


220-240V
50/60 Hz

IP
66

IK
08


Professional streetlight luminaire for LED light sources.

- Possible illuminance control
- Modern design
- Reliability



Other pictures



Code	Type of optics	Luminaire power [W]	Lumen luminaire [lm]	Efficacy [lm/W]	Colour temperature [K]	CRI/Ra	Operating temperature range [°C]
130292.5L011.010.002	O27	20	2350	117	4000	>70	-40 ... +55

Mechanical data

Mounting

on outriggers ø48-60mm

Body colour

gray

RAL

7035

Body

high pressure die-cast
aluminum

Lateral Surface Wind

Exposed

0.033 m²

Electrical data

Power supply efficiency

≤90%

Power

220-240V 50/60Hz

Includes light source

yes

Type of equipment

ED

Optical data

Way of lighting

direct

Diffuser

tempered glass

Photobiological

risk group

RG1

General data

Additional information

10kV surge protection

Other remarks

the pole and boom are not part of the
luminaire; luminaire available in
protection class I and II

LED lifetime [h]

(L75) 100 000, (L90) 100 000

Warranty

5 years

Compliant with British Standards: BS 5489-1 2020; BS EN 13201 2015; BS EN 60598-2-3:2003+A1:2011 and BS EN IEC 60598-1:2021+A11:2022.

Luminous flux tolerance +/- 10%.

Power tolerance +/- 5%.

Lighting beam, light intensity distribution and light efficiency were examined in accordance with the EN ISO 17025:2005 norm for EN13032 norm series and the LM-79 norm.

General Warranty Terms available on our website www.luglightfactory.com

Detailed information on luminous fluxes and powers for individual indexes are indicated on the product data sheet.

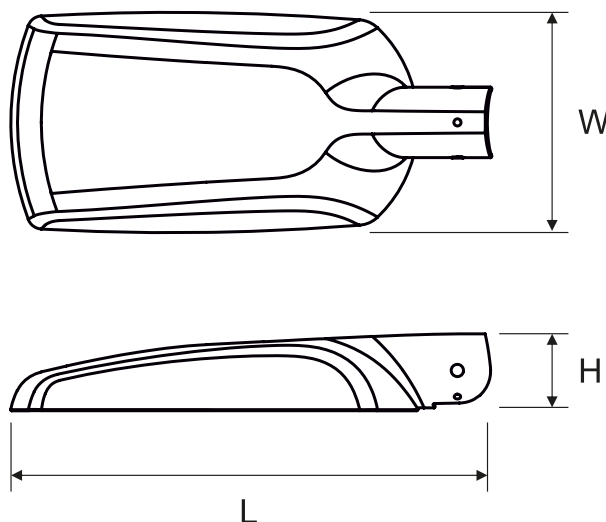
The parameters in the data sheet are given for Ta=25°C.

The operating temperature ranges apply only to luminaires used in the outdoor environment.

Colour temperature tolerance +/- 5%.

Dimensions

Dimensions [mm] LxWxH	Pallet quantity	Quantity in package	Net weight [kg]
505x230x80	70	1	3.5



Accessories



150172.01021

TRAFFIK LED Adjustable
bracket ø60mm

150170.01022

2 field connectors IP68



150170.01023

3 field connectors IP68



150170.01024

4 field connectors IP68



150170.01025

5 field connectors IP68


 220-240V
 50/60 Hz

 IP
 66

 IK
 10


A functionally optimised modern LED luminaire that complements the URBINO LED luminaire family in an environmentally responsible way with solutions for lower power and flux points.

- Possible illuminance control
- Modern design
- Simple one person mounting
- Reliability



Other pictures



Code	Type of optics	Luminaire power [W]	Lumen luminaire [lm]	Efficacy [lm/W]	Colour temperature [K]	CRI/Ra	Operating temperature range [°C]
130782.5L121.150.003	O15	34	5100	150	4000	>70	-40 ... +50

Mechanical data**Mounting**

on pillar ø40-60mm, on
outriggers ø40-60mm

Body colour

grey

Body

high pressure die-cast
aluminum

Lateral Surface Wind**Exposed**

0.035 m²

Electrical data**Power supply efficiency**

≤93%

Power

220-240V 50/60Hz

Includes light source

yes

Type of equipment

ED

Optical data**Way of lighting**

direct

Diffuser

tempered glass

MacAdam's steps

3

ULOR / DLOR

0% / 100%

Photobiological risk group

RG1

General data**Additional information**

10kV surge protection

Other remarks

the pole and boom are not part of the
luminaire

Lifetime L90B10

100 000 h

Warranty

5 years

Compliant with British Standards: BS 5489-1:2020; BS EN 13201:2015; BS EN 60598-2-3:2003+A1:2011 and BS EN IEC 60598-1:2021+A11:2022.

In order to apply the luminaire in an aggressive environment, for example with an increased concentration of sulfur, salt or other aggressive substances, a consultation with the LUG Technical Preparation of Production Branch is required.

Luminous flux tolerance +/- 10%.

Power tolerance +/- 5%.

Lighting beam, light intensity distribution and light efficiency were examined in accordance with the EN ISO 17025:2005 norm for EN13032 norm series and the LM-79 norm.

General Warranty Terms available on our website www.luglightfactory.com

Detailed information on luminous fluxes and powers for individual indexes are indicated on the product data sheet.

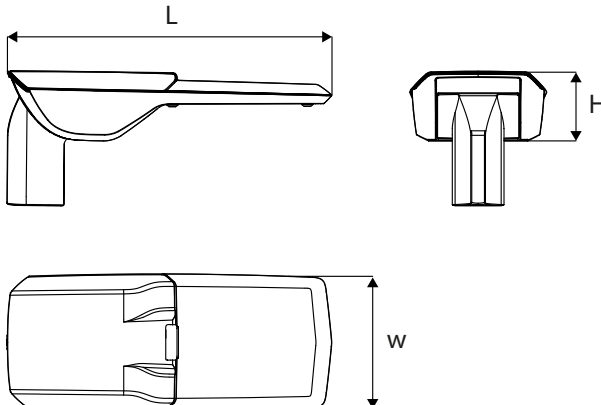
The parameters in the data sheet are given for Ta=25°C.

The operating temperature ranges apply only to luminaires used in the outdoor environment.

Colour temperature tolerance +/- 5%.

DARK SKY certification available for colour temperatures of 3000K and below and for lighting fixtures mounted in a horizontal position (use adjustment/leveling if necessary).

Dimensions

Dimensions [mm] LxWxH	Pallet quantity	Quantity in package	Net weight [kg]		
470x200x100	60	1	4		

Accessories



770020.001

eBLOC-N Controller - Thread communication



770020.002

eBLOC-N Controller - Thread communication + GNSS location



770020.004

eBLOC-N Controller - LTE Cat M1/2G communication + GNSS location



770030.001

eBLOC-Z Controller - Thread communication



770030.002

eBLOC-Z Controller - Thread communication + GNSS location



770030.004

eBLOC-Z Controller - LTE Cat M1/2G communication + GNSS location



790013.001

HUBIoT-1 EU pole mounted



790013.002

HUBIoT-1 EU surface-mounted



790013.003

HUBIoT-1 EU Ethernet pole mounted



790013.004

HUBIoT-1 EU Ethernet surface-mounted



790013.101

HUBIoT-1 Global pole mounted



790013.102

HUBIoT-1 Global surface-mounted



790013.103

HUBIoT-1 Global Ethernet pole mounted



790013.104

HUBIoT-1 Global Ethernet surface-mounted

IEC60598_2_3M ATTACHMENT			
Clause	Requirement + Test	Result - Remark	Verdict
ATTACHMENT TO TEST REPORT B5-3/244/B/23 IEC 60598-2-3 EUROPEAN GROUP DIFFERENCES AND NATIONAL DIFFERENCES Luminaires Part 2: Particular requirements Section 3: Luminaires for road and street lighting			
Differences according to		EN 60598-2-3:2003 + A1:2011 used in conjunction with EN IEC 60598-1:2021 + A11:2022	
TRF template used		IECEE OD-2020-F2:2020, Ed. 1.1	
Attachment Form No.		EU_GD_IEC60598_2_3M	
Attachment Originator		UL(Demko)	
Master Attachment		2022-05-24	
Copyright © 2022 IEC System for Conformity Testing and Certification of Electrical Equipment (IECEE), Geneva, Switzerland. All rights reserved.			
	CENELEC COMMON MODIFICATIONS (EN)		P
3.5 (3)	MARKING		P
3.5 (3.2.12)	Note 4 deleted		N/A
3.6 (4)	CONSTRUCTION		N/A
4.7 (4.11.6)	Electro-mechanical contact systems: electric strength test at 1 500 V		N/A
3.10 (5)	EXTERNAL AND INTERNAL WIRING		N/A
3.10 (5.2.2)	Cables equal to EN 50525 (all parts)		N/A
	Paragraph 2 deleted		N/A
	Replace table 5.1 – Supply cord		N/A
3.12 (12)	ENDURANCE TESTS AND THERMAL TESTS		P
3.12 (12.4.2c)	Thermal test (normal operation) see footnote c to table 12.2 relating to unsleeved fixed wiring		P
ZB	ANNEX ZB, SPECIAL NATIONAL CONDITIONS (EN)		N/A
(3.3)	DK: power supply cords of class I luminaires with label		N/A
(5.2.1)	CY, DK, FI, UK: type of plug		N/A

IEC60598_2_3M ATTACHMENT			
Clause	Requirement + Test	Result - Remark	Verdict
(5.2.18)	DK: socket-outlets		N/A
ZC	ANNEX ZC, NATIONAL DEVIATIONS (EN)		N/A
(4 & 5)	FR: Shuttered socket-outlets 10/16A		N/A
	FR: Safety requirements for high buildings <i>(Decree of 30 December 2011 on safety regulations for the construction of high-rise buildings and their protection against fire and panic risks; Section VIII; Article GH 48, Lighting)</i> Glow-wire test for outer parts of luminaires:		N/A
	- 850°C for luminaires in stairways and horizontal travel paths		N/A
	- 650°C for indoor luminaires		N/A
	UK: Requirements according to United Kingdom Building Regulation		N/A



Test Report issued under the responsibility of:
Łukasiewicz - IMiF PREDOM Division

TEST REPORT
IEC 60598-2-3
Luminaires
Part 2: Particular requirements
Section 3: Luminaires for road and street lighting

Report Number..... : B5-3/244/B/23
Date of issue..... : 11.01.2024
Total number of pages 73 + Appendix No.1 – Summary LED modules - Control gears – on CD

Name of Testing Laboratory preparing the Report Łukasiewicz - IMiF PREDOM Division
02-255 Warszawa, ul. Krakowiaków 53, Poland

Applicant's name LUG Light Factory Sp. z o.o.
Address..... : 65-127 Zielona Góra, ul. Gorzowska 11, Poland

Test specification:

Standard IEC 60598-2-3:2002, IEC 60598-2-3:2002/AMD1:2011 used in conjunction with IEC 60598-1:2020
Test procedure CB Scheme
Non-standard test method N/A

TRF template used..... : IECEE OD-2020-F1:2021, Ed.1.4
Test Report Form No. : IEC60598_2_3M
Test Report Form(s) Originator : Intertek Semko AB
Master TRF 2021-11-11

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This report is not valid as a CB Test Report unless signed by an approved IECEE Testing Laboratory and appended to a CB Test Certificate issued by an NCB in accordance with IECEE 02.

General disclaimer:

The test results presented in this report relate only to the object tested.
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Test item description..... :	Luminaires for road and street lighting	
Trade Mark(s) :	LUG	
Manufacturer :	LUG Light Factory Sp. z.o.o. ul. Gorzowska 11, 65-127 Zielona Góra, Poland	
Model/Type reference :	Traffik LED & Traffik R LED – cl I series	
Ratings :	220 - 240V 50/60Hz, IP66, IK08, cl. I	
Responsible Testing Laboratory (as applicable), testing procedure and testing location(s):		
☒	CB Testing Laboratory:	Łukasiewicz - IMiF PREDOM Division
Testing location/ address..... :		02-255 Warszawa, ul. Krakowiaków 53, Poland
Tested by (name, function, signature)..... :		K. Lisowski 
Approved by (name, function, signature)... :		T. Małyska 
☐	Testing procedure: CTF Stage 1:	
Testing location/ address..... :		
Tested by (name, function, signature)..... :		
Approved by (name, function, signature)... :		
☐	Testing procedure: CTF Stage 2:	
Testing location/ address..... :		
Tested by (name + signature) :		
Witnessed by (name, function, signature) . :		
Approved by (name, function, signature)... :		
☐	Testing procedure: CTF Stage 3:	
☐	Testing procedure: CTF Stage 4:	
Testing location/ address..... :		
Tested by (name, function, signature)..... :		
Witnessed by (name, function, signature) . :		
Approved by (name, function, signature)... :		
Supervised by (name, function, signature) :		

List of Attachments (including a total number of pages in each attachment): – Attachment No. 1 (Report Reference No. B5-3/244/B/1/23 - 2 pages)	
Summary of testing: Positive <i>According to ISO / IEC Guide 98-4 for the assessment of compliance of the measurement result with the requirements, criterion B was chosen. 50% risk of incorrect assessment decision belongs to the customer and 50% risk of incorrect assessment belongs to the laboratory</i>	
Tests performed (name of test and test clause): IEC 60598-2-3:2002, IEC 60598-2-3:2002/AMD1:2011 used in conjunction with IEC 60598-1:2020 - all clauses	Testing location: Łukasiewicz - IMiF PREDOM Division 02-255 Warszawa, ul. Krakowiaków 53, Poland
Summary of compliance with National Differences (List of countries addressed): See Attachment No. 1 to this Test Report (Report Reference No. B5-3/244/B/1/23 - 2 pages)	
☒ The product fulfils the requirements of EN 60598-2-3:2003 + A1:2011 used in conjunction with EN IEC 60598-1:2021 + A11:2022	
Use of uncertainty of measurement for decisions on conformity (decision rule) : ☒ No decision rule is specified by the IEC standard, when comparing the measurement result with the applicable limit according to the specification in that standard. The decisions on conformity are made without applying the measurement uncertainty ("simple acceptance" decision rule, previously known as "accuracy method"). ☐ Other:... (to be specified, for example when required by the standard or client, or if national accreditation requirements apply)	
Information on uncertainty of measurement: The uncertainties of measurement are calculated by the laboratory based on application of criteria given by OD-5014 for test equipment and application of test methods, decision sheets and operational procedures of IECEE. IEC Guide 115 provides guidance on the application of measurement uncertainty principles and applying the decision rule when reporting test results within IECEE scheme, noting that the reporting of the measurement uncertainty for measurements is not necessary unless required by the test standard or customer. Calculations leading to the reported values are on file with the NCB and testing laboratory that conducted the testing.	

Copy of marking plate:



Test item particulars.....: Luminaire for road and street lighting	
Classification of installation and use.....: Normal use	
Supply Connection.....: Wire	
Possible test case verdicts: - test case does not apply to the test object..... : N/A - test object does meet the requirement..... : P (Pass) - test object does not meet the requirement..... : F (Fail)	
Testing..... :	
Date of receipt of test item : 19.12.2023	
Date (s) of performance of tests : 19.12.2023 - 11.01.2024	
General remarks:	
"(See Enclosure #)" refers to additional information appended to the report. "(See appended table)" refers to a table appended to the report. Throughout this report a ☒ comma / ☐ point is used as the decimal separator. Clause numbers between brackets refer to clauses in IEC 60598-1	
Manufacturer's Declaration per sub-clause 4.2.5 of IEC 02:	
The application for obtaining a CB Test Certificate includes more than one factory location and a declaration from the Manufacturer stating that the sample(s) submitted for evaluation is (are) representative of the products from each factory has been provided :	☐ Yes ☒ Not applicable
When differences exist; they shall be identified in the General product information section.	
Name and address of factory (ies)..... : LUG Light Factory Sp. z.o.o. ul. Gorzowska 11; 65-127 Zielona Góra, Poland	

General product information and other remarks:

Name and address of the license holder:	LUG Light Factory Sp z o.o. ul. Gorzowska 11; 65-127 Zielona Góra - Poland				
Name and address of manufacturer:	LUG Light Factory Sp z o.o. ul. Gorzowska 11; 65-127 Zielona Góra - Poland				
Name and address of manufacturing place:	LUG Light Factory Sp z o.o. ul. Gorzowska 11; 65-127 Zielona Góra - Poland				
Name of product:	Traffik LED & Traffik R LED– cl I series				
Trade mark :	LUG				
Technical data:					
Rated voltage	220-240V				
Rated frequency:	50/60Hz				
Protection against electric shock:	Class I				
Degree of protection:	IP66; IK08				
ta	LED Type	LED quantity	Pmin [W]	Pmax [W]	Ta max[°C]
	Hi-Power	12	4	33	+55
	Hi-Power	24	7	60	+50
	Hi-Power	36	10	78	+50
	Hi-Power	48	14	90	+45
	Mid-Power (3030)	24	4	33	+55
	Mid-Power (3030)	48	7	60	+50
	Mid-Power (3030)	72	10	78	+50
	Mid-Power (3030)	96	14	90	+45
	Mid-Power (5050)	12	4	33	+55
	Mid-Power (5050)	24	7	60	+50
	Mid-Power (5050)	36	10	78	+50
	Mid-Power (5050)	48	14	90	+45

Choice sheet of the luminaires Traffik LED & Traffik R LED– cl I series:**Example of symbol (Marking):**

130292.5LR7B30S320.101.N.P.R

1 2 3 4 5 6 7 8 9

Designations used on the marking of luminaires (some designation may not appear in the name) :

1. 13029	- Code of the series 13029- Traffik LED 13087- Traffik LED - Hi-Power XPG3 13088- Traffik LED - Mid-Power 3030 13089- Traffik LED - Mid-Power 5050
2. 2	- Color: 1: black 2: grey 5: graphite 0: another
3. 5L	- Type of power supply: 2L - DIMM 1-10V 3L – DALI 5L – on-off 6L – on-off / DALI 7L - ZHAGA D4i PL – programmable

4. R7	-	CRI: R7 = 70-79 R8 = 80-89
5. B30	-	Color temperature ($\pm 50K$): B18 = 1800K B22 = 2200K B27 = 2700K B30 = 3000K B40 = 4000K B57 = 5700K B65 = 6500K
6. S320	-	Max. luminous flux (e.g. S320 = 3200lm)
7. 1	-	1 - Safety Class I
8. 01	-	Optic: 01 O1 - for road lighting type O1 02 O2 - for road lighting type O2 ... 99 O99 - for road lighting type O99 MKxx – xx 00 ...99 – for investment optic
9. N.P	-	Additional equipment A - additional corrosion protection B - Tool-free access to the LED Driver N - NEMA Socket Z - ZHAGA Socket T - NTC Sensor W - Twilight Sensor V - Surge Device Protector 10kV Y - Surge Device Protector 20kV P - Anti pressure vent R - Traffik R LED (Regulate bracket)

List of LED's and electronic led driver's system:

See Appendix No.1 – Summary LED modules - Control gears – on CD

After review of technical documentation, model series, characteristic of particular models, differences between models, technical parameters, class of luminaires, IP code, light sources, components, etc., luminaire **130872.7LR7B18S725.145.Z.V.R** has been tested as the representative of all models of luminaires. Tests were performed for worst power supply parameters of the product

IEC 60598-2-3			
Clause	Requirement + Test	Result - Remark	Verdict
3.2 (0)	GENERAL TEST REQUIREMENTS		P
3.2 (0.3)	More sections applicable..... :	Yes ☐ No ☒ Section/s:	—
3.2 (0.5)	Components	(see Annex 1)	—
3.2 (0.7)	Information for luminaire design in light sources standards		—
3.2 (0.7.2)	Light source safety standard	IEC 62031	—
	Luminaire design in the light source safety standard		P

3.4 (2)	CLASSIFICATION OF LUMINAIRES		P
3.4 (2.2)	Type of protection	Class I	P
3.4 (2.3)	Degree of protection	IP66	P
3.4 (2.4)	Luminaire suitable for direct mounting on normally flammable surfaces	Yes ☒ No ☐	—
3.4 (2.5)	Luminaire for normal use	Yes ☒ No ☐	—
	Luminaire for rough service	Yes ☐ No ☒	—
3.4 (-)	Modes of installation of road or street lighting		—
	a) on a pipe	Yes ☒ No ☐	—
	b) on a mast arm	Yes ☒ No ☐	—
	c) on a post top	Yes ☒ No ☐	—
	d) on span or suspension wires	Yes ☐ No ☒	—
	e) on a wall	Yes ☒ No ☐	—

3.5 (3)	MARKING		P
3.5 (3.2)	Mandatory markings		P
	Position of the marking		P
	Format of symbols/text		P
3.5 (3.3)	Additional information		P
	Language of instructions		P
3.5 (3.3.1)	Combination luminaires		N/A
3.5 (3.3.2)	Nominal frequency in Hz		P
3.5 (3.3.3)	Operating temperature		P
3.5 (3.3.5)	Wiring diagram		P
3.5 (3.3.6)	Special conditions		N/A
3.5 (3.3.7)	Metal halide lamp luminaire – warning		N/A
3.5 (3.3.8)	Limitation for semi-luminaires		N/A

IEC 60598-2-3			
Clause	Requirement + Test	Result - Remark	Verdict
3.5 (3.3.9)	Power factor and supply current		P
3.5 (3.3.10)	Suitability for use indoors		N/A
3.5 (3.3.11)	Luminaires with remote control		N/A
3.5 (3.3.12)	Clip-mounted luminaire – warning		N/A
3.5 (3.3.13)	Specifications of protective shields		N/A
3.5 (3.3.14)	Symbol for nature of supply		P
3.5 (3.3.15)	Rated current of socket outlet		N/A
3.5 (3.3.16)	Rough service luminaire		N/A
3.5 (3.3.17)	Mounting instruction for type Y, type Z and some type X attachments		N/A
3.5 (3.3.18)	Non-ordinary luminaires with PVC cable		N/A
3.5 (3.3.19)	Protective conductor current in instruction if applicable		N/A
3.5 (3.3.20)	Provided with information if not intended to be mounted within arm's reach		N/A
3.5 (3.3.21)	Non replaceable and non-user replaceable light sources information provided		P
3.5 (3.3.22)	Controllable luminaires, classification of insulation provided		N/A
3.5 (3.3.23)	Luminaires without control gear provided with necessary information for selection of appropriate component		N/A
3.5 (3.3.24)	If not supplied with terminal block, information on the packaging		N/A
3.5 (3.3.25)	Luminaires employing light sources emitting UV on mains wiring, information provided		N/A
3.5 (3.3.26)	Wall mounted luminaire using external flexible cable or cord longer than 0.3 m, information provided		N/A
3.5 (3.4)	Test with water		P
	Test with hexane		P
	Legible after test		P
	Label attached		P
3.5 (-)	Additional information in instruction leaflet		P
	a) Design attitude		P
	b) Weight		P
	c) Overall dimensions		P
	d) Maximum projected area if applicable		N/A
	e) Cross-sectional area of wires if applicable		N/A
	f) Suitability for indoors use		N/A

IEC 60598-2-3			
Clause	Requirement + Test	Result - Remark	Verdict
	g) Dimensions of the compartment		N/A
	h) Torque setting to be applied to bolts or screws		P
	i) Maximum mounting height		P

3.6 (4)	CONSTRUCTION		P
3.6 (4.2)	Components replaceable without difficulty		P
3.6 (4.3)	Wireways smooth and free from sharp edges		P
3.6 (4.4)	Lampholders		N/A
3.6 (4.4.1)	Integral lampholder		N/A
3.6 (4.4.2)	Wiring connection		N/A
3.6 (4.4.3)	Lampholder for end-to-end mounting		N/A
3.6 (4.4.4)	Positioning		N/A
	- pressure test (N) :	N/A	—
	After test the lampholder comply with relevant standard sheets and show no damage		N/A
	After test on single-capped lampholder the lampholder have not moved from its position and show no permanent deformation		N/A
	- bending test (N) :	N/A	—
	After test the lampholder have not moved from its position and show no permanent deformation		N/A
3.6 (4.4.5)	Peak pulse voltage		N/A
3.6 (4.4.6)	Centre contact		N/A
3.6 (4.4.7)	Parts in rough service luminaires resistant to tracking		N/A
3.6 (4.4.8)	Lamp connectors		N/A
3.6 (4.4.9)	Caps and bases correctly used		N/A
3.6 (4.4.10)	Light source for lampholder or connection according IEC 60061 not connected another way		N/A
3.6 (4.5)	Starter holders		N/A
	Starter holder in luminaires other than class II		N/A
	Starter holder class II construction		N/A
3.6 (4.6)	Terminal blocks		N/A
	Tails		N/A
	Unsecured blocks		N/A
3.6 (4.7)	Terminals and supply connections		P
3.6 (4.7.1)	Contact to metal parts		P

IEC 60598-2-3			
Clause	Requirement + Test	Result - Remark	Verdict
3.6 (4.7.2)	Test 8 mm live conductor		P
	Test 8 mm earth conductor		P
3.6 (4.7.3)	Terminals for supply conductors		P
3.6 (4.7.3.1)	Welded method and material		N/A
	- stranded or solid conductor		N/A
	- spot welding		N/A
	- welding between wires		N/A
	- Type Z attachment		N/A
	- mechanical test according to 15.6.2		N/A
	- electrical test according to 15.6.3		N/A
	- heat test according to 15.6.3.2.3 and 15.6.3.2.4		N/A
3.6 (4.7.4)	Terminals other than supply connection		P
3.6 (4.7.5)	Heat-resistant wiring/sleeves		N/A
3.6 (4.7.6)	Multi-pole plug		N/A
	- test at 30 N		N/A
3.6 (4.8)	Switches		N/A
	- adequate rating		N/A
	- adequate fixing		N/A
	- polarized supply		N/A
	- compliance with IEC 61058-1 for electronic switches		N/A
3.6 (4.9)	Insulating lining and sleeves		N/A
3.6 (4.9.1)	Retainment		N/A
	Method of fixing :		N/A
3.6 (4.9.2)	Insulated linings and sleeves:		N/A
	Resistant to a temperature > 20 °C to the wire temperature or		N/A
	a) & c) Insulation resistance and electric strength		N/A
	b) Ageing test. Temperature (°C) :		N/A
3.6 (4.10)	Double or reinforced insulation		N/A
3.6 (4.10.1)	No contact, mounting surface – accessible metal parts – wiring of basic insulation		N/A
	Safe installation fixed luminaires		N/A
	Capacitors and switches		N/A
3.6 (4.10.2)	Assembly gaps:		N/A
	- not coincidental		N/A

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Clause	Requirement + Test	Result - Remark	Verdict
	- no straight access with test probe		N/A
3.6 (4.10.3)	Retainment of insulation:		N/A
	- fixed		N/A
	- unable to be replaced; luminaire inoperative		N/A
	- sleeves retained in position		N/A
	- lining in lampholder		N/A
3.6 (4.10.4)	Protective impedance device		N/A
	Basic and supplementary insulation bridged by resistor(s) or appropriate capacitor		N/A
	Double or reinforced insulation bridged by appropriate and at least two resistors or two Y2 capacitors or one Y1 capacitor		N/A
	Capacitors comply with IEC 60384-14		N/A
	Resistors comply with test (a) in 14.1 of IEC 60065		N/A
3.6 (4.11)	Electrical connections and current-carrying parts		P
3.6 (4.11.1)	Contact pressure		P
3.6 (4.11.2)	Screws:		P
	- self-tapping screws		P
	- thread-cutting screws		P
3.6 (4.11.3)	Screw locking:		N/A
	- spring washer		N/A
	- rivets		N/A
3.6 (4.11.4)	Material of current-carrying parts		P
3.6 (4.11.5)	No contact to wood or mounting surface		N/A
3.6 (4.11.6)	Electro-mechanical contact systems		N/A
3.6 (4.12)	Screws and connections (mechanical) and glands		P
3.6 (4.12.1)	Screws not made of soft metal		P
	Screws of insulating material		N/A
	Torque test: torque (Nm); part..... :	LED module, Glass cover, Driver, Earthing – 1,2 Nm	P
	Torque test: torque (Nm); part..... :		N/A
	Torque test: torque (Nm); part..... :		N/A
3.6 (4.12.2)	Screws with diameter < 3 mm screwed into metal		N/A
3.6 (4.12.4)	Locked connections:		P
	- fixed arms; torque (Nm) :	7	P

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Clause	Requirement + Test	Result - Remark	Verdict
	- lampholder; torque (Nm)		N/A
	- push-button switches; torque 0,8 Nm		N/A
3.6 (4.12.5)	Screwed glands; force (Nm).....	3,25 Nm	P
3.6 (4.13)	Mechanical strength		P
3.6 (4.13.1)	Impact tests:		P
	- fragile parts; energy (Nm)	0,5 Nm	P
	- other parts; energy (Nm)	0,7 Nm	P
	1) live parts		P
	2) linings		N/A
	3) protection		P
	4) covers		P
3.6 (4.13.2)	Metal parts have adequate mechanical strength		P
3.6 (4.13.3)	Straight test finger		P
3.6 (4.13.4)	Rough service luminaires		N/A
	- IP54 or higher		N/A
	a) fixed		N/A
	b) hand-held		N/A
	c) delivered with a stand		N/A
	d) for temporary installations and suitable for mounting on a stand		N/A
3.6 (4.13.6)	Tumbling barrel		N/A
3.6 (4.14)	Suspensions, fixings and means of adjusting		P
3.6 (4.14.1)	Mechanical load:		P
	A) four times the weight		P
	B) torque 2,5 Nm		P
	C) bracket arm; bending moment (Nm).....		N/A
	D) load track-mounted luminaires		N/A
	E) clip-mounted luminaires, glass-shelve. Thickness (mm)		N/A
	Metal rod. diameter (mm)		N/A
	Fixed luminaire or independent control gear without fixing devices		N/A
3.6 (4.14.2)	Load to flexible cables		N/A
	Mass (kg)	N/A	—
	Stress in conductors (N/mm ²)		N/A
	Mass (kg) of semi-luminaire		N/A

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Clause	Requirement + Test	Result - Remark	Verdict
	Bending moment (Nm) of semi-luminaire		N/A
3.6 (4.14.3)	Adjusting devices:		N/A
	- flexing test; number of cycles.....		N/A
	- strands broken		N/A
	- electric strength test afterwards		N/A
3.6 (4.14.4)	Telescopic tubes: cords not fixed to tube; no strain on conductors		N/A
3.6 (4.14.5)	Guide pulleys		N/A
3.6 (4.14.6)	Strain on socket-outlets		N/A
3.6 (4.15)	Flammable materials		N/A
	- glow-wire test 650°C	See Test Table 3.15 (13.3.2)	N/A
	- spacing ≥ 30 mm		N/A
	- screen withstanding test of 13.3.1		N/A
	- screen dimensions		N/A
	- no fiercely burning material		N/A
	- thermal protection		N/A
	- electronic circuits exempted		N/A
3.6 (4.15.2)	Luminaires made of thermoplastic material with lamp control gear		N/A
	a) construction		N/A
	b) temperature sensing control		N/A
	c) surface temperature		N/A
3.6 (4.16)	Luminaires for mounting on normally flammable surfaces		P
	No lamp control gear	(compliance with Section 12)	N/A
	Provided with adaptor for a track meet the requirements for direct mounting on normally flammable surfaces		N/A
3.6 (4.16.1)	Lamp control gear spacing:		P
	- spacing 35 mm		P
	- spacing 10 mm		N/A
3.6 (4.16.2)	Thermal protection:		P
	- in lamp control gear		P
	- external		N/A
	- fixed position		N/A
	- temperature marked lamp control gear	110°C	P
3.6 (4.16.3)	Design to satisfy the test of 12.6	(see clause 12.6)	N/A
3.6 (4.17)	Drain holes		N/A

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Clause	Requirement + Test	Result - Remark	Verdict
	Clearance at least 5 mm		N/A
3.6 (4.18)	Resistance to corrosion		N/A
3.6 (4.18.1)	- rust-resistance		N/A
3.6 (4.18.2)	- season cracking in copper		N/A
3.6 (4.18.3)	- corrosion of aluminium		N/A
3.6 (4.19)	Ignitors compatible with ballast		N/A
3.6 (4.20)	Rough service vibration		N/A
3.6 (4.21)	Protective shield		N/A
3.6 (4.21.1)	Shield fitted if tungsten halogen lamps or metal halide lamps		N/A
	Shield of glass if tungsten halogen lamps		N/A
3.6 (4.21.2)	Particles from a shattering lamp not impair safety		N/A
3.6 (4.21.3)	No direct path		N/A
3.6 (4.21.4)	Impact test on shield		N/A
	Glow-wire test on lamp compartment..... :	See Test Table 3.15 (13.3.2)	N/A
3.6 (4.22)	Attachments to lamps not cause overheating or damage		N/A
3.6 (4.23)	Semi-luminaires comply Class II		N/A
3.6 (4.24)	Photobiological hazards		P
3.6 (4.24.1)	No excessive UV radiation if tungsten halogen lamps and metal halide lamps (Annex P)		N/A
3.6 (4.24.2)	Retinal blue light hazard		P
	Class of risk group assessed according to IEC/TR 62778	Risk Group 1	—
	Luminaires with E_{thr} :		N/A
	a) Fixed luminaires		N/A
	- distance x m, borderline between RG1 and RG2 .. :		N/A
	- marking and instruction according 3.2.23		N/A
	b) Portable and handheld luminaires		N/A
	- marking according 3.2.23 if RG1 exceeded at 200 mm according to IEC/TR 62778		N/A
	Portable luminaires for children IEC 60598-2-10 and Mains socket outlet nightlights IEC 60598-2-12 not exceed RG1 at 200 mm according to IEC/62778		N/A
3.6 (4.25)	Mechanical hazard		P
	No sharp point or edges		P
3.6 (4.26)	Short-circuit protection		N/A

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Clause	Requirement + Test	Result - Remark	Verdict
3.6 (4.26.1)	Adequate means of uninsulated accessible SELV parts		N/A
3.6 (4.26.2)	Short-circuit test with test chain according 4.26.3		N/A
	Supply source ES1 PSE		N/A
	Test chain not melt through		N/A
	Test sample not exceed values of Table 12.1 and 12.2		N/A
3.6 (4.27)	Terminal blocks with integrated screwless earthing contacts		N/A
	Test according Annex V		N/A
	Pull test of terminal fixing (20 N)		N/A
	After test, resistance < 0,05 Ω		N/A
	Pull test of mechanical connection (50 N)		N/A
	After test, resistance < 0,05 Ω		N/A
	Voltage drop test, resistance < 0,05 Ω		N/A
3.6 (4.28)	Fixing of thermal sensing control		N/A
	Not plug-in or easily replaceable type		N/A
	Reliably kept in position		N/A
	No adhesive fixing if UV radiations from a lamp can degrade the fixing		N/A
	Not outside the luminaire enclosure		N/A
	Test of adhesive fixing:		N/A
	Max. temperature on adhesive material (°C) :	N/A	—
	100 cycles between t min and t max		N/A
	Temperature sensing control still in position		N/A
3.6 (4.29)	Luminaires with non-replaceable light source		N/A
	Not possible to replace light source		N/A
	Live part not accessible after parts have been opened by hand or tools		N/A
3.6 (4.30)	Luminaires with non-user replaceable light source		P
	If protective cover provide protection against electric shock and marked with “caution, electric shock risk” symbol:		P
	At least one fixing means requiring use of tool		P
3.6 (4.31)	Insulation between circuits		P
	Circuits insulated from LV supply fulfil requirements according 4.31.1 – 4.31.3		P

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Clause	Requirement + Test	Result - Remark	Verdict
	Controllable luminaires requiring same level of insulation for all components, the insulation between control terminals and LV supply fulfil requirements according 4.31.1 – 4.31.3		P
3.6 (4.31.1)	SELV or PELV circuits		N/A
	Used SELV/PELV source		N/A
	Voltage $\leq$ ELV		N/A
	Insulating of SELV/PELV circuits from LV supply		N/A
	Insulating of SELV/PELV circuits from other non SELV/PELV circuits		N/A
	Insulating of SELV/PELV circuits from FELV		N/A
	Insulating of SELV/PELV circuits from other SELV/PELV circuits		N/A
	SELV/PELV circuits insulated from accessible parts according Table X.1		N/A
	Plugs not able to make any electrical contact with socket-outlets of other voltage systems		N/A
	Socket outlets does not admit plugs of other voltage systems		N/A
	Plugs and socket-outlets does not have protective conductor contact		N/A
3.6 (4.31.2)	FELV circuits		N/A
	Used FELV source		N/A
	Voltage $\leq$ ELV		N/A
	Insulating of FELV circuits from LV supply		N/A
	FELV circuits insulated from accessible parts according Table X.1		N/A
	Plugs not able to make any electrical contact with socket-outlets of other voltage systems		N/A
	Socket outlets does not admit plugs of other voltage systems		N/A
	Socket-outlets does not have protective conductor contact		N/A
3.6 (4.31.3)	Other circuits		N/A
	Other circuits insulated from accessible parts according Table X.1		N/A
	Class II construction with equipotential bonding for protection against indirect contacts with live parts:		N/A
	- conductive parts are connected together		N/A
	- test according 7.2.3		N/A

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Clause	Requirement + Test	Result - Remark	Verdict
	- conductive part not cause an electric shock in case of an insulation fault		N/A
	- equipotential bonding in master/slave applications		N/A
	- master luminaire provided with terminal for accessible conductive parts of slave luminaires		N/A
	- slave luminaire constructed as class I		N/A
3.6 (4.32)	Overvoltage protective devices		N/A
	Comply with IEC 61643-11		N/A
	External to controlgear and connected to earth:		N/A
	- only in fixed luminaires		N/A
	- only connected to protective earth		N/A
3.6 (4.33)	Luminaire powered via information technology communication cabling		N/A
	Requirements for Class III luminaire		N/A
	Rated voltage within the range of ES1 and does not exceed maximum voltage of used connector		N/A
	Luminaire does not create any hazard from overvoltage	(see Annex 2)	N/A
3.6 (4.34)	Electromagnetic fields (EMF)		N/A
	No harmful electromagnetic fields		N/A
3.6 (4.35)	Protection against moving fan blades		N/A
	Test with a standard test finger		N/A
	Test with test probe acc. to Figure 13 (IEC 61032) for portable luminaire		N/A
	-hardness less than D60 Shore		N/A
	-peripheral speed less than 15 m/s		N/A
	-input power of fan ≤ 2 W at rated voltage		N/A
3.6 (4.36)	Track-mounted luminaires		N/A
	Test in accordance with Annex A of IEC60570:2003/AMD2:2019		N/A
3.6.1 (-)	At least IP X3 or X5 respectively. IP	IP66	P
	Column-integrated luminaires:		N/A
	- parts below 2,5 m. IP		N/A
	- parts above 2,5 m. IP		N/A
3.6.2 (-)	Suspension on span wires		N/A
3.6.3 (-)	Means for attaching the luminaire or external parts to its support appropriate to the weight		P
3.6.3.1 (-)	Static load test		P

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Clause	Requirement + Test	Result - Remark	Verdict
	- drag coefficient.....:	1,2	P
	- loaded area (m²).....:	0,033	P
	- used load (N).....:	49,1	P
	- measured deformation (cm/m)	< 1 cm/m	P
	- no rotation		P
3.6.4 (-)	Adjustable lampholders		N/A
3.6.5 (-)	Luminaires installed above 5 m, glass covers shall be:		P
	a) glass that fractures into small pieces (test according to 3.6.5.1), or		N/A
	b) glass having a high impact shock resistance (test according to 3.6.5.2), or		P
	c) protected by any means to retain glass fragments		N/A
	For tunnel luminaires 3.6.5.1 apply		N/A
	Method of protection declared by the manufacturer		P
3.6.5.1 (-)	Protection by the use of glass that fractures into small pieces		N/A
	- number of particles is more than 40.....:		N/A
3.6.5.2 (-)	Protection by the use of high impact resistant glass		P
3.6.5.2.1 (-)	Glass covers have high mechanical strength		P
	Test according IEC 62262 with test apparatus according IEC 60068-2-75 with impact energy of 5J on preconditioned sample	IK08 (see the Test Report No. B5-3/246/B/23 dated 10.01.2024 carried out by Łukasiewicz-IMiF PREDOM Division)	P
3.6.5.2.2 (-)	Glass covers not break into large pieces		N/A
	- test according 3.6.5.1, number of particles is more than 20		N/A
3.6.6 (-)	Connection compartment of column-integrated luminaire		N/A
	- provides adequate space		N/A
	- means for attachment		N/A
	- means for attachment of metal corrosion-resistant		N/A
3.6.7 (-)	Compliance with ISO standard or other		N/A
3.6.8 (-)	Doors of column-integrated luminaires:		N/A
	- corrosion-resistant		N/A
	- opening only possible for an authorized person		N/A
	- impact test 5 Nm		N/A
	- sample show no damage		N/A
3.6.9 (-)	Column-integrated luminaire:		N/A
	- dimension of the cable entry slot (mm)		N/A

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Clause	Requirement + Test	Result - Remark	Verdict
	- cable path from the slot to the connection compartment (mm)		N/A
	- cable path free from obstruction that might cause abrasion of the cable		N/A

3.7 (11)	CREEPAGE DISTANCES AND CLEARANCES		P
3.7 (11.2)	Creepage distances and clearances..... :	See Table 3.7 (11.2)	P
	Impulse withstand category (Normal category II) (Category III Annex U, Table U.1)	Category II ☒ Category III ☐	—
	Protected against pollution, reduced creepage and clearance according Annex P of IEC 61347-1		N/A
3.7 (11.2.2)	Creepage distances for frequency up to 30 kHz	See Test Table 3.7 (11.2) I	P
	Creepage distances for frequency over 30 kHz:		N/A
	- Controlgear marked with $\hat{U}_{OUT}$ and f_{UOUT} according IEC 61347-1, clause 7.1, item w	See Test Table 3.7 (11.2) II	N/A
	- Requirements according IEC 60664-4 for controlgear not covered by IEC 61347	See Test Table 3.7 (11.2) II	N/A
3.7 (11.2.3)	Clearances for frequency up to 30 kHz	See Test Table 3.7 (11.2) I	P
	Clearances distances for frequency over 30 kHz:		N/A
	- Controlgear marked with U_P	See Test Table 3.7 (11.2) II	N/A
	- Requirements according IEC 60664-4 for controlgear not covered by IEC 61347	See Test Table 3.7 (11.2) II	N/A

3.8 (7)	PROVISION FOR EARTHING		P
3.8 (7.2.1 + 7.2.3)	Accessible metal parts		P
	Metal parts in contact with supporting surface		P
	Resistance < 0,5 Ω :	0,27 Ω	P
	Self-tapping screws used		N/A
	Thread-forming screws		N/A
	Thread-forming screw used in a grove		N/A
	Protective earth makes contact first		P
	Terminal blocks with integrated screwless protective earthing contacts tested according Annex V		N/A
	Protective earthing of the luminaire not via built-in control gear		P
3.8 (7.2.2 + 7.2.3)	Protective earth continuity in joints, etc.		P
3.8 (7.2.4)	Locking of clamping means		P

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Clause	Requirement + Test	Result - Remark	Verdict
	Compliance with 4.7.3		P
3.8 (7.2.5)	Protective earth terminal integral part of connector socket		N/A
3.8 (7.2.6)	Protective earth terminal adjacent to mains terminals		P
3.8 (7.2.7)	Electrolytic corrosion of the protective earth terminal		P
3.8 (7.2.8)	Material of protective earth terminal		P
	Contact surface bare metal		N/A
3.8 (7.2.10)	Class II luminaire for looping-in		N/A
	Double or reinforced insulation to functional earth		N/A
3.8 (7.2.11)	Protective earthing core coloured green-yellow		P
	Length of earth conductor		P
3.8 (7.2.12)	PELV circuit connected to protective earth for functional purpose		N/A

3.9 (14)	SCREW TERMINALS		N/A
	Separately approved; component list	(see Annex 1)	N/A
	Part of the luminaire	(see Annex 3)	N/A

3.9 (15)	SCREWLESS TERMINALS AND ELECTRICAL CONNECTIONS		P
	Separately approved; component list..... :	(see Annex 1)	P
	Part of the luminaire :	(see Annex 4)	N/A

3.10 (5)	EXTERNAL AND INTERNAL WIRING		P
3.10 (5.2)	Supply connection and external wiring		P
3.10 (5.2.1)	Means of connection :	Wire (Tails)	P
	Outdoor luminaire has not PVC insulated external wiring if not Class III or SELV/PELV circuits ≤ 25 V AC/60 V DC/25 V peak interrupted DC voltage with frequency 10Hz -200 Hz or protected from outdoor environment		N/A
3.10 (5.2.2)	Type of cable :	H05VV-F	P
	Nominal cross-sectional area (mm ²) :	1,5	P
	Cables equal to IEC 60227 or IEC 60245		N/A
3.10 (5.2.3)	Type of attachment, X, Y or Z		P
3.10 (5.2.5)	Type Z not connected to screws		N/A
3.10 (5.2.6)	Cable entries:		P
	- suitable for introduction		P

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Clause	Requirement + Test	Result - Remark	Verdict
	- adequate degree of protection		P
3.10 (5.2.7)	Cable entries through rigid material have rounded edges		P
3.10 (5.2.8)	Insulating bushings:		N/A
	- suitably fixed		N/A
	- material in bushings		N/A
	- material not likely to deteriorate		N/A
	- tubes or guards made of insulating material		N/A
3.10 (5.2.9)	Locking of screwed bushings		N/A
3.10 (5.2.10)	Cord anchorage:		N/A
	- covering protected from abrasion		N/A
	- clear how to be effective		N/A
	- no mechanical or thermal stress		N/A
	- no tying of cables into knots etc.		N/A
	- insulating material or lining		N/A
3.10 (5.2.10.1)	Cord anchorage for type X attachment:		N/A
	a) at least one part fixed		N/A
	b) types of cable		N/A
	c) no damaging of the cable		N/A
	d) whole cable can be mounted		N/A
	e) no touching of clamping screws		N/A
	f) metal screw not directly on cable		N/A
	g) replacement without special tool		N/A
	Glands not used as anchorage		N/A
	Labyrinth type anchorages		N/A
3.10 (5.2.10.2)	Adequate cord anchorage for type Y and type Z attachment		P
3.10 (5.2.10.3)	Tests:		P
	- impossible to push cable; unsafe		P
	- pull test: 25 times; pull (N) : 80		P
	- torque test: torque (Nm) : 0,35		P
	- displacement ≤ 2 mm		P
	- no movement of conductors		P

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Clause	Requirement + Test	Result - Remark	Verdict
	- no damage of cable or cord		P
	- function independent of electrical connection		P
3.10 (5.2.10.4)	Luminaire with/ designed for use with supply cord with maximum current of 2A:		N/A
	- Ordinary Class III luminaire supplied with SELV ≤ 25V RMS/60V DC		N/A
	- Ordinary Class III luminaire supplied with PELV ≤12V RMS/30V DC		N/A
	- Other than ordinary Class III luminaire supplied with voltage ≤12V RMS/30V DC		N/A
	Pull test of 30N		N/A
3.10 (5.2.11)	External wiring passing into luminaire		P
3.10 (5.2.12)	Looping-in terminals		N/A
3.10 (5.2.13)	Wire ends not tinned		P
	Wire ends tinned: no cold flow		P
3.10 (5.2.14)	Mains plug same protection		N/A
	Class III luminaire plug		N/A
	No unsafe compatibility		N/A
3.10 (5.2.15)	Connectors for Class III luminaires (IEC 60603 or IEC 62680)		N/A
3.10 (5.2.16)	Appliance inlets (IEC 60320)		N/A
	Installation couplers (IEC 61535)		N/A
	Appliance inlet or connector systems (IEC 61984)		N/A
3.10 (5.2.17)	No standardized interconnecting cables properly assembled		N/A
3.10 (5.2.18)	Used plug in accordance with		N/A
	- IEC 60083		N/A
	- other standard		N/A
3.10 (5.3)	Internal wiring		P
3.10 (5.3.1)	Internal wiring of suitable size and type		P
	Through wiring		N/A
	- not delivered/ mounting instruction		N/A
	- factory assembled		N/A

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Clause	Requirement + Test	Result - Remark	Verdict
	- socket outlet loaded (A)		N/A
	- temperatures	(see Annex 2)	N/A
	Green-yellow for protective earth only		P
3.10 (5.3.1.1)	Internal wiring connected directly to fixed wiring		P
	Cross-sectional area (mm ²).....	0,5 mm ²	P
	Insulation thickness	0,5 mm	P
	Extra insulation added where necessary		P
3.10 (5.3.1.2)	Internal wiring connected to fixed wiring via internal current-limiting device		P
	Cross-sectional area (mm ²).....	0,5 mm ²	P
3.10 (5.3.1.3)	Double or reinforced insulation for class II		N/A
3.10 (5.3.1.4)	Conductors without insulation		N/A
3.10 (5.3.1.5)	SELV/PELV current-carrying parts		N/A
3.10 (5.3.1.6)	Insulation thickness other than PVC or rubber		N/A
3.10 (5.3.2)	Sharp edges etc.		P
	No moving parts of switches etc.		P
	Joints, raising/lowering devices		N/A
	Telescopic tubes etc.		N/A
	No twisting over 360°		P
3.10 (5.3.3)	Insulating bushings:		N/A
	- suitable fixed		N/A
	- material in bushings		N/A
	- material not likely to deteriorate		N/A
	- cables with protective sheath		N/A
3.10 (5.3.4)	Joints and junctions effectively insulated		N/A
3.10 (5.3.5)	Strain on internal wiring		N/A
3.10 (5.3.6)	Wire carriers		N/A
3.10 (5.3.7)	Wire ends not tinned		N/A
	Wire ends tinned: no cold flow		N/A
3.10 (5.4)	Test to determine suitability of conductors having a reduced cross-sectional area		N/A
	Under test the temperature of the luminaire wiring insulation not exceed the limits stated in Table 12.2	(see Annex 2)	N/A

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Clause	Requirement + Test	Result - Remark	Verdict
	No damage to luminaire wiring after test		N/A
3.10.1 (-)	Cord anchorage if applicable		P
	- pull test: 25 times; pull (N):	80	P
	- torque test: torque (Nm):	0,35	P

3.11 (8)	PROTECTION AGAINST ELECTRIC SHOCK		P
3.11 (8.2.1)	Live parts not accessible		P
	Basic insulated parts not used on the outer surface without appropriate protection		P
	Basic insulated parts not accessible with standard test finger on portable, settable and adjustable luminaires		P
	Basic insulated parts not accessible with Ø 50 mm probe from outside, other types of luminaires		P
	Lamp and starterholders in portable and adjustable luminaires comply with double or reinforced insulation requirements		N/A
	Basic insulation only accessible under lamp or starter replacement		N/A
	Protection in any position		P
	Double-ended tungsten filament lamp		N/A
	Insulation lacquer not reliable		N/A
	Double-ended high pressure discharge lamp		N/A
	Relevant warning according to 3.2.18 fitted to the luminaire		N/A
3.11 (8.2.2)	Portable luminaire adjusted in most unfavourable position		N/A
3.11 (8.2.3.a)	Class II luminaire:		N/A
	- basic insulated metal parts not accessible during starter or lamp replacement		N/A
	- basic insulation not accessible other than during starter or lamp replacement		N/A
	- glass protective shields not used as supplementary insulation		N/A
3.11 (8.2.3.b)	BC lamp holder of metal in class I luminaires shall be connected to protective earth		N/A
3.11 (8.2.3.c)	SELV circuits with exposed current carrying parts:		N/A
	Ordinary luminaire:		N/A

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Clause	Requirement + Test	Result - Remark	Verdict
	- voltage under load/ no-load AC (V)..... :		N/A
	- voltage under load/ no-load DC (V)..... :		N/A
	- interrupted DC voltage (V) :		N/A
	- touch current if applicable (mA) :		N/A
	One conductive part insulated if required		N/A
	Other than ordinary luminaire:		N/A
	- voltage under load/ no-load AC (V)..... :		N/A
	- voltage under load/ no-load DC (V)..... :		N/A
	- interrupted DC voltage (V) :		N/A
	Class III luminaire only for connection to SELV		N/A
	Class III luminaire not provided with means for protective earthing		N/A
3.11 (8.2.3.d)	PELV circuits with exposed current carrying parts:		N/A
	Ordinary luminaire:		N/A
	- voltage under load/ no-load AC (V)..... :		N/A
	- voltage under load/ no-load DC (V)..... :		N/A
	Other than ordinary luminaire:		N/A
	- voltage under load/ no-load AC (V)..... :		N/A
	- voltage under load/ no-load DC (V)..... :		N/A
	One pole insulated if required		N/A
3.11 (8.2.4)	Portable luminaire have protection independent of supporting surface		N/A
3.11 (8.2.5)	Compliance with the standard test finger or relevant probe		P
3.11 (8.2.6)	Covers reliably secured		P
3.11 (8.2.7)	Luminaire other than below with capacitor > 0,5 μ F not exceed 50 V 1 min after disconnection		N/A
	Portable luminaire with capacitor > 0,1 μ F (0.25) not exceed 34 V 1 s after disconnection		N/A
	Other luminaires with capacitor > 0,1 μ F (0.25) with plug and track adaptors not exceed 60 V 5 s after disconnection		N/A
3.12 (12)	ENDURANCE TEST AND THERMAL TEST		P
3.12 (-)	If IP > IP 20 relevant test of (12.4), (12.5), (12.6) and (12.7) after (9.2) before (9.3) as specified in 3.13		—
3.12 (12.2)	Selection of lamps and ballasts		—

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Clause	Requirement + Test	Result - Remark	Verdict
	Lamp used according Annex B	(Lamp used see Annex 2)	—
	Control gear if separate and not supplied	(Control gear used see Annex 2)	—
3.12 (12.3)	Endurance test:		P
	a) mounting-position	Down lighting	—
	b) test temperature (°C)	50+10°C	—
	c) total duration (h)	240 h	—
	d) supply voltage (V)	264 V	—
	d) if not equipped with control gear, constant voltage/current (V) or (A)	N/A	—
3.12 (12.3.1d)	d) Class III luminaires powered via information technology communication cable:		N/A
	- voltage under normal operation (V).....	N/A	—
	- voltage under abnormal operation (V).....	N/A	—
	e) luminaire ceases to operate	N/A	—
	f) luminaire with constant light output function		N/A
3.12 (12.3.2)	After endurance test:		P
	- no part unserviceable		P
	- luminaire not unsafe		P
	- no damage to track system		N/A
	- marking legible		P
	- no cracks, deformation etc.		P
3.12 (12.4)	Thermal test (normal operation)	(see Annex 2)	P
3.12 (12.5)	Thermal test (abnormal operation)	(see Annex 2)	N/A
3.12 (12.6)	Thermal test (failed lamp control gear condition):		N/A
3.12 (12.6.1)	Through wiring or looping-in wiring loaded by a current of (A)	N/A	—
	- case of abnormal conditions	N/A	—
	- electronic lamp control gear		N/A
	- measured winding temperature (°C): at 1,1 Un	N/A	—
	- measured mounting surface temperature (°C) at 1,1 Un		N/A
	- calculated mounting surface temperature (°C)		N/A
	- track-mounted luminaires		N/A
3.12 (12.6.2)	Temperature sensing control		N/A

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Clause	Requirement + Test	Result - Remark	Verdict
	- case of abnormal conditions	N/A	—
	- thermal link		N/A
	- manual reset cut-out		N/A
	- auto reset cut-out		N/A
	- measured mounting surface temperature (°C)		N/A
	- track-mounted luminaires		N/A
3.12 (12.7)	Thermal test (failed lamp control gear in plastic luminaires):		N/A
3.12 (12.7.1)	Luminaire without temperature sensing control		N/A
3.12 (12.7.1.1)	Luminaire with fluorescent lamp ≤ 70W		N/A
	Test method 12.7.1.1 or Annex W	N/A	—
	Test according to 12.7.1.1:		N/A
	- case of abnormal conditions	N/A	—
	- Ballast failure at supply voltage (V)	N/A	—
	- Components retained in place after the test		N/A
	- Test with standard test finger after the test		N/A
	Test according to Annex W:		N/A
	- case of abnormal conditions	N/A	—
	- measured winding temperature (°C): at 1,1 Un	N/A	—
	- measured temperature of fixing point/exposed part (°C): at 1,1 Un	N/A	—
	- calculated temperature of fixing point/exposed part (°C)	N/A	—
	Ball-pressure test	See Table 3.15 (13.2.1)	N/A
3.12 (12.7.1.2)	Luminaire with discharge lamp, fluorescent lamp > 70W, transformer > 10 VA		N/A
	- case of abnormal conditions	N/A	—
	- measured winding temperature (°C): at 1,1 Un	N/A	—
	- measured temperature of fixing point/exposed part (°C): at 1,1 Un	N/A	—
	- calculated temperature of fixing point/exposed part (°C)	N/A	—
	Ball-pressure test	See Table 3.15 (13.2.1)	N/A
3.12 (12.7.1.3)	Luminaire with short circuit proof transformers ≤ 10 VA		N/A
	- case of abnormal conditions	N/A	—

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Clause	Requirement + Test	Result - Remark	Verdict
	- Components retained in place after the test		N/A
	- Test with standard test finger after the test		N/A
3.12 (12.7.2)	Luminaire with temperature sensing control		N/A
	- thermal link..... : Yes ☐ No ☐		—
	- manual reset cut-out : Yes ☐ No ☐		—
	- auto reset cut-out : Yes ☐ No ☐		—
	- case of abnormal conditions : N/A		—
	- highest measured temperature of fixing point/ exposed part (°C): : N/A		—
	Ball-pressure test: : See Table 3.15 (13.2.1)		N/A
3.12.1 (-)	Temperature reduction if for outdoor use only		P
3.12.2 (-)	(See above)		—
3.12.3 (-)	Glass covers used within the thermal limits declared by the glass manufacturer		N/A

3.13 (9)	RESISTANCE TO DUST AND MOISTURE		P
3.13.1 (-)	If IP > IP 20 the order of tests as specified in clause 3.12		P
3.13 (9.2)	Tests for ingress of dust, solid objects and moisture:		P
	- classification according to IP..... : IP66		—
	- mounting position during test : down-lighting		—
	- fixing screws tightened; torque (Nm) : See mounting instruction		—
	- tests according to clauses..... : 9.2.2, 9.2.7		—
	- electric strength test afterwards		P
	a) no deposit in dust-proof luminaire		N/A
	b) no talcum in dust-tight luminaire		P
	c) no trace of water on current-carrying parts or on insulation where it could become a hazard		P
	c.1) For luminaires without drain holes – no water entry		P
	c.2) For luminaires with drain holes – no hazardous water entry		N/A
	d) no water in watertight, pressure watertight, high pressure and temperature water jet-proof or high pressure and cold water jet-proof luminaire		N/A
	e) no contact with live parts (IP 2X)		N/A
	e) no entry into enclosure (IP 3X and IP 4X)		N/A

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Clause	Requirement + Test	Result - Remark	Verdict
	e) no contact with live parts through drain holes and ventilation slots (IP3X and IP4X)		N/A
	f) no trace of water on part of lamp requiring protection from splashing water		N/A
	g) no damage of protective shield or glass envelope		N/A
3.13 (9.3)	Humidity test 48 h		P

3.14 (10)	INSULATION RESISTANCE AND ELECTRIC STRENGTH		P
3.14 (10.2.1)	Insulation resistance test		P
	Cable or cord covered by metal foil or replaced by a metal rod of mm Ø	N/A	—
	Insulation resistance (MΩ)	> 10 MΩ	—
	SELV/PELV:		P
	- between current-carrying parts of different polarity :		N/A
	- between current-carrying parts and mounting surface	> 10 MΩ	P
	- between current-carrying parts and metal parts of the luminaire	> 10 MΩ	P
	- between the outer surface of a flexible cord or cable where it is clamped in a cord anchorage and accessible metal parts		N/A
	- Insulation bushings as described in Section 5		N/A
	Other than SELV/PELV:		P
	- between live parts of different polarity		N/A
	- between live parts and mounting surface	> 10 MΩ	P
	- between live parts and metal parts	> 10 MΩ	P
	- between live parts of different polarity through action of a switch		N/A
	- between the outer surface of a flexible cord or cable where it is clamped in a cord anchorage and accessible metal parts	> 10 MΩ	P
	- Insulation bushings as described in Section 5		N/A
3.14 (10.2.2)	Electric strength test		P
	Dummy lamp		N/A
	Luminaires with ignitors after 24 h test		N/A
	Luminaires with manual ignitors		N/A
	Test voltage (V)	See below	P

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Clause	Requirement + Test	Result - Remark	Verdict
	SELV/PELV:		N/A
	- between current-carrying parts of different polarity :		N/A
	- between current-carrying parts and mounting surface..... :		N/A
	- between current-carrying parts and metal parts of the luminaire..... :		N/A
	- between the outer surface of a flexible cord or cable where it is clamped in a cord anchorage and accessible metal parts..... :		N/A
	- Insulation bushings as described in Section 5 :		N/A
	Other than SELV/PELV:		P
	- between live parts of different polarity :		N/A
	- between live parts and mounting surface :	1480 V	P
	- between live parts and metal parts :	1480 V	P
	- between live parts of different polarity through action of a switch..... :		N/A
	- between the outer surface of a flexible cord or cable where it is clamped in a cord anchorage and accessible metal parts..... :		N/A
	- Insulation bushings as described in Section 5 :		N/A
3.14 (10.3)	Touch current (mA)..... :		N/A
	Protective conductor current (mA)..... :	0,33 mA	P

3.15 (13)	RESISTANCE TO HEAT, FIRE AND TRACKING		N/A
3.15 (13.2.1)	Ball-pressure test :	See Test Table 3.15 (13.2.1)	N/A
3.15 (13.3.1)	Needle-flame test (10 s)..... :	See Test Table 3.15 (13.3.1)	N/A
3.15 (13.3.2)	Glow-wire test (650°C) :	See Test Table 3.15 (13.3.2)	N/A
3.15 (13.4)	Proof tracking test (IEC 60112)..... :	See Test Table 3.15 (13.4)	N/A

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Clause	Requirement + Test	Result - Remark	Verdict

3.7 (11.2)	TABLE I: Creepage distances and clearances						P
	Minimum distances (mm) for a.c. up to 30 kHz sinusoidal voltages						P
	Applicable part of IEC 60598-1 Table 11.1.A*, 11.1.B* and 11.2*						P
	Insulation type **	Measured clearance	Required		Measured creepage	Required	
			clearance	*Table		creepage	*Table
Distance 1:	B	4,5mm	1,5 mm	11.1.B	9,5mm	220V - 2,2 mm 240V – 2,4 mm	11.1.A
Working voltage (V)					220 - 240		—
PTI					< 600 ☒ ≥ 600 ☐		—
Pulse voltage or U_P if applicable (kV)							—
Supplementary information:							
Distance 2:	B						
Working voltage (V)							—
PTI					< 600 ☒ ≥ 600 ☐		—
Pulse voltage or U_P if applicable (kV)							—
Supplementary information:							
Distance 3:							
Working voltage (V)							—
PTI					< 600 ☐ ≥ 600 ☐		—
Pulse voltage or U_P if applicable (kV)							—
Supplementary information:							

** Insulation type: B – Basic; S – Supplementary; R – Reinforced. See also IEC 60598-1 Annex M.

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Clause	Requirement + Test	Result - Remark	Verdict

3.7 (11.2)	TABLE II: Creepage distances and clearances							N/A
Minimum distances (mm) for a.c. higher than 30 kHz sinusoidal voltages								
Applicable part of IEC 61347-1 Table 7 and 8* or IEC 60664-4 Table 1 and 2								
Distances	Insulation type **	Measured clearance	Required		Measured creepage	Required		
			clearance	*Table		creepage	*Table	
Distance 1:								
Working voltage (V)							—	
Frequency if applicable (kHz)							—	
PTI					< 600 ☐ ≥ 600 ☐		—	
Peak value of the working voltage $\hat{U}_{out}$ if applicable (kV)							—	
Supplementary information:								
Distance 2:								
Working voltage (V)							—	
Frequency if applicable (kHz)							—	
PTI					< 600 ☐ ≥ 600 ☐		—	
Peak value of the working voltage $\hat{U}_{out}$ if applicable (kV)							—	
Supplementary information:								
Distance 3:								
Working voltage (V)							—	
Frequency if applicable (kHz)							—	
PTI					< 600 ☐ ≥ 600 ☐		—	
Peak value of the working voltage $\hat{U}_{out}$ if applicable (kV)							—	
Supplementary information:								

** Insulation type: B – Basic; S – Supplementary; R – Reinforced.

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Clause	Requirement + Test	Result - Remark	Verdict

3.15 (13.2.1)	TABLE: Ball Pressure Test of Thermoplastics			N/A
Allowed impression diameter (mm) :		2		—
Object/ Part No./ Material	Manufacturer/ trademark	Test temperature (°C)	Impression diameter (mm)	
Supplementary information:				

3.15 (13.3.1)	TABLE: Needle-flame test				N/A
Object/ Part No./ Material	Manufacturer/ trademark	Duration of application of test flame (ta); (s)	Ignition of specified layer Yes/No	Duration of burning (tb) (s)	Verdict
Supplementary information:					

3.15 (13.3.2)	TABLE: Resistance to heat and fire - Glow wire tests						N/A
Object/ Part No./ Material	Manufacturer/ trademark	Glow wire test (°C)					Verdict
		650		750		850	
		te	ti	te	ti		
Ignition of the specified layer placed underneath the test specimen (Yes/No)..... :							
Supplementary information:							

3.15 (13.4)	TABLE: Proof tracking test				N/A
Test voltage PTI		175 V			—
Object/ Part No./ Material	Manufacturer/ trademark	Withstand 50 drops without failure on three places or on three specimens			Verdict
Supplementary information:					

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Clause	Requirement + Test	Result - Remark	Verdict

ANNEX 1		TABLE: Critical components information					P
Object / part No.	Cod e	Manufacturer/ trademark	Type / model	Technical data	Standard	Mark(s) of conformity ¹⁾	
LED Modules	A	LUG	ML21XXXYY.WQQQ.UUV Luxeon 5050 modules (choice sheet below)	Tc -40°C to +85°C	EN62031	ENEC	
Example of symbol:							
ML21XXXYY.WQQQ.UUV 12345678							
Designations used on the marking of LED boards:							
1. ML - PCB designation (ML – LED module)							
2. 21 - Year of the project 19, 20, 21							
3. XXX - Number of the project: 660, 661, 662, 663, 670, 671, 672, 673, 680, 681, 682, 683, 690, 691, 692, 693							
4. YY - Project variant (PCB design, milling, dimensions, soldermask color, laminate thickness, LED configuration): 00...99							
5. W Light color: W: White							
6. QQQ - CRI and CCT: 718: CRI 70 and 1800K 722: CRI 70 and 2200K 727: CRI 70 and 2700K 730: CRI 70 and 3000K 735: CRI 70 and 3500K 740: CRI 70 and 4000K 750: CRI 70 and 5000K 757: CRI 70 and 5700K 765: CRI 70 and 6500K 818: CRI 80 and 1800K 822: CRI 80 and 2200K 827: CRI 80 and 2700K 830: CRI 80 and 3000K 835: CRI 80 and 3500K 840: CRI 80 and 4000K 850: CRI 80 and 5000K 857: CRI 80 and 5700K 865: CRI 80 and 6500K							
7. UU - Assembly variant (selected components not mounted): 01...99							
8. V - NTC Thermistor type: A - none B – 10K C – 47K							
LED Modules	A	LUG	ML21XXXYY.WQQQ.UUV Cree XPG3 modules (choice sheet below)	Tc -40°C to +85°C	EN62031	ENEC	
Example of symbol:							

IEC 60598-2-3			
Clause	Requirement + Test	Result - Remark	Verdict

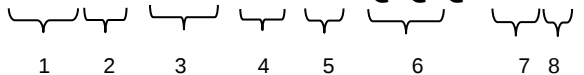
ANNEX 1		TABLE: Critical components information					P
Object / part No.	Cod e	Manufacturer/ trademark	Type / model		Technical data	Standard	Mark(s) of conformity ¹⁾
ML21XXXYY.WQQQ.UUV 12345678 Designations used on the marking of LED boards: 1. ML - PCB designation (ML – LED module) 2. 21 - Year of the project 12, 13, 14, 15, 16, 17, 18, 19, 20, 21 3. XXX - Number of the project: 600, 601, 610, 611, 001, 002, 003, 004, 005, 008, 009, 010, 013, 014, 017, 020, 023, 024, 182, 193, 271, 272, 273, 281, 506, 513 4. YY - Project variant (PCB design, milling, dimensions, soldermask color, laminate thickness, LED configuration): 00...99 5. W Light color: W: White 6. QQQ - CRI and CCT: 718: CRI 70 and 1800K 722: CRI 70 and 2200K 727: CRI 70 and 2700K 730: CRI 70 and 3000K 735: CRI 70 and 3500K 740: CRI 70 and 4000K 750: CRI 70 and 5000K 757: CRI 70 and 5700K 765: CRI 70 and 6500K 818: CRI 80 and 1800K 822: CRI 80 and 2200K 827: CRI 80 and 2700K 830: CRI 80 and 3000K 835: CRI 80 and 3500K 840: CRI 80 and 4000K 850: CRI 80 and 5000K 857: CRI 80 and 5700K 865: CRI 80 and 6500K 7. UU - Assembly variant (selected components not mounted): 01...99 8. V - NTC Thermistor type: A - none B – 10K C – 47K							
LED Modules	A	LUG	ML21XXXYY.WQQQ.UUV Duris S8 modules (choice sheet below)		Tc -40°C to +85°C	EN62031	ENEC
Example of symbol:							
ML21XXXYY.WQQQ.UUV 12345678 Designations used on the marking of LED boards:							

IEC 60598-2-3			
Clause	Requirement + Test	Result - Remark	Verdict

ANNEX 1	TABLE: Critical components information					P
Object / part No.	Cod e	Manufacturer/ trademark	Type / model	Technical data	Standard	Mark(s) of conformity ¹⁾
1. ML			- PCB designation (ML – LED module)			
2. 21			- Year of the project 19, 20, 21			
3. XXX			- Number of the project: 241, 510			
4. YY			- Project variant (PCB design, milling, dimensions, soldermask color, laminate thickness, LED configuration): 00...99			
5. W			Light color: W: White			
6. QQQ			- CRI and CCT: 718: CRI 70 and 1800K 722: CRI 70 and 2200K 727: CRI 70 and 2700K 730: CRI 70 and 3000K 735: CRI 70 and 3500K 740: CRI 70 and 4000K 750: CRI 70 and 5000K 757: CRI 70 and 5700K 765: CRI 70 and 6500K 818: CRI 80 and 1800K 822: CRI 80 and 2200K 827: CRI 80 and 2700K 830: CRI 80 and 3000K 835: CRI 80 and 3500K 840: CRI 80 and 4000K 850: CRI 80 and 5000K 857: CRI 80 and 5700K 865: CRI 80 and 6500K			
7. UU			- Assembly variant (selected components not mounted): 01...99			
8. V			- NTC Thermistor type: A - none B – 10K C – 47K			
LED Modules	A	LUG	ML21XXXYY.WQQQ.UUV Luxeon 3030 modules (choice sheet below)	Tc -40°C to +85°C	EN62031	ENEC

Example of symbol:

ML21XXXYY.WQQQ.UUV



Designations used on the marking of LED boards:

- | | |
|--------|--|
| 1. ML | - PCB designation (ML – LED module) |
| 2. 21 | - Year of the project
18, 19, 20, 21 |
| 3. XXX | - Number of the project:
Luxeon 3030 – 222, 320 |
| 4. YY | - Project variant (PCB design, milling, dimensions, soldermask color,
laminate thickness, LED configuration): |

IEC 60598-2-3			
Clause	Requirement + Test	Result - Remark	Verdict

ANNEX 1	TABLE: Critical components information					P
Object / part No.	Code	Manufacturer/ trademark	Type / model	Technical data	Standard	Mark(s) of conformity ¹⁾
5. W			00...99	Light color: W: White		
6. QQQ			- CRI and CCT: 718: CRI 70 and 1800K 722: CRI 70 and 2200K 727: CRI 70 and 2700K 730: CRI 70 and 3000K 735: CRI 70 and 3500K 740: CRI 70 and 4000K 750: CRI 70 and 5000K 757: CRI 70 and 5700K 765: CRI 70 and 6500K 818: CRI 80 and 1800K 822: CRI 80 and 2200K 827: CRI 80 and 2700K 830: CRI 80 and 3000K 835: CRI 80 and 3500K 840: CRI 80 and 4000K 850: CRI 80 and 5000K 857: CRI 80 and 5700K 865: CRI 80 and 6500K			
7. UU			- Assembly variant (selected components not mounted): 01...99			
8. V			- NTC Thermistor type: A - none B – 10K C – 47K			
LED Modules	A	LUG	ML21XXYY.WQQQ.UUV Cree XTE modules (choice sheet below)	Tc -40°C to +85°C	EN62031	ENEC

Example of symbol:

ML21XXYY.WQQQ.UUV

1 2 3 4 5 6 7 8

Designations used on the marking of LED boards:

- | | |
|--------|---|
| 1. ML | - PCB designation (ML – LED module) |
| 2. 21 | - Year of the project
14, 15 |
| 3. XXX | - Number of the project:
003, 010 |
| 4. YY | - Project variant (PCB design, milling, dimensions, soldermask color,
lamine thickness, LED configuration):
00...99 |
| 5. W | Light color:
W: White |
| 6. QQQ | - CRI and CCT:
718: CRI 70 and 1800K |

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Clause	Requirement + Test	Result - Remark	Verdict

ANNEX 1		TABLE: Critical components information					P
Object / part No.	Cod e	Manufacturer/ trademark	Type / model	Technical data	Standard	Mark(s) of conformity ¹⁾	
722: CRI 70 and 2200K 727: CRI 70 and 2700K 730: CRI 70 and 3000K 735: CRI 70 and 3500K 740: CRI 70 and 4000K 750: CRI 70 and 5000K 757: CRI 70 and 5700K 765: CRI 70 and 6500K 818: CRI 80 and 1800K 822: CRI 80 and 2200K 827: CRI 80 and 2700K 830: CRI 80 and 3000K 835: CRI 80 and 3500K 840: CRI 80 and 4000K 850: CRI 80 and 5000K 857: CRI 80 and 5700K 865: CRI 80 and 6500K 7. UU - Assembly variant (selected components not mounted): 01...99 8. V - NTC Thermistor type: A - none B – 10K C – 47K							
Control gear	A	OSRAM	OT100W/UNV/800C/2DIMLT2/P6	220..240V, 50-60Hz, ta= -40...+55°C, tc max=90°C	EN 61347-1 EN 61347-2-13	ENEC	
Control gear	A	OSRAM	OT 110/170...240/1A0 1DIMLT2 G1 CE	220..240V, 50-60Hz, ta= -40...+55°C, tc max=85°C	EN 61347-1 EN 61347-2-13	ENEC	
Control gear	A	OSRAM	OT 20/170-240/1A0 1DIM LT2 G1 CE	220..240V, 50-60Hz, ta= -40...+60°C, tc max=75°C	EN 61347-1 EN 61347-2-13	ENEC	
Control gear	A	OSRAM	OT 75/170...240/1A0 1DIMLT2 G1 CE	220..240V, 50-60Hz, ta= -40...+55°C, tc max=80°C	EN 61347-1 EN 61347-2-13	ENEC	
Control gear	A	OSRAM	OT DX 40/220...240/1A0 DIMA LT2 E	220..240V, 50-60Hz, ta= -40...+55°C, tc max=80°C	EN 61347-1 EN 61347-2-13	ENEC	
Control gear	A	OSRAM	OT DX 75/220...240/1A0 DIMA LT2 E	220..240V, 50-60Hz, ta= -40...+55°C, tc max=85°C	EN 61347-1 EN 61347-2-13	ENEC	

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Clause	Requirement + Test	Result - Remark	Verdict

ANNEX 1	TABLE: Critical components information					P
Object / part No.	Cod e	Manufacturer/ trademark	Type / model	Technical data	Standard	Mark(s) of conformity ⁴⁾
Control gear	A	OSRAM	OT DX 110/220...240/1A0 DIMA LT2 E	220..240V, 50-60Hz, ta= -40...+55°C, tc max=85°C	EN 61347-1 EN 61347-2-13	ENEC
Control gear	A	OSRAM	OT 20/170...240/1A0 4DIMLT2 G2 CE	220..240V, 50-60Hz, ta= -40...+60°C, tc max=75°C	EN 61347-1 EN 61347-2-13	ENEC
Control gear	A	OSRAM	OT 40/170...240/1A0 4DIMLT2 G2 CE	220..240V, 50-60Hz, ta= -40...+60°C, tc max=80°C	EN 61347-1 EN 61347-2-13	ENEC
Control gear	A	OSRAM	OT 75/170...240/1A0 4DIMLT2 G2 CE	220..240V, 50-60Hz, ta= -40...+55°C, tc max=85°C	EN 61347-1 EN 61347-2-13	ENEC
Control gear	A	OSRAM	OT 110/170...240/1A0 4DIMLT2 G2 CE	220..240V, 50-60Hz, ta= -40...+60°C, tc max=75°C	EN 61347-1 EN 61347-2-13	ENEC
Control gear	A	OSRAM	OT 20/170...240/1A0 1DIMLT2 G1 CE	220..240V, 50-60Hz, ta= -40...+55°C, tc max=85°C	EN 61347-1 EN 61347-2-13	ENEC
Control gear	A	OSRAM	OT 40/170...240/1A0 1DIMLT2 G1 CE	220..240V, 50-60Hz, ta= -40...+60°C, tc max=80°C	EN 61347-1 EN 61347-2-13	ENEC
Control gear	A	OSRAM	OT 40/120...277/1A0 4DIMLT2 E	220..240V, 50-60Hz, ta= -40...+60°C, tc max=80°C	EN 61347-1 EN 61347-2-13	ENEC
Control gear	A	OSRAM	OT 60/170...240/1A0 4DIMLT2 E	220..240V, 50-60Hz, ta= -40...+60°C, tc max=85°C	EN 61347-1 EN 61347-2-13	ENEC
Control gear	A	OSRAM	OT 90/170...240/1A0 4DIMLT2 E	220..240V, 50-60Hz, ta= -40...+55°C, tc max=90°C	EN 61347-1 EN 61347-2-13	ENEC
Control gear	A	OSRAM	OT 50/120...277/800 2DIMLT2 P6	220..240V, 50-60Hz, ta= -40...+55°C, tc max=85°C	EN 61347-1 EN 61347-2-13	ENEC

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Clause	Requirement + Test	Result - Remark	Verdict

ANNEX 1	TABLE: Critical components information					P
Object / part No.	Cod e	Manufacturer/ trademark	Type / model	Technical data	Standard	Mark(s) of conformity ¹⁾
Control gear	A	OSRAM	OT 50/120...277/1A2 2DIMLT2 P6	220..240V, 50-60Hz, ta= -40...+55°C, tc max=80°C	EN 61347-1 EN 61347-2-13	ENEC
Control gear	A	OSRAM	OT 100/120...277/800 2DIMLT2 P6	220..240V, 50-60Hz, ta= -40...+55°C, tc max=85°C	EN 61347-1 EN 61347-2-13	ENEC
Control gear	A	OSRAM	OT 110/120...277/1A4 2DIMLT2 P6	220..240V, 50-60Hz, ta= -40...+55°C, tc max=85°C	EN 61347-1 EN 61347-2-13	ENEC
Control gear	A	OSRAM	OT 60/220...240/1A4 1DIMA P7	220..240V, 50-60Hz, ta= -40...+55°C, tc max=85°C	EN 61347-1 EN 61347-2-13	ENEC
Control gear	A	OSRAM	OT 100/220...240/1A4 1DIMA P7	220..240V, 50-60Hz, ta= -40...+55°C, tc max=85°C	EN 61347-1 EN 61347-2-13	ENEC
Control gear	A	OSRAM	OT 75/UNV/1A0 2DIM P7	120..277V, 50-60Hz, ta= -40...+55°C, tc max=85°C	EN 61347-1 EN 61347-2-13	ENEC
Control gear	A	OSRAM	OT 100/UNV/1A0 2DIM P7	120..277V, 50-60Hz, ta= -40...+55°C, tc max=85°C	EN 61347-1 EN 61347-2-13	ENEC
Control gear	A	OSRAM	OT 100/ 220-240/1A4 2DIM P7	220..240V, 50-60Hz, ta= -40...+55°C, tc max=85°C	EN 61347-1 EN 61347-2-13	ENEC
LED Driver	A	OSRAM	IT DALI 20/220...240/1A0 E	220...240 V/50/60Hz, Ta =-40...+60 °C, Tc max =75 °C	Acc. to EN 61347-1/Acc. to EN 61347-2- 13/Acc. to EN 55015/Acc. to EN 61547/Acc. to EN 61000-3- 2/Acc. to EN 62384/Acc. to EN 62386	CE / CCC / EAC / RCM / VDE / VDE-EMC / UKCA / DALI-2 / ENEC

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Clause	Requirement + Test	Result - Remark	Verdict

ANNEX 1	TABLE: Critical components information					P
Object / part No.	Code	Manufacturer/ trademark	Type / model	Technical data	Standard	Mark(s) of conformity ⁴⁾
LED Driver	A	OSRAM	IT DALI 40/220...240/1A0 E	220...240 V/50/60Hz, Ta = -40...+60 °C, Tc max = 85 °C	EN 61347-2-13, EN 61347-1	VDE, ENEC10
LED Driver	A	OSRAM	IT DALI 75/220...240/1A0 E	220...240 V/50/60Hz, Ta = -40...+60 °C, Tc max = 100 °C	EN 61347-2-13	VDE, ENEC10
LED Driver	A	OSRAM	IT DALI 110/220...240/1A0 E	220...240 V/50/60Hz, Ta = -40...+60 °C, Tc max = 90 °C	EN 61347-2-13, EN 61347-1	VDE, ENEC10
LED Driver	A	OSRAM	IT DALI 150/220...240/1A0 E	220...240, 50/60Hz, Ta = -40...+55 °C, Tc max = 85 °C	Acc. to EN 61347-1/Acc. to EN 61347-2- 13/Acc. to EN 55015/Acc. to EN 61547/Acc. to EN 61000-3- 2/Acc. to EN 62384/Acc. to EN 62386	CCC / CE / RCM / EAC / UKCA / DALI-2 / VDE / VDE- EMC / ENEC
LED Driver	A	OSRAM	IT DALI 200/220...240/1A0 E	220...240, 50/60Hz, Ta = -40...+60 °C, Tc max = 75 °C	Acc. to EN 61347-1/Acc. to EN 61347-2- 13/Acc. to EN 55015/Acc. to EN 61547/Acc. to EN 61000-3- 2/Acc. to EN 62384/Acc. to EN 62386	CCC / CE / RCM / EAC / UKCA / DALI-2 / VDE / VDE- EMC / ENEC
LED Driver	A	Osram	OT 75 /220...240/1A0 1DIM G2 CE	220...240V, 50/60Hz, Ta = -40...+55 °C, Tc max = 85 °C	EN 61347-2-13, EN 61347-1	CE / ENEC / VDE / VDE-EMC / CCC / EAC ENEC 10 VDE
Control Gear	A	OSRAM	OT 50/120...277/700 P5	120..277V, 50-60Hz, ta= -40...+55°C, tc max=85°C	EN 61347-1, EN 61347-2-13	CB by Dekra

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Clause	Requirement + Test	Result - Remark	Verdict

ANNEX 1	TABLE: Critical components information					P
Object / part No.	Cod e	Manufacturer/ trademark	Type / model	Technical data	Standard	Mark(s) of conformity ¹⁾
Control Gear	A	OSRAM	OT 100/120...277/700 P5	120..277V, 50-60Hz, ta= -40...+55°C, tc max=85°C	EN 61347-1, EN 61347-2-13	CB by Dekra
Control Gear	A	OSRAM	OT 100/220...240/4A2 P5	220..240V, 50-60Hz, ta= -40...+55°C, tc max=85°C	EN 61347-1, EN 61347-2-13	CB certifikat
Control Gear	A	OSRAM	OT 20/170...240/1A0 4DIM NFC G3 CE	220..240V, 50-60Hz, ta= -40...+60°C, tc max=75°C	EN 61347-1, EN 61347-2-13	ENEC 10 VDE
Control Gear	A	OSRAM	OT 40/170...240/0A7 4DIM NFC G3 CE	220..240V, 50-60Hz, ta= -40...+60°C, tc max=80°C	EN 61347-1, EN 61347-2-13	ENEC 10 VDE
Control Gear	A	OSRAM	OT 40/170...240/1A0 4DIM NFC G3 CE	220..240V, 50-60Hz, ta= -40...+60°C, tc max=80°C	EN 61347-1, EN 61347-2-13	ENEC 10 VDE
Control Gear	A	OSRAM	OT 75/170...240/0A7 4DIM NFC G3 CE	220..240V, 50-60Hz, ta= -40...+55°C, tc max=90°C	EN 61347-1, EN 61347-2-13	ENEC 10 VDE
Control Gear	A	OSRAM	OT 75/170...240/1A0 4DIM NFC G3 CE	220..240V, 50-60Hz, ta= -40...+55°C, tc max=90°C	EN 61347-1, EN 61347-2-13	ENEC 10 VDE
Control Gear	A	OSRAM	OT 75/170...240/1A5 4DIM NFC G3 CE	220..240V, 50-60Hz, ta= -40...+60°C, tc max=85°C	EN 61347-1, EN 61347-2-13	ENEC 10 VDE
Control Gear	A	OSRAM	OT 110/170...240/0A7 4DIM NFC G3 CE	220..240V, 50-60Hz, ta= -40...+55°C, tc max=80°C	EN 61347-1, EN 61347-2-13	ENEC 10 VDE
Control Gear	A	OSRAM	OT 110/170...240/1A0 4DIM NFC G3 CE	220..240V, 50-60Hz, ta= -40...+55°C, tc max=85°C	EN 61347-1, EN 61347-2-13	ENEC 10 VDE
Control Gear	A	OSRAM	OT DX 40/170...240/1A0 DIMA NFC G2	170..240V, 50-60Hz, ta= -40...+55°C, tc max=75°C	EN 61347-1, EN 61347-2-13	ENEC 10 VDE
Control Gear	A	OSRAM	OT DX 75/170...240/1A0 DIMA NFC G2	170..240V, 50-60Hz, ta= -40...+55°C, tc max=85°C	EN 61347-1, EN 61347-2-13	ENEC 10 VDE
Control Gear	A	OSRAM	OT DX 110/170...240/1A0 DIMA NFC G2	170..240V, 50-60Hz, ta= -40...+55°C, tc max=85°C	EN 61347-1, EN 61347-2-13	ENEC 10 VDE
LED Driver	A	OSRAM	IT DALI 20/120...240/1A0 P7	120..240V, 50-60Hz, ta= -40...+70°C, tc max=80°C	EN 61347-1 EN 61347-2-13	ENEC

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Clause	Requirement + Test	Result - Remark	Verdict

ANNEX 1	TABLE: Critical components information					P
Object / part No.	Code	Manufacturer/ trademark	Type / model	Technical data	Standard	Mark(s) of conformity ¹⁾
LED Driver	A	OSRAM	IT DALI 40/120...240/1A0 P7	120..240V, 50-60Hz, ta= -40...+65°C, tc max=80°C	EN 61347-1 EN 61347-2-13	ENEC
LED Driver	A	OSRAM	IT DALI 75/120...240/1A0 P7	120..240V, 50-60Hz, ta= -40...+65°C, tc max=80°C	EN 61347-1 EN 61347-2-13	ENEC
LED Driver	A	OSRAM	IT DALI 110/120...240/1A0 P7	120..240V, 50-60Hz, ta= -40...+60°C, tc max=85°C	EN 61347-1 EN 61347-2-13	ENEC
LED Driver	A	OSRAM	IT DALI 150/120...240/1A0 P7	120..240V, 50-60Hz, ta= -40...+60°C, tc max=90°C	EN 61347-1 EN 61347-2-13	ENEC
LED Driver	A	OSRAM	IT DALI 200/120...240/1A0 P7	120..240V, 50-60Hz, ta= -40...+55°C, tc max=90°C	EN 61347-1 EN 61347-2-13	ENEC
Control gear	B	OSRAM	OT 20/170...240/1A0 1DIM NFC G3 CE	220..240V, 50-60Hz, ta= -40...+60°C, tc max=75°C	EN 61347-1, EN 61347-2-13	ENEC 10 VDE
Control gear	B	OSRAM	OT 40/170-240/0A7 1DIM NFC G3 CE	220..240V, 50-60Hz, ta= -40...+60°C, tc max=80°C	EN 61347-1, EN 61347-2-13	ENEC 10 VDE
Control gear	B	OSRAM	OT 40/170-240/1A0 1DIM NFC G3 CE	220..240V, 50-60Hz, ta= -40...+60°C, tc max=80°C	EN 61347-1, EN 61347-2-13	ENEC 10 VDE

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Clause	Requirement + Test	Result - Remark	Verdict

ANNEX 1	TABLE: Critical components information					P
Object / part No.	Code	Manufacturer/ trademark	Type / model	Technical data	Standard	Mark(s) of conformity ¹⁾
Control gear	B	OSRAM	OT 75/170-240/1A0 1DIM NFC G3 CE	220..240V, 50-60Hz, ta= -40...+55°C, tc max=90°C	EN 61347-1, EN 61347-2-13	ENEC 10 VDE
Control gear	B	OSRAM	OT 110/170-240/0A7 1DIM NFC G3	220..240V, 50-60Hz, ta= -40...+55°C, tc max=80°C	EN 61347-1, EN 61347-2-13	ENEC 10 VDE
Control gear	B	OSRAM	OT 110/170-240/1A0 1DIM NFC G3	220..240V, 50-60Hz, ta= -40...+55°C, tc max=85°C	EN 61347-1, EN 61347-2-13	ENEC 10 VDE
Control gear	A	Inventronics	EBS-025S045BT2	176..305V, 50-60Hz, ta= -40...+75°C,	EN 61347-1, EN 61347-2-13	ENEC
Control gear	A	Inventronics	EBS-025S070BT2	176..305V, 50-60Hz, ta= -40...+75°C,	EN 61347-1, EN 61347-2-13	ENEC
Control gear	A	Inventronics	EBS-025S105BT2	171..275V, 50-60Hz, ta= -40...+75°C,	EN 61347-1, EN 61347-2-13	ENEC
Control gear	A	Inventronics	EBS-040S045BT2	176..305V, 50-60Hz, ta= -40...+75°C,	EN 61347-1, EN 61347-2-13	ENEC
Control gear	A	Inventronics	EBS-040S070BT2	176..305V, 50-60Hz, ta= -40...+75°C,	EN 61347-1, EN 61347-2-13	ENEC
Control gear	A	Inventronics	EBS-040S105BT2	176..305V, 50-60Hz, ta= -40...+75°C, tc max=90°C	EN 61347-1 EN 61347-2-13	ENEC
Control gear	A	Inventronics	EBS-080S070BT2	176..305V, 50-60Hz, ta= -40...+75°C,	EN 61347-1	ENEC
Control gear	A	Inventronics	EBS-080S105BT2	176..305V, 50-60Hz, ta= -40...+75°C, tc max=90°C	EN 61347-1 EN 61347-2-13	ENEC

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Clause	Requirement + Test	Result - Remark	Verdict

ANNEX 1	TABLE: Critical components information					P
Object / part No.	Code	Manufacturer/ trademark	Type / model	Technical data	Standard	Mark(s) of conformity ¹⁾
Control gear	A	Inventronics	EBS-080S150BT2	176..305V, 50-60Hz, ta= -40...+75°C, tc max=90°C	EN 61347-2-13	ENEC
Control gear	A	Inventronics	EBS-120S070BT2	176..305V, 50-60Hz, ta= -40...+75°C,	EN 61347-2-13	ENEC
Control gear	A	Inventronics	EBS-120S105BT2	176..305V, 50-60Hz, ta= -40...+75°C,	EN 61347-2-13	ENEC
Control gear	A	Inventronics	EBS-120S150BT2	176..305V, 50-60Hz, ta= -40...+75°C,	EN 61347-2-13	ENEC
Control gear	A	Inventronics	EUM-075S	90..305V, 50-60Hz, ta= -40...+80°C, tc max=90°C	EN 61347-1 EN 61347-2-13	ENEC
Control gear	A	Inventronics	EUM – 100S	100..277V, 50-60Hz, ta= -40...+75°C, tc max=90°C	EN 61347-1 EN 61347-2-13	ENEC
Control gear	A	Inventronics	EUM – 150S	100..277V, 50-60Hz, ta= -40...+75°C, tc max=90°C		ENEC
Control gear	A	Inventronics	EUM – 200S	100..277V, 50-60Hz, ta= -40...+75°C, tc max=90°C	EN 61347-1 EN 61347-2-13	ENEC
Control gear	A	Inventronics	EUM – 240S	100..277V, 50-60Hz, ta= -40...+75°C, tc max=90°C	EN 61347-1 EN 61347-2-13	ENEC
Control gear	A	Philips	Xitanium 40W 0.7A Prog+ GL-J sXt	220..240V, 50-60Hz, ta= -40...+55°C, tc max=80°C	EN 61347-1 EN 61347-2-13	ENEC
Control gear	A	Philips	Xitanium 75W 0.35-0.70A GL Prog+ sXt	220..240V, 50-60Hz, ta= -40...+55°C, tc max=80°C	EN 61347-1 EN 61347-2-13	ENEC
Control gear	A	Philips	Xitanium 75W 0.1-1.05A Prog GL F sXt	220..240V, 50-60Hz, ta= -40...+55°C, tc max=80°C	EN 61347-1 EN 61347-2-13	ENEC

IEC 60598-2-3			
Clause	Requirement + Test	Result - Remark	Verdict

ANNEX 1	TABLE: Critical components information					P
Object / part No.	Cod e	Manufacturer/ trademark	Type / model	Technical data	Standard	Mark(s) of conformity ⁴⁾
Control gear	A	Philips	Xitanium 100W 0.7A Prog+ GL-Z sXt	220..240V, 50-60Hz, ta= -40...+55°C, tc max=80°C	EN 61347-1 EN 61347-2-13	ENEC
Control gear	A	Philips	Xi BP 12W 0.1-0.5A S 230V C100	220..240V, 50-60Hz, ta= -40...+55°C, tc max=80°C	EN 61347-1 EN 61347-2-13	ENEC
Control gear	A	Philips	Xi BP 22W 0.2-0.7A S 230V C123	220..240V, 50-60Hz, ta= -40...+55°C, tc max=85°C	EN 61347-1 EN 61347-2-13	ENEC
Control gear	A	Philips	Xi BP 40W 0.2-0.7A S 230V C123	220..240V, 50-60Hz, ta= -40...+55°C, tc max=85°C	EN 61347-1 EN 61347-2-13	ENEC
Control gear	A	Philips	Xi BP 40W 0.3-1.0A S 230V C123	220..240V, 50-60Hz, ta= -40...+55°C, tc max=80°C	EN 61347-1 EN 61347-2-13	ENEC
Control gear	A	Philips	Xi LP 22W 0.2-0.7A S1 230V C123 sXt	220..240V, 50-60Hz, ta= -40...+55°C, tc max=85°C	EN 61347-1 EN 61347-2-13	ENEC
Control gear	A	Philips	Xi LP 22W 0.3-1.0A S1 230V C123 sXt	220..240V, 50-60Hz, ta= -40...+55°C, tc max=85°C	EN 61347-1 EN 61347-2-13	ENEC
Control gear	A	Philips	Xi LP 40W 0.2-0.7A S1 230V C123 sXt	220..240V, 50-60Hz, ta= -40...+55°C, tc max=85°C	EN 61347-1 EN 61347-2-13	ENEC
Control gear	A	Philips	Xi LP 40W 0.3-1.0A S1 230V C123 sXt	220..240V, 50-60Hz, ta= -40...+55°C, tc max=85°C	EN 61347-1 EN 61347-2-13	ENEC
Control gear	A	Philips	Xi LP 75W 0.2-0.7A S1 230V C133 sXt	220..240V, 50-60Hz, ta= -40...+55°C, tc max=80°C	EN 61347-1 EN 61347-2-13	ENEC
Control gear	A	Philips	Xi LP 75W 0.3-1.0A S1 230V C133 sXt	220..240V, 50-60Hz, ta= -40...+55°C, tc max=80°C	EN 61347-1 EN 61347-2-13	ENEC

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Clause	Requirement + Test	Result - Remark	Verdict

ANNEX 1	TABLE: Critical components information					P
Object / part No.	Code	Manufacturer/ trademark	Type / model	Technical data	Standard	Mark(s) of conformity ¹⁾
Control gear	A	Philips	Xi LP 75W 0.5-1.5A S1 230V C133 sXt	220..240V, 50-60Hz, ta= -40...+55°C, tc max=80°C	EN 61347-1 EN 61347-2-13	ENEC
Control gear	A	Philips	Xi LP 110W 0.2-0.7A S1 230V C133 sXt	220..240V, 50-60Hz, ta= -40...+55°C, tc max=90°C	EN 61347-1 EN 61347-2-13	ENEC
Control gear	A	Philips	Xi LP 110W 0.3-1.0A S1 230V C133 sXt	220..240V, 50-60Hz, ta= -40...+55°C, tc max=90°C	EN 61347-1 EN 61347-2-13	ENEC
Control gear	A	Philips	Xi LP 22W 0.2-0.7A S1 230V S175 sXt	220..240V, 50-60Hz, ta= -40...+55°C, tc max=80°C	EN 61347-1 EN 61347-2-13	ENEC
Control gear	A	Philips	Xi LP 22W 0.3-1.0A S1 230V S175 sXt	220..240V, 50-60Hz, ta= -40...+55°C, tc max=80°C	EN 61347-1 EN 61347-2-13	ENEC
Control gear	A	Philips	Xi LP 40W 0.2 -0.7A S1 230V S175 sXt	220..240V, 50-60Hz, ta= -40...+55°C, tc max=80°C	EN 61347-1 EN 61347-2-13	ENEC
Control gear	A	Philips	Xi LP 40W 0.2-0.7A SL 230V S175 sXt	220..240V, 50-60Hz, ta= -40...+55°C, tc max=80°C	EN 61347-1 EN 61347-2-13	ENEC
Control gear	A	Philips	Xi LP 40W 0.3-1.0A S1 230V S175 sXt	220..240V, 50-60Hz, ta= -40...+55°C, tc max=80°C	EN 61347-1 EN 61347-2-13	ENEC
Control gear	A	Philips	Xi LP 40W 0.3-1.0A SL 230V S175 sXt	220..240V, 50-60Hz, ta= -40...+55°C, tc max=80°C	EN 61347-1 EN 61347-2-13	ENEC
Control gear	A	Philips	Xi LP 40W 0.2-0.7A SN 230V S175 sXt	220..240V, 50-60Hz, ta= -40...+55°C, tc max=80°C	EN 61347-1 EN 61347-2-13	ENEC
Control gear	A	Philips	Xi LP 75W 0.2-0.7A S1 230V S240 sXt	220..240V, 50-60Hz, ta= -40...+55°C, tc max=90°C	EN 61347-1 EN 61347-2-13	ENEC

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Clause	Requirement + Test	Result - Remark	Verdict

ANNEX 1	TABLE: Critical components information					P
Object / part No.	Code	Manufacturer/ trademark	Type / model	Technical data	Standard	Mark(s) of conformity ¹⁾
Control gear	A	Philips	Xi LP 75W 0.2-0.7A SL 230V S240 sXt	220..240V, 50-60Hz, ta= -40...+55°C, tc max=85°C	EN 61347-1 EN 61347-2-13	ENEC
Control gear	A	Philips	Xi LP 75W 0.3-1.0A S1 230V S240 sXt	220..240V, 50-60Hz, ta= -40...+55°C, tc max=90°C	EN 61347-1 EN 61347-2-13	ENEC
Control gear	A	Philips	Xi LP 75W 0.3-1.0A SL 230V S240 sXt	220..240V, 50-60Hz, ta= -40...+55°C, tc max=85°C	EN 61347-1 EN 61347-2-13	ENEC
Control gear	A	Philips	Xi LP 75W 0.2-0.7A SN 230V S240 sXt	220..240V, 50-60Hz, ta= -40...+55°C, tc max=85°C	EN 61347-1 EN 61347-2-13	ENEC
Control gear	A	Philips	Xi LP 75W 0.5-1.5A S1 230V S240 sXt	220..240V, 50-60Hz, ta= -40...+55°C, tc max=85°C	EN 61347-1 EN 61347-2-13	ENEC
Control gear	A	Philips	Xi FP 22W 0.2-0.7A SNLDAE 230V C123 sXt	220..240V, 50-60Hz, ta= -40...+55°C, tc max=85°C	EN 61347-1 EN 61347-2-13	ENEC
Control gear	A	Philips	Xi FP 22W 0.3-1.0A SNLDAE 230V C123 sXt	220..240V, 50-60Hz, ta= -40...+55°C, tc max=85°C	EN 61347-1 EN 61347-2-13	ENEC
Control gear	A	Philips	Xi FP 40W 0.2-0.7A SNLDAE 230V C123 sXt	220..240V, 50-60Hz, ta= -40...+55°C, tc max=85°C	EN 61347-1 EN 61347-2-13	ENEC
Control gear	A	Philips	Xi FP 40W 0.3-1.0A SNLDAE 230V C123 sXt	220..240V, 50-60Hz, ta= -40...+55°C, tc max=85°C	EN 61347-1 EN 61347-2-13	ENEC
Control gear	A	Philips	Xi FP 70W 0.3-1.0A NLD C150 230V sXt	220..240V, 50-60Hz, ta= -30...+60°C, tc max=90°C	EN 61347-1 EN 61347-2-13	ENEC
Control gear	A	Philips	Xi FP 75W 0.2-0.7A SNLDAE 230V C133 sXt	220..240V, 50-60Hz, ta= -40...+55°C, tc max=80°C	EN 61347-1 EN 61347-2-13	ENEC

IEC 60598-2-3			
Clause	Requirement + Test	Result - Remark	Verdict

ANNEX 1	TABLE: Critical components information					P
Object / part No.	Cod e	Manufacturer/ trademark	Type / model	Technical data	Standard	Mark(s) of conformity ⁴⁾
Control gear	A	Philips	Xi FP 75W 0.3-1.0A SNLDAE 230V C133 sXt	220..240V, 50-60Hz, ta= -40...+55°C, tc max=80°C	EN 61347-1 EN 61347-2-13	ENEC
Control gear	A	Philips	Xi FP 75W 0.5-1.5A SNLDAE 230V C133 sXt	220..240V, 50-60Hz, ta= -40...+55°C, tc max=80°C	EN 61347-1 EN 61347-2-13	ENEC
Control gear	A	Philips	Xi FP 100W 0.2-0.7A SNLDAE 230V C165 sXt	220..240V, 50-60Hz, ta= -40...+55°C, tc max=85°C	EN 61347-1 EN 61347-2-13	ENEC
Control gear	A	Philips	Xi FP 110W 0.2-0.7A SNLDAE 230V C133 sXt	220..240V, 50-60Hz, ta= -40...+55°C, tc max=85°C	EN 61347-1 EN 61347-2-13	ENEC
Control gear	A	Philips	Xi FP 110W 0.3-1.0A NLD C150 230V sXt	220..240V, 50-60Hz, ta= -30...+60°C, tc max=90°C	EN 61347-1 EN 61347-2-13	ENEC
Control gear	A	Philips	Xi FP 110W 0.3-1.0A SNLDAE 230V C133 sXt	220..240V, 50-60Hz, ta= -40...+55°C, tc max=85°C	EN 61347-1 EN 61347-2-13	ENEC
Control gear	A	Philips	Xi FP 22W 0.2-0.7A SNLDAE 230V S175 sXt	220..240V, 50-60Hz, ta= -40...+55°C, tc max=85°C	EN 61347-1 EN 61347-2-13	ENEC
Control gear	A	Philips	Xi FP 22W 0.3-1.0A SNLDAE 230V S175 sXt	220..240V, 50-60Hz, ta= -40...+55°C, tc max=85°C	EN 61347-1 EN 61347-2-13	ENEC
Control gear	A	Philips	Xi FP 40W 0.2-7.0A SNLDAE 230V S175 sXt	220..240V, 50-60Hz, ta= -40...+55°C, tc max=85°C	EN 61347-1 EN 61347-2-13	ENEC
Control gear	A	Philips	Xi FP 40W 0.3-1.0A SNLDAE 230V S175 sXt	220..240V, 50-60Hz, ta= -40...+55°C, tc max=90°C	EN 61347-1 EN 61347-2-13	ENEC
Control gear	A	Philips	Xi FP 75W 0.2-0.7A SNLDAE 230V S240 sXt	220..240V, 50-60Hz, ta= -40...+55°C, tc max=85°C	EN 61347-1 EN 61347-2-13	ENEC

IEC 60598-2-3			
Clause	Requirement + Test	Result - Remark	Verdict

ANNEX 1	TABLE: Critical components information						P
Object / part No.	Code	Manufacturer/ trademark	Type / model	Technical data	Standard	Mark(s) of conformity ¹⁾	
Control gear	A	Philips	Xi FP 75W 0.3-1.0A SNLDAE 230V S240 sXt	220..240V, 50-60Hz, ta= -40...+55°C, tc max=85°C	EN 61347-1 EN 61347-2-13	ENEC	
Control gear	A	Philips	Xi SR 12W 0.2-0.7A SNEMP 230V C133 sXt	220..240V, 50-60Hz, ta= -40...+55°C, tc max=85°C	EN 61347-1 EN 61347-2-13	ENEC	
Control gear	A	Philips	Xi SR 22W 0.2-0.7A SNEMP 230V C133 sXt	220..240V, 50-60Hz, ta= -40...+55°C, tc max=85°C	EN 61347-1 EN 61347-2-13	ENEC	
Control gear	A	Philips	Xi SR 40W 0.2-0.7A SNEMP 230V C133 sXt	220..240V, 50-60Hz, ta= -40...+55°C, tc max=85°C	EN 61347-1 EN 61347-2-13	ENEC	
Control gear	A	Philips	Xi SR 75W 0.2-0.7A SNEMP 230V C150 sXt	220..240V, 50-60Hz, ta= -40...+55°C, tc max=90°C	EN 61347-1 EN 61347-2-13	ENEC	
Control gear	A	Philips	Xi SR 75W 0.2-0.7A SNEMP 230V S240 sXt	220..240V, 50-60Hz, ta= -40...+55°C, tc max=90°C	EN 61347-1 EN 61347-2-13	ENEC	
Control gear	A	Philips	Xi SR 110W 0.2-0.7A SNEMP 230V C150 sXt	220..240V, 50-60Hz, ta= -40...+55°C, tc max=90°C	EN 61347-1 EN 61347-2-13	ENEC	
Control gear	A	Philips	Xi SR 150W 0.2-0.7A SNEMP 230V S240 sXt	220..240V, 50-60Hz, ta= -40...+55°C, tc max=90°C	EN 61347-1 EN 61347-2-13	ENEC	
Control gear	A	Philips	Xitanium 100W 2.1-4.2A AOC 230V I220	220..240V, 50-60Hz, ta= -40...+55°C, tc max=80°C	EN 61347-1 EN 61347-2-13	ENEC	
Control gear	A	Philips	Xitanium 150W 2.5-4.9A AOC 230V I220	220..240V, 50-60Hz, ta= -40...+55°C, tc max=80°C	EN 61347-1 EN 61347-2-13	ENEC	
Control gear	A	Philips	Xi LP 100W 0.3-1.05A S1 230V I175	220..240V, 50-60Hz, ta= -40...+55°C, tc max=80°C	EN 61347-1 EN 61347-2-13	ENEC	

IEC 60598-2-3			
Clause	Requirement + Test	Result - Remark	Verdict

ANNEX 1	TABLE: Critical components information					P
Object / part No.	Cod e	Manufacturer/ trademark	Type / model	Technical data	Standard	Mark(s) of conformity ¹⁾
Control gear	A	Philips	Xi LP 150W 0.3-1.05A S1 230V I175	220..240V, 50-60Hz, ta= -40...+55°C, tc max=80°C	EN 61347-1 EN 61347-2-13	ENEC
Control gear	A	Philips	Xitanium Dim 35W 0.7A 1-10V TWE I175	220..240V, 50-60Hz, ta= -40...+55°C, tc max=80°C	EN 61347-1 EN 61347-2-13	ENEC
Control gear	A	Philips	Xitanium Dim 100W 0.7A 1-10V TWE I220	220..240V, 50-60Hz, ta= -40...+55°C, tc max=80°C	EN 61347-1 EN 61347-2-13	ENEC
Control gear	A	Philips	Xitanium Dim 150W 0.7A 1-10V TWE I220	220..240V, 50-60Hz, ta= -40...+55°C, tc max=85°C	EN 61347-1 EN 61347-2-13	ENEC
Control gear	A	Philips	Xitanium 75W 0.7A TWE I175	220..240V, 50-60Hz, ta= -40...+55°C, tc max=80°C	EN 61347-1 EN 61347-2-13	ENEC
Control gear	A	Philips	Xitanium 150W 0.7A TWE I220	220..240V, 50-60Hz, ta= -40...+55°C, tc max=85°C	EN 61347-1 EN 61347-2-13	ENEC
Control gear	A	Philips	Xitanium 75W 1.05A 1-10V 230V C165 sXt	220..240V, 50-60Hz, ta= -40...+55°C, tc max=85°C	EN 61347-1 EN 61347-2-13	ENEC
Control gear	A	Philips	Xitanium 75W 0.70A 1-10V 230V C165 sXt	220..240V, 50-60Hz, ta= -40...+55°C, tc max=85°C	EN 61347-1 EN 61347-2-13	ENEC
Control gear	A	Philips	Xitanium Dim 75W 0.70A 1-10V 230V I220	220..240V, 50-60Hz, ta= -40...+55°C, tc max=80°C	EN 61347-1	ENEC
Control gear	A	Philips	Xitanium Dim 150W 0.70A 1-10V 230V I220		EN 61347-1	ENEC
Control gear	A	Philips	Xitanium 75W 1-10V 230V C165		EN 61347-1 EN 61347-2-13	ENEC
Control gear	A	Philips	Xitanium 150W 1.05A 1-10V 230V S240 sXt	220..240V, 50-60Hz, ta= -40...+55°C,	EN 61347-1	ENEC

IEC 60598-2-3			
Clause	Requirement + Test	Result - Remark	Verdict

ANNEX 1	TABLE: Critical components information					P
Object / part No.	Code	Manufacturer/ trademark	Type / model	Technical data	Standard	Mark(s) of conformity ¹⁾
				tc max=80°C	EN 61347-2-13	
Control gear	A	Tridonic	Tridonic LCA 120W 300-1050mA	220..240V, 50-60Hz, ta= -30...+55°C, tc max=85°C	EN 61347-1 EN 61347-2-13	ENEC
Control gear	A	Tridonic	Tridonic LCA 75W 250-750mA one	220..240V, 50-60Hz, ta= -40...+70°C, tc max=85°C	EN 61347-1 EN 61347-2-13	ENEC
Control gear	A	Tridonic	Tridonic LCA 120W 350-1050mA o	220..240V, 50-60Hz, ta= -40...+70°C, tc max=85°C	EN 61347-1 EN 61347-2-13	ENEC
Control gear	A	Tridonic	Tridonic LCA 160W 350-1050mA o	220..240V, 50-60Hz, ta= -40...+70°C, tc max=85°C	EN 61347-1 EN 61347-2-13	ENEC
Control gear	A	Tridonic	LCO 14/100-500/38 NF C ADV3	220..240V, 50-60Hz, ta= -40...+70°C, tc max=90°C	EN 61347-1 EN 61347-2-13	ENEC
Control gear	A	Tridonic	LCO 24/200-1050/39 NF C ADV3	220..240V, 50-60Hz, ta= -40...+70°C, tc max=85°C	EN 61347-1 EN 61347-2-13	ENEC
Control gear	A	Tridonic	LCO 40/200-1050/64 NF C ADV3	220..240V, 50-60Hz, ta= -40...+70°C, tc max=90°C	EN 61347-1 EN 61347-2-13	ENEC
Control gear	A	Tridonic	LCO 60/200-1050/100 NF C ADV3	220..240V, 50-60Hz, ta= -40...+70°C, tc max=90°C	EN 61347-1 EN 61347-2-13	ENEC
Control gear	A	Tridonic	LCO 90/200-1050/165 NF C ADV3	220..240V, 50-60Hz, ta= -40...+70°C, tc max=100°C	EN 61347-1 EN 61347-2-13	ENEC
Control gear	A	Tridonic	LCO 135/200-1050/220 NF C ADV3	220..240V, 50-60Hz, ta= -40...+70°C, tc max=100°C	EN 61347-1 EN 61347-2-13	ENEC
Control gear	A	Tridonic	LCO 14/100-500/38 o4a NF C EXC3	220..240V, 50-60Hz, ta= -40...+70°C,	EN 61347-1	ENEC

IEC 60598-2-3			
Clause	Requirement + Test	Result - Remark	Verdict

ANNEX 1	TABLE: Critical components information					P
Object / part No.	Cod e	Manufacturer/ trademark	Type / model	Technical data	Standard	Mark(s) of conformity ¹⁾
				tc max=90°C	EN 61347-2-13	
Control gear	A	Tridonic	LCO 24/200-1050/39 o4a NF C EXC3	220..240V, 50-60Hz, ta= -40...+70°C, tc max=85°C	EN 61347-1 EN 61347-2-13	ENEC
Control gear	A	Tridonic	LCO 40/200-1050/64 o4a NF C EXC3	220..240V, 50-60Hz, ta= -40...+70°C, tc max=90°C	EN 61347-1 EN 61347-2-13	ENEC
Control gear	A	Tridonic	LCO 60/200-1050/100 o4a NF C EXC3	220..240V, 50-60Hz, ta= -40...+70°C, tc max=95°C	EN 61347-1 EN 61347-2-13	ENEC
Control gear	A	Tridonic	LCO 90/200-1050/165 o4a NF C EXC3	220..240V, 50-60Hz, ta= -40...+70°C, tc max=100°C	EN 61347-1 EN 61347-2-13	ENEC
Control gear	A	Tridonic	LCO 135/200-1050/220 o4a NF C EXC3	220..240V, 50-60Hz, ta= -40...+70°C, tc max=100°C	EN 61347-1 EN 61347-2-13	ENEC
Control gear	A	Tridonic	LCO 200/200-1050/355 o4a NF C EXC3	220..240V, 50-60Hz, ta= -40...+70°C, tc max=100°C	EN 61347-1 EN 61347-2-13	ENEC
Control gear	A	Tridonic	LCO 100/1050/95 fixC L SNC2	220..240V, 50-60Hz, ta= -40...+65°C, tc max=80°C	EN 61347-1 EN 61347-2-13	ENEC
Control gear	A	Tridonic	LCO 100/1400/71 fixC L SNC2	220..240V, 50-60Hz, ta= -40...+65°C, tc max=80°C	EN 61347-1 EN 61347-2-13	ENEC
Control gear	A	Tridonic	LCO 100/500/200 fixC L SNC2	220..240V, 50-60Hz, ta= -40...+65°C, tc max=80°C	EN 61347-1 EN 61347-2-13	ENEC
Control gear	A	Tridonic	LCO 100/700/143 fixC L SNC2	220..240V, 50-60Hz, ta= -40...+65°C, tc max=80°C	EN 61347-1 EN 61347-2-13	ENEC
Control gear	A	Tridonic	LCO 150/1050/142 fixC L SNC2	220..240V, 50-60Hz, ta= -40...+65°C,	EN 61347-1	ENEC

IEC 60598-2-3			
Clause	Requirement + Test	Result - Remark	Verdict

ANNEX 1	TABLE: Critical components information					P
Object / part No.	Code	Manufacturer/ trademark	Type / model	Technical data	Standard	Mark(s) of conformity ¹⁾
				tc max=80°C	EN 61347-2-13	
Control gear	A	Tridonic	LCO 150/1400/107 fixC L SNC2	220..240V, 50-60Hz, ta= -40...+65°C, tc max=85°C	EN 61347-1 EN 61347-2-13	ENEC
Control gear	A	Tridonic	LCO 150/500/300 fixC L SNC2	220..240V, 50-60Hz, ta= -40...+65°C, tc max=85°C	EN 61347-1 EN 61347-2-13	ENEC
Control gear	A	Tridonic	LCO 150/700/214 fixC L SNC2	220..240V, 50-60Hz, ta= -40...+65°C, tc max=85°C	EN 61347-1 EN 61347-2-13	ENEC
Control gear	A	Tridonic	LCO 75/1050/72 fixC L SNC2	220..240V, 50-60Hz, ta= -40...+65°C, tc max=80°C	EN 61347-1 EN 61347-2-13	ENEC
Control gear	A	Tridonic	LCO 75/1400/53 fixC L SNC2	220..240V, 50-60Hz, ta= -40...+65°C, tc max=80°C	EN 61347-1 EN 61347-2-13	ENEC
Control gear	A	Tridonic	LCO 75/500/150 fixC L SNC2	220..240V, 50-60Hz, ta= -40...+65°C, tc max=80°C	EN 61347-1 EN 61347-2-13	ENEC
Control gear	A	Tridonic	LCO 75/700/108 fixC L SNC2	220..240V, 50-60Hz, ta= -40...+65°C, tc max=80°C	EN 61347-1 EN 61347-2-13	ENEC
Control gear	A	Tridonic	LCO 14W 100–550mA 38V pD+ NFC C PRE3	220..240V, 50-60Hz, ta= -40...+70°C, tc max=95°C	EN 61347-1 EN 61347-2-13	ENEC
Control gear	A	Tridonic	LCO 24W 200–1050mA 39V pD+ NFC C PRE3	220..240V, 50-60Hz, ta= -40...+70°C, tc max=85°C	EN 61347-1 EN 61347-2-13	ENEC
Control Gear	A	Tridonic	LCO 40W 200–1050mA 64V pD+ NFC C PRE3	220..240V, 50-60Hz, ta= -40...+65°C, tc max=95°C	EN 61347-1, EN 61347-2-13	ENEC
Control Gear	A	Tridonic	LCO 60W 200–1050mA 100V pD+ NFC C PRE3	220..240V, 50-60Hz, ta= -40...+65°C, tc max=95°C	EN 61347-1, EN 61347-2-13	ENEC

IEC 60598-2-3			
Clause	Requirement + Test	Result - Remark	Verdict

ANNEX 1	TABLE: Critical components information					P
Object / part No.	Code	Manufacturer/ trademark	Type / model	Technical data	Standard	Mark(s) of conformity ¹⁾
Control gear	A	Tridonic	LCO 90W 200–1050mA 165V pD+ NFC C PRE3	220...240V, 50-60Hz, ta= -40...+70°C, tc max=95°C	EN 61347-1 EN 61347-2-13	ENEC
Control gear	A	Tridonic	LCO 135W 200–1050mA 220V pD+ NFC C PRE3	220...240V, 50-60Hz, ta= -40...+70°C, tc max=85°C	EN 61347-1 EN 61347-2-13	ENEC
Control Gear	A	Tridonic	LCO 165W 200–1050mA 285V pD+ NFC C PRE3	220...240V, 50-60Hz, ta= -40...+65°C, tc max=95°C	EN 61347-1, EN 61347-2-13	ENEC
Control Gear	A	Tridonic	LCO 165W 200–1050mA 285V one4all NFC C EXC3	220...240V, 50-60Hz, ta= -40...+70°C, tc max=100°C	EN 61347-1, EN 61347-2-13	ENEC
LED Driver	A	LACROIX	DL-PAK 70	220...240 50/60Hz, Ta =-25...+60 °C, Tc max =90 °C	EN 61347-2-13, EN 61347-1	ENEC
LED Driver	A	DELTA	EUCI-040105GLA	220...240 V/50/60Hz, Ta=-40...+60 °C, Tc max =85 °C	EN 61347-2-13, EN 61347-1	ENEC
LED Driver	A	DELTA	EUCI-075105GLA	220...240 V/50/60Hz, Ta=-40...+55 °C, Tc max =85 °C	EN 61347-2-13, EN 61347-1	ENEC
LED Driver	A	DELTA	EUCI-130105GLA	220...240 V/50/60Hz, Ta=-40...+55 °C, Tc max =85 °C	EN 61347-2-13, EN 61347-1	ENEC
LED Driver	A	DELTA	EUCI-170105GLA	220...240 V/50/60Hz, Ta=-40...+55 °C, Tc max =90 °C	EN 61347-2-13, EN 61347-1	ENEC
LED Driver	A	Delta	EUCI-022105GLB	220...240V, 50/60Hz, Ta=-40...+55 °C, Tc max =85 °C	EN 61347-2-13, EN 61347-1	ENEC

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Clause	Requirement + Test	Result - Remark	Verdict

ANNEX 1	TABLE: Critical components information					P
Object / part No.	Code	Manufacturer/ trademark	Type / model	Technical data	Standard	Mark(s) of conformity ¹⁾
LED Driver	A	Delta	EUCI-040105GLB	198...264V, 50/60Hz, Ta = -40...+55 °C, Tc max = 90 °C	EN 61347-2-13, EN 61347-1	ENEC
LED Driver	A	Delta	EUCI-075105GLB	220...240 V/50/60Hz, Ta = -40...+55 °C, Tc max = 85 °C	EN 61347-2-13, EN 61347-1	ENEC
Control Gear	A	Delta	EUCI 040105GIA	220...240V, 50-60Hz, ta= -40...+60°C, tc max=85°C	EN 61347-1, EN 61347-2-13	ENEC
Control Gear	A	Delta	EUCO 150140GA	220...240V, 50-60Hz, ta= -40...+55°C, tc max=85°C	EN 61347-1, EN 61347-2-13	ENEC
Control Gear	A	Delta	EUCO 200140GA	220...240V, 50-60Hz, ta= -40...+55°C, tc max=90°C	EN 61347-1, EN 61347-2-13	ENEC
Control Gear	A	SOSEN	SS-50VP-72BH	100...277V, 50-60Hz, ta= -40...+90C, tc max=90C	EN 61347-1 EN 61347-2-13	ENEC
Control Gear	A	SOSEN	SS-75VP-108BH	100...277V, 50-60Hz, ta= -40...+90C, tc max=90C	EN 61347-1 EN 61347-2-13	ENEC
Control Gear	A	SOSEN	SS-100VP-143BH	100...277V, 50-60Hz, ta= -40...+90C, tc max=90C	EN 61347-1 EN 61347-2-13	ENEC
Control Gear	A	SOSEN	SS-150VP-215BH	100...277V, 50-60Hz, ta= -40...+90C, tc max=90C	EN 61347-1 EN 61347-2-13	ENEC
Control Gear	A	SOSEN	SS-22PA- 32B	220...240V, 50-60Hz, ta= -40...+60C, tc max=90C	EN 61347-1 EN 61347-2-13	ENEC
Control Gear	A	SOSEN	SS-40PA-54B	220...240V, 50-60Hz, ta= -40...+60C, tc max=90C	EN 61347-1 EN 61347-2-13	ENEC
Control Gear	A	SOSEN	SS-75PA-108B	220...240V, 50-60Hz, ta= -40...+60C, tc max=90C	EN 61347-1 EN 61347-2-13	ENEC
Control Gear	A	SOSEN	SS-110PA-160B	220...240V, 50-60Hz, ta= -40...+60C, tc max=90C	EN 61347-1 EN 61347-2-13	ENEC

IEC 60598-2-3			
Clause	Requirement + Test	Result - Remark	Verdict

ANNEX 1	TABLE: Critical components information					P
Object / part No.	Cod e	Manufacturer/ trademark	Type / model	Technical data	Standard	Mark(s) of conformity ¹⁾
Control Gear	A	SOSEN	SS-165PA-235B	220..240V, 50-60Hz, ta= -40...+60C, tc max=90C	EN 61347-1 EN 61347-2-13	ENEC
Control Gear	A	SOSEN	SS-40PA-57F	220..240V, 50-60Hz, ta= -40...+60C, tc max=90C	EN 61347-1 EN 61347-2-13	ENEC
Control Gear	A	SOSEN	SS-75PA-178F	220..240V, 50-60Hz, ta= -40...+60C, tc max=90C	EN 61347-1 EN 61347-2-13	ENEC
Control Gear	A	SOSEN	SS-110PA-160F	220..240V, 50-60Hz, ta= -40...+60C, tc max=90C	EN 61347-1 EN 61347-2-13	ENEC
Control Gear	A	SOSEN	SS-165PA-236F	220..240V, 50-60Hz, ta= -40...+60C, tc max=90C	EN 61347-1 EN 61347-2-13	ENEC
Control Gear	A	Pelsan	316646 150W	220..240V, 50-60Hz, ta= -40...+90C, tc max=90°C	EN 61347-1, EN 61347-2-13	ENEC
Control Gear	A	Moon	MU240HxxxAQ_DALI2 Series	220..240V, 50-60Hz, ta= -40...+50C, tc max=90C	EN 61347-1, EN 61347-2-13	UL
Control Gear	A	ELDO LED	OT50W/UNV/800C/2DIMLT2/P6	120..277V, 50-60Hz, ta= -40...+60C, tc max=90C	EN 61347-1, EN 61347-2-13	UL
Control Gear	A	Moso	U6-040D057	220..240V, 50-60Hz, ta= -40...+55°C, tc max=85°C	EN 61347-1, EN 61347-2-13	ENEC
Control Gear	A	Moso	U6-080D115	220..240V, 50-60Hz, ta= -40...+55°C, tc max=85°C	EN 61347-1, EN 61347-2-13	ENEC
Control Gear	A	Moso	U6-120D172	220..240V, 50-60Hz, ta= -40...+55°C, tc max=85°C	EN 61347-1, EN 61347-2-13	ENEC
Control Gear	A	Moso	U7-026D038	220..240V, 50-60Hz, ta= -40...+55°C, tc max=85°C	EN 61347-1, EN 61347-2-13	ENEC
Control Gear	A	Moso	U7-040D057	220..240V, 50-60Hz, ta= -40...+55°C, tc max=85°C	EN 61347-1, EN 61347-2-13	ENEC
Control Gear	A	Moso	U7-060D086	220..240V, 50-60Hz, ta= -40...+55°C, tc max=85°C	EN 61347-1, EN 61347-2-13	ENEC

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Clause	Requirement + Test	Result - Remark	Verdict

ANNEX 1	TABLE: Critical components information					P
Object / part No.	Cod e	Manufacturer/ trademark	Type / model	Technical data	Standard	Mark(s) of conformity ¹⁾
Control Gear	A	Moso	U7-080D115	220..240V, 50-60Hz, ta= -40...+550C, tc max=90°C	EN 61347-1, EN 61347-2-13	ENEC
Control Gear	A	Moso	U7-120D172	220..240V, 50-60Hz, ta= -40...+500C, tc max=90°C	EN 61347-1, EN 61347-2-13	ENEC
Control Gear	A	Moso	LUP 120	220..240V, 50-60Hz, ta= -40...+60°C, tc max=85°C	EN 61347-1, EN 61347-2-13	ENEC
Control Gear	A	Moso	LUP 150	220..240V, 50-60Hz, ta= -40...+60°C, tc max=85°C	EN 61347-1, EN 61347-2-13	ENEC
Control Gear	A	Moso	LUP 200	220..240V, 50-60Hz, ta= -40...+60°C, tc max=85°C	EN 61347-1, EN 61347-2-13	ENEC
Control Gear	A	uPowerTek	APD-040	176..264V, 50-60Hz, ta= -40...+900C, tc max=900C	EN 61347-1, EN 61347-2-13	ENEC
Control Gear	A	uPowerTek	APD-075	176..264V, 50-60Hz, ta= -40...+900C, tc max=900C	EN 61347-1, EN 61347-2-13	ENEC
Control Gear	A	uPowerTek	APD-110	176..264V, 50-60Hz, ta= -40...+900C, tc max=900C	EN 61347-1, EN 61347-2-13	ENEC
Control Gear	A	uPowerTek	APD-165	176..264V, 50-60Hz, ta= -40...+900C, tc max=900C	EN 61347-1, EN 61347-2-13	ENEC
Control Gear	A	uPowerTek	APD-200	176..264V, 50-60Hz, ta= -40...+900C, tc max=900C	EN 61347-1, EN 61347-2-13	ENEC
Control Gear	A	uPowerTek	BLD-060	176..264V, 50-60Hz, ta= -40...+900C, tc max=900C	EN 61347-1, EN 61347-2-13	ENEC
Control Gear	A	uPowerTek	BLD-075	176..264V, 50-60Hz, ta= -40...+900C, tc max=900C	EN 61347-1, EN 61347-2-13	ENEC
Control Gear	A	uPowerTek	BLD-096	176..264V, 50-60Hz, ta= -40...+900C, tc max=900C	EN 61347-1, EN 61347-2-13	ENEC
Control Gear	A	uPowerTek	BLD-120	176..264V, 50-60Hz, ta= -40...+900C, tc max=900C	EN 61347-1, EN 61347-2-13	ENEC

IEC 60598-2-3			
Clause	Requirement + Test	Result - Remark	Verdict

ANNEX 1	TABLE: Critical components information						P
Object / part No.	Cod e	Manufacturer/ trademark	Type / model	Technical data	Standard	Mark(s) of conformity ¹⁾	
Control Gear	A	TCI	MILANOinLED 75W/200-1050 AD	220..240V, 50-60Hz, ta= -40...+550C, tc max=850C	EN 61347-1, EN 61347-2-13	ENEC	
Control Gear	A	TCI	MILANOinLED 20W/200-1050 1PN	220..240V, 50-60Hz, ta= -40...+60°C, tc max=75°C	EN 61347-1, EN 61347-2-13	ENEC	
Control Gear	A	TCI	MILANOinLED 40W/200-1050 1PN	220..240V, 50-60Hz, ta= -40...+60°C, tc max=80°C	EN 61347-1, EN 61347-2-13	ENEC	
Control Gear	A	TCI	MILANOinLED 75W/200-1050 1PN	220..240V, 50-60Hz, ta= -40...+55°C, tc max=85°C	EN 61347-1, EN 61347-2-13	ENEC	
Control Gear	A	TCI	MILANOinLED 110W/200-1050 1PN	220..240V, 50-60Hz, ta= -40...+55°C, tc max=85°C	EN 61347-1, EN 61347-2-13	ENEC	
Control Gear	A	TCI	MILANOinLED 165W/200-1050 1PN	220..240V, 50-60Hz, ta= -40...+55°C, tc max=90°C	EN 61347-1, EN 61347-2-13	ENEC	
Control Gear	A	TCI	MILANOinLED 20W/200-1050 4PN	220..240V, 50-60Hz, ta= -40...+60°C, tc max=75°C	EN 61347-1, EN 61347-2-13	ENEC	
Control Gear	A	TCI	MILANOinLED 40W/200-1050 4PN	220..240V, 50-60Hz, ta= -40...+60°C, tc max=80°C	EN 61347-1, EN 61347-2-13	ENEC	
Control Gear	A	TCI	MILANOinLED 75W/200-1050 4PN	220..240V, 50-60Hz, ta= -40...+55°C, tc max=85°C	EN 61347-1, EN 61347-2-13	ENEC	
Control Gear	A	TCI	MILANOinLED 110W/200-1050 4PN	220..240V, 50-60Hz, ta= -40...+55°C, tc max=85°C	EN 61347-1, EN 61347-2-13	ENEC	
Control Gear	A	TCI	MILANOinLED 165W/200-1050 4PN	220..240V, 50-60Hz, ta= -40...+55°C, tc max=90°C	EN 61347-1, EN 61347-2-13	ENEC	
Control Gear	A	TCI	VEGA 75/530-1050 FPD IP67	220..240V, 50-60Hz, ta= -40...+60°C, tc max=90°C	EN 61347-1, EN 61347-2-13	ENEC	
Control Gear	A	TCI	VEGA 105/530-1050 FPD IP67	220..240V, 50-60Hz, ta= -40...+60°C, tc max=90°C	EN 61347-1, EN 61347-2-13	ENEC	
Control Gear	A	TCI	VEGA 150/530-1050 FPD IP67	220..240V, 50-60Hz, ta= -40...+60°C, tc max=90°C	EN 61347-1, EN 61347-2-13	ENEC	

IEC 60598-2-3			
Clause	Requirement + Test	Result - Remark	Verdict

ANNEX 1	TABLE: Critical components information						P
Object / part No.	Code	Manufacturer/ trademark	Type / model	Technical data	Standard	Mark(s) of conformity ¹⁾	
Control Gear	A	TCI	SIRIO SQ 22W 200-700 1-10V	220..240V, 50-60Hz, ta= -40...+55°C, tc max=85°C	EN 61347-1, EN 61347-2-13	ENEC	
Control Gear	A	TCI	SIRIO SQ 40W 200-700 1-10V	220..240V, 50-60Hz, ta= -40...+55°C, tc max=85°C	EN 61347-1, EN 61347-2-13	ENEC	
Control Gear	A	TCI	SIRIO SQ 75W 200-700 1-10V	220..240V, 50-60Hz, ta= -40...+55°C, tc max=80°C	EN 61347-1, EN 61347-2-13	ENEC	
Control Gear	A	TCI	SIRIO SQ 110W 200-700 1-10V	220..240V, 50-60Hz, ta= -40...+55°C, tc max=90°C	EN 61347-1, EN 61347-2-13	ENEC	
Control Gear	A	TCI	SIRIO SQ 165W 200-700 1-10V	220..240V, 50-60Hz, ta= -40...+55°C, tc max=85°C	EN 61347-1, EN 61347-2-13	ENEC	
Control Gear	A	TCI	SIRIO SQ 22W 200-700 4PN	220..240V, 50-60Hz, ta= -40...+55°C, tc max=85°C	EN 61347-1, EN 61347-2-13	ENEC	
Control Gear	A	TCI	SIRIO SQ 40W 200-700 4PN	220..240V, 50-60Hz, ta= -40...+55°C, tc max=85°C	EN 61347-1, EN 61347-2-13	ENEC	
Control Gear	A	TCI	SIRIO SQ 75W 200-700 4PN	220..240V, 50-60Hz, ta= -40...+55°C, tc max=80°C	EN 61347-1, EN 61347-2-13	ENEC	
Control Gear	A	TCI	SIRIO SQ 110W 200-700 4PN	220..240V, 50-60Hz, ta= -40...+55°C, tc max=85°C	EN 61347-1, EN 61347-2-13	ENEC	
Control Gear	A	TCI	SIRIO SQ 22W 200-700 AD	220..240V, 50-60Hz, ta= -40...+55°C, tc max=85°C	EN 61347-1, EN 61347-2-13	ENEC	
Control Gear	A	TCI	SIRIO SQ 40W 200-700 AD	220..240V, 50-60Hz, ta= -40...+55°C, tc max=85°C	EN 61347-1, EN 61347-2-13	ENEC	
Control Gear	A	TCI	SIRIO SQ 75W 200-700 AD	220..240V, 50-60Hz, ta= -40...+55°C, tc max=90°C	EN 61347-1, EN 61347-2-13	ENEC	
Control Gear	A	TCI	SIRIO SQ 110W 200-700 AD	220..240V, 50-60Hz, ta= -40...+55°C, tc max=90°C	EN 61347-1, EN 61347-2-13	ENEC	
Control Gear	A	TCI	SIRIO SQ 165W 200-700 AD	220..240V, 50-60Hz, ta= -40...+55°C, tc max=90°C	EN 61347-1, EN 61347-2-13	ENEC	
Control Gear	A	Vossloh schwabe	PRIMELINE ECXd 1050.639	220..240V, 50-60Hz, ta= -40...+55°C, tc	EN 61347-1, EN 61347-2-13	ENEC	

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Clause	Requirement + Test	Result - Remark	Verdict

ANNEX 1	TABLE: Critical components information					P
Object / part No.	Cod e	Manufacturer/ trademark	Type / model	Technical data	Standard	Mark(s) of conformity ¹⁾
				max=85°C		
Control Gear	A	Vossloh schwabe	PRIMELINE ECXd 1050.640	220..240V, 50-60Hz, ta= -40...+55°C, tc max=85°C	EN 61347-1, EN 61347-2-13	ENEC
Control Gear	A	Vossloh schwabe	PrimeLine ECXd1050.659	220..240V, 50-60Hz, ta= -40...+55°C, tc max=85°C	EN 61347-1, EN 61347-2-13	ENEC
Control Gear	A	Vossloh schwabe	PRIMELINE ECXd 1050.641	220..240V, 50-60Hz, ta= -40...+55°C, tc max=85°C	EN 61347-1, EN 61347-2-13	ENEC
Control Gear	A	Vossloh schwabe	PRIMELINE ECXd 1050.642	220..240V, 50-60Hz, ta= -40...+55°C, tc max=85°C	EN 61347-1, EN 61347-2-13	ENEC
Wires LED	B	Mrowiec	H05V-K	500 V; 1 mm ²	IEC227	SEP-BBJ
Internal wires	B	Mrowiec	H05V-K	500 V; 0,5 mm ²	IEC227	SEP-BBJ
Wires	B	Mrowiec	H05VV-F	2X1,5mm ²	IEC227	SEP-BBJ
Connector	B	LONGJOIN	JL-700	1.5A, 30V	EN5015:2013+ A1:2015, EN61547:2009, EN 61000-3-2:2014, EN 61000-3-3:2013, EN 61984:2009	Dekra
Connector system	B	BJB	47.121.-303.93, 47.121.-305.80, 47.121.-702.14, 47.121.-705.84, 47.121.U301.80, 47.121.U303.80, 47.121.U304.80, 47.921.-801.68, 47.921.-802.68, 47.921.U801.81	2A, 24V DC, ta= -40°C to 100°C	EN 61984	VDE
Connector	B	BJB	46.412	16A; 450 V	DIN EN 60998-1 (VDE 0613 Teil 1):2005-03; EN 60998-1:2004; DIN EN 60998-2-2 (VDE 0613 Teil 2-2):2005-03; EN 60998-2-2:2004	VDE UL
Connector	B	BJB	46.413	16A; 450 V	EN 60998-2-2	VDE UL
Connector	B	BJB	46.414	16A; 450 V	EN 60998-2-2	VDE UL
Connector	B	BJB	46.415	16A; 450 V	EN 60998-2-2	VDE UL
Connector	B	BJB	46.455	16A; 450 V	EN 60998-2-2	VDE UL

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Clause	Requirement + Test	Result - Remark	Verdict

ANNEX 1	TABLE: Critical components information					P
Object / part No.	Cod e	Manufacturer/ trademark	Type / model	Technical data	Standard	Mark(s) of conformity ¹⁾
Connector	B	TE Connectivity	2834049 2834048 2834055 2834054	9A; 600 V	EN 61984	TUV
Connector	A	Greenway Electronics Co Ltd	M684	16A; 450 V	EN 61984, EN 60988-1,	ENEC
Luminaire protection	B	Linoya Electronic Technology	LYSPD10D	300Vac, 50Hz, IP67	EN 61643-11:2012+A11	TUV
Luminaire protection	B	Vossloh schwabe	SP / 230 / 10K	220-240V, 50/60Hz, Ta = -30°C do 80°C	EN 60598-2-3 EN 61643-11	VDE
Luminaire protection	B	Vossloh schwabe	SP3 / 230 / 10K / i	100-277V, 50/60Hz, Ta = -35°C do 80°C	EN 60598-2-3 EN 61643-11	DEKRA
Luminaire protection	B	Vossloh schwabe	SPC 3 / 230 / 10K / i	100-277V, 50/60Hz, Ta = -35°C do 80°C	EN 60598-2-3 EN 61643-11	DEKRA
Luminaire protection	B	Vossloh schwabe	SPC 3 / 230 / 10K / i-IP66	100-277V, 50/60Hz, Ta = -35°C do 80°C	EN 60598-2-3 EN 61643-11	DEKRA
Fixed resistor	B	Uniroyal Electronics	MGR series	100k Ohm to 100 MOhm (+-5%), 2W, 2,5kV	DIN EN IEC 62368-1 (VDE 0868-1):2021-05 Anhang/Annex G.10; EN IEC 62368-1:2020+A11:2020 Anhang/Annex G.10 IEC 62368-1:2018, Anhang/Annex G.10	VDE
Connector	B	Jiang Men Krealux Electrical	P02-M	17,5A; 450 V	EN 60988-1 EN 60998-2-2	VDE
Connector	A	Openwise	925	16A; 450 V	EN 60988-1 EN 60998-2-2	ENEC
Connector	A	Openwise	928	32A; 450 V	EN 60988-1 EN 60998-2-2	ENEC
Connector system	B	LONGJOIN Nema	JL-240	t= -40...+70°C, 480VAC, 50/60Hz, Signal Contacts: 30VDC, 0,25A	EN 61984	DEKRA
Connector system	B	Tridonic	SPD 10kV CE SNC	100-277V, 50/60Hz, Ta = -40°C do 80°C	EN 61643-11	KEMA KEUR
Luminaire protection	B	Vossloh schwabe	SPC 230/10K/i	100-277V, 50/60Hz, Ta = -35°C do 80°C	EN 61643-11	DEKRA
Luminaire protection	B	Inventronics	PU-20KX10KTXX	320Vac, 8A, 47-63Hz, Ta = -40°C do 85°C	EN 61643-11 EN 61643-21	VDE
Luminaire protection	B	Inventronics	PU-20Kx10KBx	320Vac, 15A, 47-63Hz, Ta = -40°C do 85°C	EN 61643-11 EN 61643-21	VDE
Luminaire protection	B	Inventronics	PU-10Kx05KBx	320Vac, 8A, 47-63Hz, Ta = -40°C do 85°C	EN 61643-11 EN 61643-21	VDE

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Clause	Requirement + Test	Result - Remark	Verdict

ANNEX 1	TABLE: Critical components information					P
Object / part No.	Code	Manufacturer/ trademark	Type / model	Technical data	Standard	Mark(s) of conformity ¹⁾
Luminaire protection	B	Linoya Electronic Technology	LYSPD10D	300Vac, 50Hz, IP67	EN 61643-11	TUV
Luminaire protection	B	ESB	ESB-6K	220-240V, 50/60Hz, Ta = -30°C do 80°C	EN 61643-11	VDE
Fuse holder	B	Mersen	CCR101N	400-500 VAC, 25-32 A	IEC60947-3 IEC60269-2 IEC60269-3	NF
Luminaire protection	B	RuiLongYuan	TP10D	100-277V, 50/60Hz, Ta = -40°C do 85°C	EN 61643-11 IEC 61643-11	TUV
Luminaire protection	B	Greenway	GSPD 1	100-277V, 50/60Hz, Ta = -40°C do 85°C	EN 61643-11 IEC 61643-11	TUV
Luminaire protection	B	Greenway	GSPD 3	100-277V, 50/60Hz, Ta = -40°C do 85°C	EN 61643-11 IEC 61643-11	TUV
Luminaire protection	B	LINOYA	LYSPD10A	100-277V, 50/60Hz, Ta = -40°C do 85°C	EN 61643-11 IEC 61643-11	UL
Luminaire protection	B	ZP Lightning	ZP-LSP10-PL	100-277V, 50/60Hz, Ta = -40°C do 85°C	EN 61643-11 IEC 61643-11	UL
Luminaire protection	B	ZP Lightning	ZP-LED-P10D	100-277V, 50/60Hz, Ta = -40°C do 85°C	EN 61643-11 IEC 61643-11	TUV
Luminaire protection	B	ZP Lightning	ZP-LED-S10D	100-277V, 50/60Hz, Ta = -40°C do 85°C	EN 61643-11 IEC 61643-11	TUV
Luminaire protection	B	ZP Lightning	ZP-LSP10-PR	100-277V, 50/60Hz, Ta = -40°C do 85°C	EN 61643-11 IEC 61643-11	TUV
Luminaire protection	B	ZP Lightning	ZP-LSP10-PY/II	100-277V, 50/60Hz, Ta = -40°C do 85°C	EN 61643-11 IEC 61643-11	TUV
Luminaire protection	B	ZP Lightning	ZP-LSP10-SR	100-277V, 50/60Hz, Ta = -40°C do 85°C	EN 61643-11 IEC 61643-11	TUV
Luminaire protection	B	ZP Lightning	ZP-LSP10-SY/II	100-277V, 50/60Hz, Ta = -40°C do 85°C	EN 61643-11 IEC 61643-11	TUV
Luminaire protection	B	Zhongyuan Technology	ZYS-P10WD, ZYS-P20WD	100-277V, 50/60Hz, Ta = -40°C do 85°C	EN 61643-11 IEC 61643-11	TUV
Luminaire protection	B	Zhongyuan Technology	ZYS-P10SD, ZYS-P20SD, ZYS-P10SD/II, ZYS-P20SD/II	100-277V, 50/60Hz, Ta = -40°C do 85°C	EN 61643-11 IEC 61643-11	TUV
Supplementary information: ¹⁾ Provided evidence ensures the agreed level of compliance. See OD-CB2039. The codes above have the following meaning: A - The component is replaceable with another one, also certified, with equivalent characteristics B - The component is replaceable if authorised by the test house C - Integrated component tested together with the appliance D - Alternative component						

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Clause	Requirement + Test	Result - Remark	Verdict

ANNEX 2	TABLE: Thermal tests of Section 12			P			
	Type reference	:	130872.7LR7B18S725.145.Z.V.R	—			
	Lamp used.....	:	ML2160143.W718.01A	—			
	Lamp control gear used	:	EBS-120S105BT2	—			
	Mounting position of luminaire	:	on the mast arm	—			
	Supply wattage (W)	:	76,8 W	—			
	Supply current (A)	:	0,35 A	—			
	Temperatures in test 1 - 4 below are corrected for ta (°C)	:	50 °C	—			
	- abnormal operating mode	:	N/A	—			
3.12 (12.4)	- test 1: rated voltage	:	240 V	—			
	- test 2: 1,06 times rated voltage or 1,05 times rated wattage or 1,1 times constant voltage/current	:	254,4 V	—			
	- test 3: Load on wiring to socket-outlet, 1,06 times voltage or 1,05 times wattage	:	N/A	—			
	Through wiring or looping-in wiring loaded by a current of A during the test	:	N/A	—			
3.12 (12.5)	- test 4: 1,1 times rated voltage or 1,05 times rated wattage or 1,1 times constant voltage/current or 130/150% of rated input voltage	:	N/A	—			
Temperature measurements (°C)							
Part	Ambient	Cl. 12.4 – normal				Cl. 12.5 – abnormal	
		test 1	test 2	test 3	limit	test 4	limit
LED Module Tc ML 2160143 W718.01A	50	93,7(83,7)*	N/A	N/A	85	N/A	N/A

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Clause	Requirement + Test			Result - Remark			Verdict
Control gear Tc EBS-120S105BT2	50	83,7	N/A	N/A	90	N/A	N/A
Internal wires	50	N/A	71,3	N/A	90	N/A	N/A
Wire	50	N/A	53,2	N/A	90	N/A	N/A
Luminaire protection SPC 3 / 230 / 10K / i	50	N/A	72,1	N/A	80	N/A	N/A
Supplementary information: The luminaire has been tested on 50 and 60 Hz. The table chose the worst case. (*) - acc. to standard EN 60598-2-3 temperature has been reduced by 10° C							

ANNEX 3	Screw terminals (part of the luminaire)		N/A
(14)	SCREW TERMINALS		
(14.2)	Type of terminal..... :	N/A	—
	Rated current (A)..... :	N/A	—
(14.3.2.1)	One or more conductors		N/A
(14.3.2.2)	Special preparation		N/A
(14.3.2.3)	Terminal size		N/A
	Cross-sectional area (mm²)..... :	N/A	—
(14.3.3)	Conductor space (mm)..... :		N/A
(14.4)	Mechanical tests		
(14.4.1)	Minimum distance		N/A
(14.4.2)	Cannot slip out		N/A
(14.4.3)	Special preparation		N/A
(14.4.4)	Nominal diameter of thread (metric ISO thread) :	M	N/A
	External wiring		N/A
	No soft metal		N/A
(14.4.5)	Corrosion		N/A
(14.4.6)	Nominal diameter of thread (mm) :		N/A
	Torque (Nm) :		N/A
(14.4.7)	Between metal surfaces		N/A
	Lug terminal		N/A
	Mantle terminal		N/A
	Pull test; pull (N)..... :		N/A
(14.4.8)	Without undue damage		N/A

IEC 60598-2-3			
Clause	Requirement + Test	Result - Remark	Verdict

ANNEX 4	Screwless terminals (part of the luminaire)		N/A
(15)	SCREWLESS TERMINALS		N/A
(15.2)	Type of terminal..... :	N/A	—
	Rated current (A)..... :	N/A	—
(15.3.1)	Material		N/A
(15.3.2)	Clamping		N/A
(15.3.3)	Stop		N/A
(15.3.4)	Unprepared conductors		N/A
(15.3.5)	Pressure on insulating material		N/A
(15.3.6)	Clear connection method		N/A
(15.3.7)	Clamping independently		N/A
(15.3.8)	Fixed in position		N/A
(15.3.10)	Conductor size		N/A
	Type of conductor		N/A
(15.5)	Terminals and connections for internal wiring		N/A
(15.5.1)	Mechanical tests		N/A
(15.5.1.1.1)	Pull test spring-type terminals (4 N, 4 samples)		N/A
(15.5.1.1.2)	Pull test pin or tab terminals (4 N, 4 samples)		N/A
	Insertion force not exceeding 50 N		N/A
(15.5.1.2)	Permanent connections: pull-off test (20 N)		N/A
(15.5.2)	Electrical tests		N/A
	Voltage drop (mV) after 1 h (4 samples)		N/A
	Voltage drop of two inseparable joints		N/A

IEC 60598-2-3			
Clause	Requirement + Test	Result - Remark	Verdict
	Number of cycles:		—
	Voltage drop (mV) after 10th alt. 25th cycle (4 samples)..... :		N/A
	Voltage drop (mV) after 50th alt. 100th cycle (4 samples)..... :		N/A
	After ageing, voltage drop (mV) after 10th alt. 25th cycle (4 samples)		N/A
	After ageing, voltage drop (mV) after 50th alt. 100th cycle (4 samples)		N/A
(15.6)	Terminals and connections for external wiring		N/A
(15.6.1)	Conductors		N/A
	Terminal size and rating		N/A
15.6.2	Mechanical tests		N/A
(15.6.2.1)	Pull test spring-type terminals or welded connections (4 samples); pull (N)		N/A
(15.6.2.2)	Pull test pin or tab terminals (4 samples); pull (N)		N/A
(15.6.3)	Electrical tests		N/A
	Tests according 15.6.3.1 + 15.6.3.2 in IEC 60598-1		N/A

(15.6.3.1) (15.6.3.2)	TABLE: Contact resistance test / Heating tests										N/A
	Voltage drop (mV) after 1 h										—
terminal	1	2	3	4	5	6	7	8	9	10	
voltage drop (mV)											
	Voltage drop of two inseparable joints										
	Voltage drop after 10th alt. 25th cycle										
	Max. allowed voltage drop (mV) :										—
terminal	1	2	3	4	5	6	7	8	9	10	
voltage drop (mV)											
	Voltage drop after 50th alt. 100th cycle										
	Max. allowed voltage drop (mV) :										—
terminal	1	2	3	4	5	6	7	8	9	10	
voltage drop (mV)											
	Continued ageing: voltage drop after 10th alt. 25th cycle										
	Max. allowed voltage drop (mV) :										—
terminal	1	2	3	4	5	6	7	8	9	10	

IEC 60598-2-3										
Clause	Requirement + Test					Result - Remark				Verdict
voltage drop (mV)										
	Continued ageing: voltage drop after 50th alt. 100th cycle									
	Max. allowed voltage drop (mV)									—
terminal	1	2	3	4	5	6	7	8	9	10
voltage drop (mV)										
Supplementary information:										

List of test equipment used:

A completed list of used test equipment shall be provided in the Test Reports when a Customer's Testing Facility according to CTF stage 1 or CTF stage 2 procedure has been used.

Note: This page may be removed when CTF stage 1 or CTF stage 2 are not used. See also clause 4.8 in OD 2020 for more details.

Clause	Measurement / testing	Testing / measuring equipment / material used, (Equipment ID)	Range used	Last Calibration date	Calibration due date

Photos



TRF No. IEC60598_2_3M







Bobeica

Obiect

MD-5311, s.Bobeica, r.
Hincesti, RM

Cuprins

Pagină titlu	1
Cuprins	2

Date tehnice privind produsul

LUG Light Factory - TRAFFIK LED 19W 2350lm 4000K IP66 O27 - for local roads	3
gray I (1x LED ED 19W 2350lm 4000K IP66 O27 I class gray)	
LUG Light Factory - URBINO LED S 34W 5100lm 740 O15 (1x LED 4000K)	4

Stradă - M6 · Alternativă 1

Rezumat (până la EN 13201:2015)	5
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Stradă - P5 · Alternativă 2

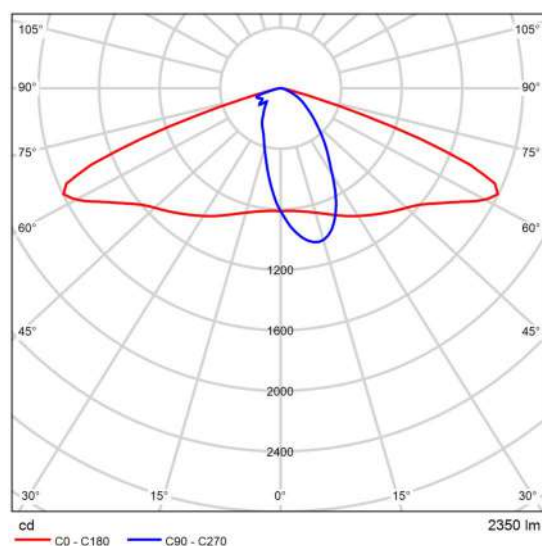
Rezumat (până la EN 13201:2015)	9
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Fișa de date privind produsul

LUG Light Factory - TRAFFIK LED 19W 2350lm 4000K IP66 O27 - for local roads gray I



Nr.articol	130292.5L011.010
P	19.0 W
$\Phi_{\text{Lampă}}$	–
$\Phi_{\text{Corp de iluminat}}$	2350 lm
η	–
Eficiența luminoasă	123.7 lm/W
CCT	4000 K
CRI	70



CDIL polar

Professional streetlight luminaire for LED light sources.

Mounting: on outriggers $\varnothing 60/48\text{mm}$

Body: high pressure die-cast aluminum

Lateral Surface Wind Exposed: 0.033 m^2 .

Power: 220-240V 50/60Hz

Available on request: DIM 1..10V, LLOC, twilight sensor, 10kV surge protection, NTC

Other remarks: the pole and boom are not part of the luminaire; luminaire available in protection class I and II

Warranty: 5 years

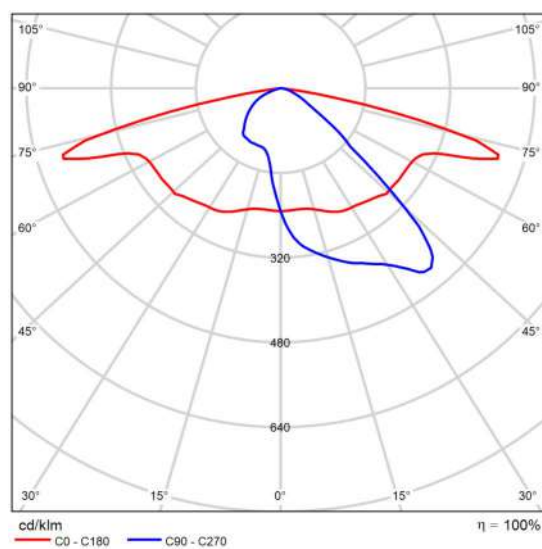
Application: local roads, express roads, town roads, residential area roads, area lighting, avenues, promenade, parking areas Type of optics: O27 - for local roads

Fișa de date privind produsul

LUG Light Factory - URBINO LED S 34W 5100lm 740 O15

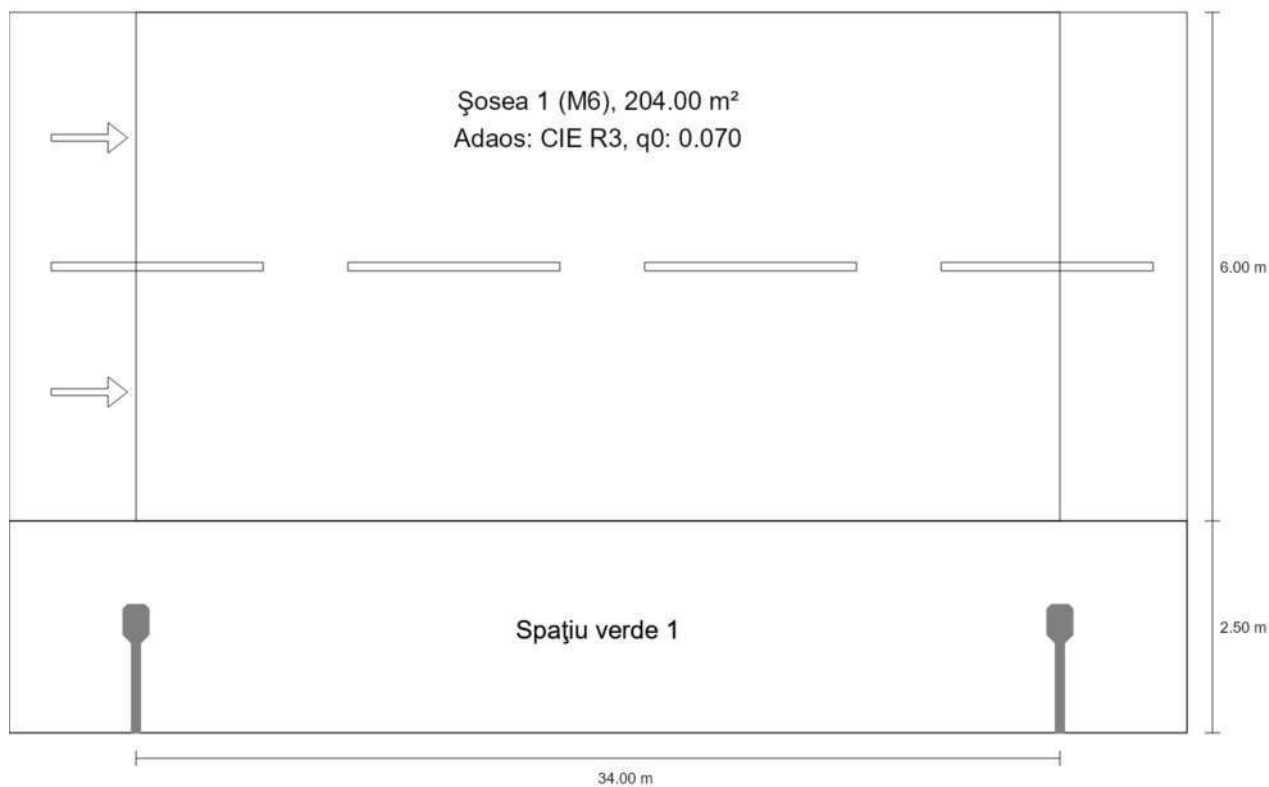


Nr.articol	130782.5L121.150.00 3
P	34.0 W
$\Phi_{\text{Lampă}}$	5100 lm
$\Phi_{\text{Corp de iluminat}}$	5100 lm
η	100.00 %
Eficiența luminoasă	150.0 lm/W
CCT	4000 K
CRI	70

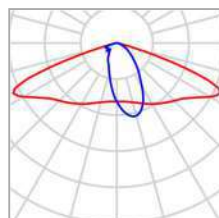


CDIL polar

Stradă - M6

Rezumat (până la EN 13201:2015)

Stradă - M6

Rezumat (până la EN 13201:2015)

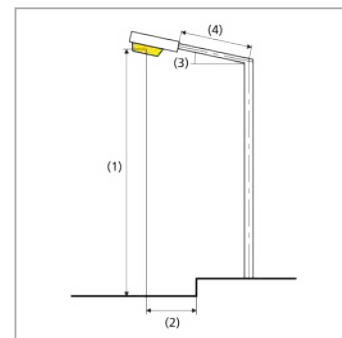
Producător	LUG Light Factory	P	19.0 W
Nr.articol	130292.5L011.010	$\Phi_{\text{Lampă}}$	–
Nume articol	TRAFFIK LED 19W 2350lm 4000K IP66 O27 - for local roads gray I	$\Phi_{\text{Corp de iluminat}}$	2350 lm
Dotare	1x LED ED 19W 2350lm 4000K IP66 O27 I class gray	η	–

Stradă - M6

Rezumat (până la EN 13201:2015)

TRAFFIK LED 19W 2350lm 4000K IP66 O27 - for local roads gray I (Pe o parte Jos)

Distanță stâlp	34.000 m
(1) Înălțimea punctului de lumină	7.000 m
(2) Ieșirea în consolă a punctului de lumină	-1.240 m
(3) Înclinare consolă	15.0°
(4) Lungime consolă	1.000 m
Număr anual de ore de funcționare	4000 h: 100.0 %, 19.0 W
Putere / traseu	551.0 W/km
ULR / ULOR	0.00 / 0.00
Intensități luminoase max. Orice direcție ce formează unghiul dat cu verticala în jos a corpurilor de iluminat instalate pentru utilizare.	$\geq 70^\circ$: 724 cd/klm $\geq 80^\circ$: 67.4 cd/klm $\geq 90^\circ$: 25.8 cd/klm
Clasă intensitate luminoasă Valorile intensității luminoase în [cd/klm] pentru calculul clasei intensității luminoase se referă la fluxul luminos al corpului de iluminat, conform EN 13201:2015.	G*2
Clasă index ornamente	D.6
MF	0.85



Stradă - M6

Rezumat (până la EN 13201:2015)

Rezultate pentru câmpurile de evaluare

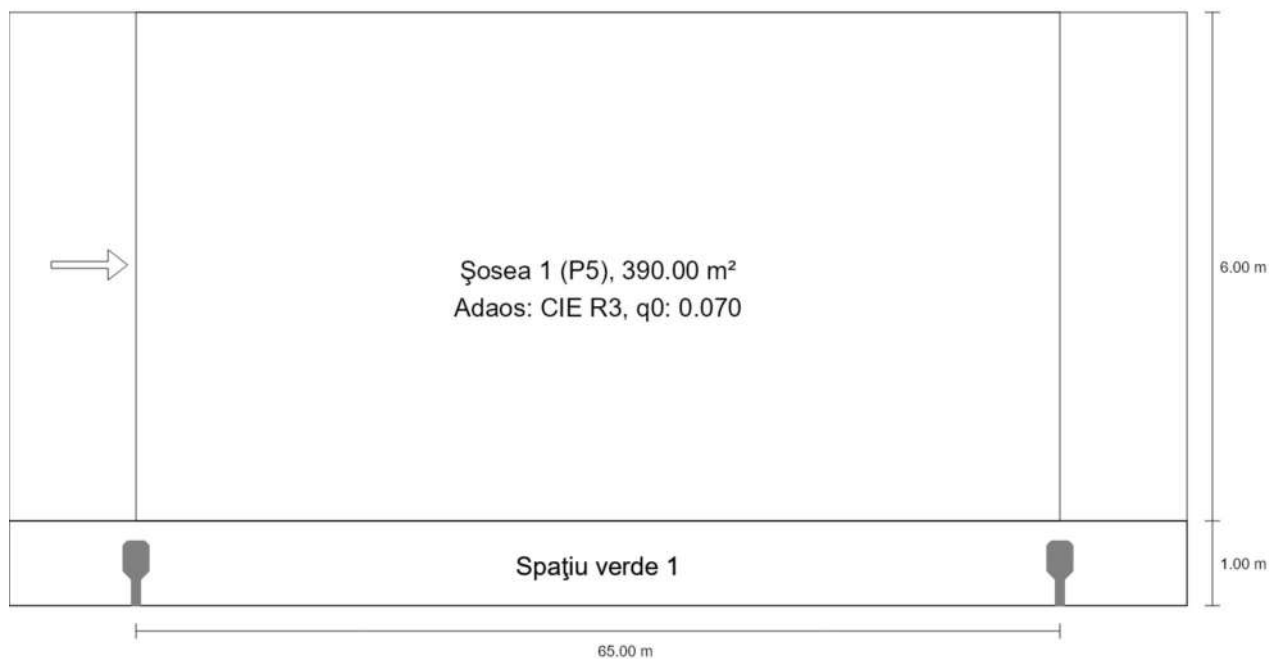
Pentru instalare s-a luat în calcul un factor de întreținere de 0.85.

	Mărime	Calculat	Nominal	Conform
Șosea 1 (M6)	L _m	0.31 cd/m ²	≥ 0.30 cd/m ²	✓
	U _o	0.37	≥ 0.35	✓
	U _l	0.43	≥ 0.40	✓
	TI	14 %	≤ 20 %	✓
	R _{EI}	0.38	≥ 0.30	✓

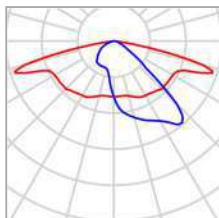
Rezultate pentru indicatorii de eficiență energetică

	Mărime	Calculat	Consumul de energie
Stradă - M6	D _p	0.017 W/lx*m ²	–
TRAFFIK LED 19W 2350lm 4000K IP66 O27 - for local roads gray I (Pe o parte jos)	D _e	0.4 kWh/m ² an	76.0 kWh/an

Stradă - P5

Rezumat (până la EN 13201:2015)

Stradă - P5

Rezumat (până la EN 13201:2015)

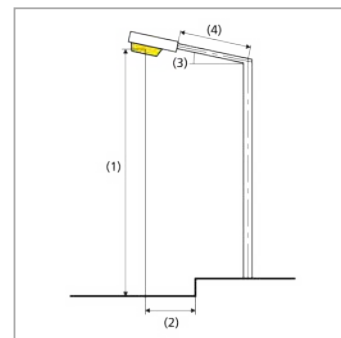
Producător	LUG Light Factory	P	34.0 W
Nr.articol	130782.5L121.150.00 3	$\Phi_{\text{Lampă}}$	5100 lm
Nume articol	URBINO LED S 34W 5100lm 740 O15	$\Phi_{\text{Corp de iluminat}}$	5100 lm
Dotare	1x LED 4000K	η	100.00 %

Stradă - P5

Rezumat (până la EN 13201:2015)

URBINO LED S 34W 5100lm 740 O15 (Pe o parte Jos)

Distanță stâlp	65.000 m
(1) Înălțimea punctului de lumină	9.000 m
(2) Ieșirea în consolă a punctului de lumină	-0.491 m
(3) Înclinare consolă	15.0°
(4) Lungime consolă	0.500 m
Număr anual de ore de funcționare	4000 h: 100.0 %, 34.0 W
Putere / traseu	510.0 W/km
ULR / ULOR	0.00 / 0.00
Intensități luminoase max. Orice direcție ce formează unghiul dat cu verticala în jos a corpurilor de iluminat instalate pentru utilizare.	≥ 70°: 628 cd/klm ≥ 80°: 420 cd/klm ≥ 90°: 20.0 cd/klm
Clasă intensitate luminoasă Valorile intensității luminoase în [cd/klm] pentru calculul clasei intensității luminoase se referă la fluxul luminos al corpului de iluminat, conform EN 13201:2015.	–
Clasă index ornamente	D.5
MF	0.85



Stradă - P5

Rezumat (până la EN 13201:2015)

Rezultate pentru câmpurile de evaluare

Pentru instalare s-a luat în calcul un factor de întreținere de 0.85.

	Mărime	Calculat	Nominal	Conform
Șosea 1 (P5)	E_m	3.63 lx	[3.00 - 4.50] lx	✓
	E_{min}	0.71 lx	≥ 0.60 lx	✓
	$TI^{(1)}$	16 %	–	

(1) informativ, nu este parte a evaluării

Rezultate pentru indicatorii de eficiență energetică

	Mărime	Calculat	Consumul de energie
Stradă - P5	D_p	0.024 W/lx*m ²	–
URBINO LED S 34W 5100lm 740 O15 (Pe o parte Jos)	D_e	0.3 kWh/m ² an	136.0 kWh/an



LIGHTING CRUISE
TOWARDS BRIGHTER FUTURE



LUG is a leading European manufacturer of professional lighting solutions with more than 30 years of experience. The company specializes in manufacturing infrastructural and industrial luminaires as well as decorative lighting for internal and external illumination of public utility buildings, sales areas and architectonic objects. A rich product portfolio, with over 6 thousand different versions of luminaires, allows the company for providing a comprehensive set of solutions for all kinds of projects. An in-house team of lighting designers, an R&D Department with a fully equipped laboratory and a Customization Section allow LUG for adapting its products to the individual needs of even the most demanding projects. In addition to our wide range of professional lighting solutions, we offer support from our teams of lighting designers, architects and technical advisors. This enables us to provide support at any stage of even the most complex projects. Moreover, our dedicated team specializing in modernization of lighting systems carries our audits and modernization projects for our Partners enabling them to optimize the lighting solutions they use and thus significantly reduce energy consumption. What is more, thanks to our capacity to synergize advantages of LED and IoT technologies, we are also active in the smart lighting and smart city areas helping municipalities better adapt to the needs of their citizens and manage different aspects of city life more efficiently as well as helping businesses improving their efficiency and increasing the safety and comfort of their employees.



OWN R&D AND MANUFACTURING FACILITIES

based in Poland

Having our own R&D department with a fully equipped laboratory and modern manufacturing facilities enables us to carry out the entire solution development process from the concept phase through prototyping and testing to final product. This allows for a full optimization in terms of solution design and ensure its form always follows its function.

HIGHEST EUROPEAN QUALITY and internationally recognized design

Ensuring the highest quality is one of our top priorities. All our solutions are designed, developed, tested and manufactured at our facilities in Poland. Carrying out these processes in-house allows us to perform quality control at all stages and make sure that our solutions offer the highest degree of reliability. Our attention to detail and quality earned us trust of business Partners in 70 countries all over the world and recognition from the global industrial design community reflected in numerous awards such as iF design and red-dot for our solutions.



COMPREHENSIVE SOLUTIONS standard portfolio / custom / bespoke

To make sure that we can provide solutions suitable to particular needs of the projects we work on, we developed a wide portfolio of about 6 thousand versions of LED luminaires. Additionally, thanks to our know-how along with our R&D and manufacturing capacities, we are able to customize the products to specific needs and requirements of our Partners and even design, develop and manufacture bespoke solutions especially for a particular project.

EXPERT SUPPORT architects / lighting designers urban development specialists technical advisers

In addition to our wide range of professional lighting solutions, we offer support from our team of lighting designers, architects and technical advisors. This enables us to provide support at any stage of even the most complex projects.



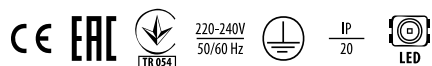


INTO LED

The INTO luminaire family was created for interiors characterized with modern simplicity in mind. A variety of sizes and methods of installation: from minimalist round and square downlights, through surface-mounted tubes, to a series of tubular suspended luminaires ensure the wide application of INTO family.

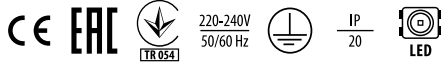


INTO R55 LED NT surface



power	6 [W]
Lumen luminaire	700 - 720 [lm]
Efficacy	117 - 120 [lm/W]
Colour temperature	3000, 4000
ULOR/DLOR	0/100
Power	220-240V 50/60Hz
CRI	≥80
Lifetime L80B10	60 000 h
Body	aluminum profile
Body colour	black, white
Operating temperature range	0 ... +45

INTO R100 LED NT surface



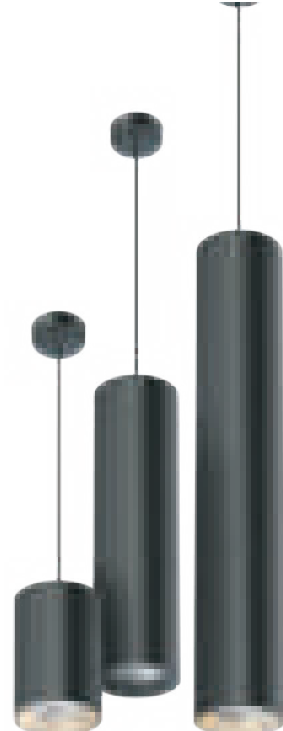
power	14 - 21 [W]
Lumen luminaire	1200 - 1900 [lm]
Efficacy	83 - 96 [lm/W]
Colour temperature	3000, 4000
ULOR/DLOR	0/100
Power	220-240V 50/60Hz
CRI	≥80
Lifetime L80B10	60 000 h
Body	aluminum profile
Body colour	black, white
Operating temperature range	0 ... +30 0 ... +35



INTO R55 LED ZW suspended

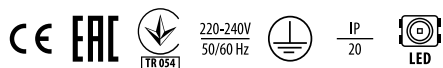


INTO R100 LED ZW suspended



INTO R160 LED ZW suspended

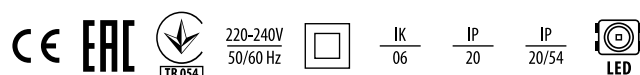
INTO R160 LED NT surface



power	23 - 30 [W]
Lumen luminaire	2600 - 3550 [lm]
Efficacy	112 - 120 [lm/W]
Colour temperature	3000, 4000
ULOR/DLOR	0/100
Power	220-240V 50/60Hz
CRI	≥80
Lifetime L80B10	60 000 h
Body	aluminum profile
Body colour	black, white
Operating temperature range	0 ... +35



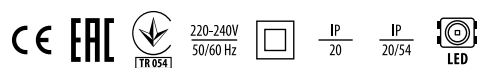
INTO R160 LED



power	23 - 30 [W]
Lumen luminaire	2600 - 3550 [lm]
Efficacy	112 - 120 [lm/W]
Colour temperature	3000, 4000
ULOR/DLOR	0/100
Power	220-240V 50/60Hz
CRI	≥80
Lifetime L80B10	60 000 h
Body	aluminum profile
Body colour	black, white
Operating temperature range	0 ... +35



INTO R55 LED



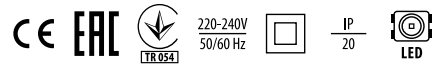
power	6 [W]
Lumen luminaire	640 - 720 [lm]
Efficacy	107 - 120 [lm/W]
Colour temperature	3000, 4000
ULOR/DLOR	0/100
Power	220-240V 50/60Hz
CRI	≥80
Lifetime L80B10	60 000 h
Body	aluminium
Body colour	black, white
Operating temperature range	0 ... +45

INTO R100 LED



power	14 - 21 [W]
Lumen luminaire	1100 - 1900 [lm]
Efficacy	71 - 96 [lm/W]
Colour temperature	3000, 4000
ULOR/DLOR	0/100
Power	220-240V 50/60Hz
CRI	≥80
Lifetime L80B10	60 000 h
Body	aluminium
Body colour	black, white
Operating temperature range	0 ... +40

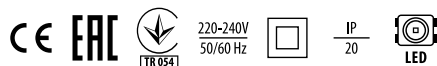
LUGSTAR 3.0



power	11 - 23 [W]
Lumen luminaire	1500 - 2650 [lm]
Efficacy	111 - 141 [lm/W]
Colour temperature	3000, 4000
ULOR/DLOR	0/100
Power	220-240V 50/60Hz
CRI	≥80
Lifetime L80B10	100 000 h
Body	high pressure die-cast aluminum
Body colour	white
Operating temperature range	0 ... +35 0°C ... +35°C



LUGSTAR 3.0 S

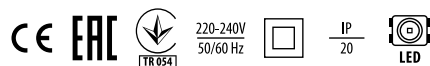


power	8 - 19.5 [W]
Lumen luminaire	1000 - 2400 [lm]
Efficacy	123 - 130 [lm/W]
Colour temperature	3000, 4000
ULOR/DLOR	0/100
Power	220-240V 50/60Hz
CRI	≥80
Lifetime LED L90	100 000 h
Body	aluminium
Body colour	white
Operating temperature range	0°C ... +35°C



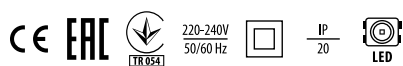


INTO S100 LED



power	14 - 20 [W]
Lumen luminaire	1400 - 1900 [lm]
Efficacy	90 - 107 [lm/W]
Colour temperature	3000, 4000
ULOR/DLOR	0/100
Power	220-240V 50/60Hz
CRI	≥80
Lifetime L80B10	60 000 h
Body	high pressure die-cast aluminum, plastic
Body colour	black, white
Operating temperature range	0 ... +40

INTO S160 LED



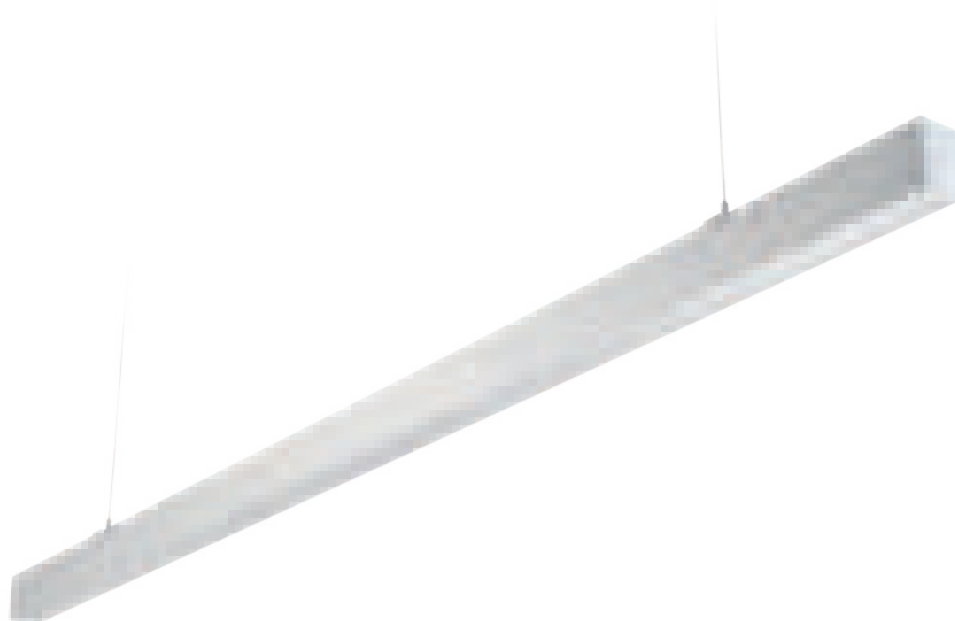
power	22 - 30 [W]
Lumen luminaire	2750 - 3750 [lm]
Efficacy	120 - 132 [lm/W]
Colour temperature	3000, 4000
ULOR/DLOR	0/100
Power	220-240V 50/60Hz
CRI	≥80
Lifetime L80B10	60 000 h
Body	high pressure die-cast aluminum, plastic
Body colour	black, white
Operating temperature range	0 ... +35





VOLICA 2.0 LED

Volica 2.0 is a wide family of minimalist luminaires and linear systems. It was created for comprehensive lighting of office and communication spaces in the area of commercial and residential real estate.



VOLICA 2.0 LED suspended



power	14 - 71 [W]
Lumen luminaire	1650 - 9500 [lm]
Efficacy	118 - 134 [lm/W]
Colour temperature	3000, 4000
ULOR/DLOR	0/100
Power	220-240V 50/60Hz
CRI	≥80
Lifetime L80B10	100 000 h
Body	aluminum profile
Body colour	anoda C-0, black, white
Operating temperature range	0 ... +35

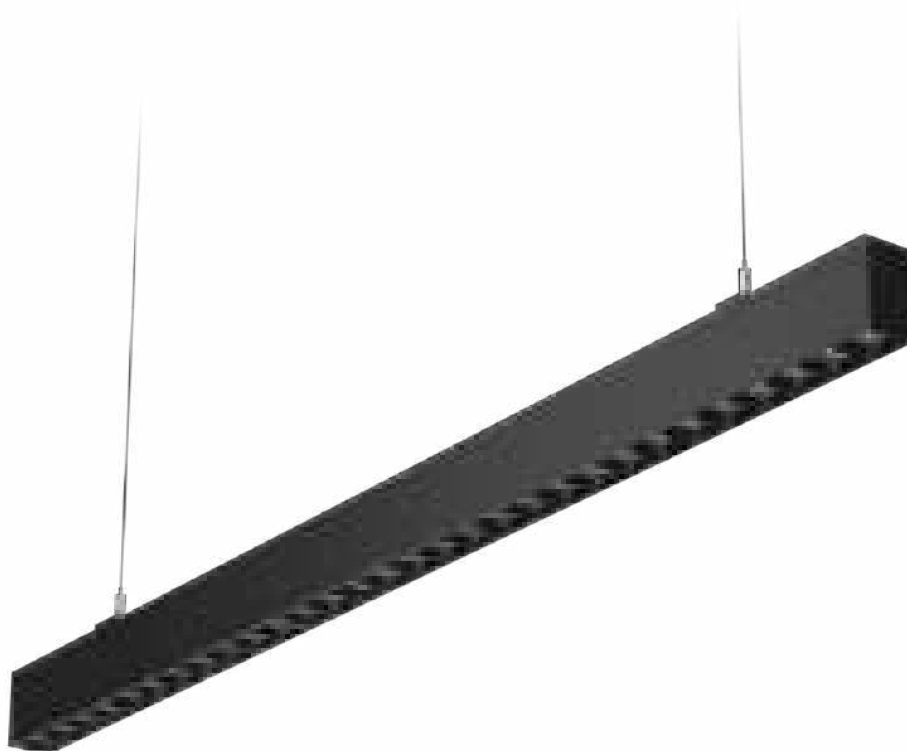


4EXPO, SUCHY LAS, POLAND

VOLICA 42 DOT LED suspended UGR<19



power	17 - 46 [W]
Lumen luminaire	1850 - 5000 [lm]
Efficacy	100 - 120 [lm/W]
Colour temperature	3000, 4000
ULOR/DLOR	0/100, 25/75
Power	220-240V 50/60Hz
CRI	≥80
Lifetime L80B10	100 000 h
Body	aluminum profile
Body colour	anoda C-0, black, white
Operating temperature range	0 ... +35





VOLICA 2.0 LED LOW - UGR suspended



power	9 - 46 [W]
Lumen luminaire	1300 - 7200 [lm]
Efficacy	142 - 157 [lm/W]
Colour temperature	3000, 4000
ULOR/DLOR	0/100
Power	220-240V 50/60Hz
CRI	≥80
Lifetime L80B10	100 000 h
Body	aluminum profile
Body colour	anoda C-0, black, white
Operating temperature range	0 ... +35

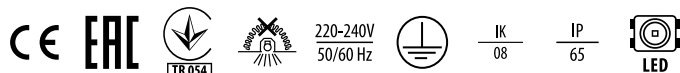


MEDICA 2.0

A modern IP65 rated luminaire designed to illuminate hospitals and clean room areas. The even uniform light distribution ensures normative lighting parameters. The hardened glass guarantees higher resistance to mechanical damage. The luminaire is equipped with ISO 3 certificate. The certificate confirms the compliance of our solution with the air purity classification standard used in clean rooms.



MEDICA 2.0 HE 600x600 p/t



power	19 - 38 [W]
Lumen luminaire	2700 - 5200 [lm]
Efficacy	137 - 142 [lm/W]
Colour temperature	3000, 4000
ULOR/DLOR	0/100
Power	220-240V 50/60Hz
CRI	90
Lifetime L80B10	78 000 h
Body	powder-painted steel sheet
Body colour	white
Operating temperature range	0 ... +35



LHL HOSPITAL, OSLO, NORWAY



URBINO LED S

A functionally optimised modern LED luminaire that complements the URBINO LED luminaire family in an environmentally responsible way with solutions for lower power and flux points.



URBINO LED S



power	4.5 - 74 [W]
Lumen luminaire	400 - 11350 [lm]
Efficacy	79 - 176 [lm/W]
Colour temperature	2200, 2700, 3000, 4000
ULOR/DLOR	0% / 100%
Power	220-240V 50/60Hz
Lifetime L90B10	100 000 h
Body	high pressure die-cast aluminum
Body colour	grey
Operating temperature range	-40 ... +40, -40 ... +50, -40 ... +55



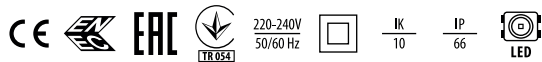
LHL HOSPITAL, OSLO, NORWAY



TRAFFIK LED



TRAFFIK LED



power	10 - 69 [W]
Lumen luminaire	1130 - 10200 [lm]
Efficacy	113 - 156 [lm/W]
Colour temperature	3000, 4000
ULOR/DLOR	0% / 100%
Power	220-240V 50/60Hz
Lifetime	(L75) 100 000 h (L90) 100 000 h
Body	high pressure die-cast aluminum
Body colour	grey
Operating temperature range	-40 ... +45 -40 ... +50 -40 ... +55



AVENIDA LED

Meet the new family of stylish park and city LUG Light Factory luminaires. The timeless form, excellent lighting parameters and three mounting solutions will allow you to comprehensively and without compromise light the most demanding space, giving it a classic character.

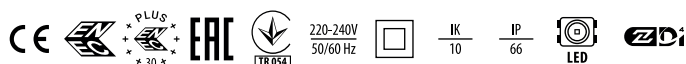
P - for mounting on pole Ø48-Ø76mm,
S - for mounting on arm Ø42mm,
C - for mounting on a steel cable Ø 6-15mm.

AVENIDA LED Moden hat



AVENIDA LED

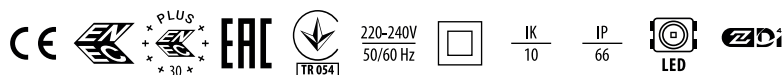
AVENIDA LED



power	19 - 34 [W]
Lumen luminaire	2350 - 4400 [lm]
Efficacy	124 - 132 [lm/W]
Colour temperature	3000, 4000
ULOR/DLOR	1,8/98,2, 1,9/98,1, 1,9/98,2,
Power	220-240V 50/60Hz
CRI	>80
Lifetime L80B10	100 000 h
Body	high pressure die-cast aluminum
Body colour	graphite, grey
Operating temperature range	-40 ... +50 -40 ... +55

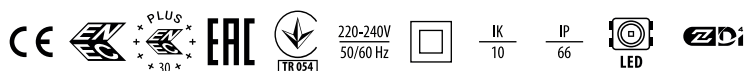


AVENIDA HERITAGE LED version C



power	19 - 34 [W]
Lumen luminaire	1750 - 4400 [lm]
Efficacy	92 - 132 [lm/W]
Colour temperature	2200, 2700, 3000, 4000
ULOR/DLOR	2,5/97,5, 2,6/97,4, 2,7/97,3
Power	220-240V 50/60Hz
CRI	>80
Lifetime L80B10	100 000 h
Body	high pressure die-cast aluminum
Body colour	graphite, grey
Operating temperature range	-40 ... +50 -40 ... +55

AVENIDA HERITAGE LED version S



power	19 - 34 [W]
Lumen luminaire	1750 - 4400 [lm]
Efficacy	92 - 132 [lm/W]
Colour temperature	2200, 2700, 3000, 4000
ULOR/DLOR	2,5/97,5, 2,6/97,4, 2,7/97,3
Power	220-240V 50/60Hz
CRI	>80
Lifetime L80B10	100 000 h
Body	high pressure die-cast aluminum
Body colour	graphite, grey
Operating temperature range	-40 ... +50 -40 ... +55



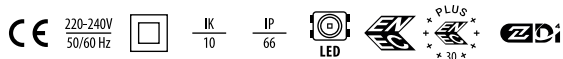


ARTERA LED

ARTERA LED is the perfect light for any urban space. Many installation types, uncompromising lighting parameters, a proprietary design harmonising with the diversity of urban DNA and additional customisation options make the clever ARTERA LED system a perfect solution wherever light contributes to the character of a space.



ARTERA LED



power	21 - 107 [W]
Lumen luminaire	2250 - 15700 [lm]
Efficacy	90 - 168 [lm/W]
Colour temperature	2200, 2700, 3000, 4000
ULOR/DLOR	0% / 100%
Power	220-240V 50/60Hz
CRI	>70
Lifetime L90B10	100 000 h
Body	high pressure die-cast aluminum
Body colour	graphite, grey
Operating temperature range	-40 ... +45 -40 ... +50

ARTERA LED dome mounting bracket 7



ARTERA LED dome C version



ARTERA LED dome mounting bracket L

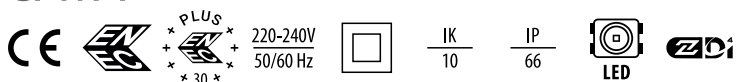


SAVA S version L



SAVA S version M

SAVA



power	12 - 164 [W]
Lumen luminaire	1150 - 25000 [lm]
Efficacy	96 - 190 [lm/W]
Colour temperature	2200, 2700, 3000, 4000
ULOR/DLOR	0% / 100%
Power	220-240V 50/60Hz
Lifetime L90B10	100 000 h
Body	high pressure die-cast aluminum
Body colour	graphite
Operating temperature range	-40 ... +45 -40 ... +50 -40 ... +55



CRUISER 2 LED

Cruiser 2 LED is a well-thought design luminaire that incorporates the cutting-edge lighting technology with functionality and modularity. The IF awarded design combined the high efficacy parameters with industrial minimalism.



CRUISER 2 LED



power	103 - 177 [W]
Lumen luminaire	10200 - 26050 [lm]
Efficacy	97 - 151 [lm/W]
Colour temperature	3000, 4000, 5700
ULOR/DLOR	0/100
Power	220-240V 50/60Hz
CRI	≥70, ≥80
Lifetime L80B10	100 000 h
Body	high pressure die-cast aluminum
Body colour	grey
Operating temperature range	-40 ... +35 -40 ... +40 -40 ... +45

CRUISER ARENA LED sports floodlight



power	395 - 399 [W]
Lumen luminaire	47100 - 62000 [lm]
Efficacy	118 - 157 [lm/W]
Colour temperature	4000, 5700
ULOR/DLOR	0/100
Power	220-240V 50/60Hz
CRI	≥70, ≥80
Lifetime L80B10	100 000 h
Body	high pressure die-cast aluminum
Body colour	grey
Operating temperature range	-40 ... +35



CRUISER 2 PLUS LED



power	204 - 219 [W]
Lumen luminaire	20000 - 31300 [lm]
Efficacy	98 - 150 [lm/W]
Colour temperature	3000, 4000, 5700
ULOR/DLOR	0/100
Power	220-240V 50/60Hz
CRI	≥70, ≥80
Lifetime L80B10	100 000 h
Body	high pressure die-cast aluminum
Body colour	grey
Operating temperature range	-40 ... +40 -40 ... +45





POWERLUG LED

Powerlug LED is a robust floodlight with the body made of die-cast aluminium and tempered glass diffuser. The IF awarded design combines minimalism in housing construction, the lateral surface wind exposed is only 0,163m², with high efficacy, more than 164lm/W. The IP65 and resistance to mechanical damage (IK09) level makes the position highly applicable, starting from heavy industry, warehouses, parking areas and finishing with facades.

POWERLUG LED



power	77 - 155 [W]
Lumen luminaire	11950 - 24400 [lm]
Efficacy	123 - 164 [lm/W]
Colour temperature	3000, 4000, 5700, 6500
ULOR/DLOR	0/100
Power	220-240V 50/60Hz
CRI	>70
Lifetime L80B10	100 000 h
Body	high pressure die-cast aluminum
Body colour	grey
Operating temperature range	-40 ... +35



POWERLUG MINI



power	25, 44, 54, 67 W
efficacy	up to 152 lm/W
luminaire flux	3800 – 9500 lm
colour temperature	4000, 5700 K
driver	ED



JYSK, SÄFFLE, SWEDEN

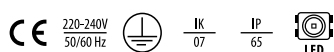


TRITON LED

TRITON LED - luminaire dedicated for interior lighting of large-area facilities such as warehouses, logistics centers, industrial facilities and production halls. Carefully designed solution designed for use in applications requiring single pendant mounting.



TRITON LED



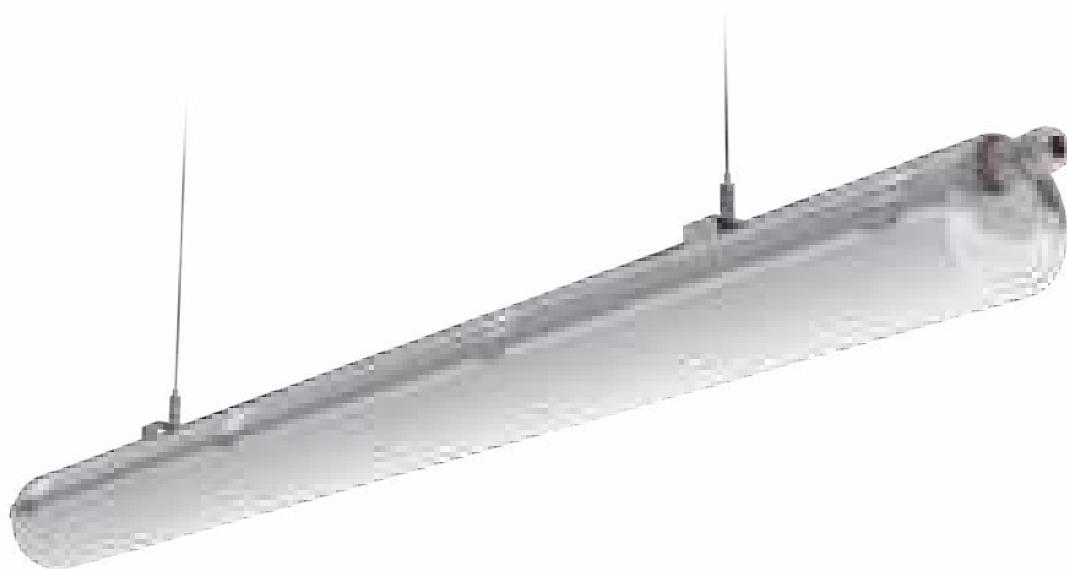
power	72 - 130 [W]
Lumen luminaire	10550 - 20550 [lm]
Efficacy	140 - 168 [lm/W]
Colour temperature	4000
ULOR/DLOR	0/100
Power	220-240V 50/60Hz
CRI	≥70, ≥80
Lifetime L80B10	100 000 h
Body	high pressure die-cast aluminum, plastic
Body colour	grey
Operating temperature range	-30 ... +50



TRITON LED PLUS version



power	148 - 221 [W]
Lumen luminaire	22300 - 35650 [lm]
Efficacy	149 - 166 [lm/W]
Colour temperature	4000
ULOR/DLOR	0/100
Power	220-240V 50/60Hz
CRI	≥80
Lifetime L80B10	100 000 h
Body	high pressure die-cast aluminum, plastic
Body colour	grey
Operating temperature range	-25 ... +40 -30 ... +40 -30 ... +45



ATLANTYK 2.0 BASIC LED

220-240V
50/60 Hz



IK
07

IP
65



power	18 - 99 [W]
Lumen luminaire	2900 - 16500 [lm]
Efficacy	132 - 181 [lm/W]
Colour temperature	4000
ULOR/DLOR	0/100, 10/90
Power	220-240V 50/60Hz
CRI	≥80
Lifetime L80B10	100 000 h 85 000 h (High Efficacy) 50 000h (High Lumen Output)
Body	polycarbonate
Body colour	graphite, light gray, red
Operating temperature range	-20 ... +30 -20 ... +35 -25 ... +30 -25 ... +35 0 ... +35



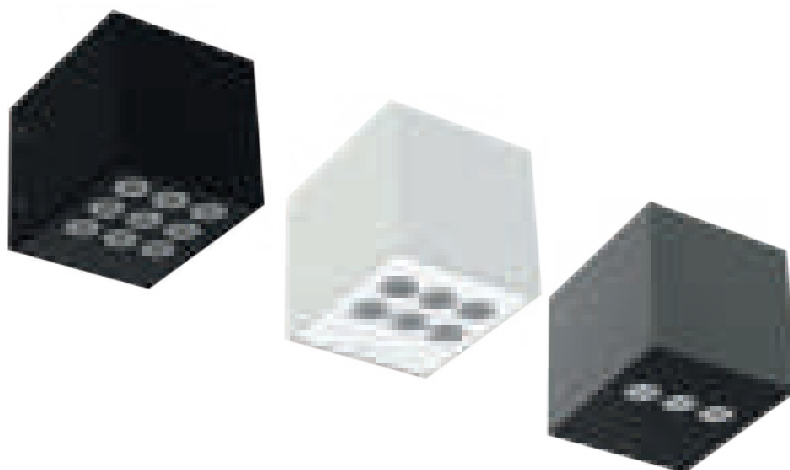
FOCUS MALL, ZIELONA GÓRA, POLAND



ICE CUBE

ICE CUBE 2.0 WALL

External architectural luminaire for installation on walls and facades in the form of a decorative wall lamp. The luminaire is available in two optical systems allowing for direct or indirect lighting. The carefully considered minimalist design and a wide range of beam angles allow for a broad application in external façade architecture



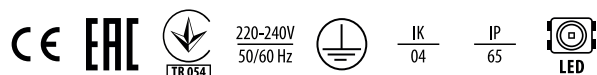
ICE CUBE 2.0 WALL



power	8 - 11.1 [W]
Lumen luminaire	280 - 1400 [lm]
Efficacy	26 - 128 [lm/W]
Colour temperature	2700, 3000, 4000, 5700, blue, green, red
ULOR/DLOR	100/100, 50/50
Power	220-240V 50/60Hz
CRI	≥80
Lifetime L90B10	50 000 h
Body	high pressure die-cast aluminum
Body colour	black, white, grey
Operating temperature range	-20 ... +45 -20 ... +50



ICE CUBE 2.0 NT



220-240V
50/60 Hz



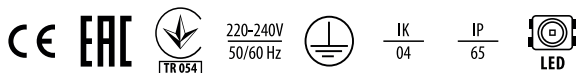
IK
04

IP
65



power	8 - 11 W
efficacy	up to 119 lm/W
luminaire flux	320 - 1300 lm
ulor/dlor	0/100
angle beam	30°, 58°, 19x52°
CRI	≥ 80
driver	ED, DALI

ICE CUBE 2.0 R



220-240V
50/60 Hz



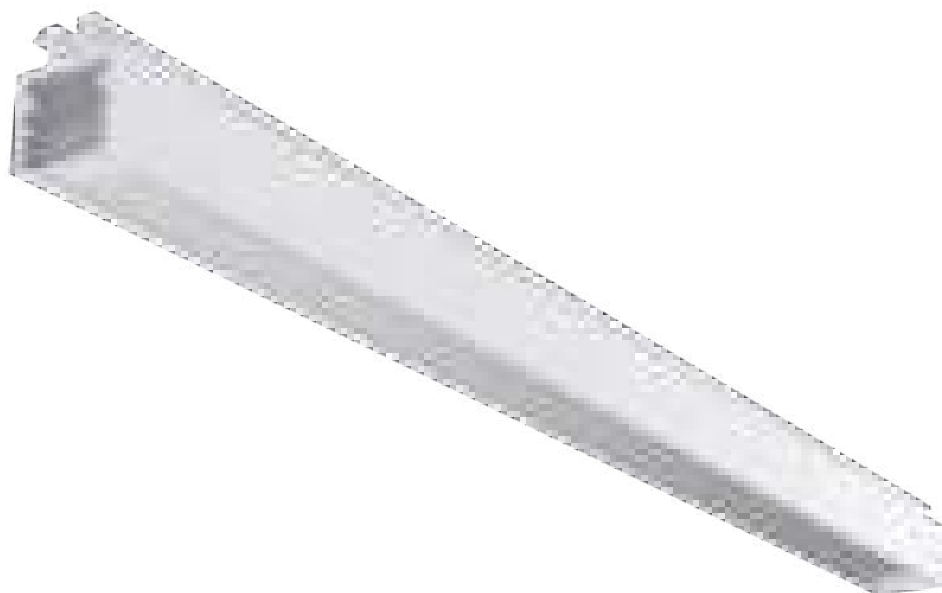
IK
04

IP
65



power	8 - 11.1 [W]
Lumen luminaire	280 - 1400 [lm]
Efficacy	26 - 128 [lm/W]
Colour temperature	2700, 3000, 4000, 5700, blue, green, red
ULOR/DLOR	100/100
Power	220-240V 50/60Hz
CRI	≥80
Lifetime L90B10	50 000 h
Body	high pressure die-cast aluminum
Body colour	black, white, grey
Operating temperature range	-20 ... +45





ARCHILINE LED



power	4.8 - 25.9 [W]
Lumen luminaire	270 - 1690 [lm]
Efficacy	54 - 65 [lm/W]
Colour temperature	4000
ULOR/DLOR	100/0
Power	24V DC
CRI	>80
Lifetime L90B10	50 000 h (ED) 43 000 h (DALI)
Body	aluminum profile
Body colour	white
Operating temperature range	-40 ... +45 -40 ... +50



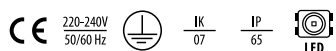
SKY PARK, ZIELONA GÓRA, POLAND



AVENIDA BOLLARD LED



AVENIDA BOLLARD LED



power	7.5 - 20.5 [W]
Lumen luminaire	630 - 1580 [lm]
Efficacy	77 - 93 [lm/W]
Colour temperature	3000, 4000
ULOR/DLOR	10/90
Power	220-240V 50/60Hz
CRI	>70
Lifetime L80B10	96 000 h
Body	high pressure die-cast aluminum
Body colour	graphite, grey
Operating temperature range	-20 ... +40 -20 ... +50 -40 ... +50





LUGTRACK SLIM LED



LUGTRACK SLIM LED



power	60 - 170 [W]
Lumen luminaire	9700 - 30200 [lm]
Efficacy	161 - 178 [lm/W]
Colour temperature	4000
ULOR/DLOR	0% / 100%, 97%/3%, 98%/2%
Power	220-240V 50/60Hz
CRI	≥80
Lifetime L80B10	100 000 h
Body	coated steel sheet
Body colour	white
Operating temperature range	0 ... +45 (0 ... +35)* 0 ... +50 (0 ... +40)*





MODENA 2.0 SL LED



power	10 - 34 [W]
Lumen luminaire	1100 - 5200 [lm]
Efficacy	110 - 153 [lm/W]
Colour temperature	3000, 4000
ULOR/DLOR	100/0
Power	220-240V 50/60Hz
CRI	≥80
Lifetime L90B10	100 000 h
Body	extruded aluminium, toughened glass, high pressure die-cast aluminum
Body colour	black anode B35
Operating temperature range	max +45°C max +50°C



HOTEL EUROPEJSKI, WARSZAWA, POLAND



PUMA

PUMA - professional and powerful floodlight designed to meet the most stringent lighting requirements in sport facilities to ensure the best perception of the show by both onsite spectators and TV viewers. The functional mounting bracket, wide choice of lumen package together with dedicated optical systems broadens the applicability to airports, seaports and heavy industry areas.

power	468 - 918 [W]
Lumen luminaire	170400 - 258800 [lm]
Efficacy	92 - 140 [lm/W]
Colour temperature	4000, 5700
ULOR/DLOR	0/100
Power	220-240V 50/60Hz
CRI	70, 80, 90
Lifetime L90B10	100 000 h
Body	aluminum
Body colour	aluminium
Operating temperature range	-40 ... +50





power	468 [W]
Lumen luminaire	42600 - 129400 [lm]
Efficacy	91 - 141 [lm/W]
Colour temperature	4000, 5700
ULOR/DLOR	0/100
Power	220-240V 50/60Hz
CRI	70, 80, 90
Lifetime L90B10	100 000 h
Body	aluminum
Body colour	aluminium
Operating temperature range	-40 ... +50



power	468 - 918 [W]
Lumen luminaire	42600 - 129400 [lm]
Efficacy	91 - 141 [lm/W]
Colour temperature	4000, 5700
ULOR/DLOR	0/100
Power	220-240V 50/60Hz
CRI	70, 80, 90
Lifetime L90B10	100 000 h
Body	high pressure die-cast aluminum
Body colour	aluminium
Operating temperature range	-40 ... +50



power	918 - 1844 [W]
Lumen luminaire	85400 - 258800 [lm]
Efficacy	91 - 141 [lm/W]
Colour temperature	4000, 5700
ULOR/DLOR	0/100
Power	220-240V 50/60Hz
CRI	70, 80, 90
Lifetime L90B10	100 000 h
Body	high pressure die-cast aluminum
Body colour	aluminium
Operating temperature range	-40 ... +50



LUG Light Factory SP. z o.o.
ul. Gorzowska 11
65-127 Zielona Góra

**LUG**[®]

LUG Light Factory Ltd.
Producer of Professional Lighting Fittings



Zielona Góra, 13.11.2024

LUG Light Factory Sp. z o.o.
ul. Gorzowska 11
65-127 Zielona Góra
POLAND
Phone: +48 68 45 33 200
Fax: +48 68 45 33 201

Concern: project in Moldova

DECLARATION

LUG Light Factory Sp. z o. o. hereby declares that for the following product(s):

1. TRAFFIK LED
2. TRAFFIK R LED
3. URBINO LED S
4. URBINO LED (including PLUS version)

in accordance with the attached general warranty conditions for lighting products from LUG Light Factory Sp. z o.o. the warranty period is 5 years.

Mariusz Ejsmont



.....
Mariusz Ejsmont
Technical Director
LUG Light Factory Sp. z o.o.

Attachments:

1. General warranty terms and conditions concerning LUG Light Factory Sp. z o. o. lighting products (PDF file).



GENERAL WARRANTY TERMS AND CONDITIONS CONCERNING LUG LIGHT FACTORY SP. Z O.O. LIGHTING PRODUCTS

1. General Warranty Terms

- 1.1. LUG Light Factory Sp. z o.o., with its registered office on ul. Gorzowska 11, 65-127 Zielona Góra, KRS (National Court Register No. 0000290498), hereinafter referred to as the "Guarantor", hereby provides the warranty for lighting products, as described in this document.
- 1.2. The Guarantor declares that the above mentioned products are free from manufacturing and material defects, and if used for their intended purpose, they will function properly for a period not shorter than the period of the warranty, subject to the circumstances described in this document.
- 1.3. The Guarantor provides the warranty for products sold for the period of:
 - 5 years for all LUG products with an LED light source
 - 5 years for all FLASH&DQ products
 - 3 years for LUGBOX products
 - 2 years for conventional lighting fixtures (without an LED light source)
 - 1 year for lighting fixtures made for emergency purposes
- 1.4. The warranty is only valid under the following conditions:
 - 1.4.1. The warranty shall only cover manufacturing defects and defects attributable to the reasons inherent in the product, i.e., hidden defects caused by manufacturing defects or hidden defects in materials;
 - 1.4.2. Lighting fixtures should be operated, installed and stored in accordance with the information on the specification sheet and assembly instructions;
 - 1.4.3. Unless otherwise stated on the specification sheet, lighting fixtures by LUG Light Factory Sp. z o.o. are designed for standard working conditions;
 - 1.4.4. Standard conditions are characterised by ambient temperatures ranging from -10°C to +25°C, humidity: <85%, pressure: 690-1060 hPa;
 - 1.4.5. Lighting fixtures should not be used in conditions dangerous to the construction, paint coatings or electrical equipment installed in the lighting fixtures. These conditions include high humidity, high temperature, presence of dust, presence of harmful chemicals in the air, UV radiation, shocks and vibrations;



- 1.4.6. The specification sheet contains a detailed description of the product, together with a general indication of its use, which refers to standard operating conditions;
 - 1.4.7. If the product is intended for use in environments with special technical characteristics, those characteristics are specified in the specification sheet. If no special technical characteristics are mentioned, the use of the lighting fixture should be in accordance with the LUG Light Factory Sp. z o.o. Technical Preparation of Production Branch;
 - 1.4.8. If the conditions in which the lighting fixtures are operated differ from those for which the fixtures are intended, the Buyer, prior to the purchase, shall notify the Guarantor of the conditions at the fitting site, and the Guarantor shall confirm their applicability in such an environment;
 - 1.4.9. The products shall be used according to their purpose and product specification provided (assembly instructions, specification sheet and label). Service reviews shall be carried out and consulted with the LUG Light Factory Sp. z o.o. Technical Preparation of Production Branch if such a requirement is provided in the documentation accompanying the products;
 - 1.4.10. The installation of the products shall be carried out in a professional manner by qualified personnel, in accordance with the terms and conditions set out in the assembly instructions attached to the product and the specification sheet, as well as and in accordance with the rules and technical knowledge;
 - 1.4.11. Modifications of product features or software updates shall be made only by the lighting fixture manufacturer or by a third party assigned by the manufacturer;
 - 1.4.12. All repairs or maintenance of the products shall be made using the manufacturer's guidelines and recommendations;
 - 1.4.13. The products must not be exposed to unintended mechanical and/or chemical congestion, which would threaten the construction of the lighting fixtures, paint coating or electronic components inside the fixtures;
 - 1.4.14. Ambient temperatures and supply voltages shall not exceed the rated values for products in specifications or technical standards.
- 1.5. The violation of the foregoing and other rules stipulated herein shall result in the loss of warranty rights.

2. Scope of Warranty

- 2.1. The warranty starts from the date of product purchase by the Buyer, resulting from the VAT invoice confirming the purchase of goods.
- 2.2. The Buyer's rights under the warranty for defects referred to in the Civil Code are excluded. This provision also applies to software.



- 2.3. This warranty only covers product defects resulting from design, material or manufacturing defects, as well as from the fact of exceeding the average nominal failure rate, which for electronic components (power supplies, controllers, ballasts, LED modules) amounts to 0.2% damages per 1,000 h of work unless stated otherwise in the product's technical data sheets/product brochures.
- 2.4. The warranty shall not cover:
- 2.4.1. Any interchangeable components, such as conventional light sources, starters, capacitors, batteries and other components subject to normal wear and tear during operation;
 - 2.4.2. Components provided by external entities, such as hard drives, computers, servers, etc. Those devices may be covered by their manufacturer's warranty, which requires the confirmation of the device manufacturer;
 - 2.4.3. The natural wear and tear of the materials used, such as discoloration or loss of elasticity of plastic parts (e.g. yellowing of polycarbonate shades), fading of paint coatings due to weathering, aging, etc.;
 - 2.4.4. Defects resulting from damaged software, viruses, services related to software upgrades or reboots, faulty component settings, defects due to wear and tear, pollution, third party activity (especially of installers using the products covered by the warranty), etc.;
 - 2.4.5. Defects resulting from the effect of chemical, thermal, mechanical, light or other factors whose impact on the products is contrary to the instructions for use and technical knowledge;
 - 2.4.6. Additional costs associated with the recognition of the warranty and the removal of defects, including the cost of assembly and disassembly of the defective product, the cost of transporting the product to the manufacturer and returning a new or repaired product, and other similar costs. Those costs shall be covered by the Buyer;
 - 2.4.7. Products whose serial numbers, product numbers, lighting fixture names, trademarks or other identification markings have been removed, covered, or made illegible.
- 2.5. A drop in the luminous flux during the product life to 0.6%/1,000 h and colour change of the LED modules are normal phenomena and shall not be covered by the warranty.
- 2.6. The total lighting time of the lighting fixtures per year must not exceed 4,300 h.
- 2.7. The parameters of the new LED lighting fixtures (modules) are covered by a +/- 10% tolerance for luminous flux, power and colour temperature.



3. Warranty Claim

- 3.1. Claims should be made using a complaint form, which is available on LUG Light Factory Sp. z o.o.'s website at: <http://www.lug.com.pl/download/dokumenty>
- 3.2. The Buyer submitting the complaint shall be obliged to complete the complaint form and send it immediately to the Guarantor.
- 3.3. All Warranty claims are made to the Guarantor in writing, under pain of forfeiture of the Warranty rights, and sent by fax or e-mail to: service@lug.com.pl with the enclosed proof of purchase (VAT invoice, cash register receipt or a copy of purchase agreement) and a detailed, documented description of the defect found. Upon receipt of a properly filled out application, a message will be sent to the Buyer about the acceptance of the application together with the number of the complaint.
- 3.4. The Guarantor shall process the complaint within 14 days of the date of the delivery of the defective product and documents stipulated in Section 3.3, subject to the possibility of extending the period, in case of the necessity to carry out detailed technical examinations, which shall be immediately communicated to the Buyer by the Guarantor.
- 3.5. The Buyer returns the faulty item, referred to in point. 3.4. of these General Warranty Terms and Conditions, clearly marking on the packaging the complaint number received from the Guarantor, lack of which may result in the non-receipt of such a shipment by the Guarantor to his warehouse.
- 3.6. The Guarantor shall inform the Buyer in writing, by telephone, fax or e-mail about the outcome of the complaint investigation.
- 3.7. The Guarantor's liability shall be limited to the maximum value of the product on the date of its purchase.
- 3.8. In the event that the Warranty claim is accepted, the Guarantor decides in each case whether to repair a defective product, replace it with a defect-free product, reduce its price or replace it with a product of the same application and similar technical parameters in the case when the subject of the complaint has been withdrawn from the offer.
- 3.9. The Guarantor, when repairing the defective product, allows the exchange of components for used or reconditioned components, which, in terms of performance, functionality and reliability are equivalent to new components and are free from defects and material shortages.
- 3.10. During the course of the warranty process, the repair of the product or its replacement into a defect-free product shall be free of charge.
- 3.11. If, as a result of a warranty claim, any elements of the defective product are replaced, the warranty period shall not be calculated anew.
- 3.12. If the warranty claim is accepted, the Guarantor will undertake necessary actions towards



fulfilling the warranty obligation at the latest within 21 days from the date of informing the Buyer about the way of handling the complaint, unless there are circumstances beyond the control of the Guarantor, which may have an impact on the extension of that time, e.g., the necessity to perform additional laboratory tests or order non-standard components to be used in the repaired lighting fixture, which need to be ordered from suppliers, etc.

- 3.13. If the product is not collected upon the Guarantor's request, the Buyer shall incur the costs of storing the product, or possibly the cost of its return.
- 3.14. The product storing period by the Guarantor is up to 6 months. After this period the product will be returned to the Buyer at his expense.
- 3.15. All costs related to the Guarantor's investigation of an unjustified warranty claim shall be borne by the Buyer.

4. Other Provisions

- 4.1. If the Buyer or any third party designated by the Buyer makes any interference in the fixture, or repairs, alters or removes any defects in the products without the written consent of the Guarantor, any claims under this warranty shall lapse once such interference, repairs, alterations or removals have been made.
- 4.2. The warranty shall also expire if the products are used for purposes other than intended.
- 4.3. If the Guarantor receives a complaint from the Buyer, the Guarantor reserves the right to inspect the defects of the products involved at their place of use. The lack of the Buyer's consent to the performance of such an inspection by the Guarantor or his designated representative shall be treated as a waiver of the warranty claim.
- 4.4. The Guarantor allows the possibility to perform payable service repairs of products, including post-warranty repairs, the terms and conditions of which shall be agreed upon each time between the Buyer and the Guarantor.
- 4.5. LUG Light Factory Sp. z o.o., within the limits of the applicable law, shall not be responsible for any loss, damage, increased costs or expense, for any loss of the possibility to use the product, its functionality, for any damage to the product, any lost benefits, savings, contracts, revenues or any losses or additional costs not resulting directly from the fault of LUG Light Factory Sp. z o.o.
- 4.6. The law applicable to this warranty shall be Polish law.
- 4.7. These General Warranty Terms and Conditions are effective from 1 December 2017 and apply to all orders placed after that date.
- 4.8. Warranty terms and conditions are available on the manufacturer's website: www.lug.com.pl



MD-2005 mun.Chișinău, str. Albișoara, 38
Tel. (022) 820-770, Email: am@am.gov.md

CONFIRMARE

privind înregistrarea în „Lista producătorilor” de produse supuse reglementărilor
de responsabilitate extinsă a producătorului (ambalaje)

În scopul plasării pe piață a ambalajelor/produselor ambalate, în conformitate
cu prevederile art. 12 alin. (5) și alin. (14) lit. e) din Legea nr. 209 din 29.07.2016
privind deșeurile, și punctele 46 – 50 din Regulamentul privind ambalajele și
deșeurile de ambalaje, aprobat prin Hotărîrea Guvernului nr. 561 din 31.07.2020,
se emite numărul de înregistrare

MD2024-8-A-2320

pentru SRL ECO EVOLUTIONS, IDNO: 1013600038165, cu adresa juridică
mun. Chișinău, str. A. Hîjdeu 98/1, ap.1.

Numărul de înregistrare este valabil începînd cu data de 09.08.2024 pînă la
data de 09.08.2029.

Director

Dorin POVERJUC

Digitally signed by Poverjuc Dorin
Date: 2024.08.09 09:49:31 EEST
Reason: MoldSign Signature
Location: Moldova

MOLDOVA EUROPEANĂ





MD-2005 mun.Chișinău, str. Albișoara, 38
Tel. (022) 820-770, Email: am@am.gov.md

CONFIRMARE

privind înregistrarea în „Lista producătorilor” de produse
supuse reglementărilor de responsabilitate extinsă a producătorului
(echipamente electrice și electronice)

În scopul plasării pe piață a produselor de echipamente electrice și electronice, în conformitate cu prevederile art. 12 alin. (5) și alin. (14) lit. b) din Legea nr. 209 din 29.07.2016 privind deșeurile, și punctele 46 – 50 din Regulamentul privind deșeurile de echipamente electrice și electronice, aprobat prin Hotărârea Guvernului nr. 212 din 07.03.2018, se emite numărul de înregistrare

MD2024-3-EEE-009

pentru SRL ECO EVOLUTIONS, IDNO: 1013600038165, cu adresa juridică:
mun. Chișinău, str. A. Hîjdeu 98/1, ap.1.

Numărul de înregistrare este valabil începînd cu data de 29.03.2024 pînă la data de 29.03.2027.

Director adjunct
Radu STRATUTA

Digitally signed by Stratuța Radu
Date: 2024.03.29 18:41:25 EET
Reason: MoldSign Signature
Location: Moldova





Łukasiewicz – IMiF
PREDOM Division
Krakowiaków 53, 02-255 WARSAW
POLAND

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LICENCE / CERTIFICATE

to use the European Mark

LICENCJA / CERTYFIKAT

na używanie europejskiego Znak



Licence / Certificate No.

Licencja / Certyfikat Nr

0340/ENEC/24

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Name and address of the Certificate owner:

Nazwa i adres posiadacza Certyfikatu:

LUG Light Factory Sp. z o.o.

ul. Gorzowska 11; 65-127 Zielona Góra Poland

For the products:

Dla wyrobów:

Luminaires for road and street lighting

Oprawy oświetleniowe drogowe i uliczne

Manufacturing place:

Miejsce produkcji:

LUG Light Factory Sp. z o.o.

ul. Gorzowska 11; 65-127 Zielona Góra Poland

Trade name:

Znak towarowy:

LUG

Type(s)/Model(s):

Typ(y), model(e):

Luminaires for road and street lighting

Traffik LED & Traffik R LED - cl I series

(details in the Appendix / Szczegóły w Załączniku)

Complying with the following

European Standards:

Zgodnymi z następującymi normami europejskimi:

EN 60598-2-3:2003

EN 60598-2-3:2003/ A1:2011

EN 60598-1:2021

EN 60598-1:2021/A11:2022

EN 62262:2002

Test report(s):

Raporty z badań:

Ref No: B5-3/244/B/23 + Att No. 1 (EU GD and ND) rep. B5-3/244/B/1/23 dated

11.01.2024; B5-3/246/B/23 dated 10.01.2024 performed by the Testing Laboratory

Łukasiewicz-IMiF PREDOM Division (Accreditation PCA AB 003)

Date:

Data:

2024-01-12

Signed by /
Podpisano przez:

Paweł Andrzej
Oziębło

Date / Data:
2024-01-12 14:26

Manager of Certification Office
Kierownik Biura Certyfikacji

This licence has been issued under the presumption and conditional on the fact that the licensee holds all necessary legal rights with regard to the product presented for testing and certification. The ENEC mark may be applied to the products as specified in this licence for the duration of the Licence. This licence expires upon withdrawal any of the above mentioned standards.

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Additional information – see the Appendix. Dodatkowe informacje – patrz Załącznik.

Name and address of the license holder:	LUG Light Factory Sp z o.o. ul. Gorzowska 11; 65-127 Zielona Góra - Poland				
Name and address of manufacturer:	LUG Light Factory Sp z o.o. ul. Gorzowska 11; 65-127 Zielona Góra - Poland				
Name and address of manufacturing place:	LUG Light Factory Sp z o.o. ul. Gorzowska 11; 65-127 Zielona Góra - Poland				
Name of product:	Traffik LED & Traffik R LED– cl I series				
Trade mark :	LUG				
Technical data:					
Rated voltage	220-240V				
Rated frequency:	50/60Hz				
Protection against electric shock:	Class I				
Degree of protection:	IP66; IK08				
ta	LED Type	LED quantity	Pmin [W]	Pmax [W]	Ta max[°C]
	Hi-Power	12	4	33	+55
	Hi-Power	24	7	60	+50
	Hi-Power	36	10	78	+50
	Hi-Power	48	14	90	+45
	Mid-Power (3030)	24	4	33	+55
	Mid-Power (3030)	48	7	60	+50
	Mid-Power (3030)	72	10	78	+50
	Mid-Power (3030)	96	14	90	+45
	Mid-Power (5050)	12	4	33	+55
	Mid-Power (5050)	24	7	60	+50
	Mid-Power (5050)	36	10	78	+50
	Mid-Power (5050)	48	14	90	+45

Choice sheet of the luminaires Traffik LED & Traffik R LED– cl I series:

Example of symbol (Marking):

130292.5LR7B30S320.101.N.P.R

1 2 3 4 5 6 7 8 9

APPENDIX TO THE LICENCE/CERTIFICATE No. 0340/ENEC/24
page 2

Designations used on the marking of luminaries (some designation may not appear in the name) :

1. 13029	- Code of the series 13029- Traffik LED 13087- Traffik LED - Hi-Power XPG3 13088- Traffik LED - Mid-Power 3030 13089- Traffik LED - Mid-Power 5050
2. 2	- Color: 1: black 2: grey 5: graphite 0: another
3. 5L	- Type of power supply: 2L - DIMM 1-10V 3L - DALI 5L - on-off 6L - on-off / DALI 7L - ZHAGA D4i PL - programmable
4. R7	- CRI: R7 = 70-79 R8 = 80-89
5. B30	- Color temperature (±50K): B18 = 1800K B22 = 2200K B27 = 2700K B30 = 3000K B40 = 4000K B57 = 5700K B65 = 6500K
6. S320	- Max. luminous flux (e.g. S320 = 3200lm)
7. 1	- 1 - Safety Class I
8. 01	- Optic: 01 01 - for road lighting type O1 02 02 - for road lighting type O2 ... 99 099 - for road lighting type O99 MKxx - xx 00 ...99 - for investment optic
9. N.P	- Additional equipment A - additional corrosion protection B - Tool-free access to the LED Driver N - NEMA Socket Z - ZHAGA Socket T - NTC Sensor W - Twilight Sensor V - Surge Device Protector 10kV Y - Surge Device Protector 20kV P - Anti pressure vent R - Traffik R LED (Regulate bracket)

APPENDIX TO THE LICENCE/CERTIFICATE No. 0340/ENEC/24

page 3

List of components:

ANNEX 1		TABLE: Critical components information					P
Object / part No.	Code	Manufacturer/ trademark	Type / model	Technical data	Standard	Mark(s) of conformity ¹⁾	
LED Modules	A	LUG	ML21XXXXYY.WQQQ.UUV Luxeon 5050 modules (choice sheet below)	Tc -40°C to +85°C	EN62031	ENEC	

Example of symbol:

ML21XXXXYY.WQQQ.UUV

1 2 3 4 5 6 7 8

Designations used on the marking of LED boards:

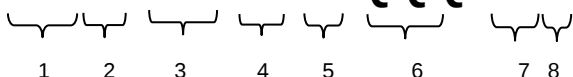
- | | |
|--------|--|
| 1. ML | - PCB designation (ML – LED module) |
| 2. 21 | - Year of the project
19, 20, 21 |
| 3. XXX | - Number of the project:
660, 661, 662, 663, 670, 671, 672, 673, 680, 681, 682, 683, 690, 691,
692, 693 |
| 4. YY | - Project variant (PCB design, milling, dimensions, soldermask color,
lamine thickness, LED configuration):
00...99 |
| 5. W | Light color:
W: White |
| 6. QQQ | - CRI and CCT:
718: CRI 70 and 1800K
722: CRI 70 and 2200K
727: CRI 70 and 2700K
730: CRI 70 and 3000K
735: CRI 70 and 3500K
740: CRI 70 and 4000K
750: CRI 70 and 5000K
757: CRI 70 and 5700K
765: CRI 70 and 6500K
818: CRI 80 and 1800K
822: CRI 80 and 2200K
827: CRI 80 and 2700K
830: CRI 80 and 3000K
835: CRI 80 and 3500K
840: CRI 80 and 4000K
850: CRI 80 and 5000K
857: CRI 80 and 5700K
865: CRI 80 and 6500K |
| 7. UU | - Assembly variant (selected components not mounted):
01...99 |
| 8. V | - NTC Thermistor type:
A - none
B – 10K
C – 47K |

APPENDIX TO THE LICENCE/CERTIFICATE No. 0340/ENEC/24
page 4

LED Modules	A	LUG	ML21XXYY.WQQQ.UUV Cree XPG3 modules (choice sheet below)	Tc -40°C to +85°C	EN62031	ENEC
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Example of symbol:

ML21XXYY.WQQQ.UUV



Designations used on the marking of LED boards:

1. ML	- PCB designation (ML – LED module)
2. 21	- Year of the project 12, 13, 14, 15, 16, 17, 18, 19, 20, 21
3. XXX	- Number of the project: 600, 601, 610, 611, 001, 002, 003, 004, 005, 008, 009, 010, 013, 014, 017, 020, 023, 024, 182, 193, 271, 272, 273, 281, 506, 513
4. YY	- Project variant (PCB design, milling, dimensions, soldermask color, laminate thickness, LED configuration): 00...99
5. W	Light color: W: White
6. QQQ	- CRI and CCT: 718: CRI 70 and 1800K 722: CRI 70 and 2200K 727: CRI 70 and 2700K 730: CRI 70 and 3000K 735: CRI 70 and 3500K 740: CRI 70 and 4000K 750: CRI 70 and 5000K 757: CRI 70 and 5700K 765: CRI 70 and 6500K 818: CRI 80 and 1800K 822: CRI 80 and 2200K 827: CRI 80 and 2700K 830: CRI 80 and 3000K 835: CRI 80 and 3500K 840: CRI 80 and 4000K 850: CRI 80 and 5000K 857: CRI 80 and 5700K 865: CRI 80 and 6500K
7. UU	- Assembly variant (selected components not mounted): 01...99
8. V	- NTC Thermistor type: A - none B – 10K C – 47K

APPENDIX TO THE LICENCE/CERTIFICATE No. 0340/ENEC/24
page 5

LED Modules	A	LUG	ML21XXXXYY.WQQQ.UUV Duris S8 modules (choice sheet below)	Tc -40°C to +85°C	EN62031	ENEC
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Example of symbol:

ML21XXXXYY.WQQQ.UUV

1 2 3 4 5 6 7 8

Designations used on the marking of LED boards:

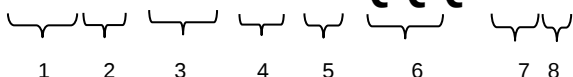
1. ML	- PCB designation (ML – LED module)
2. 21	- Year of the project 19, 20, 21
3. XXX	- Number of the project: 241, 510
4. YY	- Project variant (PCB design, milling, dimensions, soldermask color, laminate thickness, LED configuration): 00...99
5. W	Light color: W: White
6. QQQ	- CRI and CCT: 718: CRI 70 and 1800K 722: CRI 70 and 2200K 727: CRI 70 and 2700K 730: CRI 70 and 3000K 735: CRI 70 and 3500K 740: CRI 70 and 4000K 750: CRI 70 and 5000K 757: CRI 70 and 5700K 765: CRI 70 and 6500K 818: CRI 80 and 1800K 822: CRI 80 and 2200K 827: CRI 80 and 2700K 830: CRI 80 and 3000K 835: CRI 80 and 3500K 840: CRI 80 and 4000K 850: CRI 80 and 5000K 857: CRI 80 and 5700K 865: CRI 80 and 6500K
7. UU	- Assembly variant (selected components not mounted): 01...99
8. V	- NTC Thermistor type: A - none B – 10K C – 47K

APPENDIX TO THE LICENCE/CERTIFICATE No. 0340/ENEC/24
page 6

LED Modules	A	LUG	ML21XXXY.Y.WQQQ.UUV Luxeon 3030 modules (choice sheet below)	Tc -40°C to +85°C	EN62031	ENEC
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Example of symbol:

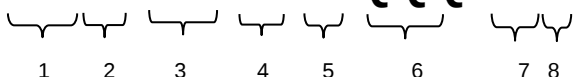
ML21XXXY.Y.WQQQ.UUV



Designations used on the marking of LED boards:

1. ML	- PCB designation (ML – LED module)
2. 21	- Year of the project 18, 19, 20, 21
3. XXX	- Number of the project: Luxeon 3030 – 222, 320
4. YY	- Project variant (PCB design, milling, dimensions, soldermask color, laminate thickness, LED configuration): 00...99
5. W	Light color: W: White
6. QQQ	- CRI and CCT: 718: CRI 70 and 1800K 722: CRI 70 and 2200K 727: CRI 70 and 2700K 730: CRI 70 and 3000K 735: CRI 70 and 3500K 740: CRI 70 and 4000K 750: CRI 70 and 5000K 757: CRI 70 and 5700K 765: CRI 70 and 6500K 818: CRI 80 and 1800K 822: CRI 80 and 2200K 827: CRI 80 and 2700K 830: CRI 80 and 3000K 835: CRI 80 and 3500K 840: CRI 80 and 4000K 850: CRI 80 and 5000K 857: CRI 80 and 5700K 865: CRI 80 and 6500K
7. UU	- Assembly variant (selected components not mounted): 01...99
8. V	- NTC Thermistor type: A - none B – 10K C – 47K

APPENDIX TO THE LICENCE/CERTIFICATE No. 0340/ENEC/24
page 7

LED Modules	A	LUG	ML21XXXY.Y.WQQQ.UUV Cree XTE modules (choice sheet below)	Tc -40°C to +85°C	EN62031	ENEC
Example of symbol: ML21XXXY.Y.WQQQ.UUV  Designations used on the marking of LED boards: 1. ML - PCB designation (ML – LED module) 2. 21 - Year of the project 14, 15 3. XXX - Number of the project: 003, 010 4. YY - Project variant (PCB design, milling, dimensions, soldermask color, laminate thickness, LED configuration): 00...99 5. W - Light color: W: White 6. QQQ - CRI and CCT: 718: CRI 70 and 1800K 722: CRI 70 and 2200K 727: CRI 70 and 2700K 730: CRI 70 and 3000K 735: CRI 70 and 3500K 740: CRI 70 and 4000K 750: CRI 70 and 5000K 757: CRI 70 and 5700K 765: CRI 70 and 6500K 818: CRI 80 and 1800K 822: CRI 80 and 2200K 827: CRI 80 and 2700K 830: CRI 80 and 3000K 835: CRI 80 and 3500K 840: CRI 80 and 4000K 850: CRI 80 and 5000K 857: CRI 80 and 5700K 865: CRI 80 and 6500K 7. UU - Assembly variant (selected components not mounted): 01...99 8. V - NTC Thermistor type: - A - none - B – 10K - C – 47K						

APPENDIX TO THE LICENCE/CERTIFICATE No. 0340/ENEC/24
page 8

Control gear	A	OSRAM	OT100W/UNV/800C/2DIMLT2/P6	220..240V, 50-60Hz, ta= -40...+55°C, tc max=90°C	EN 61347-1 EN 61347-2-13	ENEC
Control gear	A	OSRAM	OT 110/170...240/1A0 1DIMLT2 G1 CE	220..240V, 50-60Hz, ta= -40...+55°C, tc max=85°C	EN 61347-1 EN 61347-2-13	ENEC
Control gear	A	OSRAM	OT 20/170-240/1A0 1DIM LT2 G1 CE	220..240V, 50-60Hz, ta= -40...+60°C, tc max=75°C	EN 61347-1 EN 61347-2-13	ENEC
Control gear	A	OSRAM	OT 75/170...240/1A0 1DIMLT2 G1 CE	220..240V, 50-60Hz, ta= -40...+55°C, tc max=80°C	EN 61347-1 EN 61347-2-13	ENEC
Control gear	A	OSRAM	OT DX 40/220...240/1A0 DIMA LT2 E	220..240V, 50-60Hz, ta= -40...+55°C, tc max=80°C	EN 61347-1 EN 61347-2-13	ENEC
Control gear	A	OSRAM	OT DX 75/220...240/1A0 DIMA LT2 E	220..240V, 50-60Hz, ta= -40...+55°C, tc max=85°C	EN 61347-1 EN 61347-2-13	ENEC
Control gear	A	OSRAM	OT DX 110/220...240/1A0 DIMA LT2 E	220..240V, 50-60Hz, ta= -40...+55°C, tc max=85°C	EN 61347-1 EN 61347-2-13	ENEC
Control gear	A	OSRAM	OT 20/170...240/1A0 4DIMLT2 G2 CE	220..240V, 50-60Hz, ta= -40...+60°C, tc max=75°C	EN 61347-1 EN 61347-2-13	ENEC
Control gear	A	OSRAM	OT 40/170...240/1A0 4DIMLT2 G2 CE	220..240V, 50-60Hz, ta= -40...+60°C, tc max=80°C	EN 61347-1 EN 61347-2-13	ENEC
Control gear	A	OSRAM	OT 75/170...240/1A0 4DIMLT2 G2 CE	220..240V, 50-60Hz, ta= -40...+55°C, tc max=85°C	EN 61347-1 EN 61347-2-13	ENEC
Control gear	A	OSRAM	OT 110/170...240/1A0 4DIMLT2 G2 CE	220..240V, 50-60Hz, ta= -40...+60°C, tc max=75°C	EN 61347-1 EN 61347-2-13	ENEC
Control gear	A	OSRAM	OT 20/170...240/1A0 1DIMLT2 G1 CE	220..240V, 50-60Hz, ta= -40...+55°C, tc max=85°C	EN 61347-1 EN 61347-2-13	ENEC
Control gear	A	OSRAM	OT 40/170...240/1A0 1DIMLT2 G1 CE	220..240V, 50-60Hz, ta= -40...+60°C, tc max=80°C	EN 61347-1 EN 61347-2-13	ENEC

APPENDIX TO THE LICENCE/CERTIFICATE No. 0340/ENEC/24
page 9

Control gear	A	OSRAM	OT 40/120...277/1A0 4DIMLT2 E	220..240V, 50-60Hz, ta= -40...+60°C,	EN 61347-1	ENEC
				tc max=80°C	EN 61347-2-13	
Control gear	A	OSRAM	OT 60/170...240/1A0 4DIMLT2 E	220..240V, 50-60Hz, ta= -40...+60°C,	EN 61347-1	ENEC
				tc max=85°C	EN 61347-2-13	
Control gear	A	OSRAM	OT 90/170...240/1A0 4DIMLT2 E	220..240V, 50-60Hz, ta= -40...+55°C,	EN 61347-1	ENEC
				tc max=90°C	EN 61347-2-13	
Control gear	A	OSRAM	OT 50/120...277/800 2DIMLT2 P6	220..240V, 50-60Hz, ta= -40...+55°C,	EN 61347-1	ENEC
				tc max=85°C	EN 61347-2-13	
Control gear	A	OSRAM	OT 50/120...277/1A2 2DIMLT2 P6	220..240V, 50-60Hz, ta= -40...+55°C,	EN 61347-1	ENEC
				tc max=80°C	EN 61347-2-13	
Control gear	A	OSRAM	OT 100/120...277/800 2DIMLT2 P6	220..240V, 50-60Hz, ta= -40...+55°C,	EN 61347-1	ENEC
				tc max=85°C	EN 61347-2-13	
Control gear	A	OSRAM	OT 110/120...277/1A4 2DIMLT2 P6	220..240V, 50-60Hz, ta= -40...+55°C,	EN 61347-1	ENEC
				tc max=85°C	EN 61347-2-13	
Control gear	A	OSRAM	OT 60/220...240/1A4 1DIMA P7	220..240V, 50-60Hz, ta= -40...+55°C,	EN 61347-1	ENEC
				tc max=85°C	EN 61347-2-13	
Control gear	A	OSRAM	OT 100/220...240/1A4 1DIMA P7	220..240V, 50-60Hz, ta= -40...+55°C,	EN 61347-1	ENEC
				tc max=85°C	EN 61347-2-13	
Control gear	A	OSRAM	OT 75/UNV/1A0 2DIM P7	120..277V, 50-60Hz, ta= -40...+55°C,	EN 61347-1	ENEC
				tc max=85°C	EN 61347-2-13	
Control gear	A	OSRAM	OT 100/UNV/1A0 2DIM P7	120..277V, 50-60Hz, ta= -40...+55°C,	EN 61347-1	ENEC
				tc max=85°C	EN 61347-2-13	
Control gear	A	OSRAM	OT 100/ 220-240/1A4 2DIM P7	220..240V, 50-60Hz, ta= -40...+55°C,	EN 61347-1	ENEC
				tc max=85°C	EN 61347-2-13	

APPENDIX TO THE LICENCE/CERTIFICATE No. 0340/ENEC/24
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LED Driver	A	OSRAM	IT DALI 20/220...240/1A0 E	220...240 V/50/60Hz, Ta = -40...+60 °C, Tc max = 75 °C	Acc. to EN 61347-1/Acc. to EN 61347-2- 13/Acc. to EN	CE / CCC / EAC / RCM / VDE / VDE-EMC / UKCA /
					55015/Acc. to EN 61547/Acc. to EN 61000-3- 2/Acc. to EN 62384/Acc. to EN 62386	DALI-2 / ENEC
LED Driver	A	OSRAM	IT DALI 40/220...240/1A0 E	220...240 V/50/60Hz, Ta = -40...+60 °C, Tc max = 85 °C	EN 61347-2-13, EN 61347-1	VDE, ENEC10
LED Driver	A	OSRAM	IT DALI 75/220...240/1A0 E	220...240 V/50/60Hz, Ta = -40...+60 °C, Tc max = 100 °C	EN 61347-2-13	VDE, ENEC10
LED Driver	A	OSRAM	IT DALI 110/220...240/1A0 E	220...240 V/50/60Hz, Ta = -40...+60 °C, Tc max = 90 °C	EN 61347-2-13, EN 61347-1	VDE, ENEC10
LED Driver	A	OSRAM	IT DALI 150/220...240/1A0 E	220...240, 50/60Hz, Ta = -40...+55 °C, Tc max = 85 °C	Acc. to EN 61347-1/Acc. to EN 61347-2- 13/Acc. to EN 55015/Acc. to EN 61547/Acc. to EN 61000-3- 2/Acc. to EN 62384/Acc. to EN 62386	CCC / CE / RCM / EAC / UKCA / DALI-2 / VDE / VDE- EMC / ENEC
LED Driver	A	OSRAM	IT DALI 200/220...240/1A0 E	220...240, 50/60Hz, Ta = -40...+60 °C, Tc max = 75 °C	Acc. to EN 61347-1/Acc. to EN 61347-2- 13/Acc. to EN 55015/Acc. to EN 61547/Acc. to EN 61000-3- 2/Acc. to EN 62384/Acc. to EN 62386	CCC / CE / RCM / EAC / UKCA / DALI-2 / VDE / VDE- EMC / ENEC
LED Driver	A	Osram	OT 75 /220...240/1A0 1DIM G2 CE	220...240V, 50/60Hz, Ta = -40...+55 °C, Tc max = 85 °C	EN 61347-2-13, EN 61347-1	CE / ENEC / VDE / VDE-EMC / CCC / EAC ENEC 10 VDE

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Control Gear	A	OSRAM	OT 50/120...277/700 P5	120..277V, 50-60Hz, ta= -40...+55°C, tc max=85°C	EN 61347-1, EN 61347-2-13	CB by Dekra
Control Gear	A	OSRAM	OT 100/120...277/700 P5	120..277V, 50-60Hz, ta= -40...+55°C, tc max=85°C	EN 61347-1, EN 61347-2-13	CB by Dekra
Control Gear	A	OSRAM	OT 100/220...240/4A2 P5	220..240V, 50-60Hz, ta= -40...+55°C, tc max=85°C	EN 61347-1, EN 61347-2-13	CB certyfikat
Control Gear	A	OSRAM	OT 20/170...240/1A0 4DIM NFC G3 CE	220..240V, 50-60Hz, ta= -40...+60°C, tc max=75°C	EN 61347-1, EN 61347-2-13	ENEC 10 VDE
Control Gear	A	OSRAM	OT 40/170...240/0A7 4DIM NFC G3 CE	220..240V, 50-60Hz, ta= -40...+60°C, tc max=80°C	EN 61347-1, EN 61347-2-13	ENEC 10 VDE
Control Gear	A	OSRAM	OT 40/170...240/1A0 4DIM NFC G3 CE	220..240V, 50-60Hz, ta= -40...+60°C, tc max=80°C	EN 61347-1, EN 61347-2-13	ENEC 10 VDE
Control Gear	A	OSRAM	OT 75/170...240/0A7 4DIM NFC G3 CE	220..240V, 50-60Hz, ta= -40...+55°C, tc max=90°C	EN 61347-1, EN 61347-2-13	ENEC 10 VDE
Control Gear	A	OSRAM	OT 75/170...240/1A0 4DIM NFC G3 CE	220..240V, 50-60Hz, ta= -40...+55°C, tc max=90°C	EN 61347-1, EN 61347-2-13	ENEC 10 VDE
Control Gear	A	OSRAM	OT 75/170...240/1A5 4DIM NFC G3 CE	220..240V, 50-60Hz, ta= -40...+60°C, tc max=85°C	EN 61347-1, EN 61347-2-13	ENEC 10 VDE
Control Gear	A	OSRAM	OT 110/170...240/0A7 4DIM NFC G3 CE	220..240V, 50-60Hz, ta= -40...+55°C, tc max=80°C	EN 61347-1, EN 61347-2-13	ENEC 10 VDE
Control Gear	A	OSRAM	OT 110/170...240/1A0 4DIM NFC G3 CE	220..240V, 50-60Hz, ta= -40...+55°C, tc max=85°C	EN 61347-1, EN 61347-2-13	ENEC 10 VDE
Control Gear	A	OSRAM	OT DX 40/170...240/1A0 DIMA NFC G2	170..240V, 50-60Hz, ta= -40...+55°C, tc max=75°C	EN 61347-1, EN 61347-2-13	ENEC 10 VDE
Control Gear	A	OSRAM	OT DX 75/170...240/1A0 DIMA NFC G2	170..240V, 50-60Hz, ta= -40...+55°C, tc max=85°C	EN 61347-1, EN 61347-2-13	ENEC 10 VDE
Control Gear	A	OSRAM	OT DX 110/170...240/1A0 DIMA NFC G2	170..240V, 50-60Hz, ta= -40...+55°C, tc max=85°C	EN 61347-1, EN 61347-2-13	ENEC 10 VDE
LED Driver	A	OSRAM	IT DALI 20/120...240/1A0 P7	120..240V, 50-60Hz, ta= -40...+70°C, tc max=80°C	EN 61347-1 EN 61347-2-13	ENEC
LED Driver	A	OSRAM	IT DALI 40/120...240/1A0 P7	120..240V, 50-60Hz, ta= -40...+65°C, tc max=80°C	EN 61347-1 EN 61347-2-13	ENEC

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LED Driver	A	OSRAM	IT DALI 75/120...240/1A0 P7	120..240V, 50-60Hz, ta= -40...+65°C, tc max=80°C	EN 61347-1 EN 61347-2-13	ENEC
LED Driver	A	OSRAM	IT DALI 110/120...240/1A0 P7	120..240V, 50-60Hz, ta= -40...+60°C, tc max=85°C	EN 61347-1 EN 61347-2-13	ENEC
LED Driver	A	OSRAM	IT DALI 150/120...240/1A0 P7	120..240V, 50-60Hz, ta= -40...+60°C, tc max=90°C	EN 61347-1 EN 61347-2-13	ENEC
LED Driver	A	OSRAM	IT DALI 200/120...240/1A0 P7	120..240V, 50-60Hz, ta= -40...+55°C, tc max=90°C	EN 61347-1 EN 61347-2-13	ENEC
Control gear	B	OSRAM	OT 20/170...240/1A0 1DIM NFC G3 CE	220..240V, 50-60Hz, ta= -40...+60°C, tc max=75°C	EN 61347-1, EN 61347-2-13	ENEC 10 VDE
Control gear	B	OSRAM	OT 40/170-240/0A7 1DIM NFC G3 CE	220..240V, 50-60Hz, ta= -40...+60°C, tc max=80°C	EN 61347-1, EN 61347-2-13	ENEC 10 VDE
Control gear	B	OSRAM	OT 40/170-240/1A0 1DIM NFC G3 CE	220..240V, 50-60Hz, ta= -40...+60°C, tc max=80°C	EN 61347-1, EN 61347-2-13	ENEC 10 VDE
Control gear	B	OSRAM	OT 75/170-240/1A0 1DIM NFC G3 CE	220..240V, 50-60Hz, ta= -40...+55°C, tc max=90°C	EN 61347-1, EN 61347-2-13	ENEC 10 VDE
Control gear	B	OSRAM	OT 110/170-240/0A7 1DIM NFC G3	220..240V, 50-60Hz, ta= -40...+55°C, tc max=80°C	EN 61347-1, EN 61347-2-13	ENEC 10 VDE

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Control gear	B	OSRAM	OT 110/170-240/1A0 1DIM NFC G3	220..240V, 50-60Hz, ta= -40...+55°C, tc max=85°C	EN 61347-1, EN 61347-2-13	ENEC 10 VDE
Control gear	A	Inventronics	EBS-025S045BT2	176..305V, 50-60Hz, ta= -40...+75°C,	EN 61347-1, EN 61347-2-13	ENEC
Control gear	A	Inventronics	EBS-025S070BT2	176..305V, 50-60Hz, ta= -40...+75°C,	EN 61347-1, EN 61347-2-13	ENEC
Control gear	A	Inventronics	EBS-025S105BT2	171..275V, 50-60Hz, ta= -40...+75°C,	EN 61347-1, EN 61347-2-13	ENEC
Control gear	A	Inventronics	EBS-040S045BT2	176..305V, 50-60Hz, ta= -40...+75°C,	EN 61347-1, EN 61347-2-13	ENEC
Control gear	A	Inventronics	EBS-040S070BT2	176..305V, 50-60Hz, ta= -40...+75°C,	EN 61347-1, EN 61347-2-13	ENEC
Control gear	A	Inventronics	EBS-040S105BT2	176..305V, 50-60Hz, ta= -40...+75°C, tc max=90°C	EN 61347-1 EN 61347-2-13	ENEC
Control gear	A	Inventronics	EBS-080S070BT2	176..305V, 50-60Hz, ta= -40...+75°C,	EN 61347-1	ENEC
Control gear	A	Inventronics	EBS-080S105BT2	176..305V, 50-60Hz, ta= -40...+75°C, tc max=90°C	EN 61347-1 EN 61347-2-13	ENEC
Control gear	A	Inventronics	EBS-080S150BT2	176..305V, 50-60Hz, ta= -40...+75°C, tc max=90°C	EN 61347-2-13	ENEC
Control gear	A	Inventronics	EBS-120S070BT2	176..305V, 50-60Hz, ta= -40...+75°C,	EN 61347-2-13	ENEC
Control gear	A	Inventronics	EBS-120S105BT2	176..305V, 50-60Hz, ta= -40...+75°C,	EN 61347-2-13	ENEC
Control gear	A	Inventronics	EBS-120S150BT2	176..305V, 50-60Hz, ta= -40...+75°C,	EN 61347-2-13	ENEC
Control gear	A	Inventronics	EUM-075S	90..305V, 50-60Hz, ta= -40...+80°C, tc max=90°C	EN 61347-1 EN 61347-2-13	ENEC
Control gear	A	Inventronics	EUM – 100S	100..277V, 50-60Hz, ta= -40...+75°C, tc max=90°C	EN 61347-1 EN 61347-2-13	ENEC
Control gear	A	Inventronics	EUM – 150S	100..277V, 50-60Hz, ta= -40...+75°C, tc max=90°C	EN 61347-1 EN 61347-2-13	ENEC

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Control gear	A	Inventronics	EUM – 200S	100..277V, 50-60Hz, ta= -40...+75°C,	EN 61347-1	ENEC
				tc max=90°C	EN 61347-2-13	
Control gear	A	Inventronics	EUM – 240S	100..277V, 50-60Hz, ta= -40...+75°C,	EN 61347-1	ENEC
				tc max=90°C	EN 61347-2-13	
Control gear	A	Philips	Xitanium 40W 0.7A Prog+ GL-J sXt	220..240V, 50-60Hz, ta= -40...+55°C,	EN 61347-1	ENEC
				tc max=80°C	EN 61347-2-13	
Control gear	A	Philips	Xitanium 75W 0.35-0.70A GL Prog+ sXt	220..240V, 50-60Hz, ta= -40...+55°C,	EN 61347-1	ENEC
				tc max=80°C	EN 61347-2-13	
Control gear	A	Philips	Xitanium 75W 0.1-1.05A Prog GL F sXt	220..240V, 50-60Hz, ta= -40...+55°C,	EN 61347-1	ENEC
				tc max=80°C	EN 61347-2-13	
Control gear	A	Philips	Xitanium 100W 0.7A Prog+ GL-Z sXt	220..240V, 50-60Hz, ta= -40...+55°C,	EN 61347-1	ENEC
				tc max=80°C	EN 61347-2-13	
Control gear	A	Philips	Xi BP 12W 0.1-0.5A S 230V C100	220..240V, 50-60Hz, ta= -40...+55°C,	EN 61347-1	ENEC
				tc max=80°C	EN 61347-2-13	
Control gear	A	Philips	Xi BP 22W 0.2-0.7A S 230V C123	220..240V, 50-60Hz, ta= -40...+55°C,	EN 61347-1	ENEC
				tc max=85°C	EN 61347-2-13	
Control gear	A	Philips	Xi BP 40W 0.2-0.7A S 230V C123	220..240V, 50-60Hz, ta= -40...+55°C,	EN 61347-1	ENEC
				tc max=85°C	EN 61347-2-13	
Control gear	A	Philips	Xi BP 40W 0.3-1.0A S 230V C123	220..240V, 50-60Hz, ta= -40...+55°C,	EN 61347-1	ENEC
				tc max=80°C	EN 61347-2-13	
Control gear	A	Philips	Xi LP 22W 0.2-0.7A S1 230V C123 sXt	220..240V, 50-60Hz, ta= -40...+55°C,	EN 61347-1	ENEC
				tc max=85°C	EN 61347-2-13	
Control gear	A	Philips	Xi LP 22W 0.3-1.0A S1 230V C123 sXt	220..240V, 50-60Hz, ta= -40...+55°C,	EN 61347-1	ENEC
				tc max=85°C	EN 61347-2-13	
Control gear	A	Philips	Xi LP 40W 0.2-0.7A S1 230V C123 sXt	220..240V, 50-60Hz, ta= -40...+55°C,	EN 61347-1	ENEC
				tc max=85°C	EN 61347-2-13	

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Control gear	A	Philips	Xi LP 40W 0.3-1.0A S1 230V C123 sXt	220..240V, 50-60Hz, ta= -40...+55°C,	EN 61347-1	ENEC
				tc max=85°C	EN 61347-2-13	
Control gear	A	Philips	Xi LP 75W 0.2-0.7A S1 230V C133 sXt	220..240V, 50-60Hz, ta= -40...+55°C,	EN 61347-1	ENEC
				tc max=80°C	EN 61347-2-13	
Control gear	A	Philips	Xi LP 75W 0.3-1.0A S1 230V C133 sXt	220..240V, 50-60Hz, ta= -40...+55°C,	EN 61347-1	ENEC
				tc max=80°C	EN 61347-2-13	
Control gear	A	Philips	Xi LP 75W 0.5-1.5A S1 230V C133 sXt	220..240V, 50-60Hz, ta= -40...+55°C,	EN 61347-1	ENEC
				tc max=80°C	EN 61347-2-13	
Control gear	A	Philips	Xi LP 110W 0.2-0.7A S1 230V C133 sXt	220..240V, 50-60Hz, ta= -40...+55°C,	EN 61347-1	ENEC
				tc max=90°C	EN 61347-2-13	
Control gear	A	Philips	Xi LP 110W 0.3-1.0A S1 230V C133 sXt	220..240V, 50-60Hz, ta= -40...+55°C,	EN 61347-1	ENEC
				tc max=90°C	EN 61347-2-13	
Control gear	A	Philips	Xi LP 22W 0.2-0.7A S1 230V S175 sXt	220..240V, 50-60Hz, ta= -40...+55°C,	EN 61347-1	ENEC
				tc max=80°C	EN 61347-2-13	
Control gear	A	Philips	Xi LP 22W 0.3-1.0A S1 230V S175 sXt	220..240V, 50-60Hz, ta= -40...+55°C,	EN 61347-1	ENEC
				tc max=80°C	EN 61347-2-13	
Control gear	A	Philips	Xi LP 40W 0.2 -0.7A S1 230V S175 sXt	220..240V, 50-60Hz, ta= -40...+55°C,	EN 61347-1	ENEC
				tc max=80°C	EN 61347-2-13	
Control gear	A	Philips	Xi LP 40W 0.2-0.7A SL 230V S175 sXt	220..240V, 50-60Hz, ta= -40...+55°C,	EN 61347-1	ENEC
				tc max=80°C	EN 61347-2-13	
Control gear	A	Philips	Xi LP 40W 0.3-1.0A S1 230V S175 sXt	220..240V, 50-60Hz, ta= -40...+55°C,	EN 61347-1	ENEC
				tc max=80°C	EN 61347-2-13	
Control gear	A	Philips	Xi LP 40W 0.3-1.0A SL 230V S175 sXt	220..240V, 50-60Hz, ta= -40...+55°C,	EN 61347-1	ENEC
				tc max=80°C	EN 61347-2-13	
Control gear	A	Philips	Xi LP 40W 0.2-0.7A SN 230V S175 sXt	220..240V, 50-60Hz, ta= -40...+55°C,	EN 61347-1	ENEC
				tc max=80°C	EN 61347-2-13	

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Control gear	A	Philips	Xi LP 75W 0.2-0.7A S1 230V S240 sXt	220..240V, 50-60Hz, ta= -40...+55°C,	EN 61347-1	ENEC
				tc max=90°C	EN 61347-2-13	
Control gear	A	Philips	Xi LP 75W 0.2-0.7A SL 230V S240 sXt	220..240V, 50-60Hz, ta= -40...+55°C,	EN 61347-1	ENEC
				tc max=85°C	EN 61347-2-13	
Control gear	A	Philips	Xi LP 75W 0.3-1.0A S1 230V S240 sXt	220..240V, 50-60Hz, ta= -40...+55°C,	EN 61347-1	ENEC
				tc max=90°C	EN 61347-2-13	
Control gear	A	Philips	Xi LP 75W 0.3-1.0A SL 230V S240 sXt	220..240V, 50-60Hz, ta= -40...+55°C,	EN 61347-1	ENEC
				tc max=85°C	EN 61347-2-13	
Control gear	A	Philips	Xi LP 75W 0.2-0.7A SN 230V S240 sXt	220..240V, 50-60Hz, ta= -40...+55°C,	EN 61347-1	ENEC
				tc max=85°C	EN 61347-2-13	
Control gear	A	Philips	Xi LP 75W 0.5-1.5A S1 230V S240 sXt	220..240V, 50-60Hz, ta= -40...+55°C,	EN 61347-1	ENEC
				tc max=85°C	EN 61347-2-13	
Control gear	A	Philips	Xi FP 22W 0.2-0.7A SNLDAE 230V C123 sXt	220..240V, 50-60Hz, ta= -40...+55°C,	EN 61347-1	ENEC
				tc max=85°C	EN 61347-2-13	
Control gear	A	Philips	Xi FP 22W 0.3-1.0A SNLDAE 230V C123 sXt	220..240V, 50-60Hz, ta= -40...+55°C,	EN 61347-1	ENEC
				tc max=85°C	EN 61347-2-13	
Control gear	A	Philips	Xi FP 40W 0.2-0.7A SNLDAE 230V C123 sXt	220..240V, 50-60Hz, ta= -40...+55°C,	EN 61347-1	ENEC
				tc max=85°C	EN 61347-2-13	
Control gear	A	Philips	Xi FP 40W 0.3-1.0A SNLDAE 230V C123 sXt	220..240V, 50-60Hz, ta= -40...+55°C,	EN 61347-1	ENEC
				tc max=85°C	EN 61347-2-13	
Control gear	A	Philips	Xi FP 70W 0.3-1.0A NLD C150 230V sXt	220..240V, 50-60Hz, ta= -30...+60°C,	EN 61347-1	ENEC
				tc max=90°C	EN 61347-2-13	
Control gear	A	Philips	Xi FP 75W 0.2-0.7A SNLDAE 230V C133 sXt	220..240V, 50-60Hz, ta= -40...+55°C,	EN 61347-1	ENEC
				tc max=80°C	EN 61347-2-13	
Control gear	A	Philips	Xi FP 75W 0.3-1.0A SNLDAE 230V C133 sXt	220..240V, 50-60Hz, ta= -40...+55°C,	EN 61347-1	ENEC
				tc max=80°C	EN 61347-2-13	

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Control gear	A	Philips	Xi FP 75W 0.5-1.5A SNLDAE 230V C133 sXt	220..240V, 50-60Hz, ta= -40...+55°C,	EN 61347-1	ENEC
				tc max=80°C	EN 61347-2-13	
Control gear	A	Philips	Xi FP 100W 0.2-0.7A SNLDAE 230V C165 sXt	220..240V, 50-60Hz, ta= -40...+55°C,	EN 61347-1	ENEC
				tc max=85°C	EN 61347-2-13	
Control gear	A	Philips	Xi FP 110W 0.2-0.7A SNLDAE 230V C133 sXt	220..240V, 50-60Hz, ta= -40...+55°C,	EN 61347-1	ENEC
				tc max=85°C	EN 61347-2-13	
Control gear	A	Philips	Xi FP 110W 0.3-1.0A NLD C150 230V sXt	220..240V, 50-60Hz, ta= -30...+60°C,	EN 61347-1	ENEC
				tc max=90°C	EN 61347-2-13	
Control gear	A	Philips	Xi FP 110W 0.3-1.0A SNLDAE 230V C133 sXt	220..240V, 50-60Hz, ta= -40...+55°C,	EN 61347-1	ENEC
				tc max=85°C	EN 61347-2-13	
Control gear	A	Philips	Xi FP 22W 0.2-0.7A SNLDAE 230V S175 sXt	220..240V, 50-60Hz, ta= -40...+55°C,	EN 61347-1	ENEC
				tc max=85°C	EN 61347-2-13	
Control gear	A	Philips	Xi FP 22W 0.3-1.0A SNLDAE 230V S175 sXt	220..240V, 50-60Hz, ta= -40...+55°C,	EN 61347-1	ENEC
				tc max=85°C	EN 61347-2-13	
Control gear	A	Philips	Xi FP 40W 0.2-7.0A SNLDAE 230V S175 sXt	220..240V, 50-60Hz, ta= -40...+55°C,	EN 61347-1	ENEC
				tc max=85°C	EN 61347-2-13	
Control gear	A	Philips	Xi FP 40W 0.3-1.0A SNLDAE 230V S175 sXt	220..240V, 50-60Hz, ta= -40...+55°C,	EN 61347-1	ENEC
				tc max=90°C	EN 61347-2-13	
Control gear	A	Philips	Xi FP 75W 0.2-0.7A SNLDAE 230V S240 sXt	220..240V, 50-60Hz, ta= -40...+55°C,	EN 61347-1	ENEC
				tc max=85°C	EN 61347-2-13	
Control gear	A	Philips	Xi FP 75W 0.3-1.0A SNLDAE 230V S240 sXt	220..240V, 50-60Hz, ta= -40...+55°C,	EN 61347-1	ENEC
				tc max=85°C	EN 61347-2-13	
Control gear	A	Philips	Xi SR 12W 0.2-0.7A SNEMP 230V C133 sXt	220..240V, 50-60Hz, ta= -40...+55°C,	EN 61347-1	ENEC
				tc max=85°C	EN 61347-2-13	
Control gear	A	Philips	Xi SR 22W 0.2-0.7A SNEMP 230V C133 sXt	220..240V, 50-60Hz, ta= -40...+55°C,	EN 61347-1	ENEC
				tc max=85°C	EN 61347-2-13	

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Control gear	A	Philips	Xi SR 40W 0.2-0.7A SNEMP 230V C133 sXt	220..240V, 50-60Hz, ta= -40...+55°C,	EN 61347-1	ENEC
				tc max=85°C	EN 61347-2-13	
Control gear	A	Philips	Xi SR 75W 0.2-0.7A SNEMP 230V C150 sXt	220..240V, 50-60Hz, ta= -40...+55°C,	EN 61347-1	ENEC
				tc max=90°C	EN 61347-2-13	
Control gear	A	Philips	Xi SR 75W 0.2-0.7A SNEMP 230V S240 sXt	220..240V, 50-60Hz, ta= -40...+55°C,	EN 61347-1	ENEC
				tc max=90°C	EN 61347-2-13	
Control gear	A	Philips	Xi SR 110W 0.2-0.7A SNEMP 230V C150 sXt	220..240V, 50-60Hz, ta= -40...+55°C,	EN 61347-1	ENEC
				tc max=90°C	EN 61347-2-13	
Control gear	A	Philips	Xi SR 150W 0.2-0.7A SNEMP 230V S240 sXt	220..240V, 50-60Hz, ta= -40...+55°C,	EN 61347-1	ENEC
				tc max=90°C	EN 61347-2-13	
Control gear	A	Philips	Xitanium 100W 2.1-4.2A AOC 230V I220	220..240V, 50-60Hz, ta= -40...+55°C,	EN 61347-1	ENEC
				tc max=80°C	EN 61347-2-13	
Control gear	A	Philips	Xitanium 150W 2.5-4.9A AOC 230V I220	220..240V, 50-60Hz, ta= -40...+55°C,	EN 61347-1	ENEC
				tc max=80°C	EN 61347-2-13	
Control gear	A	Philips	Xi LP 100W 0.3-1.05A S1 230V I175	220..240V, 50-60Hz, ta= -40...+55°C,	EN 61347-1	ENEC
				tc max=80°C	EN 61347-2-13	
Control gear	A	Philips	Xi LP 150W 0.3-1.05A S1 230V I175	220..240V, 50-60Hz, ta= -40...+55°C,	EN 61347-1	ENEC
				tc max=80°C	EN 61347-2-13	
Control gear	A	Philips	Xitanium Dim 35W 0.7A 1-10V TWE I175	220..240V, 50-60Hz, ta= -40...+55°C,	EN 61347-1	ENEC
				tc max=80°C	EN 61347-2-13	
Control gear	A	Philips	Xitanium Dim 100W 0.7A 1-10V TWE I220	220..240V, 50-60Hz, ta= -40...+55°C,	EN 61347-1	ENEC
				tc max=80°C	EN 61347-2-13	
Control gear	A	Philips	Xitanium Dim 150W 0.7A 1-10V TWE I220	220..240V, 50-60Hz, ta= -40...+55°C,	EN 61347-1	ENEC
				tc max=85°C	EN 61347-2-13	
Control gear	A	Philips	Xitanium 75W 0.7A TWE I175	220..240V, 50-60Hz, ta= -40...+55°C,	EN 61347-1	ENEC
				tc max=80°C	EN 61347-2-13	

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Control gear	A	Philips	Xitanium 150W 0.7A TWE I220	220..240V, 50-60Hz, ta= -40...+55°C,	EN 61347-1	ENEC
				tc max=85°C	EN 61347-2-13	
Control gear	A	Philips	Xitanium 75W 1.05A 1-10V 230V C165 sXt	220..240V, 50-60Hz, ta= -40...+55°C,	EN 61347-1	ENEC
				tc max=85°C	EN 61347-2-13	
Control gear	A	Philips	Xitanium 75W 0.70A 1-10V 230V C165 sXt	220..240V, 50-60Hz, ta= -40...+55°C,	EN 61347-1	ENEC
				tc max=85°C	EN 61347-2-13	
Control gear	A	Philips	Xitanium Dim 75W 0.70A 1-10V 230V I220	220..240V, 50-60Hz, ta= -40...+55°C,	EN 61347-1	ENEC
Control gear	A	Philips	Xitanium Dim 150W 0.70A 1-10V 230V I220	220..240V, 50-60Hz, ta= -40...+55°C,	EN 61347-1	ENEC
Control gear	A	Philips	Xitanium 75W 1-10V 230V C165	220..240V, 50-60Hz, ta= -40...+55°C,	EN 61347-1	ENEC
				tc max=80°C	EN 61347-2-13	
Control gear	A	Philips	Xitanium 150W 1.05A 1-10V 230V S240 sXt	220..240V, 50-60Hz, ta= -40...+55°C,	EN 61347-1	ENEC
				tc max=80°C	EN 61347-2-13	
Control gear	A	Tridonic	Tridonic LCA 120W 300-1050mA	220..240V, 50-60Hz, ta= -30...+55°C,	EN 61347-1	ENEC
				tc max=85°C	EN 61347-2-13	
Control gear	A	Tridonic	Tridonic LCA 75W 250-750mA one	220..240V, 50-60Hz, ta= -40...+70°C,	EN 61347-1	ENEC
				tc max=85°C	EN 61347-2-13	
Control gear	A	Tridonic	Tridonic LCA 120W 350-1050mA o	220..240V, 50-60Hz, ta= -40...+70°C,	EN 61347-1	ENEC
				tc max=85°C	EN 61347-2-13	
Control gear	A	Tridonic	Tridonic LCA 160W 350-1050mA o	220..240V, 50-60Hz, ta= -40...+70°C,	EN 61347-1	ENEC
				tc max=85°C	EN 61347-2-13	
Control gear	A	Tridonic	LCO 14/100-500/38 NF C ADV3	220..240V, 50-60Hz, ta= -40...+70°C,	EN 61347-1	ENEC
				tc max=90°C	EN 61347-2-13	
Control gear	A	Tridonic	LCO 24/200-1050/39 NF C ADV3	220..240V, 50-60Hz, ta= -40...+70°C,	EN 61347-1	ENEC
				tc max=85°C	EN 61347-2-13	
Control gear	A	Tridonic	LCO 40/200-1050/64 NF C ADV3	220..240V, 50-60Hz, ta= -40...+70°C,	EN 61347-1	ENEC
				tc max=90°C	EN 61347-2-13	

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Control gear	A	Tridonic	LCO 60/200-1050/100 NF C ADV3	220..240V, 50-60Hz, ta= -40...+70°C,	EN 61347-1	ENEC
				tc max=90°C	EN 61347-2-13	
Control gear	A	Tridonic	LCO 90/200-1050/165 NF C ADV3	220..240V, 50-60Hz, ta= -40...+70°C,	EN 61347-1	ENEC
				tc max=100°C	EN 61347-2-13	
Control gear	A	Tridonic	LCO 135/200-1050/220 NF C ADV3	220..240V, 50-60Hz, ta= -40...+70°C,	EN 61347-1	ENEC
				tc max=100°C	EN 61347-2-13	
Control gear	A	Tridonic	LCO 14/100-500/38 o4a NF C EXC3	220..240V, 50-60Hz, ta= -40...+70°C,	EN 61347-1	ENEC
				tc max=90°C	EN 61347-2-13	
Control gear	A	Tridonic	LCO 24/200-1050/39 o4a NF C EXC3	220..240V, 50-60Hz, ta= -40...+70°C,	EN 61347-1	ENEC
				tc max=85°C	EN 61347-2-13	
Control gear	A	Tridonic	LCO 40/200-1050/64 o4a NF C EXC3	220..240V, 50-60Hz, ta= -40...+70°C,	EN 61347-1	ENEC
				tc max=90°C	EN 61347-2-13	
Control gear	A	Tridonic	LCO 60/200-1050/100 o4a NF C EXC3	220..240V, 50-60Hz, ta= -40...+70°C,	EN 61347-1	ENEC
				tc max=95°C	EN 61347-2-13	
Control gear	A	Tridonic	LCO 90/200-1050/165 o4a NF C EXC3	220..240V, 50-60Hz, ta= -40...+70°C,	EN 61347-1	ENEC
				tc max=100°C	EN 61347-2-13	
Control gear	A	Tridonic	LCO 135/200-1050/220 o4a NF C EXC3	220..240V, 50-60Hz, ta= -40...+70°C,	EN 61347-1	ENEC
				tc max=100°C	EN 61347-2-13	
Control gear	A	Tridonic	LCO 200/200-1050/355 o4a NF C EXC3	220..240V, 50-60Hz, ta= -40...+70°C,	EN 61347-1	ENEC
				tc max=100°C	EN 61347-2-13	
Control gear	A	Tridonic	LCO 100/1050/95 fixC L SNC2	220..240V, 50-60Hz, ta= -40...+65°C,	EN 61347-1	ENEC
				tc max=80°C	EN 61347-2-13	
Control gear	A	Tridonic	LCO 100/1400/71 fixC L SNC2	220..240V, 50-60Hz, ta= -40...+65°C,	EN 61347-1	ENEC
				tc max=80°C	EN 61347-2-13	
Control gear	A	Tridonic	LCO 100/500/200 fixC L SNC2	220..240V, 50-60Hz, ta= -40...+65°C,	EN 61347-1	ENEC
				tc max=80°C	EN 61347-2-13	

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Control gear	A	Tridonic	LCO 100/700/143 fixC L SNC2	220..240V, 50-60Hz, ta= -40...+65°C,	EN 61347-1	ENEC
				tc max=80°C	EN 61347-2-13	
Control gear	A	Tridonic	LCO 150/1050/142 fixC L SNC2	220..240V, 50-60Hz, ta= -40...+65°C,	EN 61347-1	ENEC
				tc max=80°C	EN 61347-2-13	
Control gear	A	Tridonic	LCO 150/1400/107 fixC L SNC2	220..240V, 50-60Hz, ta= -40...+65°C,	EN 61347-1	ENEC
				tc max=85°C	EN 61347-2-13	
Control gear	A	Tridonic	LCO 150/500/300 fixC L SNC2	220..240V, 50-60Hz, ta= -40...+65°C,	EN 61347-1	ENEC
				tc max=85°C	EN 61347-2-13	
Control gear	A	Tridonic	LCO 150/700/214 fixC L SNC2	220..240V, 50-60Hz, ta= -40...+65°C,	EN 61347-1	ENEC
				tc max=85°C	EN 61347-2-13	
Control gear	A	Tridonic	LCO 75/1050/72 fixC L SNC2	220..240V, 50-60Hz, ta= -40...+65°C,	EN 61347-1	ENEC
				tc max=80°C	EN 61347-2-13	
Control gear	A	Tridonic	LCO 75/1400/53 fixC L SNC2	220..240V, 50-60Hz, ta= -40...+65°C,	EN 61347-1	ENEC
				tc max=80°C	EN 61347-2-13	
Control gear	A	Tridonic	LCO 75/500/150 fixC L SNC2	220..240V, 50-60Hz, ta= -40...+65°C,	EN 61347-1	ENEC
				tc max=80°C	EN 61347-2-13	
Control gear	A	Tridonic	LCO 75/700/108 fixC L SNC2	220..240V, 50-60Hz, ta= -40...+65°C,	EN 61347-1	ENEC
				tc max=80°C	EN 61347-2-13	
Control gear	A	Tridonic	LCO 14W 100–550mA 38V pD+ NFC C PRE3	220..240V, 50-60Hz, ta= -40...+70°C,	EN 61347-1	ENEC
				tc max=95°C	EN 61347-2-13	
Control gear	A	Tridonic	LCO 24W 200–1050mA 39V pD+ NFC C PRE3	220..240V, 50-60Hz, ta= -40...+70°C,	EN 61347-1	ENEC
				tc max=85°C	EN 61347-2-13	
Control Gear	A	Tridonic	LCO 40W 200–1050mA 64V pD+ NFC C PRE3	220..240V, 50-60Hz, ta= -40...+65°C, tc max=950C	EN 61347-1, EN 61347-2-13	ENEC
Control Gear	A	Tridonic	LCO 60W 200–1050mA 100V pD+ NFC C PRE3	220..240V, 50-60Hz, ta= -40...+65°C, tc max=950C	EN 61347-1, EN 61347-2-13	ENEC

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Control gear	A	Tridonic	LCO 90W 200–1050mA 165V pD+ NFC C PRE3	220...240V, 50-60Hz, ta= -40...+70°C,	EN 61347-1	ENEC
				tc max=95°C	EN 61347-2-13	
Control gear	A	Tridonic	LCO 135W 200–1050mA 220V pD+ NFC C PRE3	220...240V, 50-60Hz, ta= -40...+70°C,	EN 61347-1	ENEC
				tc max=85°C	EN 61347-2-13	
Control Gear	A	Tridonic	LCO 165W 200–1050mA 285V pD+ NFC C PRE3	220...240V, 50-60Hz, ta= -40...+65°C, tc max=95°C	EN 61347-1, EN 61347-2-13	ENEC
Control Gear	A	Tridonic	LCO 165W 200–1050mA 285V one4all NFC C EXC3	220...240V, 50-60Hz, ta= -40...+70°C, tc max=100°C	EN 61347-1, EN 61347-2-13	ENEC
LED Driver	A	LACROIX	DL-PAK 70	220...240 50/60Hz, Ta =-25...+60 °C, Tc max =90 °C	EN 61347-2-13, EN 61347-1	ENEC
LED Driver	A	DELTA	EUCI-040105GLA	220...240 V/50/60Hz, Ta =-40...+60 °C, Tc max =85 °C	EN 61347-2-13, EN 61347-1	ENEC
LED Driver	A	DELTA	EUCI-075105GLA	220...240 V/50/60Hz, Ta =-40...+55 °C, Tc max =85 °C	EN 61347-2-13, EN 61347-1	ENEC
LED Driver	A	DELTA	EUCI-130105GLA	220...240 V/50/60Hz, Ta =-40...+55 °C, Tc max =85 °C	EN 61347-2-13, EN 61347-1	ENEC
LED Driver	A	DELTA	EUCI-170105GLA	220...240 V/50/60Hz, Ta =-40...+55 °C, Tc max =90 °C	EN 61347-2-13, EN 61347-1	ENEC
LED Driver	A	Delta	EUCI-022105GLB	220...240V, 50/60Hz, Ta =-40...+55 °C, Tc max =85 °C	EN 61347-2-13, EN 61347-1	ENEC
LED Driver	A	Delta	EUCI-040105GLB	198...264V, 50/60Hz, Ta =-40...+55 °C, Tc max =90 °C	EN 61347-2-13, EN 61347-1	ENEC
LED Driver	A	Delta	EUCI-075105GLB	220...240 V/50/60Hz, Ta =-40...+55 °C, Tc max = 85 °C	EN 61347-2-13, EN 61347-1	ENEC

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Control Gear	A	Delta	EUCI 040105GIA	220..240V, 50-60Hz, ta= -40...+60°C, tc max=85°C	EN 61347-1, EN 61347-2-13	ENEC
Control Gear	A	Delta	EUCO 150140GA	220..240V, 50-60Hz, ta= -40...+55°C, tc max=85°C	EN 61347-1, EN 61347-2-13	ENEC
Control Gear	A	Delta	EUCO 200140GA	220..240V, 50-60Hz, ta= -40...+55°C, tc max=90°C	EN 61347-1, EN 61347-2-13	ENEC
Control Gear	A	SOSEN	SS-50VP-72BH	100..277V, 50-60Hz, ta= -40...+90C, tc max=90C	EN 61347-1 EN 61347-2-13	ENEC
Control Gear	A	SOSEN	SS-75VP-108BH	100..277V, 50-60Hz, ta= -40...+90C, tc max=90C	EN 61347-1 EN 61347-2-13	ENEC
Control Gear	A	SOSEN	SS-100VP-143BH	100..277V, 50-60Hz, ta= -40...+90C, tc max=90C	EN 61347-1 EN 61347-2-13	ENEC
Control Gear	A	SOSEN	SS-150VP-215BH	100..277V, 50-60Hz, ta= -40...+90C, tc max=90C	EN 61347-1 EN 61347-2-13	ENEC
Control Gear	A	SOSEN	SS-22PA- 32B	220..240V, 50-60Hz, ta= -40...+60C, tc max=90C	EN 61347-1 EN 61347-2-13	ENEC
Control Gear	A	SOSEN	SS-40PA-54B	220..240V, 50-60Hz, ta= -40...+60C, tc max=90C	EN 61347-1 EN 61347-2-13	ENEC
Control Gear	A	SOSEN	SS-75PA-108B	220..240V, 50-60Hz, ta= -40...+60C, tc max=90C	EN 61347-1 EN 61347-2-13	ENEC
Control Gear	A	SOSEN	SS-110PA-160B	220..240V, 50-60Hz, ta= -40...+60C, tc max=90C	EN 61347-1 EN 61347-2-13	ENEC
Control Gear	A	SOSEN	SS-165PA-235B	220..240V, 50-60Hz, ta= -40...+60C, tc max=90C	EN 61347-1 EN 61347-2-13	ENEC
Control Gear	A	SOSEN	SS-40PA-57F	220..240V, 50-60Hz, ta= -40...+60C, tc max=90C	EN 61347-1 EN 61347-2-13	ENEC
Control Gear	A	SOSEN	SS-75PA-178F	220..240V, 50-60Hz, ta= -40...+60C, tc max=90C	EN 61347-1 EN 61347-2-13	ENEC
Control Gear	A	SOSEN	SS-110PA-160F	220..240V, 50-60Hz, ta= -40...+60C, tc max=90C	EN 61347-1 EN 61347-2-13	ENEC
Control Gear	A	SOSEN	SS-165PA-236F	220..240V, 50-60Hz, ta= -40...+60C, tc max=90C	EN 61347-1 EN 61347-2-13	ENEC

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Control Gear	A	Pelsan	316646 150W	220..240V, 50-60Hz, ta= -40...+90°C, tc max=90°C	EN 61347-1, EN 61347-2-13	ENEC
Control Gear	A	Moon	MU240HxxxAQ_DALI2 Series	220..240V, 50-60Hz, ta= -40...+50°C, tc max=90°C	EN 61347-1, EN 61347-2-13	UL
Control Gear	A	ELDO LED	OT50W/UNV/800C/2DIMLT2/P6	120..277V, 50-60Hz, ta= -40...+60°C, tc max=90°C	EN 61347-1, EN 61347-2-13	UL
Control Gear	A	Moso	U6-040D057	220..240V, 50-60Hz, ta= -40...+55°C, tc max=85°C	EN 61347-1, EN 61347-2-13	ENEC
Control Gear	A	Moso	U6-080D115	220..240V, 50-60Hz, ta= -40...+55°C, tc max=85°C	EN 61347-1, EN 61347-2-13	ENEC
Control Gear	A	Moso	U6-120D172	220..240V, 50-60Hz, ta= -40...+55°C, tc max=85°C	EN 61347-1, EN 61347-2-13	ENEC
Control Gear	A	Moso	U7-026D038	220..240V, 50-60Hz, ta= -40...+55°C, tc max=85°C	EN 61347-1, EN 61347-2-13	ENEC
Control Gear	A	Moso	U7-040D057	220..240V, 50-60Hz, ta= -40...+55°C, tc max=85°C	EN 61347-1, EN 61347-2-13	ENEC
Control Gear	A	Moso	U7-060D086	220..240V, 50-60Hz, ta= -40...+55°C, tc max=85°C	EN 61347-1, EN 61347-2-13	ENEC
Control Gear	A	Moso	U7-080D115	220..240V, 50-60Hz, ta= -40...+55°C, tc max=90°C	EN 61347-1, EN 61347-2-13	ENEC
Control Gear	A	Moso	U7-120D172	220..240V, 50-60Hz, ta= -40...+50°C, tc max=90°C	EN 61347-1, EN 61347-2-13	ENEC
Control Gear	A	Moso	LUP 120	220..240V, 50-60Hz, ta= -40...+60°C, tc max=85°C	EN 61347-1, EN 61347-2-13	ENEC
Control Gear	A	Moso	LUP 150	220..240V, 50-60Hz, ta= -40...+60°C, tc max=85°C	EN 61347-1, EN 61347-2-13	ENEC
Control Gear	A	Moso	LUP 200	220..240V, 50-60Hz, ta= -40...+60°C, tc max=85°C	EN 61347-1, EN 61347-2-13	ENEC
Control Gear	A	uPowerTek	APD-040	176..264V, 50-60Hz, ta= -40...+90°C, tc max=90°C	EN 61347-1, EN 61347-2-13	ENEC
Control Gear	A	uPowerTek	APD-075	176..264V, 50-60Hz, ta= -40...+90°C, tc max=90°C	EN 61347-1, EN 61347-2-13	ENEC

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Control Gear	A	uPowerTek	APD-110	176..264V, 50-60Hz, ta= -40...+900C, tc max=900C	EN 61347-1, EN 61347-2-13	ENEC
Control Gear	A	uPowerTek	APD-165	176..264V, 50-60Hz, ta= -40...+900C, tc max=900C	EN 61347-1, EN 61347-2-13	ENEC
Control Gear	A	uPowerTek	APD-200	176..264V, 50-60Hz, ta= -40...+900C, tc max=900C	EN 61347-1, EN 61347-2-13	ENEC
Control Gear	A	uPowerTek	BLD-060	176..264V, 50-60Hz, ta= -40...+900C, tc max=900C	EN 61347-1, EN 61347-2-13	ENEC
Control Gear	A	uPowerTek	BLD-075	176..264V, 50-60Hz, ta= -40...+900C, tc max=900C	EN 61347-1, EN 61347-2-13	ENEC
Control Gear	A	uPowerTek	BLD-096	176..264V, 50-60Hz, ta= -40...+900C, tc max=900C	EN 61347-1, EN 61347-2-13	ENEC
Control Gear	A	uPowerTek	BLD-120	176..264V, 50-60Hz, ta= -40...+900C, tc max=900C	EN 61347-1, EN 61347-2-13	ENEC
Control Gear	A	TCI	MILANOinLED 75W/200-1050 AD	220..240V, 50-60Hz, ta= -40...+550C, tc max=850C	EN 61347-1, EN 61347-2-13	ENEC
Control Gear	A	TCI	MILANOinLED 20W/200-1050 1PN	220..240V, 50-60Hz, ta= -40...+60°C, tc max=75°C	EN 61347-1, EN 61347-2-13	ENEC
Control Gear	A	TCI	MILANOinLED 40W/200-1050 1PN	220..240V, 50-60Hz, ta= -40...+60°C, tc max=80°C	EN 61347-1, EN 61347-2-13	ENEC
Control Gear	A	TCI	MILANOinLED 75W/200-1050 1PN	220..240V, 50-60Hz, ta= -40...+55°C, tc max=85°C	EN 61347-1, EN 61347-2-13	ENEC
Control Gear	A	TCI	MILANOinLED 110W/200-1050 1PN	220..240V, 50-60Hz, ta= -40...+55°C, tc max=85°C	EN 61347-1, EN 61347-2-13	ENEC
Control Gear	A	TCI	MILANOinLED 165W/200-1050 1PN	220..240V, 50-60Hz, ta= -40...+55°C, tc max=90°C	EN 61347-1, EN 61347-2-13	ENEC
Control Gear	A	TCI	MILANOinLED 20W/200-1050 4PN	220..240V, 50-60Hz, ta= -40...+60°C, tc max=75°C	EN 61347-1, EN 61347-2-13	ENEC
Control Gear	A	TCI	MILANOinLED 40W/200-1050 4PN	220..240V, 50-60Hz, ta= -40...+60°C, tc max=80°C	EN 61347-1, EN 61347-2-13	ENEC
Control Gear	A	TCI	MILANOinLED 75W/200-1050 4PN	220..240V, 50-60Hz, ta= -40...+55°C, tc max=85°C	EN 61347-1, EN 61347-2-13	ENEC

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Control Gear	A	TCI	MILANOinLED 110W/200-1050 4PN	220..240V, 50-60Hz, ta= -40...+55°C, tc max=85°C	EN 61347-1, EN 61347-2-13	ENEC
Control Gear	A	TCI	MILANOinLED 165W/200-1050 4PN	220..240V, 50-60Hz, ta= -40...+55°C, tc max=90°C	EN 61347-1, EN 61347-2-13	ENEC
Control Gear	A	TCI	VEGA 75/530-1050 FPD IP67	220..240V, 50-60Hz, ta= -40...+60°C, tc max=90°C	EN 61347-1, EN 61347-2-13	ENEC
Control Gear	A	TCI	VEGA 105/530-1050 FPD IP67	220..240V, 50-60Hz, ta= -40...+60°C, tc max=90°C	EN 61347-1, EN 61347-2-13	ENEC
Control Gear	A	TCI	VEGA 150/530-1050 FPD IP67	220..240V, 50-60Hz, ta= -40...+60°C, tc max=90°C	EN 61347-1, EN 61347-2-13	ENEC
Control Gear	A	TCI	SIRIO SQ 22W 200-700 1-10V	220..240V, 50-60Hz, ta= -40...+55°C, tc max=85°C	EN 61347-1, EN 61347-2-13	ENEC
Control Gear	A	TCI	SIRIO SQ 40W 200-700 1-10V	220..240V, 50-60Hz, ta= -40...+55°C, tc max=85°C	EN 61347-1, EN 61347-2-13	ENEC
Control Gear	A	TCI	SIRIO SQ 75W 200-700 1-10V	220..240V, 50-60Hz, ta= -40...+55°C, tc max=80°C	EN 61347-1, EN 61347-2-13	ENEC
Control Gear	A	TCI	SIRIO SQ 110W 200-700 1-10V	220..240V, 50-60Hz, ta= -40...+55°C, tc max=90°C	EN 61347-1, EN 61347-2-13	ENEC
Control Gear	A	TCI	SIRIO SQ 165W 200-700 1-10V	220..240V, 50-60Hz, ta= -40...+55°C, tc max=85°C	EN 61347-1, EN 61347-2-13	ENEC
Control Gear	A	TCI	SIRIO SQ 22W 200-700 4PN	220..240V, 50-60Hz, ta= -40...+55°C, tc max=85°C	EN 61347-1, EN 61347-2-13	ENEC
Control Gear	A	TCI	SIRIO SQ 40W 200-700 4PN	220..240V, 50-60Hz, ta= -40...+55°C, tc max=85°C	EN 61347-1, EN 61347-2-13	ENEC
Control Gear	A	TCI	SIRIO SQ 75W 200-700 4PN	220..240V, 50-60Hz, ta= -40...+55°C, tc max=80°C	EN 61347-1, EN 61347-2-13	ENEC
Control Gear	A	TCI	SIRIO SQ 110W 200-700 4PN	220..240V, 50-60Hz, ta= -40...+55°C, tc max=85°C	EN 61347-1, EN 61347-2-13	ENEC
Control Gear	A	TCI	SIRIO SQ 22W 200-700 AD	220..240V, 50-60Hz, ta= -40...+55°C, tc max=85°C	EN 61347-1, EN 61347-2-13	ENEC
Control Gear	A	TCI	SIRIO SQ 40W 200-700 AD	220..240V, 50-60Hz, ta= -40...+55°C, tc max=85°C	EN 61347-1, EN 61347-2-13	ENEC

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Control Gear	A	TCI	SIRIO SQ 75W 200-700 AD	220..240V, 50-60Hz, ta= -40...+55°C, tc max=90°C	EN 61347-1, EN 61347-2-13	ENEC
Control Gear	A	TCI	SIRIO SQ 110W 200-700 AD	220..240V, 50-60Hz, ta= -40...+55°C, tc max=90°C	EN 61347-1, EN 61347-2-13	ENEC
Control Gear	A	TCI	SIRIO SQ 165W 200-700 AD	220..240V, 50-60Hz, ta= -40...+55°C, tc max=90°C	EN 61347-1, EN 61347-2-13	ENEC
Control Gear	A	Vossloh schwabe	PRIMELINE ECXd 1050.639	220..240V, 50-60Hz, ta= -40...+55°C, tc max=85°C	EN 61347-1, EN 61347-2-13	ENEC
Control Gear	A	Vossloh schwabe	PRIMELINE ECXd 1050.640	220..240V, 50-60Hz, ta= -40...+55°C, tc max=85°C	EN 61347-1, EN 61347-2-13	ENEC
Control Gear	A	Vossloh schwabe	PrimeLine ECXd1050.659	220..240V, 50-60Hz, ta= -40...+55°C, tc max=85°C	EN 61347-1, EN 61347-2-13	ENEC
Control Gear	A	Vossloh schwabe	PRIMELINE ECXd 1050.641	220..240V, 50-60Hz, ta= -40...+55°C, tc max=85°C	EN 61347-1, EN 61347-2-13	ENEC
Control Gear	A	Vossloh schwabe	PRIMELINE ECXd 1050.642	220..240V, 50-60Hz, ta= -40...+55°C, tc max=85°C	EN 61347-1, EN 61347-2-13	ENEC
Wires LED	B	Mrowiec	H05V-K	500 V; 1 mm ²	IEC227	SEP-BBJ
Internal wires	B	Mrowiec	H05V-K	500 V; 0,5 mm ²	IEC227	SEP-BBJ
Wires	B	Mrowiec	H05VV-F	2X1,5mm ²	IEC227	SEP-BBJ
Connector	B	LONGJOIN	JL-700	1.5A, 30V	EN5015:2013+ A1:2015, EN61547:2009, EN 61000-3- 2:2014, EN 61000-3- 3:2013, EN 61984:2009	Dekra
Connector system	B	BJB	47.121.-303.93, 47.121.-305.80, 47.121.-702.14, 47.121.-705.84, 47.121.U301.80, 47.121.U303.80, 47.121.U304.80, 47.921.-801.68, 47.921.- 802.68, 47.921.U801.81	2A, 24V DC, ta= -40°C to 100°C	EN 61984	VDE
Connector	B	BJB	46.412	16A; 450 V	DIN EN 60998- 1 (VDE 0613 Teil 1):2005-03; EN 60998- 1:2004; DIN EN 60998-2-2 (VDE 0613 Teil 2- 2):2005-03; EN 60998-2-2:2004	VDE UL
Connector	B	BJB	46.413	16A; 450 V	EN 60998-2-2	VDE UL
Connector	B	BJB	46.414	16A; 450 V	EN 60998-2-2	VDE UL
Connector	B	BJB	46.415	16A; 450 V	EN 60998-2-2	VDE UL

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Connector	B	BJB	46.455	16A; 450 V	EN 60998-2-2	VDE UL
Connector	B	TE Connectivity	2834049 2834048 2834055 2834054	9A; 600 V	EN 61984	TUV
Connector	A	Greenway Electronics Co Ltd	M684	16A; 450 V	EN 61984, EN 60988-1,	ENEC
Luminaire protection	B	Linoya Electronic Technology	LYSPD10D	300Vac, 50Hz, IP67	EN 61643- 11:2012+A11	TUV
Luminaire protection	B	Vossloh schwabe	SP / 230 / 10K	220-240V, 50/60Hz, Ta = -30°C do 80°C	EN 60598-2-3 EN 61643-11	VDE
Luminaire protection	B	Vossloh schwabe	SP3 / 230 / 10K / i	100-277V, 50/60Hz, Ta = -35°C do 80°C	EN 60598-2-3 EN 61643-11	DEKRA
Luminaire protection	B	Vossloh schwabe	SPC 3 / 230 / 10K / i	100-277V, 50/60Hz, Ta = -35°C do 80°C	EN 60598-2-3 EN 61643-11	DEKRA
Luminaire protection	B	Vossloh schwabe	SPC 3 / 230 / 10K / i-IP66	100-277V, 50/60Hz, Ta = -35°C do 80°C	EN 60598-2-3 EN 61643-11	DEKRA
Fixed resistor	B	Uniroyal Electronics	MGR series	100k Ohm to 100 MOhm (+5%), 2W, 2,5kV	DIN EN IEC 62368-1 (VDE 0868-1):2021- 05 Anhang/Annex G.10; EN IEC 62368- 1:2020+A11:20 20 Anhang/Annex G.10 IEC 62368-1:2018, Anhang/Annex G.10	VDE
Connector	B	Jiang Men Krealux Electrical	P02-M	17,5A; 450 V	EN 60988-1 EN 60998-2-2	VDE
Connector	A	Openwise	925	16A; 450 V	EN 60988-1 EN 60998-2-2	ENEC
Connector	A	Openwise	928	32A; 450 V	EN 60988-1 EN 60998-2-2	ENEC
Connector system	B	LONGJOIN Nema	JL-240	t= -40...+70°C, 480VAC, 50/60Hz, Signal Contacts: 30VDC, 0,25A	EN 61984	DEKRA
Connector system	B	Tridonic	SPD 10kV CE SNC	100-277V, 50/60Hz, Ta = -40°C do 80°C	EN 61643-11	KEMA KEUR
Luminaire protection	B	Vossloh schwabe	SPC 230/10K/i	100-277V, 50/60Hz, Ta = -35°C do 80°C	EN 61643-11	DEKRA
Luminaire protection	B	Inventronics	PU-20KX10KTXX	320Vac, 8A, 47-63Hz, Ta = -40°C do 85°C	EN 61643-11 EN 61643-21	VDE
Luminaire protection	B	Inventronics	PU-20Kx10KBx	320Vac, 15A, 47-63Hz, Ta = -40°C do 85°C	EN 61643-11 EN 61643-21	VDE
Luminaire protection	B	Inventronics	PU-10Kx05KBx	320Vac, 8A, 47-63Hz, Ta = -40°C do 85°C	EN 61643-11 EN 61643-21	VDE
Luminaire protection	B	Linoya Electronic Technology	LYSPD10D	300Vac, 50Hz, IP67	EN 61643-11	TUV
Luminaire protection	B	ESB	ESB-6K	220-240V, 50/60Hz, Ta = -30°C do 80°C	EN 61643-11	VDE
Fuse holder	B	Mersen	CCR101N	400-500 VAC, 25-32 A	IEC60947-3 IEC60269-2 IEC60269-3	NF

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Luminaire protection	B	RuiLongYuan	TP10D	100-277V, 50/60Hz, Ta = -40°C do 85°C	EN 61643-11 IEC 61643-11	TUV
Luminaire protection	B	Greenway	GSPD 1	100-277V, 50/60Hz, Ta = -40°C do 85°C	EN 61643-11 IEC 61643-11	TUV
Luminaire protection	B	Greenway	GSPD 3	100-277V, 50/60Hz, Ta = -40°C do 85°C	EN 61643-11 IEC 61643-11	TUV
Luminaire protection	B	LINOYA	LYSPD10A	100-277V, 50/60Hz, Ta = -40°C do 85°C	EN 61643-11 IEC 61643-11	UL
Luminaire protection	B	ZP Lightning	ZP-LSP10-PL	100-277V, 50/60Hz, Ta = -40°C do 85°C	EN 61643-11 IEC 61643-11	UL
Luminaire protection	B	ZP Lightning	ZP-LED-P10D	100-277V, 50/60Hz, Ta = -40°C do 85°C	EN 61643-11 IEC 61643-11	TUV
Luminaire protection	B	ZP Lightning	ZP-LED-S10D	100-277V, 50/60Hz, Ta = -40°C do 85°C	EN 61643-11 IEC 61643-11	TUV
Luminaire protection	B	ZP Lightning	ZP-LSP10-PR	100-277V, 50/60Hz, Ta = -40°C do 85°C	EN 61643-11 IEC 61643-11	TUV
Luminaire protection	B	ZP Lightning	ZP-LSP10-PY/II	100-277V, 50/60Hz, Ta = -40°C do 85°C	EN 61643-11 IEC 61643-11	TUV
Luminaire protection	B	ZP Lightning	ZP-LSP10-SR	100-277V, 50/60Hz, Ta = -40°C do 85°C	EN 61643-11 IEC 61643-11	TUV
Luminaire protection	B	ZP Lightning	ZP-LSP10-SY/II	100-277V, 50/60Hz, Ta = -40°C do 85°C	EN 61643-11 IEC 61643-11	TUV
Luminaire protection	B	Zhongyuan Technology	ZYS-P10WD, ZYS-P20WD	100-277V, 50/60Hz, Ta = -40°C do 85°C	EN 61643-11 IEC 61643-11	TUV
Luminaire protection	B	Zhongyuan Technology	ZYS-P10SD, ZYS-P20SD, ZYS-P10SD/II, ZYS-P20SD/II	100-277V, 50/60Hz, Ta = -40°C do 85°C	EN 61643-11 IEC 61643-11	TUV

Supplementary information:

¹⁾ Provided evidence ensures the agreed level of compliance. See OD-CB2039.

The codes above have the following meaning:

- A - The component is replaceable with another one, also certified, with equivalent characteristics
- B - The component is replaceable if authorised by the test house
- C - Integrated component tested together with the appliance
- D - Alternative component

Date: Data: 2024-01-12
Signature:


Signed by /
Podpisano przez:

Paweł Andrzej
Oziębło

Date / Data:
2024-01-12 14:27

Manager of Certification Office
Kierownik Biura Certyfikacji



Łukasiewicz – IMiF
PREDOM Division
Krakowiaków 53, 02-255 WARSAW
POLAND

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LICENCE / CERTIFICATE

to use the European Mark

LICENCJA / CERTYFIKAT

na używanie europejskiego Znaku



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Licencja / Certyfikat Nr

0375/ENEC/24

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Name and address of the Certificate owner:

Nazwa i adres posiadacza certyfikatu:

LUG Light Factory Sp. z o.o.

ul. Gorzowska 11; 65-127 Zielona Góra Poland

For the products:

Dla wyrobów:

Luminaires for road and street lighting

Oprawy oświetleniowe drogowe i uliczne

Manufacturing place:

Miejsce produkcji:

LUG Light Factory Sp. z o.o.

ul. Gorzowska 11; 65-127 Zielona Góra Poland

Trade name:

Znak towarowy:

LUG

Type(s)/Model(s):

Typ(y), model(e):

URBINO LED S cl I – series

(details in the Appendix / Szczegóły w Załączniku)

Complying with the following European Standards:

Zgodnymi z następującymi normami europejskimi:

EN 60598-2-3:2003

EN 60598-2-3:2003/ A1:2011

EN IEC 60598-1:2021

EN IEC 60598-1:2021/A11:2022

EN 62262:2002

Test report(s):

Raporty z badań:

Ref No: B5-3/117/B/24 + Att No. 1 (EU GD and ND) rep. Ref. B5-3/117/B/1/24 dated 23.09.2024; B5-3/096/B/22 dated 08.07.2022; performed by the Testing Laboratory Łukasiewicz-IMiF PREDOM Division (Accreditation PCA AB 003)

Date:

Data:

2024-09-30

Signed by /
Podpisano przez:

Paweł Andrzej
Oziębto

Date / Data:
2024-09-30 14:38

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Additional information – see the Appendix. Dodatkowe informacje – patrz Załącznik.

Nazwa i adres posiadacza certyfikatu: <i>Name and address of the license holder:</i>	LUG Light Factory Sp z o.o. ul. Gorzowska 11; 65-127 Zielona Góra - Poland
Nazwa i adres producenta: <i>Name and address of manufacturer:</i>	LUG Light Factory Sp z o.o. ul. Gorzowska 11; 65-127 Zielona Góra - Poland
Nazwa i adres miejsca produkcji: <i>Name and address of manufacturing place:</i>	LUG Light Factory Sp z o.o. ul. Gorzowska 11; 65-127 Zielona Góra - Poland
Nazwa wyrobu: <i>Name of the product:</i>	Luminaires for road and street lighting
Typ (model): <i>Type (model):</i>	URBINO LED S cl I – series
Znak handlowy: <i>Trade mark:</i>	LUG
Dane techniczne: <i>Technical data</i>	
<i>Rated voltage</i>	220-240V
<i>Rated frequency:</i>	50/60Hz
<i>Protection against electric shock:</i>	Class I
<i>Degree of protection:</i>	IP66, IK10
<i>ta</i>	4,5W - 36W - Ta= -40°C / -35°C* / -30°C** ... +55°C 37W - 76W - Ta= -40°C / -35°C* / -30°C**/-25°C*** ... +50°C

* - For luminaires equipped with:

- Vossloh Schwabe SP/230/10K/i

** - For luminaires equipped with:

- SPD Vossloh Schwabe SP/230/10K
- Xi FP 110W 0.3-0.1A NLP C150 230V
- Tridonic LCA 120W 300-1050mA

*** - For luminaires equipped with:

- LACROIX DL-PAK 70

Choice sheet of the luminaires Urbino LED S cl. I - series:*Zbiór możliwości opraw Urbino LED S kl.I – seria***Example of symbol:***Przykładowy symbol (na naklejce):*

130772.7LR7B40S895.101.B.N.V.P.K.O

1 2 3 4 5 6 7 8 9

Designations used on the marking of luminaires (some designation may not appear in the name):
(Oznaczenia stosowane na naklejce znamionowej opraw (niektóre oznaczenia mogą nie występować w nazwie)):

1. 13077 13078	- Code of the series URBINO LED S - XPG3 SERIES (<i>Kod rodziny</i>) Code of the series URBINO LED S - LUXEON SERIES (<i>Kod rodziny</i>)
2. 2	- Color (<i>Kolor</i>): 2: grey 5: graphite 0: another

3. 7L	- Control type (<i>Typ sterowania</i>): 2L - DIMM 1-10V 3L – DALI 5L – on-off 6L – on-off / DALI 7L – ZHAGA D4i PL – programmable
4. R7	- CRI: R7 = 70-79 R8 = 80-89
5. B40	- Color temperature [K] (<i>Temperatura barwowa</i>): B22 = 2200 B27 = 2700 B30 = 3000 B40 = 4000 B57 = 5700 B65 = 6500
6. S895	- Luminous flux (<i>Strumień świetlny</i>) (e.g. (Przykład) 895 = 8950lm)
7. 1	- Safety Class I (<i>Klasa ochronności</i>)
8. 01	- Optic type – for road lighting (<i>Typ optyki – dla opraw ulicznych</i>) 01 to 99
9. B.N.V.P.K.O	- Additional equipment (<i>Dodatkowe wyposażenie</i>): A - additional corrosion protection (<i>Dodatkowa ochrona przed korozją</i>) B - Tool-free access to the LED Driver (<i>Beznarzędziowy dostęp do sterownika LED</i>) U - $\varnothing 76$ mm pole (<i>$\varnothing 76$mm słup</i>) N - NEMA Socket (<i>Łącze NEMA</i>) Z - ZHAGA Socket (<i>Łącze ZHAGA</i>) T - NTC Sensor (<i>Czujnik NTC</i>) W - Twilight Sensor (<i>Czujnik zmierzchu</i>) V - Surge Device Protector 10kV (<i>Zabezpieczenie przeciwprzepięciowe 10kV</i>) Y - Surge Device Protector 20kV (<i>Zabezpieczenie przeciwprzepięciowe 20kV</i>) P- Anti pressure vent (<i>Odpowietrznik przeciwcisnieniowy</i>) I- iBloc ("URBAN" smart city system) (<i>System inteligentnego miasta "URBAN"</i>) K- Knife switch connector (<i>Złącze nożowe</i>) C - RAL Color (<i>Kolor RAL</i>) O - Investment luminaire (<i>Oprawa inwestycyjna</i>)

List of components:

Object / part No.	Code	Manufacturer/ trademark	Type / model	Technical data	Standard	Mark(s) of conformity ¹⁾
LED Modules <i>Moduły LED</i>	B	LUG	ML21XXXYY.WQQQ.UUV (LUXEON 5050 modules) (choice sheet below)	Tc -40°C to +85°C	EN 62031	Tested and accepted by IMiF PREDOM Division Test Report No. Z7-3/143/B/21/M1

Choice sheet of the Urbino LED S series modules LUXEON 5050:

Zbiór możliwości modułów opraw Urbino LED S – seria

Example of symbol (Przykład):

ML21XXXYY.WQQQ.UUV

1 2 3 4 5 6 7 8

Designations used on the marking of LED boards (*Oznaczenia stosowane na modułach LED*):

1. ML
 - PCB designation (*Oznaczenie PCB*)
(ML – LED module) (*ML – moduł LED*)
2. 21
 - Year of the project (*Rok produkcji*)
21, 22, 23, 24
3. XXX
 - Number of the project: (*Numer projektu*):
Luxeon - 660, 661, 663, 670, 671, 672, 673, 680, 681, 682, 683, 690, 691, 692, 693
4. YY
 - Project variant (PCB design, milling, dimensions, soldermask color, laminate thickness, LED configuration):
(*Wariant projektu (projekt PCB, frezowanie, wymiary, kolor maski, grubość laminatu, konfiguracja LED)*):
00...99
5. W
 - Light color (*Kolor światła*) :
W: White (*Biały*)
6. QQQ
 - CRI and CCT:
722: CRI 70 and 2200K
727: CRI 70 and 2700K
730: CRI 70 and 3000K
735: CRI 70 and 3500K
740: CRI 70 and 4000K
750: CRI 70 and 5000K
757: CRI 70 and 5700K
765: CRI 70 and 6500K
822: CRI 80 and 2200K
827: CRI 80 and 2700K
830: CRI 80 and 3000K
835: CRI 80 and 3500K
840: CRI 80 and 4000K
850: CRI 80 and 5000K
857: CRI 80 and 5700K
865: CRI 80 and 6500K
7. UU
 - Assembly variant (selected components not mounted) (*Wariant montażowy (wybrane komponenty niezamontowane)*):
01...99
8. V
 - NTC Thermistor type (*Typ termistora NTC*):
A - none
B – 10K
C – 47K

Object / part No.	Code	Manufacturer/ trademark	Type / model	Technical data	Standard	Mark(s) of conformity ¹⁾
LED Modules <i>Moduły LED</i>	B	LUG	ML21XXXYY.WQQQ.UUV (CREE XPG3 modules) (choice sheet below)	Tc -40°C to +85°C	EN 62031	Tested and accepted by IMiF PREDOM Division Test Report No. B10-3/089/B/22/M1

Choice sheet of the Urbino LED S series modules CREE XPG3:
Zbiór możliwości modułów opraw Urbino LED S – seria
Example of symbol (Przykład):

ML21XXXYY.WQQQ.UUV

1 2 3 4 5 6 7 8

Designations used on the marking of LED boards (*Oznaczenia stosowane na modułach LED*):

1. ML
 - PCB designation (*Oznaczenie PCB*)
(ML – LED module) (*ML – moduł LED*)
2. 21
 - Year of the project (*Rok produkcji*)
21, 22, 23, 24
3. XXX
 - Number of the project: (*Numer projektu*):
Cree - 600, 601, 610, 611
4. YY
 - Project variant (PCB design, milling, dimensions, soldermask color, laminate thickness, LED configuration):
(*Wariant projektu (projekt PCB, frezowanie, wymiary, kolor maski, grubość laminatu, konfiguracja LED)*):
00...99
5. W
 - Light color (*Kolor światła*) :
W: White (*Biały*)
6. QQQ
 - CRI and CCT:
722: CRI 70 and 2200K
727: CRI 70 and 2700K
730: CRI 70 and 3000K
735: CRI 70 and 3500K
740: CRI 70 and 4000K
750: CRI 70 and 5000K
757: CRI 70 and 5700K
765: CRI 70 and 6500K
822: CRI 80 and 2200K
827: CRI 80 and 2700K
830: CRI 80 and 3000K
835: CRI 80 and 3500K
840: CRI 80 and 4000K
850: CRI 80 and 5000K
857: CRI 80 and 5700K
865: CRI 80 and 6500K
7. UU
 - Assembly variant (selected components not mounted): (*Wariant montażowy (wybrane komponenty niezamontowane)*):
01...99
8. V
 - NTC Thermistor type (*Typ termistora NTC*):
A - none
B – 10K
C – 47K

Object / part No.	Code	Manufacturer/ trademark	Type / model	Technical data	Standard	Mark(s) of conformity ¹⁾
Control gear <i>Zasilacz</i>	A	OSRAM	OT100W/UNV/800C/2D IMLT2/P6	220..240V, 50-60Hz, ta= -40...+55°C, tc max=90°C	EN 61347-1 EN 61347-2-13	ENEC
Control gear <i>Zasilacz</i>	A	OSRAM	OT 110/170...240/1A0 1DIMLT2 G1 CE	220..240V, 50-60Hz, ta= -40...+55°C, tc max=85°C	EN 61347-1 EN 61347-2-13	ENEC
Control gear <i>Zasilacz</i>	A	OSRAM	OT 20/170-240/1A0 1DIM LT2 G1 CE	220..240V, 50-60Hz, ta= -40...+60°C, tc max=75°C	EN 61347-1 EN 61347-2-13	ENEC
Control gear <i>Zasilacz</i>	A	OSRAM	OT 75/170...240/1A0 1DIMLT2 G1 CE	220..240V, 50-60Hz, ta= -40...+55°C, tc max=80°C	EN 61347-1 EN 61347-2-13	ENEC
Control gear <i>Zasilacz</i>	A	OSRAM	OT DX 40/220...240/1A0 DIMA LT2 E	220..240V, 50-60Hz, ta= -40...+55°C, tc max=800C	EN 61347-1 EN 61347-2-13	ENEC
Control gear <i>Zasilacz</i>	A	OSRAM	OT DX 75/220...240/1A0 DIMA LT2 E	220..240V, 50-60Hz, ta= -40...+55°C, tc max=850C	EN 61347-1 EN 61347-2-13	ENEC
Control gear <i>Zasilacz</i>	A	OSRAM	OT DX 110/220...240/1A0 DIMA LT2 E	220..240V, 50-60Hz, ta= -40...+55°C, tc max=850C	EN 61347-1 EN 61347-2-13	ENEC
Control gear <i>Zasilacz</i>	A	OSRAM	OT 20/170...240/1A0 4DIMLT2 G2 CE	220..240V, 50-60Hz, ta= -40...+60°C, tc max=750C	EN 61347-1 EN 61347-2-13	ENEC
Control gear <i>Zasilacz</i>	A	OSRAM	OT 40/170...240/1A0 4DIMLT2 G2 CE	220..240V, 50-60Hz, ta= -40...+60°C, tc max=800C	EN 61347-1 EN 61347-2-13	ENEC
Control gear <i>Zasilacz</i>	A	OSRAM	OT 75/170...240/1A0 4DIMLT2 G2 CE	220..240V, 50-60Hz, ta= -40...+55°C, tc max=850C	EN 61347-1 EN 61347-2-13	ENEC
Control gear <i>Zasilacz</i>	A	OSRAM	OT 110/170...240/1A0 4DIMLT2 G2 CE	220..240V, 50-60Hz, ta= -40...+60°C, tc max=750C	EN 61347-1 EN 61347-2-13	ENEC
Control gear <i>Zasilacz</i>	A	OSRAM	OT 20/170...240/1A0 1DIMLT2 G1 CE	220..240V, 50-60Hz, ta= -40...+55°C, tc max=850C	EN 61347-1 EN 61347-2-13	ENEC
Control gear <i>Zasilacz</i>	A	OSRAM	OT 40/170...240/1A0 1DIMLT2 G1 CE	220..240V, 50-60Hz, ta= -40...+60°C, tc max=800C	EN 61347-1 EN 61347-2-13	ENEC
Control gear <i>Zasilacz</i>	A	OSRAM	OT 40/120...277/1A0 4DIMLT2 E	220..240V, 50-60Hz, ta= -40...+60°C, tc max=800C	EN 61347-1 EN 61347-2-13	ENEC
Control gear <i>Zasilacz</i>	A	OSRAM	OT 60/170...240/1A0 4DIMLT2 E	220..240V, 50-60Hz, ta= -40...+60°C, tc max=850C	EN 61347-1 EN 61347-2-13	ENEC
Control gear <i>Zasilacz</i>	A	OSRAM	OT 90/170...240/1A0 4DIMLT2 E	220..240V, 50-60Hz, ta= -40...+55°C, tc max=900C	EN 61347-1 EN 61347-2-13	ENEC
Control gear <i>Zasilacz</i>	A	OSRAM	OT 50/120...277/800 2DIMLT2 P6	220..240V, 50-60Hz, ta= -40...+55°C, tc max=850C	EN 61347-1 EN 61347-2-13	ENEC
Control gear <i>Zasilacz</i>	A	OSRAM	OT 50/120...277/1A2 2DIMLT2 P6	220..240V, 50-60Hz, ta= -40...+55°C, tc max=800C	EN 61347-1 EN 61347-2-13	ENEC
Control gear <i>Zasilacz</i>	A	OSRAM	OT 100/120...277/800 2DIMLT2 P6	220..240V, 50-60Hz, ta= -40...+55°C, tc max=850C	EN 61347-1 EN 61347-2-13	ENEC
Control gear <i>Zasilacz</i>	A	OSRAM	OT 110/120...277/1A4 2DIMLT2 P6	220..240V, 50-60Hz, ta= -40...+55°C, tc max=850C	EN 61347-1 EN 61347-2-13	ENEC
Control gear <i>Zasilacz</i>	A	OSRAM	OT 60/220...240/1A4 1DIMA P7	220..240V, 50-60Hz, ta= -40...+55°C, tc max=850C	EN 61347-1 EN 61347-2-13	ENEC
Control gear <i>Zasilacz</i>	A	OSRAM	OT 100/220...240/1A4 1DIMA P7	220..240V, 50-60Hz, ta= -40...+55°C, tc max=850C	EN 61347-1 EN 61347-2-13	ENEC

Object / part No.	Code	Manufacturer/ trademark	Type / model	Technical data	Standard	Mark(s) of conformity ¹⁾
Control gear <i>Zasilacz</i>	A	OSRAM	OT 75/UNV/1A0 2DIM P7	120..277V, 50-60Hz, ta= -40...+55°C, tc max=85°C	EN 61347-1 EN 61347-2-13	ENEC
Control gear <i>Zasilacz</i>	A	OSRAM	OT 100/UNV/1A0 2DIM P7	120..277V, 50-60Hz, ta= -40...+55°C, tc max=85°C	EN 61347-1 EN 61347-2-13	ENEC
Control gear <i>Zasilacz</i>	A	OSRAM	OT 100/ 220-240/1A4 2DIM P7	220..240V, 50-60Hz, ta= -40...+55°C, tc max=85°C	EN 61347-1 EN 61347-2-13	ENEC
Control gear <i>Zasilacz</i>	A	OSRAM	IT DALI 20/220...240/1A0 E	220...240 V/50/60Hz, Ta =-40...+60 °C, Tc max =75 °C	EN 61347-1 EN 61347-2-13	ENEC
Control gear <i>Zasilacz</i>	A	OSRAM	IT DALI 40/220...240/1A0 E	220...240 V/50/60Hz, Ta =-40...+60 °C, Tc max =85 °C	EN 61347-1 EN 61347-2-13	ENEC
Control gear <i>Zasilacz</i>	A	OSRAM	IT DALI 75/220...240/1A0 E	220...240 V/50/60Hz, Ta =-40...+60 °C, Tc max =100 °C	EN 61347-1 EN 61347-2-13	ENEC
Control gear <i>Zasilacz</i>	A	OSRAM	IT DALI 110/220...240/1A0 E	220...240 V/50/60Hz, Ta =-40...+60 °C, Tc max =90 °C	EN 61347-1 EN 61347-2-13	ENEC
Control gear <i>Zasilacz</i>	A	OSRAM	OT 75 /220...240/1A0 1DIM G2 CE	220...240V, 50/60Hz, Ta =-40...+55 °C, Tc max =85 °C	EN 61347-1 EN 61347-2-13	ENEC
Control gear <i>Zasilacz</i>	A	OSRAM	OT 50/120...277/700 P5	120..277V, 50-60Hz, ta= -40...+55°C, tc max=85°C	EN 61347-1 EN 61347-2-13	ENEC
Control gear <i>Zasilacz</i>	A	OSRAM	OT 100/120...277/700 P5	120..277V, 50-60Hz, ta= -40...+55°C, tc max=85°C	EN 61347-1 EN 61347-2-13	ENEC
Control gear <i>Zasilacz</i>	A	OSRAM	OT 100/220...240/4A2 P5	220..240V, 50-60Hz, ta= -40...+55°C, tc max=85°C	EN 61347-1 EN 61347-2-13	ENEC
Control gear <i>Zasilacz</i>	A	OSRAM	OT 20/170...240/1A0 4DIM NFC G3 CE	220..240V, 50-60Hz, ta= -40...+60°C, tc max=75°C	EN 61347-1 EN 61347-2-13	ENEC
Control gear <i>Zasilacz</i>	A	OSRAM	OT 40/170...240/0A7 4DIM NFC G3 CE	220..240V, 50-60Hz, ta= -40...+60°C, tc max=80°C	EN 61347-1 EN 61347-2-13	ENEC
Control gear <i>Zasilacz</i>	A	OSRAM	OT 40/170...240/1A0 4DIM NFC G3 CE	220..240V, 50-60Hz, ta= -40...+60°C, tc max=80°C	EN 61347-1 EN 61347-2-13	ENEC
Control gear <i>Zasilacz</i>	A	OSRAM	OT 75/170...240/0A7 4DIM NFC G3 CE	220..240V, 50-60Hz, ta= -40...+55°C, tc max=90°C	EN 61347-1 EN 61347-2-13	ENEC
Control gear <i>Zasilacz</i>	A	OSRAM	OT 75/170...240/1A0 4DIM NFC G3 CE	220..240V, 50-60Hz, ta= -40...+55°C, tc max=90°C	EN 61347-1 EN 61347-2-13	ENEC
Control gear <i>Zasilacz</i>	A	OSRAM	OT 75/170...240/1A5 4DIM NFC G3 CE	220..240V, 50-60Hz, ta= -40...+60°C, tc max=85°C	EN 61347-1 EN 61347-2-13	ENEC
Control gear <i>Zasilacz</i>	A	OSRAM	OT 110/170...240/0A7 4DIM NFC G3 CE	220..240V, 50-60Hz, ta= -40...+55°C, tc max=80°C	EN 61347-1 EN 61347-2-13	ENEC
Control gear <i>Zasilacz</i>	A	OSRAM	OT 110/170...240/1A0 4DIM NFC G3 CE	220..240V, 50-60Hz, ta= -40...+55°C, tc max=85°C	EN 61347-1 EN 61347-2-13	ENEC
Control gear <i>Zasilacz</i>	A	OSRAM	OT DX 40/170...240/1A0 DIMA NFC G2	170..240V, 50-60Hz, ta= -40...+55°C, tc max=75°C	EN 61347-1 EN 61347-2-13	ENEC
Control gear <i>Zasilacz</i>	A	OSRAM	OT DX 75/170...240/1A0 DIMA NFC G2	170..240V, 50-60Hz, ta= -40...+55°C, tc max=85°C	EN 61347-1 EN 61347-2-13	ENEC
Control gear <i>Zasilacz</i>	A	OSRAM	OT DX 110/170...240/1A0 DIMA NFC G2	170..240V, 50-60Hz, ta= -40...+55°C, tc max=85°C	EN 61347-1 EN 61347-2-13	ENEC

Object / part No.	Code	Manufacturer/ trademark	Type / model	Technical data	Standard	Mark(s) of conformity ¹⁾
Control gear <i>Zasilacz</i>	A	OSRAM	IT DALI 20/120...240/1A0 P7	120..240V, 50-60Hz, ta= -40...+70°C, tc max=80°C	EN 61347-1 EN 61347-2-13	ENEC
Control gear <i>Zasilacz</i>	A	OSRAM	IT DALI 40/120...240/1A0 P7	120..240V, 50-60Hz, ta= -40...+65°C, tc max=80°C	EN 61347-1 EN 61347-2-13	ENEC
Control gear <i>Zasilacz</i>	A	OSRAM	IT DALI 75/120...240/1A0 P7	120..240V, 50-60Hz, ta= -40...+65°C, tc max=80°C	EN 61347-1 EN 61347-2-13	ENEC
Control gear <i>Zasilacz</i>	A	OSRAM	IT DALI 110/120...240/1A0 P7	120..240V, 50-60Hz, ta= -40...+60°C, tc max=85°C	EN 61347-1 EN 61347-2-13	ENEC
Control gear <i>Zasilacz</i>	A	OSRAM	OT 20/170-240/1A0 1DIM NFC G3 CE	220..240V, 50-60Hz, ta= -40...+60°C, tc max=75°C	EN 61347-1 EN 61347-2-13	ENEC
Control gear <i>Zasilacz</i>	A	OSRAM	OT 40/170-240/0A7 1DIM NFC G3 CE	220..240V, 50-60Hz, ta= -40...+60°C, tc max=80°C	EN 61347-1 EN 61347-2-13	ENEC
Control gear <i>Zasilacz</i>	A	OSRAM	OT 40/170-240/1A0 1DIM NFC G3 CE	220..240V, 50-60Hz, ta= -40...+60°C, tc max=80°C	EN 61347-1 EN 61347-2-13	ENEC
Control gear <i>Zasilacz</i>	A	OSRAM	OT 75/170-240/0A7 1DIM NFC G3 CE	220..240V, 50-60Hz, ta= -40...+55°C, tc max=90°C	EN 61347-1 EN 61347-2-13	ENEC
Control gear <i>Zasilacz</i>	A	OSRAM	OT 75/170-240/1A0 1DIM NFC G3 CE	220..240V, 50-60Hz, ta= -40...+55°C, tc max=90°C	EN 61347-1 EN 61347-2-13	ENEC
Control gear <i>Zasilacz</i>	A	OSRAM	OT 110/170-240/0A7 1DIM NFC G3 CE	220..240V, 50-60Hz, ta= -40...+55°C, tc max=80°C	EN 61347-1 EN 61347-2-13	ENEC
Control gear <i>Zasilacz</i>	A	OSRAM	OT 110/170-240/1A0 1DIM NFC G3 CE	220..240V, 50-60Hz, ta= -40...+55°C, tc max=85°C	EN 61347-1 EN 61347-2-13	ENEC
Control gear <i>Zasilacz</i>	A	Inventronics	EBS-025S045BT2	176..305V, 50-60Hz, ta= -40...+750C, tc max=900C	EN 61347-1 EN 61347-2-13	ENEC
Control gear <i>Zasilacz</i>	A	Inventronics	EBS-025S070BT2	176..305V, 50-60Hz, ta= -40...+750C, tc max=900C	EN 61347-1 EN 61347-2-13	ENEC
Control gear <i>Zasilacz</i>	A	Inventronics	EBS-025S105BT2	171..275V, 50-60Hz, ta= -40...+750C, tc max=900C	EN 61347-1 EN 61347-2-13	ENEC
Control gear <i>Zasilacz</i>	A	Inventronics	EBS-040S045BT2	176..305V, 50-60Hz, ta= -40...+750C, tc max=900C	EN 61347-1 EN 61347-2-13	ENEC
Control gear <i>Zasilacz</i>	A	Inventronics	EBS-040S070BT2	176..305V, 50-60Hz, ta= -40...+750C, tc max=900C	EN 61347-1 EN 61347-2-13	ENEC
Control gear <i>Zasilacz</i>	A	Inventronics	EBS-040S105BT2	176..305V, 50-60Hz, ta= -40...+750C, tc max=900C	EN 61347-1 EN 61347-2-13	ENEC
Control gear <i>Zasilacz</i>	A	Inventronics	EBS-080S070BT2	176..305V, 50-60Hz, ta= -40...+750C, tc max=900C	EN 61347-1 EN 61347-2-13	ENEC
Control gear <i>Zasilacz</i>	A	Inventronics	EBS-080S105BT2	176..305V, 50-60Hz, ta= -40...+750C, tc max=900C	EN 61347-1 EN 61347-2-13	ENEC
Control gear <i>Zasilacz</i>	A	Inventronics	EBS-080S150BT2	176..305V, 50-60Hz, ta= -40...+750C, tc max=900C	EN 61347-1 EN 61347-2-13	ENEC
Control gear <i>Zasilacz</i>	A	Inventronics	EBS-120S070BT2	176..305V, 50-60Hz, ta= -40...+750C, tc max=900C	EN 61347-1 EN 61347-2-13	ENEC
Control gear <i>Zasilacz</i>	A	Inventronics	EBS-120S105BT2	176..305V, 50-60Hz, ta= -40...+750C, tc max=900C	EN 61347-1 EN 61347-2-13	ENEC

Object / part No.	Code	Manufacturer/ trademark	Type / model	Technical data	Standard	Mark(s) of conformity ¹⁾
Control gear <i>Zasilacz</i>	A	Inventronics	EBS-120S150BT2	176..305V, 50-60Hz, ta= -40...+750C, tc max=900C	EN 61347-1 EN 61347-2-13	ENEC
Control gear <i>Zasilacz</i>	A	Inventronics	EUM-075S	90..305V, 50-60Hz, ta= -40...+80°C, tc max=90°C	EN 61347-1 EN 61347-2-13	ENEC
Control gear <i>Zasilacz</i>	A	Inventronics	EUM – 100S	100..277V, 50-60Hz, ta= -40...+75°C, tc max=90°C	EN 61347-1 EN 61347-2-13	ENEC
Control gear <i>Zasilacz</i>	A	Philips	Xitanium 40W 0.7A Prog+ GL-J sXt	220..240V, 50-60Hz, ta= -40...+55°C, tc max=80°C	EN 61347-1 EN 61347-2-13	ENEC
Control gear <i>Zasilacz</i>	A	Philips	Xitanium 75W 0.35- 0.70A GL Prog+ sXt	220..240V, 50-60Hz, ta= -40...+55°C, tc max=80°C	EN 61347-1 EN 61347-2-13	ENEC
Control gear <i>Zasilacz</i>	A	Philips	Xitanium 75W 0.1-1.05A Prog GL F sXt	220..240V, 50-60Hz, ta= -40...+55°C, tc max=80°C	EN 61347-1 EN 61347-2-13	ENEC
Control gear <i>Zasilacz</i>	A	Philips	Xitanium 100W 0.7A Prog+ GL-Z sXt	220..240V, 50-60Hz, ta= -40...+55°C, tc max=80°C	EN 61347-1 EN 61347-2-13	ENEC
Control gear <i>Zasilacz</i>	A	Philips	Xi BP 12W 0.1-0.5A S 230V C100	220..240V, 50-60Hz, ta= -40...+55°C, tc max=80°C	EN 61347-1 EN 61347-2-13	ENEC
Control gear <i>Zasilacz</i>	A	Philips	Xi BP 22W 0.2-0.7A S 230V C123	220..240V, 50-60Hz, ta= -40...+55°C, tc max=85°C	EN 61347-1 EN 61347-2-13	ENEC
Control gear <i>Zasilacz</i>	A	Philips	Xi BP 40W 0.2-0.7A S 230V C123	220..240V, 50-60Hz, ta= -40...+55°C, tc max=85°C	EN 61347-1 EN 61347-2-13	ENEC
Control gear <i>Zasilacz</i>	A	Philips	Xi BP 40W 0.3-1.0A S 230V C123	220..240V, 50-60Hz, ta= -40...+55°C, tc max=80°C	EN 61347-1 EN 61347-2-13	ENEC
Control gear <i>Zasilacz</i>	A	Philips	Xi BP 75W 0.2-0.7A S 230V C133 sXt	220..240V, 50-60Hz, ta= -40...+55°C, tc max=80°C	EN 61347-1 EN 61347-2-13	ENEC
Control gear <i>Zasilacz</i>	A	Philips	Xi BP 75W 0.3-1.0A S 230V C133 sXt	220..240V, 50-60Hz, ta= -40...+55°C, tc max=85°C	EN 61347-1 EN 61347-2-13	ENEC
Control gear <i>Zasilacz</i>	A	Philips	Xi BP 110W 0.2-0.7A S 230V C133 sXt	220..240V, 50-60Hz, ta= -40...+55°C, tc max=85°C	EN 61347-1 EN 61347-2-13	ENEC
Control gear <i>Zasilacz</i>	A	Philips	Xi BP 110W 0.3-1.0A S 230V C133 sXt	220..240V, 50-60Hz, ta= -40...+55°C, tc max=80°C	EN 61347-1 EN 61347-2-13	ENEC
Control gear <i>Zasilacz</i>	A	Philips	Xi LP 22W 0.2-0.7A S1 230V C123 sXt	220..240V, 50-60Hz, ta= -40...+55°C, tc max=85°C	EN 61347-1 EN 61347-2-13	ENEC
Control gear <i>Zasilacz</i>	A	Philips	Xi LP 22W 0.3-1.0A S1 230V C123 sXt	220..240V, 50-60Hz, ta= -40...+55°C, tc max=85°C	EN 61347-1 EN 61347-2-13	ENEC
Control gear <i>Zasilacz</i>	A	Philips	Xi LP 40W 0.2-0.7A S1 230V C123 sXt	220..240V, 50-60Hz, ta= -40...+55°C, tc max=85°C	EN 61347-1 EN 61347-2-13	ENEC
Control gear <i>Zasilacz</i>	A	Philips	Xi LP 40W 0.3-1.0A S1 230V C123 sXt	220..240V, 50-60Hz, ta= -40...+55°C, tc max=85°C	EN 61347-1 EN 61347-2-13	ENEC
Control gear <i>Zasilacz</i>	A	Philips	Xi LP 75W 0.2-0.7A S1 230V C133 sXt	220..240V, 50-60Hz, ta= -40...+55°C, tc max=80°C	EN 61347-1 EN 61347-2-13	ENEC
Control gear <i>Zasilacz</i>	A	Philips	Xi LP 75W 0.3-1.0A S1 230V C133 sXt	220..240V, 50-60Hz, ta= -40...+55°C, tc max=80°C	EN 61347-1 EN 61347-2-13	ENEC
Control gear <i>Zasilacz</i>	A	Philips	Xi LP 75W 0.5-1.5A S1 230V C133 sXt	220..240V, 50-60Hz, ta= -40...+55°C, tc max=80°C	EN 61347-1 EN 61347-2-13	ENEC

Object / part No.	Code	Manufacturer/ trademark	Type / model	Technical data	Standard	Mark(s) of conformity ¹⁾
Control gear <i>Zasilacz</i>	A	Philips	Xi LP 110W 0.2-0.7A S1 230V C133 sXt	220..240V, 50-60Hz, ta= -40...+55°C, tc max=90°C	EN 61347-1 EN 61347-2-13	ENEC
Control gear <i>Zasilacz</i>	A	Philips	Xi LP 110W 0.3-1.0A S1 230V C133 sXt	220..240V, 50-60Hz, ta= -40...+55°C, tc max=90°C	EN 61347-1 EN 61347-2-13	ENEC
Control gear <i>Zasilacz</i>	A	Philips	Xi LP 22W 0.2-0.7A S1 230V S175 sXt	220..240V, 50-60Hz, ta= -40...+55°C, tc max=80°C	EN 61347-1 EN 61347-2-13	ENEC
Control gear <i>Zasilacz</i>	A	Philips	Xi LP 22W 0.3-1.0A S1 230V S175 sXt	220..240V, 50-60Hz, ta= -40...+55°C, tc max=80°C	EN 61347-1 EN 61347-2-13	ENEC
Control gear <i>Zasilacz</i>	A	Philips	Xi LP 40W 0.2 -0.7A S1 230V S175 sXt	220..240V, 50-60Hz, ta= -40...+55°C, tc max=80°C	EN 61347-1 EN 61347-2-13	ENEC
Control gear <i>Zasilacz</i>	A	Philips	Xi LP 40W 0.2-0.7A SL 230V S175 sXt	220..240V, 50-60Hz, ta= -40...+55°C, tc max=80°C	EN 61347-1 EN 61347-2-13	ENEC
Control gear <i>Zasilacz</i>	A	Philips	Xi LP 40W 0.3-1.0A S1 230V S175 sXt	220..240V, 50-60Hz, ta= -40...+55°C, tc max=80°C	EN 61347-1 EN 61347-2-13	ENEC
Control gear <i>Zasilacz</i>	A	Philips	Xi LP 40W 0.3-1.0A SL 230V S175 sXt	220..240V, 50-60Hz, ta= -40...+55°C, tc max=80°C	EN 61347-1 EN 61347-2-13	ENEC
Control gear <i>Zasilacz</i>	A	Philips	Xi LP 40W 0.2-0.7A SN 230V S175 sXt	220..240V, 50-60Hz, ta= -40...+55°C, tc max=80°C	EN 61347-1 EN 61347-2-13	ENEC
Control gear <i>Zasilacz</i>	A	Philips	Xi LP 75W 0.2-0.7A S1 230V S240 sXt	220..240V, 50-60Hz, ta= -40...+55°C, tc max=90°C	EN 61347-1 EN 61347-2-13	ENEC
Control gear <i>Zasilacz</i>	A	Philips	Xi LP 75W 0.2-0.7A SL 230V S240 sXt	220..240V, 50-60Hz, ta= -40...+55°C, tc max=85°C	EN 61347-1 EN 61347-2-13	ENEC
Control gear <i>Zasilacz</i>	A	Philips	Xi LP 75W 0.3-1.0A S1 230V S240 sXt	220..240V, 50-60Hz, ta= -40...+55°C, tc max=90°C	EN 61347-1 EN 61347-2-13	ENEC
Control gear <i>Zasilacz</i>	A	Philips	Xi LP 75W 0.3-1.0A SL 230V S240 sXt	220..240V, 50-60Hz, ta= -40...+55°C, tc max=85°C	EN 61347-1 EN 61347-2-13	ENEC
Control gear <i>Zasilacz</i>	A	Philips	Xi LP 75W 0.2-0.7A SN 230V S240 sXt	220..240V, 50-60Hz, ta= -40...+55°C, tc max=85°C	EN 61347-1 EN 61347-2-13	ENEC
Control gear <i>Zasilacz</i>	A	Philips	Xi LP 75W 0.5-1.5A S1 230V S240 sXt	220..240V, 50-60Hz, ta= -40...+55°C, tc max=85°C	EN 61347-1 EN 61347-2-13	ENEC
Control gear <i>Zasilacz</i>	A	Philips	Xi FP 22W 0.2-0.7A SNLDAE 230V C123 sXt	220..240V, 50-60Hz, ta= -40...+55°C, tc max=85°C	EN 61347-1 EN 61347-2-13	ENEC
Control gear <i>Zasilacz</i>	A	Philips	Xi FP 22W 0.3-1.0A SNLDAE 230V C123 sXt	220..240V, 50-60Hz, ta= -40...+55°C, tc max=85°C	EN 61347-1 EN 61347-2-13	ENEC
Control gear <i>Zasilacz</i>	A	Philips	Xi FP 40W 0.2-0.7A SNLDAE 230V C123 sXt	220..240V, 50-60Hz, ta= -40...+55°C, tc max=85°C	EN 61347-1 EN 61347-2-13	ENEC
Control gear <i>Zasilacz</i>	A	Philips	Xi FP 40W 0.3-1.0A SNLDAE 230V C123 sXt	220..240V, 50-60Hz, ta= -40...+55°C, tc max=85°C	EN 61347-1 EN 61347-2-13	ENEC
Control gear <i>Zasilacz</i>	A	Philips	Xi FP 70W 0.3-1.0A NLD C150 230V sXt	220..240V, 50-60Hz, ta= -30...+60°C, tc max=90°C	EN 61347-1 EN 61347-2-13	ENEC
Control gear <i>Zasilacz</i>	A	Philips	Xi FP 75W 0.2-0.7A SNLDAE 230V C133 sXt	220..240V, 50-60Hz, ta= -40...+55°C, tc max=80°C	EN 61347-1 EN 61347-2-13	ENEC
Control gear <i>Zasilacz</i>	A	Philips	Xi FP 75W 0.3-1.0A SNLDAE 230V C133 sXt	220..240V, 50-60Hz, ta= -40...+55°C, tc max=80°C	EN 61347-1 EN 61347-2-13	ENEC

Object / part No.	Code	Manufacturer/ trademark	Type / model	Technical data	Standard	Mark(s) of conformity ¹⁾
Control gear <i>Zasilacz</i>	A	Philips	Xi FP 75W 0.5-1.5A SNLDAE 230V C133 sXt	220..240V, 50-60Hz, ta= -40...+55°C, tc max=80°C	EN 61347-1 EN 61347-2-13	ENEC
Control gear <i>Zasilacz</i>	A	Philips	Xi FP 100W 0.2-0.7A SNLDAE 230V C165 sXt	220..240V, 50-60Hz, ta= -40...+55°C, tc max=85°C	EN 61347-1 EN 61347-2-13	ENEC
Control gear <i>Zasilacz</i>	A	Philips	Xi FP 110W 0.2-0.7A SNLDAE 230V C133 sXt	220..240V, 50-60Hz, ta= -40...+55°C, tc max=85°C	EN 61347-1 EN 61347-2-13	ENEC
Control gear <i>Zasilacz</i>	A	Philips	Xi FP 110W 0.3-1.0A NLD C150 230V sXt	220..240V, 50-60Hz, ta= -30...+60°C, tc max=90°C	EN 61347-1 EN 61347-2-13	ENEC
Control gear <i>Zasilacz</i>	A	Philips	Xi FP 110W 0.3-1.0A SNLDAE 230V C133 sXt	220..240V, 50-60Hz, ta= -40...+55°C, tc max=85°C	EN 61347-1 EN 61347-2-13	ENEC
Control gear <i>Zasilacz</i>	A	Philips	Xi FP 22W 0.2-0.7A SNLDAE 230V S175 sXt	220..240V, 50-60Hz, ta= -40...+55°C, tc max=85°C	EN 61347-1 EN 61347-2-13	ENEC
Control gear <i>Zasilacz</i>	A	Philips	Xi FP 22W 0.3-1.0A SNLDAE 230V S175 sXt	220..240V, 50-60Hz, ta= -40...+55°C, tc max=85°C	EN 61347-1 EN 61347-2-13	ENEC
Control gear <i>Zasilacz</i>	A	Philips	Xi FP 40W 0.2-7.0A SNLDAE 230V S175 sXt	220..240V, 50-60Hz, ta= -40...+55°C, tc max=85°C	EN 61347-1 EN 61347-2-13	ENEC
Control gear <i>Zasilacz</i>	A	Philips	Xi FP 40W 0.3-1.0A SNLDAE 230V S175 sXt	220..240V, 50-60Hz, ta= -40...+55°C, tc max=90°C	EN 61347-1 EN 61347-2-13	ENEC
Control gear <i>Zasilacz</i>	A	Philips	Xi FP 75W 0.2-0.7A SNLDAE 230V S240 sXt	220..240V, 50-60Hz, ta= -40...+55°C, tc max=85°C	EN 61347-1 EN 61347-2-13	ENEC
Control gear <i>Zasilacz</i>	A	Philips	Xi FP 75W 0.3-1.0A SNLDAE 230V S240 sXt	220..240V, 50-60Hz, ta= -40...+55°C, tc max=85°C	EN 61347-1 EN 61347-2-13	ENEC
Control gear <i>Zasilacz</i>	A	Philips	Xi SR 12W 0.2-0.7A SNEMP 230V C133 sXt	220..240V, 50-60Hz, ta= -40...+55°C, tc max=85°C	EN 61347-1 EN 61347-2-13	ENEC
Control gear <i>Zasilacz</i>	A	Philips	Xi SR 22W 0.2-0.7A SNEMP 230V C133 sXt	220..240V, 50-60Hz, ta= -40...+55°C, tc max=85°C	EN 61347-1 EN 61347-2-13	ENEC
Control gear <i>Zasilacz</i>	A	Philips	Xi SR 40W 0.2-0.7A SNEMP 230V C133 sXt	220..240V, 50-60Hz, ta= -40...+55°C, tc max=85°C	EN 61347-1 EN 61347-2-13	ENEC
Control gear <i>Zasilacz</i>	A	Philips	Xi SR 75W 0.2-0.7A SNEMP 230V C150 sXt	220..240V, 50-60Hz, ta= -40...+55°C, tc max=90°C	EN 61347-1 EN 61347-2-13	ENEC
Control gear <i>Zasilacz</i>	A	Philips	Xi SR 75W 2 0.3-1.0A SNEMPF C170 sXt	220..240V, 50-60Hz, ta= -40...+55°C, tc max=90°C	EN 61347-1 EN 61347-2-13	ENEC
Control gear <i>Zasilacz</i>	A	Philips	Xi SR 75W 0.2-0.7A SNEMP 230V S240 sXt	220..240V, 50-60Hz, ta= -40...+55°C, tc max=90°C	EN 61347-1 EN 61347-2-13	ENEC
Control gear <i>Zasilacz</i>	A	Philips	Xi SR 75W 0.3-1.0A SNEMP 230V S240 sXt	220..240V, 50-60Hz, ta= -40...+55°C, tc max=90°C	EN 61347-1 EN 61347-2-13	ENEC
Control gear <i>Zasilacz</i>	A	Philips	Xi SR 110W 0.2-0.7A SNEMP 230V C150 sXt	220..240V, 50-60Hz, ta= -40...+55°C, tc max=90°C	EN 61347-1 EN 61347-2-13	ENEC
Control gear <i>Zasilacz</i>	A	Philips	Xitanium 100W 2.1-4.2A AOC 230V I220	220..240V, 50-60Hz, ta= -40...+55°C, tc max=80°C	EN 61347-1 EN 61347-2-13	ENEC
Control gear <i>Zasilacz</i>	A	Philips	Xi LP 100W 0.3-1.05A S1 230V I175	220..240V, 50-60Hz, ta= -40...+55°C, tc max=80°C	EN 61347-1 EN 61347-2-13	ENEC
Control gear <i>Zasilacz</i>	A	Philips	Xitanium Dim 35W 0.7A 1-10V TWE I175	220..240V, 50-60Hz, ta= -40...+55°C, tc max=80°C	EN 61347-1 EN 61347-2-13	ENEC

Object / part No.	Code	Manufacturer/ trademark	Type / model	Technical data	Standard	Mark(s) of conformity ¹⁾
Control gear <i>Zasilacz</i>	A	Philips	Xitanium Dim 100W 0.7A 1-10V TWE I220	220..240V, 50-60Hz, ta= -40...+55°C, tc max=80°C	EN 61347-1 EN 61347-2-13	ENEC
Control gear <i>Zasilacz</i>	A	Philips	Xitanium 75W 0.7A TWE I175	220..240V, 50-60Hz, ta= -40...+55°C, tc max=80°C	EN 61347-1 EN 61347-2-13	ENEC
Control gear <i>Zasilacz</i>	A	Philips	Xitanium 75W 1.05A 1- 10V 230V C165 sXt	220..240V, 50-60Hz, ta= -40...+55°C, tc max=85°C	EN 61347-1 EN 61347-2-13	ENEC
Control gear <i>Zasilacz</i>	A	Philips	Xitanium 75W 0.70A 1- 10V 230V C165 sXt	220..240V, 50-60Hz, ta= -40...+55°C, tc max=85°C	EN 61347-1 EN 61347-2-13	ENEC
Control gear <i>Zasilacz</i>	A	Philips	Xitanium Dim 75W 0.70A 1-10V 230V I220	220..240V, 50-60Hz, ta= -40...+55°C, tc max=80°C	EN 61347-1 EN 61347-2-13	ENEC
Control gear <i>Zasilacz</i>	A	Philips	Xitanium 75W 1-10V 230V C165	220..240V, 50-60Hz, ta= -40...+55°C, tc max=80°C	EN 61347-1 EN 61347-2-13	ENEC
Control gear <i>Zasilacz</i>	A	Tridonic	LCA 120W 300-1050mA	220..240V, 50-60Hz, ta= -30...+55°C, tc max=85°C	EN 61347-1 EN 61347-2-13	ENEC
Control gear <i>Zasilacz</i>	A	Tridonic	LCA 75W 250-750mA one	220..240V, 50-60Hz, ta= -40...+70°C, tc max=85°C	EN 61347-1 EN 61347-2-13	ENEC
Control gear <i>Zasilacz</i>	A	Tridonic	LCA 120W 350- 1050mA one	220..240V, 50-60Hz, ta= -40...+70°C, tc max=85°C	EN 61347-1 EN 61347-2-13	ENEC
Control gear <i>Zasilacz</i>	A	Tridonic	LCO 14/100-500/38 NF C ADV3	220..240V, 50-60Hz, ta= -40...+70°C, tc max=90°C	EN 61347-1 EN 61347-2-13	ENEC
Control gear <i>Zasilacz</i>	A	Tridonic	LCO 24/200-1050/39 NF C ADV3	220..240V, 50-60Hz, ta= -40...+70°C, tc max=85°C	EN 61347-1 EN 61347-2-13	ENEC
Control gear <i>Zasilacz</i>	A	Tridonic	LCO 40/200-1050/64 NF C ADV3	220..240V, 50-60Hz, ta= -40...+70°C, tc max=90°C	EN 61347-1 EN 61347-2-13	ENEC
Control gear <i>Zasilacz</i>	A	Tridonic	LCO 60/200-1050/100 NF C ADV3	220..240V, 50-60Hz, ta= -40...+70°C, tc max=90°C	EN 61347-1 EN 61347-2-13	ENEC
Control gear <i>Zasilacz</i>	A	Tridonic	LCO 90/200-1050/165 NF C ADV3	220..240V, 50-60Hz, ta= -40...+70°C, tc max=100°C	EN 61347-1 EN 61347-2-13	ENEC
Control gear <i>Zasilacz</i>	A	Tridonic	LCO 14/100-500/38 o4a NF C EXC3	220..240V, 50-60Hz, ta= -40...+70°C, tc max=90°C	EN 61347-1 EN 61347-2-13	ENEC
Control gear <i>Zasilacz</i>	A	Tridonic	LCO 24/200-1050/39 o4a NF C EXC3	220..240V, 50-60Hz, ta= -40...+70°C, tc max=85°C	EN 61347-1 EN 61347-2-13	ENEC
Control gear <i>Zasilacz</i>	A	Tridonic	LCO 40/200-1050/64 o4a NF C EXC3	220..240V, 50-60Hz, ta= -40...+70°C, tc max=90°C	EN 61347-1 EN 61347-2-13	ENEC
Control gear <i>Zasilacz</i>	A	Tridonic	LCO 60/200-1050/100 o4a NF C EXC3	220..240V, 50-60Hz, ta= -40...+70°C, tc max=95°C	EN 61347-1 EN 61347-2-13	ENEC
Control gear <i>Zasilacz</i>	A	Tridonic	LCO 60/700-1500/43 o4a NFC C EXC3	220..240V, 50-60Hz, ta= -40...+70°C, tc max=95°C	EN 61347-1 EN 61347-2-13	ENEC
Control gear <i>Zasilacz</i>	A	Tridonic	LCO 90/200-1050/165 o4a NF C EXC3	220..240V, 50-60Hz, ta= -40...+70°C, tc max=100°C	EN 61347-1 EN 61347-2-13	ENEC
Control gear <i>Zasilacz</i>	A	Tridonic	LCO 100/1050/95 fixC L SNC2	220..240V, 50-60Hz, ta= -40...+65°C, tc max=80°C	EN 61347-1 EN 61347-2-13	ENEC
Control gear <i>Zasilacz</i>	A	Tridonic	LCO 100/1400/71 fixC L SNC2	220..240V, 50-60Hz, ta= -40...+65°C, tc max=80°C	EN 61347-1 EN 61347-2-13	ENEC

Object / part No.	Code	Manufacturer/ trademark	Type / model	Technical data	Standard	Mark(s) of conformity ¹⁾
Control gear <i>Zasilacz</i>	A	Tridonic	LCO 100/500/200 fixC L SNC2	220..240V, 50-60Hz, ta= -40...+65°C, tc max=80°C	EN 61347-1 EN 61347-2-13	ENEC
Control gear <i>Zasilacz</i>	A	Tridonic	LCO 100/700/143 fixC L SNC2	220..240V, 50-60Hz, ta= -40...+65°C, tc max=80°C	EN 61347-1 EN 61347-2-13	ENEC
Control gear <i>Zasilacz</i>	A	Tridonic	LCO 75/1050/72 fixC L SNC2	220..240V, 50-60Hz, ta= -40...+65°C, tc max=80°C	EN 61347-1 EN 61347-2-13	ENEC
Control gear <i>Zasilacz</i>	A	Tridonic	LCO 75/1400/53 fixC L SNC2	220..240V, 50-60Hz, ta= -40...+65°C, tc max=80°C	EN 61347-1 EN 61347-2-13	ENEC
Control gear <i>Zasilacz</i>	A	Tridonic	LCO 75/500/150 fixC L SNC2	220..240V, 50-60Hz, ta= -40...+65°C, tc max=80°C	EN 61347-1 EN 61347-2-13	ENEC
Control gear <i>Zasilacz</i>	A	Tridonic	LCO 75/700/108 fixC L SNC2	220..240V, 50-60Hz, ta= -40...+65°C, tc max=80°C	EN 61347-1 EN 61347-2-13	ENEC
Control gear <i>Zasilacz</i>	A	Tridonic	LCO 14W 100–550mA 38V pD+ NFC C PRE3	220..240V, 50-60Hz, ta= -40...+700C, tc max=950C	EN 61347-1 EN 61347-2-13	ENEC
Control gear <i>Zasilacz</i>	A	Tridonic	LCO 24W 200–1050mA 39V pD+ NFC C PRE3	220..240V, 50-60Hz, ta= -40...+700C, tc max=850C	EN 61347-1 EN 61347-2-13	ENEC
Control gear <i>Zasilacz</i>	A	Tridonic	LCO 40W 200–1050mA 64V pD+ NFC C PRE3	220..240V, 50-60Hz, ta= -40...+650C, tc max=950C	EN 61347-1 EN 61347-2-13	ENEC
Control gear <i>Zasilacz</i>	A	Tridonic	LCO 40W 200–1050mA 58V 2xCH pD+ NF C PRE3	220..240V, 50-60Hz, ta= -40...+650C, tc max=950C	EN 61347-1 EN 61347-2-13	ENEC
Control gear <i>Zasilacz</i>	A	Tridonic	LCO 60W 200–1050mA 100V pD+ NFC C PRE3	220..240V, 50-60Hz, ta= -40...+650C, tc max=950C	EN 61347-1 EN 61347-2-13	ENEC
Control gear <i>Zasilacz</i>	A	Tridonic	LCO 80W 200–1050mA 91V 2xCH pD+ NF C PRE3	220..240V, 50-60Hz, ta= -40...+700C, tc max=950C	EN 61347-1 EN 61347-2-13	ENEC
Control gear <i>Zasilacz</i>	A	Tridonic	LCO 90W 200–1050mA 165V pD+ NFC C PRE3	220..240V, 50-60Hz, ta= -40...+700C, tc max=950C	EN 61347-1 EN 61347-2-13	ENEC
Control gear <i>Zasilacz</i>	A	Tridonic	LCO 120W 200– 1050mA 182V 2xCH pD+ NF C PRE3	220..240V, 50-60Hz, ta= -40...+700C, tc max=950C	EN 61347-1 EN 61347-2-13	ENEC
Control gear <i>Zasilacz</i>	A	LACROIX	DL-PAK 70	220...240 50/60Hz, Ta =-25...+60 °C, Tc max =90 °C	EN 61347-1 EN 61347-2-13	ENEC
Control gear <i>Zasilacz</i>	A	LACROIX	DL-Pak 100L	220...240 50/60Hz, Ta =-25...+55 °C, Tc max =90 °C	EN 61347-1 EN 61347-2-13	ENEC
Control gear <i>Zasilacz</i>	A	DELTA	EUCI-040105GLA	220...240 V/50/60Hz, Ta =-40...+60 °C, Tc max =85 °C	EN 61347-1 EN 61347-2-13	ENEC
Control gear <i>Zasilacz</i>	A	DELTA	EUCI-075105GLA	220...240 V/50/60Hz, Ta =-40...+55 °C, Tc max =85 °C	EN 61347-1 EN 61347-2-13	ENEC
Control gear <i>Zasilacz</i>	A	Delta	EUCI-022105GLB	220...240V, 50/60Hz, Ta =-40...+55 °C, Tc max =85 °C	EN 61347-1 EN 61347-2-13	ENEC
Control gear <i>Zasilacz</i>	A	Delta	EUCI-040105GLB	198...264V, 50/60Hz, Ta =-40...+55 °C, Tc max =90 °C	EN 61347-1 EN 61347-2-13	ENEC
Control gear <i>Zasilacz</i>	A	Delta	EUCI-075105GLB	220...240 V/50/60Hz, Ta =-40...+55 °C, Tc max = 85 °C	EN 61347-1 EN 61347-2-13	ENEC
Control gear <i>Zasilacz</i>	A	Delta	EUCI 022105GIA	220..240V, 50-60Hz, ta= -40...+60°C, tc max=85°C	EN 61347-1 EN 61347-2-13	ENEC

Object / part No.	Code	Manufacturer/ trademark	Type / model	Technical data	Standard	Mark(s) of conformity ¹⁾
Control gear <i>Zasilacz</i>	A	Delta	EUCI 040105GIA	220..240V, 50-60Hz, ta= -40...+60°C, tc max=85°C	EN 61347-1 EN 61347-2-13	ENEC
Control gear <i>Zasilacz</i>	A	SOSEN	SS-50VP-72BH	220..240V, 50-60Hz, ta= -40...+60C, tc max=90C	EN 61347-1 EN 61347-2-13	ENEC
Control gear <i>Zasilacz</i>	A	SOSEN	SS-75VP-108BH	220..240V, 50-60Hz, ta= -40...+60C, tc max=90C	EN 61347-1 EN 61347-2-13	ENEC
Control gear <i>Zasilacz</i>	A	SOSEN	SS-100VP-143BH	220..240V, 50-60Hz, ta= -40...+60C, tc max=90C	EN 61347-1 EN 61347-2-13	ENEC
Control gear <i>Zasilacz</i>	A	SOSEN	SS-22PA- 32B	220..240V, 50-60Hz, ta= -40...+60C, tc max=90C	EN 61347-1 EN 61347-2-13	ENEC
Control gear <i>Zasilacz</i>	A	SOSEN	SS-40PA-54B	220..240V, 50-60Hz, ta= -40...+60C, tc max=90C	EN 61347-1 EN 61347-2-13	ENEC
Control gear <i>Zasilacz</i>	A	SOSEN	SS-75PA-108B	220..240V, 50-60Hz, ta= -40...+60C, tc max=90C	EN 61347-1 EN 61347-2-13	ENEC
Control gear <i>Zasilacz</i>	A	SOSEN	SS-110PA-160B	220..240V, 50-60Hz, ta= -40...+60C, tc max=90C	EN 61347-1 EN 61347-2-13	ENEC
Control gear <i>Zasilacz</i>	A	SOSEN	SS-22PA- 32F	220..240V, 50-60Hz, ta= -40...+60C, tc max=90C	EN 61347-1 EN 61347-2-13	ENEC
Control gear <i>Zasilacz</i>	A	SOSEN	SS-22PA- 49F	220..240V, 50-60Hz, ta= -40...+60C, tc max=90C	EN 61347-1 EN 61347-2-13	ENEC
Control gear <i>Zasilacz</i>	A	SOSEN	SS-22PA- 72F	220..240V, 50-60Hz, ta= -40...+60C, tc max=90C	EN 61347-1 EN 61347-2-13	ENEC
Control gear <i>Zasilacz</i>	A	SOSEN	SS-40PA-57F	220..240V, 50-60Hz, ta= -40...+60C, tc max=90C	EN 61347-1 EN 61347-2-13	ENEC
Control gear <i>Zasilacz</i>	A	SOSEN	SS-40PA-80F	220..240V, 50-60Hz, ta= -40...+60C, tc max=90C	EN 61347-1 EN 61347-2-13	ENEC
Control gear <i>Zasilacz</i>	A	SOSEN	SS-40PA-133F	220..240V, 50-60Hz, ta= -40...+60C, tc max=90C	EN 61347-1 EN 61347-2-13	ENEC
Control gear <i>Zasilacz</i>	A	SOSEN	SS-75PA-114F	220..240V, 50-60Hz, ta= -40...+60C, tc max=90C	EN 61347-1 EN 61347-2-13	ENEC
Control gear <i>Zasilacz</i>	A	SOSEN	SS-75PA-178F	220..240V, 50-60Hz, ta= -40...+60C, tc max=90C	EN 61347-1 EN 61347-2-13	ENEC
Control gear <i>Zasilacz</i>	A	SOSEN	SS-75PA-245F	220..240V, 50-60Hz, ta= -40...+60C, tc max=90C	EN 61347-1 EN 61347-2-13	ENEC
Control gear <i>Zasilacz</i>	A	SOSEN	SS-110PA-105F	220..240V, 50-60Hz, ta= -40...+60C, tc max=90C	EN 61347-1 EN 61347-2-13	ENEC
Control gear <i>Zasilacz</i>	A	SOSEN	SS-110PA-160F	220..240V, 50-60Hz, ta= -40...+60C, tc max=90C	EN 61347-1 EN 61347-2-13	ENEC
Control gear <i>Zasilacz</i>	A	SOSEN	SS-110PA-245F	220..240V, 50-60Hz, ta= -40...+60C, tc max=90C	EN 61347-1 EN 61347-2-13	ENEC
Control gear <i>Zasilacz</i>	A	ELDO LED	OT50W/UNV/800C/2DI MLT2/P6	120..277V, 50-60Hz, ta= -40...+60C, tc max=90C	EN 61347-1 EN 61347-2-13	ENEC
Control gear <i>Zasilacz</i>	A	Moso	U6-040D057	220..240V, 50-60Hz, ta= -40...+55°C, tc max=85°C	EN 61347-1 EN 61347-2-13	ENEC

Object / part No.	Code	Manufacturer/ trademark	Type / model	Technical data	Standard	Mark(s) of conformity ¹⁾
Control gear <i>Zasilacz</i>	A	Moso	U6-080D115	220..240V, 50-60Hz, ta= -40...+55°C, tc max=85°C	EN 61347-1 EN 61347-2-13	ENEC
Control gear <i>Zasilacz</i>	A	Moso	U6-120D172	220..240V, 50-60Hz, ta= -40...+55°C, tc max=85°C	EN 61347-1 EN 61347-2-13	ENEC
Control gear <i>Zasilacz</i>	A	Moso	U7-026D038	220..240V, 50-60Hz, ta= -40...+55°C, tc max=85°C	EN 61347-1 EN 61347-2-13	ENEC
Control gear <i>Zasilacz</i>	A	Moso	U7-040D057	220..240V, 50-60Hz, ta= -40...+55°C, tc max=85°C	EN 61347-1 EN 61347-2-13	ENEC
Control gear <i>Zasilacz</i>	A	Moso	U7-060D086	220..240V, 50-60Hz, ta= -40...+55°C, tc max=85°C	EN 61347-1 EN 61347-2-13	ENEC
Control gear <i>Zasilacz</i>	A	Moso	U7-080D115	220..240V, 50-60Hz, ta= -40...+55°C, tc max=90°C	EN 61347-1 EN 61347-2-13	ENEC
Control gear <i>Zasilacz</i>	A	Moso	U7-120D172	220..240V, 50-60Hz, ta= -40...+50°C, tc max=90°C	EN 61347-1 EN 61347-2-13	ENEC
Control gear <i>Zasilacz</i>	A	Moso	LUP 120	220..240V, 50-60Hz, ta= -40...+60°C, tc max=85°C	EN 61347-1 EN 61347-2-13	ENEC
Control gear <i>Zasilacz</i>	A	uPowerTek	APD-040	176..264V, 50-60Hz, ta= -40...+90°C, tc max=90°C	EN 61347-1 EN 61347-2-13	ENEC
Control gear <i>Zasilacz</i>	A	uPowerTek	APD-075	176..264V, 50-60Hz, ta= -40...+90°C, tc max=90°C	EN 61347-1 EN 61347-2-13	ENEC
Control gear <i>Zasilacz</i>	A	uPowerTek	APD-110	176..264V, 50-60Hz, ta= -40...+90°C, tc max=90°C	EN 61347-1 EN 61347-2-13	ENEC
Control gear <i>Zasilacz</i>	A	uPowerTek	BLD-060	176..264V, 50-60Hz, ta= -40...+90°C, tc max=90°C	EN 61347-1 EN 61347-2-13	ENEC
Control gear <i>Zasilacz</i>	A	uPowerTek	BLD-075	176..264V, 50-60Hz, ta= -40...+90°C, tc max=90°C	EN 61347-1 EN 61347-2-13	ENEC
Control gear <i>Zasilacz</i>	A	uPowerTek	BLD-096	176..264V, 50-60Hz, ta= -40...+90°C, tc max=90°C	EN 61347-1 EN 61347-2-13	ENEC
Control gear <i>Zasilacz</i>	A	uPowerTek	BLD-120	176..264V, 50-60Hz, ta= -40...+90°C, tc max=90°C	EN 61347-1 EN 61347-2-13	ENEC
Control gear <i>Zasilacz</i>	A	TCI	MILANOinLED 75W/200-1050 AD	220..240V, 50-60Hz, ta= -40...+55°C, tc max=85°C	EN 61347-1 EN 61347-2-13	ENEC
Control gear <i>Zasilacz</i>	A	TCI	MILANOinLED 20W/200-1050 1PN	220..240V, 50-60Hz, ta= -40...+60°C, tc max=75°C	EN 61347-1 EN 61347-2-13	ENEC
Control gear <i>Zasilacz</i>	A	TCI	MILANOinLED 40W/200-1050 1PN	220..240V, 50-60Hz, ta= -40...+60°C, tc max=80°C	EN 61347-1 EN 61347-2-13	ENEC
Control gear <i>Zasilacz</i>	A	TCI	MILANOinLED 75W/200-1050 1PN	220..240V, 50-60Hz, ta= -40...+55°C, tc max=85°C	EN 61347-1 EN 61347-2-13	ENEC
Control gear <i>Zasilacz</i>	A	TCI	MILANOinLED 110W/200-1050 1PN	220..240V, 50-60Hz, ta= -40...+55°C, tc max=85°C	EN 61347-1 EN 61347-2-13	ENEC
Control gear <i>Zasilacz</i>	A	TCI	MILANOinLED 20W/200-1050 4PN	220..240V, 50-60Hz, ta= -40...+60°C, tc max=75°C	EN 61347-1 EN 61347-2-13	ENEC
Control gear <i>Zasilacz</i>	A	TCI	MILANOinLED 40W/200-1050 4PN	220..240V, 50-60Hz, ta= -40...+60°C, tc max=80°C	EN 61347-1 EN 61347-2-13	ENEC

Object / part No.	Code	Manufacturer/ trademark	Type / model	Technical data	Standard	Mark(s) of conformity ¹⁾
Control gear <i>Zasilacz</i>	A	TCI	MILANOinLED 75W/200-1050 4PN	220..240V, 50-60Hz, ta= -40...+55°C, tc max=85°C	EN 61347-1 EN 61347-2-13	ENEC
Control gear <i>Zasilacz</i>	A	TCI	MILANOinLED 110W/200-1050 4PN	220..240V, 50-60Hz, ta= -40...+55°C, tc max=85°C	EN 61347-1 EN 61347-2-13	ENEC
Control gear <i>Zasilacz</i>	A	TCI	VEGA 75/530-1050 FPD IP67	220..240V, 50-60Hz, ta= -40...+60°C, tc max=90°C	EN 61347-1 EN 61347-2-13	ENEC
Control gear <i>Zasilacz</i>	A	TCI	VEGA 105/530-1050 FPD IP67	220..240V, 50-60Hz, ta= -40...+60°C, tc max=90°C	EN 61347-1 EN 61347-2-13	ENEC
Control gear <i>Zasilacz</i>	A	TCI	SIRIO SQ 22W 200-700 1-10V	220..240V, 50-60Hz, ta= -40...+55°C, tc max=85°C	EN 61347-1 EN 61347-2-13	ENEC
Control gear <i>Zasilacz</i>	A	TCI	SIRIO SQ 40W 200-700 1-10V	220..240V, 50-60Hz, ta= -40...+55°C, tc max=85°C	EN 61347-1 EN 61347-2-13	ENEC
Control gear <i>Zasilacz</i>	A	TCI	SIRIO SQ 75W 200-700 1-10V	220..240V, 50-60Hz, ta= -40...+55°C, tc max=80°C	EN 61347-1 EN 61347-2-13	ENEC
Control gear <i>Zasilacz</i>	A	TCI	SIRIO SQ 110W 200- 700 1-10V	220..240V, 50-60Hz, ta= -40...+55°C, tc max=90°C	EN 61347-1 EN 61347-2-13	ENEC
Control gear <i>Zasilacz</i>	A	TCI	SIRIO SQ 22W 200-700 4PN	220..240V, 50-60Hz, ta= -40...+55°C, tc max=85°C	EN 61347-1 EN 61347-2-13	ENEC
Control gear <i>Zasilacz</i>	A	TCI	SIRIO SQ 40W 200-700 4PN	220..240V, 50-60Hz, ta= -40...+55°C, tc max=85°C	EN 61347-1 EN 61347-2-13	ENEC
Control gear <i>Zasilacz</i>	A	TCI	SIRIO SQ 75W 200-700 4PN	220..240V, 50-60Hz, ta= -40...+55°C, tc max=80°C	EN 61347-1 EN 61347-2-13	ENEC
Control gear <i>Zasilacz</i>	A	TCI	SIRIO SQ 110W 200- 700 4PN	220..240V, 50-60Hz, ta= -40...+55°C, tc max=85°C	EN 61347-1 EN 61347-2-13	ENEC
Control gear <i>Zasilacz</i>	A	TCI	SIRIO SQ 22W 200-700 AD	220..240V, 50-60Hz, ta= -40...+55°C, tc max=85°C	EN 61347-1 EN 61347-2-13	ENEC
Control gear <i>Zasilacz</i>	A	TCI	SIRIO SQ 40W 200-700 AD	220..240V, 50-60Hz, ta= -40...+55°C, tc max=85°C	EN 61347-1 EN 61347-2-13	ENEC
Control gear <i>Zasilacz</i>	A	TCI	SIRIO SQ 75W 200-700 AD	220..240V, 50-60Hz, ta= -40...+55°C, tc max=90°C	EN 61347-1 EN 61347-2-13	ENEC
Control gear <i>Zasilacz</i>	A	TCI	SIRIO SQ 110W 200- 700 AD	220..240V, 50-60Hz, ta= -40...+55°C, tc max=90°C	EN 61347-1 EN 61347-2-13	ENEC
Control gear <i>Zasilacz</i>	A	Eaglerise	CKH-26-500 IP67 R	220..240V, 50-60Hz, ta= -40...+60°C, tc max=90°C	EN 61347-1 EN 61347-2-13	ENEC
Control gear <i>Zasilacz</i>	A	Ledants	URF A100-A	220..240V, 50-60Hz, ta= -40...+65°C, tc max=90°C	EN 61347-1 EN 61347-2-13	ENEC
Control gear <i>Zasilacz</i>	A	Vossloh schwabe	PRIMELINE ECXd 1050.639	220..240V, 50-60Hz, ta= -40...+55°C, tc max=85°C	EN 61347-1 EN 61347-2-13	ENEC
Control gear <i>Zasilacz</i>	A	Vossloh schwabe	PRIMELINE ECXd 1050.640	220..240V, 50-60Hz, ta= -40...+55°C, tc max=85°C	EN 61347-1 EN 61347-2-13	ENEC
Control gear <i>Zasilacz</i>	A	Vossloh schwabe	PRIMELINE ECXd 1050.641	220..240V, 50-60Hz, ta= -40...+55°C, tc max=85°C	EN 61347-1 EN 61347-2-13	ENEC
Control gear <i>Zasilacz</i>	A	Vossloh schwabe	PRIMELINE ECXd 1050.642	220..240V, 50-60Hz, ta= -40...+55°C, tc max=85°C	EN 61347-1 EN 61347-2-13	ENEC

Object / part No.	Code	Manufacturer/ trademark	Type / model	Technical data	Standard	Mark(s) of conformity ¹⁾
Control gear <i>Zasilacz</i>	A	Vossloh schwabe	PRIMELINE ECXd 1050.659	220..240V, 50-60Hz, ta= -40...+55°C, tc max=85°C	EN 61347-1 EN 61347-2-13	ENEC
Control gear <i>Zasilacz</i>	A	Vossloh schwabe	PRIMELINE ECXd 1050.660	220..240V, 50-60Hz, ta= -40...+55°C, tc max=85°C	EN 61347-1 EN 61347-2-13	ENEC
Control gear <i>Zasilacz</i>	A	Vossloh schwabe	PRIMELINE ECXd 1050.682	220..240V, 50-60Hz, ta= -40...+55°C, tc max=85°C	EN 61347-1 EN 61347-2-13	ENEC
Control gear <i>Zasilacz</i>	A	Vossloh schwabe	PRIMELINE ECXd 1050.683	220..240V, 50-60Hz, ta= -40...+55°C, tc max=85°C	EN 61347-1 EN 61347-2-13	ENEC
Control gear <i>Zasilacz</i>	A	Vossloh schwabe	PRIMELINE ECXd 1050.684	220..240V, 50-60Hz, ta= -40...+55°C, tc max=85°C	EN 61347-1 EN 61347-2-13	ENEC
Control gear <i>Zasilacz</i>	A	Vossloh schwabe	PRIMELINE ECXd 1050.685	220..240V, 50-60Hz, ta= -40...+55°C, tc max=85°C	EN 61347-1 EN 61347-2-13	ENEC
Control gear <i>Zasilacz</i>	A	Lifud	LF-ACD040A/B	220..240V, 50-60Hz, ta= -40...+55°C, tc max=90°C	EN 61347-1 EN 61347-2-13	ENEC
Control gear <i>Zasilacz</i>	A	Lifud	LF-ACD075A/B/C	220..240V, 50-60Hz, ta= -40...+55°C, tc max=90°C	EN 61347-1 EN 61347-2-13	ENEC
Control gear <i>Zasilacz</i>	A	Lifud	LF-ACD120A/B	220..240V, 50-60Hz, ta= -40...+55°C, tc max=90°C	EN 61347-1 EN 61347-2-13	ENEC
Control gear <i>Zasilacz</i>	A	Lifud	LF-ACD165A/B	220..240V, 50-60Hz, ta= -40...+55°C, tc max=90°C	EN 61347-1 EN 61347-2-13	ENEC
Wires LED <i>Przewody</i>	B	Mrowiec	H05V-U	500 V; 0,5 mm ²	EN 50525	BBJ
Internal wires <i>Przewody wewnętrzne</i>	B	Mrowiec	H05V-K	500 V; 1 mm ²	EN 50525	BBJ
Supply cord <i>Przewód zasilający</i>	B	TF Kable	H07RN-F	450/750 V;	EN 50525	BBJ
Internal wires <i>Przewody wewnętrzne</i>	A	E.M.C. Colosio	RD10-B	300/500 V; 0,5 mm ²	EN 50525	IMQ, <HAR>
Silicon Fiberglass Insulating Sleeving <i>Oplot izolacyjny z włókna szklanego</i>	B	Isolcavi	GVES 1500	min. 1500 Volt, Temp -60...+250°C	IEC 60684-3-400	UL
Connector <i>Złącze</i>	B	Jiang Men Krealux Electrical	P02-M	17,5A; 450 V	EN 60988-1 EN 60998-2-2	VDE
Connector <i>Złącze</i>	A	Openwise	925	16A; 450 V	EN 60988-1 EN 60998-2-2	ENEC
Connector <i>Złącze</i>	A	Openwise	928	32A; 450 V	EN 60988-1 EN 60998-2-2	ENEC
Connector <i>Złącze</i>	A	Greenway Electronics Co Ltd	M684	16A; 450 V	EN 61984, EN 60988-1, EN 60998-2-1, EN 62444	ENEC
Terminal block <i>Listwa zaciskowa</i>	B	Stucchi	651/652	16A; 400 V	EN-61984	IMQ
Terminal block <i>Listwa zaciskowa</i>	B	Stucchi	661/662	6A; 400 V	EN-61984	IMQ

Object / part No.	Code	Manufacturer/ trademark	Type / model	Technical data	Standard	Mark(s) of conformity ¹⁾
Connector <i>Złącze</i>	B	BJB	47.121.-303.93, 47.121.-305.80, 47.121.-702.14, 47.121.-705.84, 47.121.U301.80, 47.121.U303.80, 47.121.U304.80, 47.921.-801.68, 47.921.-802.68, 47.921.U801.81	2A, 24V DC, ta= -40°C to 100°C	EN 61984, UL773	CE, VDE
Connector <i>Złącze</i>	B	BJB	48.281	16A; 400 V	EN 60998-2-2	VDE
Connector <i>Złącze</i>	B	BJB	46.412	16A; 450 V	EN 60998-2-2	VDE
Connector <i>Złącze</i>	B	BJB	46.413	16A; 450 V	EN 60998-2-2	VDE
Connector <i>Złącze</i>	B	BJB	46.414	16A; 450 V	EN 60998-2-2	VDE
Connector <i>Złącze</i>	B	BJB	46.415	16A; 450 V	EN 60998-2-2	VDE
Connector <i>Złącze</i>	B	BJB	46.455	16A; 450 V	EN 60998-2-2	VDE
Connector <i>Złącze</i>	B	WAGO	224-101	24A; 400 V	EN 60998-2-2	VDE
Connector <i>Złącze</i>	B	WAGO	224-112	24A; 400 V	EN 60998-2-2	VDE
Connector <i>Złącze</i>	B	TE Connectivity	2834049 2834048 2834055 2834054	9A; 600 V	EN 61984	TUV
Terminal block <i>Listwa zaciskowa</i>	B	Wieland	GST 18I4S	20A; 400 V	EN 61535	VDE
Terminal block <i>Listwa zaciskowa</i>	B	Wieland	GST 15I2	16A; 250 V	EN 61535	VDE
Terminal block <i>Listwa zaciskowa</i>	B	Wieland	96.051.4153.6	20A; 250 V	EN 61535	VDE, UL
Terminal block <i>Listwa zaciskowa</i>	B	Wieland	96.031.4053.1	20A; 250 V	EN 61535	VDE, UL
Connector <i>Złącze</i>	B	EMC Colosio	M26B	17A; 300 V	EN 60598-1	IMQ
Knife switch (connector) <i>Złącze nożowe</i>	B	Longran	M29 M29 mini	16A; 450 V 16A; 250 V	EN 61984 EN 60998-2-1 EN 60998-1	TUV
Connector <i>Złącze</i>	B	LONGJOIN	JL-700	1,5A, 30V	EN 61984	DEKRA
Connector <i>Złącze</i>	B	Tyco Electronics Corp.	2213795, 2213831, 2213837, 2213858, 2328823, 2329013	30V AC/DC 50/60Hz, 1,5A	EN 61984	CB certificate, UL EU, IEC
Connector <i>Złącze</i>	B	Tyco Electronics Corp.	1-2213871-1, 1-2213871-2, 2213871-1, 2213871-2, X-2213362-X, X-2213627-X	t= -40...+80°C, tc max=80°C 150/240/300VAC, 50/60Hz, 15/7.5/6 A, Signal Contacts: 30VDC, 1.5A	EN 61984	CB certificate, UL EU, IEC

Object / part No.	Code	Manufacturer/ trademark	Type / model	Technical data	Standard	Mark(s) of conformity ¹⁾
Connector <i>Złącze</i>	B	LUG	iBlock	230V, 50Hz, Ta = -40°C do 70°C	EN61347-2-11	Tested and accepted by ITE PREDOM Division TR No. Z7-2/016/B/20
Luminaire protection <i>Zabezpieczenie oprawy</i>	B	Vossloh schwabe	SP / 230 / 10K	220-240V, 50/60Hz, Ta = -30°C do 80°C	EN 60598-2-3 EN 61643-11	VDE
Luminaire protection <i>Zabezpieczenie oprawy</i>	B	Vossloh schwabe	SP 3 / 230 / 10K	100-277V, 50/60Hz, Ta = -30°C do 80°C	EN 60598-2-3 EN 61643-11	DEKRA
Luminaire protection <i>Zabezpieczenie oprawy</i>	B	Vossloh schwabe	SPC 3 / 230 / 10K / i	100-277V, 50/60Hz, Ta = -35°C do 80°C	EN 60598-2-3 EN 61643-11	DEKRA
Luminaire protection <i>Zabezpieczenie oprawy</i>	B	Vossloh schwabe	SPC 3 / 230 / 10K / i-IP66	100-277V, 50/60Hz, Ta = -35°C do 80°C	EN 60598-2-3 EN 61643-11	DEKRA
Luminaire protection <i>Zabezpieczenie oprawy</i>	B	Vossloh schwabe	SPC 230 / 10K / i	100-277V, 50/60Hz, Ta = -35°C do 80°C	EN 61643-11	DEKRA
Luminaire protection <i>Zabezpieczenie oprawy</i>	B	Tridonic	SPD 10kV CE SNC	100-277V, 50/60Hz, Ta = -40°C do 80°C	EN 61643-11	KEMA KEUR
Luminaire protection <i>Zabezpieczenie oprawy</i>	B	Inventronics	PU-20KX10KTXX	320Vac, 8A, 47-63Hz, Ta = -40°C do 85°C	EN 61643-11, EN 61643-21	CE, VDE
Luminaire protection <i>Zabezpieczenie oprawy</i>	B	Inventronics	PU-20Kx10KBx	320Vac, 15A, 47-63Hz, Ta = -40°C do 85°C	EN 61643-11, EN 61643-21	CE, VDE
Luminaire protection <i>Zabezpieczenie oprawy</i>	B	Inventronics	PU-10Kx05KBx	320Vac, 8A, 47-63Hz, Ta = -40°C do 85°C	EN 61643-11, EN 61643-21	CE, VDE
Luminaire protection <i>Zabezpieczenie oprawy</i>	B	Linoya Electronic Technology	LYSPD10D	300Vac, 50Hz, IP67	EN 61643-11	TUV
Luminaire protection <i>Zabezpieczenie oprawy</i>	B	ESB	ESB-6K	220-240V, 50/60Hz, Ta = -30°C do 80°C	EN 61643-11	VDE
Connector <i>Złącze</i>	B	LONGJOIN Nema	JL-240	t= -40...+70°C, 480VAC, 50/60Hz, Signal Contacts: 30VDC, 0,25A	EN 61984	DEKRA
Connector <i>Złącze</i>	B	LONGJOIN Nema	JL-208	t= -40...+70°C, 480VAC, 50/60Hz, Signal Contacts: 30VDC, 0,25A	EN 61984	CB
Connector <i>Złącze</i>	B	Ojun Zhaga	OJ-M716, OJ-M718	t= -40...+70°C, 500V, 50/60Hz, 30VDC, 1,5A	EN 61984	DEKRA, CB, Kema Keur, UKCA
Connector <i>Złącze</i>	B	Optimum	OPT801, OPT805, OPT806	t= -40...+70°C, IP66, 50/60Hz, 60VDC, 1,5A	EN 61984	DEKRA, CB, Kema Keur, UKCA
Fixed resistor <i>Rezystor</i>	B	Uniroyal Electronics	MGR series	100k Ohm to 100 MOhm (+-5%), 2W, 2,5kV	EN IEC 62368-1	VDE
Luminaire protection <i>Zabezpieczenie oprawy</i>	B	RuiLongYuan	TP10D	100-277V, 50/60Hz, Ta = -40°C do 85°C	EN 61643-11 IEC 61643-11	TUV

Object / part No.	Code	Manufacturer/ trademark	Type / model	Technical data	Standard	Mark(s) of conformity ¹⁾
Luminaire protection <i>Zabezpieczenie oprawy</i>	B	Greenway	GSPD 1	100-277V, 50/60Hz, Ta = -40°C do 85°C	EN 61643-11 IEC 61643-11	ETL / UL / TUV
Luminaire protection <i>Zabezpieczenie oprawy</i>	B	Greenway	GSPD 3	100-277V, 50/60Hz, Ta = -40°C do 85°C	EN 61643-11 IEC 61643-11	ETL / UL / TUV
Luminaire protection <i>Zabezpieczenie oprawy</i>	B	LINOYA	LYSPD10A	300Vac, 50Hz, IP67	EN 61643-11	UL
Luminaire protection <i>Zabezpieczenie oprawy</i>	B	ZP Lightning	ZP-LSP10-PL	100-277V, 50/60Hz, Ta = -40°C do 85°C	EN 61643-11 IEC 61643-11	UL
Luminaire protection <i>Zabezpieczenie oprawy</i>	B	ZP Lightning	ZP-LED-P10D	100-277V, 50/60Hz, Ta = -40°C do 85°C	EN 61643-11 IEC 61643-11	TUV
Luminaire protection <i>Zabezpieczenie oprawy</i>	B	ZP Lightning	ZP-LED-S10D	100-277V, 50/60Hz, Ta = -40°C do 85°C	EN 61643-11 IEC 61643-11	TUV
Luminaire protection <i>Zabezpieczenie oprawy</i>	B	ZP Lightning	ZP-LSP10-PR	100-277V, 50/60Hz, Ta = -40°C do 85°C	EN 61643-11 IEC 61643-11	TUV
Luminaire protection <i>Zabezpieczenie oprawy</i>	B	ZP Lightning	ZP-LSP10-PY/II	100-277V, 50/60Hz, Ta = -40°C do 85°C	EN 61643-11 IEC 61643-11	TUV
Luminaire protection <i>Zabezpieczenie oprawy</i>	B	ZP Lightning	ZP-LSP10-SR	100-277V, 50/60Hz, Ta = -40°C do 85°C	EN 61643-11 IEC 61643-11	TUV
Luminaire protection <i>Zabezpieczenie oprawy</i>	B	ZP Lightning	ZP-LSP10-SY/II	100-277V, 50/60Hz, Ta = -40°C do 85°C	EN 61643-11 IEC 61643-11	TUV
Luminaire protection <i>Zabezpieczenie oprawy</i>	B	Zhongyuan Technology	ZYS-P10WD, ZYS-P20WD	100-277V, 50/60Hz, Ta = -40°C do 85°C	EN 61643-11 IEC 61643-11	TUV
Luminaire protection <i>Zabezpieczenie oprawy</i>	B	Zhongyuan Technology	ZYS-P10SD, ZYS-P20SD, ZYS-P10SD/II, ZYS-P20SD/II	100-277V, 50/60Hz, Ta = -40°C do 85°C	EN 61643-11 IEC 61643-11	TUV
Supplementary information: ¹⁾ Provided evidence ensures the agreed level of compliance. See OD-CB2039. The codes above have the following meaning: A - The component is replaceable with another one, also certified, with equivalent characteristics B - The component is replaceable if authorised by the test house C - Integrated component tested together with the appliance D - Alternative component						

Date/Data: **2024-09-30** Signature:



Signed by /
Podpisano przez:

Paweł Andrzej
Oziębło

Date / Data:
2024-09-30 14:39

Manager of Certification Office
Kierownik Biura Certyfikacji


Łukasiewicz – IMiF
PREDOM Division
**Krakowiaków 53, 02-255 WARSAW
POLAND**

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LICENCE / CERTIFICATE

to use the ENEC+ Mark
LICENCJA / CERTYFIKAT
na używanie ZNAKU ENEC+

Licence / Certificate No.
Licencja / Certyfikat Nr
0128/ENEC+/24

Under the conditions given in the following pages of this document, the licence to use the ENEC+ Mark in conjunction with the suffix 30, as shown above, has been issued to:

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Name and address of the
Certificate owner:
Nazwa i adres posiadacza certyfikatu:
LUG Light Factory Sp. z o.o.
ul. Gorzowska 11; 65-127 Zielona Góra Poland
For the products:
Dla wyrobów:
Luminaires for road and street lighting
Oprawy oświetleniowe drogowe i uliczne
Trade name:
Znak towarowy:

Type(s)/Model(s):
Typ(y), model(e):
URBINO LED S family cl I – series
(details in the Appendix / Szczegóły w Załączniku)
Complying with the following European Standards:
Zgodnymi z następującymi normami europejskimi:
**ENPR 003:2018-05 based on/ opartym na
EN 62722-2-1:2016**
Test report(s):
Raporty z badań:

**Ref. No: B5-3/119/B/24 dated 30.09.2024 performed by the
Testing Laboratory Łukasiewicz-IMiF PREDOM Division
(Accreditation PCA AB 003)**

**This ENEC+ License / Certificate is valid
only in conjunction with ENEC Licence /
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*Niniejsza Licencja / Certyfikat ENEC+ jest ważna
tylko w połączeniu z Licencją / Certyfikatem ENEC Nr:*

Date:
Data:
2024-10-01
0375/ENEC/24 dated / z dnia 2024-09-30
Issued by / wydany przez: Łukasiewicz – IMiF PREDOM Division

Manager of Certification Office
Kierownik Biura Certyfikacji

Signed by /
Podpisano przez:

Paweł Andrzej
Oziębło

Date / Data:
2024-10-01 15:49

This licence has been issued under the presumption and conditional on the fact that the licensee holds all necessary legal rights with regard to the product presented for testing and certification. The ENEC+ mark may be applied to the products as specified in this licence for the duration of the Licence. This licence expires upon withdrawal any of the above mentioned standards.

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Additional information – see the Appendix. Dodatkowe informacje – patrz Załącznik.



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PREDOM Division
Krakowiaków 53, 02-255 WARSAW
POLAND

APPENDIX TO THE LICENCE No. 0128/ENEC+/24

page 1

Name and address of the license holder:	LUG Light Factory Sp. z o.o. ul. Gorzowska 11, 65-127 Zielona Góra - Poland	
Address of the factory:	LUG Light Factory Sp. z o.o. ul. Gorzowska 11, 65-127 Zielona Góra - Poland	
Name and address of manufacturing place:	LUG Light Factory Sp. z o.o. ul. Gorzowska 11, 65-127 Zielona Góra - Poland	
Name of product:	Luminaires for road and street lighting	
Type (model):	URBINO LED S	
Trade mark :	LUG	
Technical data:		
Rated voltage	220-240V	
Rated frequency:	50/60Hz	
Protection against electric shock:	Class I	
Degree of protection:	IP66; IK10	
ta	4,5W - 36W	Ta= -40°C / -35°C* / -30°C** ... +55°C
	37W - 76W	Ta= -40°C / -35°C* / -30°C**/-25°C*** ... +50°C
Input Power (W)	URBINO LED S family cl I – series – from 4,5W to 76W	
Luminous Flux (lm)	URBINO LED S family cl I – series – from 400lm to 11350lm	
Colour temperature (CCT)	2200K, 2700K, 3000K, 4000K, 5700K, 6500K	
Colour rendering index (CRI)	CRI>70, CRI>80	
Efficacy (lm/W)	URBINO LED S family cl I – series – from 79lm/W to 176lm/W	
Lamp Type/Rating	ML21XXYY.WQQQ.UUV (LUXEON 5050 modules) (choice sheet below) ML21XXYY.WQQQ.UUV 1 2 3 4 5 6 7 8 Designations used on the marking of LED boards: 1. ML - PCB designation (ML – LED module): 2. 21 - Year of the project: 3. XXX - Number of the project: 21, 22, 23, 24 Luxeon modules: 660, 661, 663, 670, 671, 672, 673, 680, 681, 682, 683, 690, 691, 692, 693 4. YY - Project variant (PCB design, milling, dimensions, soldermask color, laminate thickness, LED configuration): 00...99 5. W - Light color: W: White 6. QQ - CRI and CCT: 722: CRI 70 and 2200K 727: CRI 70 and 2700K 730: CRI 70 and 3000K 735: CRI 70 and 3500K 740: CRI 70 and 4000K 750: CRI 70 and 5000K 757: CRI 70 and 5700K 765: CRI 70 and 6500K 822: CRI 80 and 2200K 827: CRI 80 and 2700K 830: CRI 80 and 3000K 835: CRI 80 and 3500K 840: CRI 80 and 4000K 850: CRI 80 and 5000K 857: CRI 80 and 5700K 865: CRI 80 and 6500K 7. UU - Assembly variant (selected components not mounted): 01...99 8. V - NTC Thermistor type: A - none B - 10K C - 47K ML21XXYY.WQQQ.UUV (CREE XPG3 modules) (choice sheet below) ML21XXYY.WQQQ.UUV 1 2 3 4 5 6 7 8 Designations used on the marking of LED boards: 1. ML - PCB designation (ML – LED module): 2. 21 - Year of the project: 21, 22, 23, 24 3. XXX - Number of the project: Cree modules: 600, 601, 610, 611 4. YY - Project variant (PCB design, milling, dimensions, soldermask color, laminate thickness, LED configuration): 00...99 5. W - Light color: W: White 6. QQ - CRI and CCT: 722: CRI 70 and 2200K 727: CRI 70 and 2700K 730: CRI 70 and 3000K 735: CRI 70 and 3500K 740: CRI 70 and 4000K 750: CRI 70 and 5000K 757: CRI 70 and 5700K 765: CRI 70 and 6500K 822: CRI 80 and 2200K	



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	827: CRI 80 and 2700K 830: CRI 80 and 3000K 835: CRI 80 and 3500K 840: CRI 80 and 4000K 850: CRI 80 and 5000K 857: CRI 80 and 5700K 865: CRI 80 and 6500K 7. UU - Assembly variant (selected components not mounted): 01...99 8. V - NTC Thermistor type: A - none B – 10K C – 47K					
Luminaire (Type A, B, C) :	Type A - Luminaires using LED modules where compliance with EN 62717 has been pro					
Ambient Temperature Rating (ta):	25°C					
Temperature Rating (ta):	<table><tr><td rowspan="2">ta</td><td>4,5W - 36W</td><td>Ta= -40°C / -35°C* / -30°C** ... +55°C</td></tr><tr><td>37W - 76W</td><td>Ta= -40°C / -35°C* / -30°C**/-25**** ... +50°C</td></tr></table> * - For luminaires equipped with: ▪ Vossloh Schwabe SP/230/10K/i ** - For luminaires equipped with: ▪ SPD Vossloh Schwabe SP/230/10K ▪ Xi FP 110W 0.3-0.1A NLP C150 230V ▪ Tridonic LCA 120W 300-1050mA *** - For luminaires equipped with: ▪ LACROIX DL-PAK 70	ta	4,5W - 36W	Ta= -40°C / -35°C* / -30°C** ... +55°C	37W - 76W	Ta= -40°C / -35°C* / -30°C**/-25**** ... +50°C
ta	4,5W - 36W		Ta= -40°C / -35°C* / -30°C** ... +55°C			
	37W - 76W	Ta= -40°C / -35°C* / -30°C**/-25**** ... +50°C				

* - For luminaires equipped with:

- Vossloh Schwabe SP/230/10K/i

** - For luminaires equipped with:

- SPD Vossloh Schwabe SP/230/10K
- Xi FP 110W 0.3-0.1A NLP C150 230V
- Tridonic LCA 120W 300-1050mA

*** - For luminaires equipped with:

- LACROIX DL-PAK 70

Choice sheet of the luminaires Urbino LED S kl. I series:

Example of symbol:

130772.7LR7B40S895.101.B.N.V.P.K.O

1 2 3 4 5 6 7 8 9

Designations used on the marking of luminaires (some designation may not appear in the name) :

1	13077 13078	-	Code of the series URBINO LED S - XPG3 SERIES Code of the series URBINO LED S - LUXEON SERIES
2	2	-	Color: 2: grey 5: graphite 0: another
3	7L	-	Type of power supply: 2L - DIMM 1-10V 3L - DALI 5L - on-off 6L - on-off / DALI 7L - ZHAGA D4i PL - programmable
4	R7	-	CRI: R7 = 70-79 R8 = 80-89
5	B40	-	Color temperature: B22 = 2200 B27 = 2700 B30 = 3000 B40 = 4000



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			B57 = 5700 B65 = 6500
6	S895	-	Max. luminous flux (e.g. S895 = 8950lm)
7	1	-	Safety Class I
8	01	-	Optic type - for road lighting 01 to 99
9	N.P	-	Additional equipment A - additional corrosion protection B - Tool-free access to the LED Driver U - ø76mm pole N - NEMA Socket Z - ZHAGA Socket T - NTC Sensor W - Twilight Sensor V - Surge Device Protector 10kV Y - Surge Device Protector 20kV P - Anti pressure vent I - iBloc ("URBAN" smart city system) K - Knife switch connector C - RAL Color O - Investment luminaire

List of components:

Object / part No.	Code	Manufacturer/ trademark	Type / model	Technical data	Standard	Mark(s) of conformity ¹⁾
LED Module	A	LUG	ML21XXXXYY.WQQQ.U UV (LUXEON 5050 modules) (choice sheet below)	Tc -40°C to +85°C	EN 62031	ENEC
Designations used on the marking of LED boards: 1. ML - PCB designation (ML – LED module): 2. 21 - Year of the project: 21, 22, 23, 24 3. XXX - Number of the project: <u>Luxeon modules:</u> 660, 661, 663, 670, 671, 672, 673, 680, 681, 682, 683, 690, 691, 692, 693 4. YY - Project variant (PCB design, milling, dimensions, soldermask color, laminate thickness, LED configuration): 00...99 5. W Light color: W: White 6. QQQ - CRI and CCT: 722: CRI 70 and 2200K 727: CRI 70 and 2700K 730: CRI 70 and 3000K 735: CRI 70 and 3500K 740: CRI 70 and 4000K 750: CRI 70 and 5000K 757: CRI 70 and 5700K 765: CRI 70 and 6500K 822: CRI 80 and 2200K 827: CRI 80 and 2700K 830: CRI 80 and 3000K 835: CRI 80 and 3500K 840: CRI 80 and 4000K 850: CRI 80 and 5000K 857: CRI 80 and 5700K 865: CRI 80 and 6500K 7. UU - Assembly variant (selected components not mounted): 01...99 8. V - NTC Thermistor type: A - none B – 10K C – 47K						


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Object / part No.	Code	Manufacturer/ trademark	Type / model	Technical data	Standard	Mark(s) of conformity ¹⁾
LED Module	A	LUG	ML21XXXXYY.WQQQ.U UV (CREE XPG3 modules) (choice sheet below)	Tc -40°C to +85°C	EN 62031	ENEC
ML21XXXXYY.WQQQ.UUV 1 2 3 4 5 6 7 8 Designations used on the marking of LED boards: 1. ML - PCB designation (ML – LED module): 2. 21 - Year of the project: 21, 22, 23, 24 3. XXX - Number of the project: Cree modules: 600, 601, 610, 611 4. YY - Project variant (PCB design, milling, dimensions, soldermask color, laminate thickness, LED configuration): 00...99 5. W - Light color: W: White 6. QQQ - CRI and CCT: 722: CRI 70 and 2200K 727: CRI 70 and 2700K 730: CRI 70 and 3000K 735: CRI 70 and 3500K 740: CRI 70 and 4000K 750: CRI 70 and 5000K 757: CRI 70 and 5700K 765: CRI 70 and 6500K 822: CRI 80 and 2200K 827: CRI 80 and 2700K 830: CRI 80 and 3000K 835: CRI 80 and 3500K 840: CRI 80 and 4000K 850: CRI 80 and 5000K 857: CRI 80 and 5700K 865: CRI 80 and 6500K 7. UU - Assembly variant (selected components not mounted): 01...99 8. V - NTC Thermistor type: A - none B – 10K C – 47K						
Control gear Zasilacz	A	OSRAM	OT100W/UNV/800C/2D IMLT2/P6	220..240V, 50-60Hz, ta= -40...+55°C, tc max=90°C	EN 61347-1 EN 61347-2- 13	ENEC
Control gear Zasilacz	A	OSRAM	OT 110/170...240/1A0 1DIMLT2 G1 CE	220..240V, 50-60Hz, ta= -40...+55°C, tc max=85°C	EN 61347-1 EN 61347-2- 13	ENEC
Control gear Zasilacz	A	OSRAM	OT 20/170-240/1A0 1DIM LT2 G1 CE	220..240V, 50-60Hz, ta= -40...+60°C, tc max=75°C	EN 61347-1 EN 61347-2- 13	ENEC
Control gear Zasilacz	A	OSRAM	OT 75/170...240/1A0 1DIMLT2 G1 CE	220..240V, 50-60Hz, ta= -40...+55°C, tc max=80°C	EN 61347-1 EN 61347-2- 13	ENEC
Control gear Zasilacz	A	OSRAM	OT DX 40/220...240/1A0 DIMA LT2 E	220..240V, 50-60Hz, ta= -40...+55°C, tc max=800°C	EN 61347-1 EN 61347-2- 13	ENEC
Control gear Zasilacz	A	OSRAM	OT DX 75/220...240/1A0 DIMA LT2 E	220..240V, 50-60Hz, ta= -40...+55°C, tc max=850°C	EN 61347-1 EN 61347-2- 13	ENEC
Control gear Zasilacz	A	OSRAM	OT DX 110/220...240/1A0 DIMA LT2 E	220..240V, 50-60Hz, ta= -40...+55°C, tc max=850°C	EN 61347-1 EN 61347-2- 13	ENEC
Control gear Zasilacz	A	OSRAM	OT 20/170...240/1A0 4DIMLT2 G2 CE	220..240V, 50-60Hz, ta= -40...+60°C, tc max=750°C	EN 61347-1 EN 61347-2- 13	ENEC
Control gear Zasilacz	A	OSRAM	OT 40/170...240/1A0 4DIMLT2 G2 CE	220..240V, 50-60Hz, ta= -40...+60°C, tc max=800°C	EN 61347-1 EN 61347-2- 13	ENEC
Control gear Zasilacz	A	OSRAM	OT 75/170...240/1A0 4DIMLT2 G2 CE	220..240V, 50-60Hz, ta= -40...+55°C, tc max=850°C	EN 61347-1 EN 61347-2- 13	ENEC
Control gear Zasilacz	A	OSRAM	OT 110/170...240/1A0 4DIMLT2 G2 CE	220..240V, 50-60Hz, ta= -40...+60°C, tc max=750°C	EN 61347-1 EN 61347-2- 13	ENEC

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Object / part No.	Code	Manufacturer/ trademark	Type / model	Technical data	Standard	Mark(s) of conformity ¹⁾
Control gear <i>Zasilacz</i>	A	OSRAM	OT 20/170...240/1A0 1DIMLT2 G1 CE	220..240V, 50-60Hz, ta= -40...+550C, tc max=850C	EN 61347-1 EN 61347-2- 13	ENEC
Control gear <i>Zasilacz</i>	A	OSRAM	OT 40/170...240/1A0 1DIMLT2 G1 CE	220..240V, 50-60Hz, ta= -40...+600C, tc max=800C	EN 61347-1 EN 61347-2- 13	ENEC
Control gear <i>Zasilacz</i>	A	OSRAM	OT 40/120...277/1A0 4DIMLT2 E	220..240V, 50-60Hz, ta= -40...+600C, tc max=800C	EN 61347-1 EN 61347-2- 13	ENEC
Control gear <i>Zasilacz</i>	A	OSRAM	OT 60/170...240/1A0 4DIMLT2 E	220..240V, 50-60Hz, ta= -40...+600C, tc max=850C	EN 61347-1 EN 61347-2- 13	ENEC
Control gear <i>Zasilacz</i>	A	OSRAM	OT 90/170...240/1A0 4DIMLT2 E	220..240V, 50-60Hz, ta= -40...5500C, tc max=900C	EN 61347-1 EN 61347-2- 13	ENEC
Control gear <i>Zasilacz</i>	A	OSRAM	OT 50/120...277/800 2DIMLT2 P6	220..240V, 50-60Hz, ta= -40...+550C, tc max=850C	EN 61347-1 EN 61347-2- 13	ENEC
Control gear <i>Zasilacz</i>	A	OSRAM	OT 50/120...277/1A2 2DIMLT2 P6	220..240V, 50-60Hz, ta= -40...+550C, tc max=800C	EN 61347-1 EN 61347-2- 13	ENEC
Control gear <i>Zasilacz</i>	A	OSRAM	OT 100/120...277/800 2DIMLT2 P6	220..240V, 50-60Hz, ta= -40...+550C, tc max=850C	EN 61347-1 EN 61347-2- 13	ENEC
Control gear <i>Zasilacz</i>	A	OSRAM	OT 110/120...277/1A4 2DIMLT2 P6	220..240V, 50-60Hz, ta= -40...+550C, tc max=850C	EN 61347-1 EN 61347-2- 13	ENEC
Control gear <i>Zasilacz</i>	A	OSRAM	OT 60/220...240/1A4 1DIMA P7	220..240V, 50-60Hz, ta= -40...+550C, tc max=850C	EN 61347-1 EN 61347-2- 13	ENEC
Control gear <i>Zasilacz</i>	A	OSRAM	OT 100/220...240/1A4 1DIMA P7	220..240V, 50-60Hz, ta= -40...+550C, tc max=850C	EN 61347-1 EN 61347-2- 13	ENEC
Control gear <i>Zasilacz</i>	A	OSRAM	OT 75/UNV/1A0 2DIM P7	120..277V, 50-60Hz, ta= -40...+55°C, tc max=85°C	EN 61347-1 EN 61347-2- 13	ENEC
Control gear <i>Zasilacz</i>	A	OSRAM	OT 100/UNV/1A0 2DIM P7	120..277V, 50-60Hz, ta= -40...+55°C, tc max=85°C	EN 61347-1 EN 61347-2- 13	ENEC
Control gear <i>Zasilacz</i>	A	OSRAM	OT 100/ 220-240/1A4 2DIM P7	220..240V, 50-60Hz, ta= -40...+55°C, tc max=85°C	EN 61347-1 EN 61347-2- 13	ENEC
Control gear <i>Zasilacz</i>	A	OSRAM	IT DALI 20/220...240/1A0 E	220...240 V/50/60Hz, Ta =-40...+60 °C, Tc max =75 °C	EN 61347-1 EN 61347-2- 13	ENEC
Control gear <i>Zasilacz</i>	A	OSRAM	IT DALI 40/220...240/1A0 E	220...240 V/50/60Hz, Ta =-40...+60 °C, Tc max =85 °C	EN 61347-1 EN 61347-2- 13	ENEC
Control gear <i>Zasilacz</i>	A	OSRAM	IT DALI 75/220...240/1A0 E	220...240 V/50/60Hz, Ta =-40...+60 °C, Tc max =100 °C	EN 61347-1 EN 61347-2- 13	ENEC
Control gear <i>Zasilacz</i>	A	OSRAM	IT DALI 110/220...240/1A0 E	220...240 V/50/60Hz, Ta =-40...+60 °C, Tc max =90 °C	EN 61347-1 EN 61347-2- 13	ENEC
Control gear <i>Zasilacz</i>	A	OSRAM	OT 75 /220...240/1A0 1DIM G2 CE	220...240V, 50/60Hz, Ta =-40...+55 °C, Tc max =85 °C	EN 61347-1 EN 61347-2- 13	ENEC
Control gear <i>Zasilacz</i>	A	OSRAM	OT 50/120...277/700 P5	120..277V, 50-60Hz, ta= -40...+55°C, tc max=85°C	EN 61347-1 EN 61347-2- 13	ENEC
Control gear <i>Zasilacz</i>	A	OSRAM	OT 100/120...277/700 P5	120..277V, 50-60Hz, ta= -40...+55°C, tc max=85°C	EN 61347-1 EN 61347-2- 13	ENEC
Control gear <i>Zasilacz</i>	A	OSRAM	OT 100/220...240/4A2 P5	220..240V, 50-60Hz, ta= -40...+55°C, tc max=85°C	EN 61347-1 EN 61347-2- 13	ENEC
Control gear <i>Zasilacz</i>	A	OSRAM	OT 20/170...240/1A0 4DIM NFC G3 CE	220..240V, 50-60Hz, ta= -40...+60°C, tc max=75°C	EN 61347-1 EN 61347-2- 13	ENEC
Control gear <i>Zasilacz</i>	A	OSRAM	OT 40/170...240/0A7 4DIM NFC G3 CE	220..240V, 50-60Hz, ta= -40...+60°C, tc max=80°C	EN 61347-1 EN 61347-2- 13	ENEC



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Object / part No.	Code	Manufacturer/ trademark	Type / model	Technical data	Standard	Mark(s) of conformity ¹⁾
Control gear <i>Zasilacz</i>	A	OSRAM	OT 40/170...240/1A0 4DIM NFC G3 CE	220..240V, 50-60Hz, ta= -40...+60°C, tc max=80°C	EN 61347-1 EN 61347-2- 13	ENEC
Control gear <i>Zasilacz</i>	A	OSRAM	OT 75/170...240/0A7 4DIM NFC G3 CE	220..240V, 50-60Hz, ta= -40...+55°C, tc max=90°C	EN 61347-1 EN 61347-2- 13	ENEC
Control gear <i>Zasilacz</i>	A	OSRAM	OT 75/170...240/1A0 4DIM NFC G3 CE	220..240V, 50-60Hz, ta= -40...+55°C, tc max=90°C	EN 61347-1 EN 61347-2- 13	ENEC
Control gear <i>Zasilacz</i>	A	OSRAM	OT 75/170...240/1A5 4DIM NFC G3 CE	220..240V, 50-60Hz, ta= -40...+60°C, tc max=85°C	EN 61347-1 EN 61347-2- 13	ENEC
Control gear <i>Zasilacz</i>	A	OSRAM	OT 110/170...240/0A7 4DIM NFC G3 CE	220..240V, 50-60Hz, ta= -40...+55°C, tc max=80°C	EN 61347-1 EN 61347-2- 13	ENEC
Control gear <i>Zasilacz</i>	A	OSRAM	OT 110/170...240/1A0 4DIM NFC G3 CE	220..240V, 50-60Hz, ta= -40...+55°C, tc max=85°C	EN 61347-1 EN 61347-2- 13	ENEC
Control gear <i>Zasilacz</i>	A	OSRAM	OT DX 40/170...240/1A0 DIMA NFC G2	170..240V, 50-60Hz, ta= -40...+55°C, tc max=75°C	EN 61347-1 EN 61347-2- 13	ENEC
Control gear <i>Zasilacz</i>	A	OSRAM	OT DX 75/170...240/1A0 DIMA NFC G2	170..240V, 50-60Hz, ta= -40...+55°C, tc max=85°C	EN 61347-1 EN 61347-2- 13	ENEC
Control gear <i>Zasilacz</i>	A	OSRAM	OT DX 110/170...240/1A0 DIMA NFC G2	170..240V, 50-60Hz, ta= -40...+55°C, tc max=85°C	EN 61347-1 EN 61347-2- 13	ENEC
Control gear <i>Zasilacz</i>	A	OSRAM	IT DALI 20/120...240/1A0 P7	120..240V, 50-60Hz, ta= -40...+70°C, tc max=80°C	EN 61347-1 EN 61347-2- 13	ENEC
Control gear <i>Zasilacz</i>	A	OSRAM	IT DALI 40/120...240/1A0 P7	120..240V, 50-60Hz, ta= -40...+65°C, tc max=80°C	EN 61347-1 EN 61347-2- 13	ENEC
Control gear <i>Zasilacz</i>	A	OSRAM	IT DALI 75/120...240/1A0 P7	120..240V, 50-60Hz, ta= -40...+65°C, tc max=80°C	EN 61347-1 EN 61347-2- 13	ENEC
Control gear <i>Zasilacz</i>	A	OSRAM	IT DALI 110/120...240/1A0 P7	120..240V, 50-60Hz, ta= -40...+60°C, tc max=85°C	EN 61347-1 EN 61347-2- 13	ENEC
Control gear <i>Zasilacz</i>	A	OSRAM	OT 20/170-240/1A0 1DIM NFC G3 CE	220..240V, 50-60Hz, ta= -40...+60°C, tc max=75°C	EN 61347-1 EN 61347-2- 13	ENEC
Control gear <i>Zasilacz</i>	A	OSRAM	OT 40/170-240/0A7 1DIM NFC G3 CE	220..240V, 50-60Hz, ta= -40...+60°C, tc max=80°C	EN 61347-1 EN 61347-2- 13	ENEC
Control gear <i>Zasilacz</i>	A	OSRAM	OT 40/170-240/1A0 1DIM NFC G3 CE	220..240V, 50-60Hz, ta= -40...+60°C, tc max=80°C	EN 61347-1 EN 61347-2- 13	ENEC
Control gear <i>Zasilacz</i>	A	OSRAM	OT 75/170-240/0A7 1DIM NFC G3 CE	220..240V, 50-60Hz, ta= -40...+55°C, tc max=90°C	EN 61347-1 EN 61347-2- 13	ENEC
Control gear <i>Zasilacz</i>	A	OSRAM	OT 75/170-240/1A0 1DIM NFC G3 CE	220..240V, 50-60Hz, ta= -40...+55°C, tc max=90°C	EN 61347-1 EN 61347-2- 13	ENEC
Control gear <i>Zasilacz</i>	A	OSRAM	OT 110/170-240/0A7 1DIM NFC G3 CE	220..240V, 50-60Hz, ta= -40...+55°C, tc max=80°C	EN 61347-1 EN 61347-2- 13	ENEC
Control gear <i>Zasilacz</i>	A	OSRAM	OT 110/170-240/1A0 1DIM NFC G3 CE	220..240V, 50-60Hz, ta= -40...+55°C, tc max=85°C	EN 61347-1 EN 61347-2- 13	ENEC
Control gear <i>Zasilacz</i>	A	Inventronics	EBS-025S045BT2	176..305V, 50-60Hz, ta= -40...+750C, tc max=900C	EN 61347-1 EN 61347-2- 13	ENEC
Control gear <i>Zasilacz</i>	A	Inventronics	EBS-025S070BT2	176..305V, 50-60Hz, ta= -40...+750C, tc max=900C	EN 61347-1 EN 61347-2- 13	ENEC
Control gear <i>Zasilacz</i>	A	Inventronics	EBS-025S105BT2	171..275V, 50-60Hz, ta= -40...+750C, tc max=900C	EN 61347-1 EN 61347-2- 13	ENEC
Control gear <i>Zasilacz</i>	A	Inventronics	EBS-040S045BT2	176..305V, 50-60Hz, ta= -40...+750C, tc max=900C	EN 61347-1 EN 61347-2- 13	ENEC

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Object / part No.	Code	Manufacturer/ trademark	Type / model	Technical data	Standard	Mark(s) of conformity ¹⁾
Control gear <i>Zasilacz</i>	A	Inventronics	EBS-040S070BT2	176..305V, 50-60Hz, ta= -40...+750C, tc max=900C	EN 61347-1 EN 61347-2-13	ENEC
Control gear <i>Zasilacz</i>	A	Inventronics	EBS-040S105BT2	176..305V, 50-60Hz, ta= -40...+750C, tc max=900C	EN 61347-1 EN 61347-2-13	ENEC
Control gear <i>Zasilacz</i>	A	Inventronics	EBS-080S070BT2	176..305V, 50-60Hz, ta= -40...+750C, tc max=900C	EN 61347-1 EN 61347-2-13	ENEC
Control gear <i>Zasilacz</i>	A	Inventronics	EBS-080S105BT2	176..305V, 50-60Hz, ta= -40...+750C, tc max=900C	EN 61347-1 EN 61347-2-13	ENEC
Control gear <i>Zasilacz</i>	A	Inventronics	EBS-080S150BT2	176..305V, 50-60Hz, ta= -40...+750C, tc max=900C	EN 61347-1 EN 61347-2-13	ENEC
Control gear <i>Zasilacz</i>	A	Inventronics	EBS-120S070BT2	176..305V, 50-60Hz, ta= -40...+750C, tc max=900C	EN 61347-1 EN 61347-2-13	ENEC
Control gear <i>Zasilacz</i>	A	Inventronics	EBS-120S105BT2	176..305V, 50-60Hz, ta= -40...+750C, tc max=900C	EN 61347-1 EN 61347-2-13	ENEC
Control gear <i>Zasilacz</i>	A	Inventronics	EBS-120S150BT2	176..305V, 50-60Hz, ta= -40...+750C, tc max=900C	EN 61347-1 EN 61347-2-13	ENEC
Control gear <i>Zasilacz</i>	A	Inventronics	EUM-075S	90..305V, 50-60Hz, ta= -40...+80°C, tc max=90°C	EN 61347-1 EN 61347-2-13	ENEC
Control gear <i>Zasilacz</i>	A	Inventronics	EUM – 100S	100..277V, 50-60Hz, ta= -40...+75°C, tc max=90°C	EN 61347-1 EN 61347-2-13	ENEC
Control gear <i>Zasilacz</i>	A	Philips	Xitanium 40W 0.7A Prog+ GL-J sXt	220..240V, 50-60Hz, ta= -40...+55°C, tc max=80°C	EN 61347-1 EN 61347-2-13	ENEC
Control gear <i>Zasilacz</i>	A	Philips	Xitanium 75W 0.35- 0.70A GL Prog+ sXt	220..240V, 50-60Hz, ta= -40...+55°C, tc max=80°C	EN 61347-1 EN 61347-2-13	ENEC
Control gear <i>Zasilacz</i>	A	Philips	Xitanium 75W 0.1-1.05A Prog GL F sXt	220..240V, 50-60Hz, ta= -40...+55°C, tc max=80°C	EN 61347-1 EN 61347-2-13	ENEC
Control gear <i>Zasilacz</i>	A	Philips	Xitanium 100W 0.7A Prog+ GL-Z sXt	220..240V, 50-60Hz, ta= -40...+55°C, tc max=80°C	EN 61347-1 EN 61347-2-13	ENEC
Control gear <i>Zasilacz</i>	A	Philips	Xi BP 12W 0.1-0.5A S 230V C100	220..240V, 50-60Hz, ta= -40...+55°C, tc max=80°C	EN 61347-1 EN 61347-2-13	ENEC
Control gear <i>Zasilacz</i>	A	Philips	Xi BP 22W 0.2-0.7A S 230V C123	220..240V, 50-60Hz, ta= -40...+55°C, tc max=85°C	EN 61347-1 EN 61347-2-13	ENEC
Control gear <i>Zasilacz</i>	A	Philips	Xi BP 40W 0.2-0.7A S 230V C123	220..240V, 50-60Hz, ta= -40...+55°C, tc max=85°C	EN 61347-1 EN 61347-2-13	ENEC
Control gear <i>Zasilacz</i>	A	Philips	Xi BP 40W 0.3-1.0A S 230V C123	220..240V, 50-60Hz, ta= -40...+55°C, tc max=80°C	EN 61347-1 EN 61347-2-13	ENEC
Control gear <i>Zasilacz</i>	A	Philips	Xi BP 75W 0.2-0.7A S 230V C133 sXt	220..240V, 50-60Hz, ta= -40...+55°C, tc max=80°C	EN 61347-1 EN 61347-2-13	ENEC
Control gear <i>Zasilacz</i>	A	Philips	Xi BP 75W 0.3-1.0A S 230V C133 sXt	220..240V, 50-60Hz, ta= -40...+55°C, tc max=85°C	EN 61347-1 EN 61347-2-13	ENEC
Control gear <i>Zasilacz</i>	A	Philips	Xi BP 110W 0.2-0.7A S 230V C133 sXt	220..240V, 50-60Hz, ta= -40...+55°C, tc max=85°C	EN 61347-1 EN 61347-2-13	ENEC
Control gear <i>Zasilacz</i>	A	Philips	Xi BP 110W 0.3-1.0A S 230V C133 sXt	220..240V, 50-60Hz, ta= -40...+55°C, tc max=80°C	EN 61347-1 EN 61347-2-13	ENEC
Control gear <i>Zasilacz</i>	A	Philips	Xi LP 22W 0.2-0.7A S1 230V C123 sXt	220..240V, 50-60Hz, ta= -40...+55°C, tc max=85°C	EN 61347-1 EN 61347-2-13	ENEC
Control gear <i>Zasilacz</i>	A	Philips	Xi LP 22W 0.3-1.0A S1 230V C123 sXt	220..240V, 50-60Hz, ta= -40...+55°C, tc max=85°C	EN 61347-1 EN 61347-2-13	ENEC

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Object / part No.	Code	Manufacturer/ trademark	Type / model	Technical data	Standard	Mark(s) of conformity ¹⁾
Control gear <i>Zasilacz</i>	A	Philips	Xi LP 40W 0.2-0.7A S1 230V C123 sXt	220..240V, 50-60Hz, ta= -40...+55°C, tc max=85°C	EN 61347-1 EN 61347-2- 13	ENEC
Control gear <i>Zasilacz</i>	A	Philips	Xi LP 40W 0.3-1.0A S1 230V C123 sXt	220..240V, 50-60Hz, ta= -40...+55°C, tc max=85°C	EN 61347-1 EN 61347-2- 13	ENEC
Control gear <i>Zasilacz</i>	A	Philips	Xi LP 75W 0.2-0.7A S1 230V C133 sXt	220..240V, 50-60Hz, ta= -40...+55°C, tc max=80°C	EN 61347-1 EN 61347-2- 13	ENEC
Control gear <i>Zasilacz</i>	A	Philips	Xi LP 75W 0.3-1.0A S1 230V C133 sXt	220..240V, 50-60Hz, ta= -40...+55°C, tc max=80°C	EN 61347-1 EN 61347-2- 13	ENEC
Control gear <i>Zasilacz</i>	A	Philips	Xi LP 75W 0.5-1.5A S1 230V C133 sXt	220..240V, 50-60Hz, ta= -40...+55°C, tc max=80°C	EN 61347-1 EN 61347-2- 13	ENEC
Control gear <i>Zasilacz</i>	A	Philips	Xi LP 110W 0.2-0.7A S1 230V C133 sXt	220..240V, 50-60Hz, ta= -40...+55°C, tc max=90°C	EN 61347-1 EN 61347-2- 13	ENEC
Control gear <i>Zasilacz</i>	A	Philips	Xi LP 110W 0.3-1.0A S1 230V C133 sXt	220..240V, 50-60Hz, ta= -40...+55°C, tc max=90°C	EN 61347-1 EN 61347-2- 13	ENEC
Control gear <i>Zasilacz</i>	A	Philips	Xi LP 22W 0.2-0.7A S1 230V S175 sXt	220..240V, 50-60Hz, ta= -40...+55°C, tc max=80°C	EN 61347-1 EN 61347-2- 13	ENEC
Control gear <i>Zasilacz</i>	A	Philips	Xi LP 22W 0.3-1.0A S1 230V S175 sXt	220..240V, 50-60Hz, ta= -40...+55°C, tc max=80°C	EN 61347-1 EN 61347-2- 13	ENEC
Control gear <i>Zasilacz</i>	A	Philips	Xi LP 40W 0.2 -0.7A S1 230V S175 sXt	220..240V, 50-60Hz, ta= -40...+55°C, tc max=80°C	EN 61347-1 EN 61347-2- 13	ENEC
Control gear <i>Zasilacz</i>	A	Philips	Xi LP 40W 0.2-0.7A SL 230V S175 sXt	220..240V, 50-60Hz, ta= -40...+55°C, tc max=80°C	EN 61347-1 EN 61347-2- 13	ENEC
Control gear <i>Zasilacz</i>	A	Philips	Xi LP 40W 0.3-1.0A S1 230V S175 sXt	220..240V, 50-60Hz, ta= -40...+55°C, tc max=80°C	EN 61347-1 EN 61347-2- 13	ENEC
Control gear <i>Zasilacz</i>	A	Philips	Xi LP 40W 0.3-1.0A SL 230V S175 sXt	220..240V, 50-60Hz, ta= -40...+55°C, tc max=80°C	EN 61347-1 EN 61347-2- 13	ENEC
Control gear <i>Zasilacz</i>	A	Philips	Xi LP 40W 0.2-0.7A SN 230V S175 sXt	220..240V, 50-60Hz, ta= -40...+55°C, tc max=80°C	EN 61347-1 EN 61347-2- 13	ENEC
Control gear <i>Zasilacz</i>	A	Philips	Xi LP 75W 0.2-0.7A S1 230V S240 sXt	220..240V, 50-60Hz, ta= -40...+55°C, tc max=90°C	EN 61347-1 EN 61347-2- 13	ENEC
Control gear <i>Zasilacz</i>	A	Philips	Xi LP 75W 0.2-0.7A SL 230V S240 sXt	220..240V, 50-60Hz, ta= -40...+55°C, tc max=85°C	EN 61347-1 EN 61347-2- 13	ENEC
Control gear <i>Zasilacz</i>	A	Philips	Xi LP 75W 0.3-1.0A S1 230V S240 sXt	220..240V, 50-60Hz, ta= -40...+55°C, tc max=90°C	EN 61347-1 EN 61347-2- 13	ENEC
Control gear <i>Zasilacz</i>	A	Philips	Xi LP 75W 0.3-1.0A SL 230V S240 sXt	220..240V, 50-60Hz, ta= -40...+55°C, tc max=85°C	EN 61347-1 EN 61347-2- 13	ENEC
Control gear <i>Zasilacz</i>	A	Philips	Xi LP 75W 0.2-0.7A SN 230V S240 sXt	220..240V, 50-60Hz, ta= -40...+55°C, tc max=85°C	EN 61347-1 EN 61347-2- 13	ENEC
Control gear <i>Zasilacz</i>	A	Philips	Xi LP 75W 0.5-1.5A S1 230V S240 sXt	220..240V, 50-60Hz, ta= -40...+55°C, tc max=85°C	EN 61347-1 EN 61347-2- 13	ENEC
Control gear <i>Zasilacz</i>	A	Philips	Xi FP 22W 0.2-0.7A SNLDAE 230V C123 sXt	220..240V, 50-60Hz, ta= -40...+55°C, tc max=85°C	EN 61347-1 EN 61347-2- 13	ENEC
Control gear <i>Zasilacz</i>	A	Philips	Xi FP 22W 0.3-1.0A SNLDAE 230V C123 sXt	220..240V, 50-60Hz, ta= -40...+55°C, tc max=85°C	EN 61347-1 EN 61347-2- 13	ENEC
Control gear <i>Zasilacz</i>	A	Philips	Xi FP 40W 0.2-0.7A SNLDAE 230V C123 sXt	220..240V, 50-60Hz, ta= -40...+55°C, tc max=85°C	EN 61347-1 EN 61347-2- 13	ENEC
Control gear <i>Zasilacz</i>	A	Philips	Xi FP 40W 0.3-1.0A SNLDAE 230V C123 sXt	220..240V, 50-60Hz, ta= -40...+55°C, tc max=85°C	EN 61347-1 EN 61347-2- 13	ENEC



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Object / part No.	Code	Manufacturer/ trademark	Type / model	Technical data	Standard	Mark(s) of conformity ¹⁾
Control gear <i>Zasilacz</i>	A	Philips	Xi FP 70W 0.3-1.0A NLD C150 230V sXt	220..240V, 50-60Hz, ta= -30...+60°C, tc max=90°C	EN 61347-1 EN 61347-2-13	ENEC
Control gear <i>Zasilacz</i>	A	Philips	Xi FP 75W 0.2-0.7A SNLDAE 230V C133 sXt	220..240V, 50-60Hz, ta= -40...+55°C, tc max=80°C	EN 61347-1 EN 61347-2-13	ENEC
Control gear <i>Zasilacz</i>	A	Philips	Xi FP 75W 0.3-1.0A SNLDAE 230V C133 sXt	220..240V, 50-60Hz, ta= -40...+55°C, tc max=80°C	EN 61347-1 EN 61347-2-13	ENEC
Control gear <i>Zasilacz</i>	A	Philips	Xi FP 75W 0.5-1.5A SNLDAE 230V C133 sXt	220..240V, 50-60Hz, ta= -40...+55°C, tc max=80°C	EN 61347-1 EN 61347-2-13	ENEC
Control gear <i>Zasilacz</i>	A	Philips	Xi FP 100W 0.2-0.7A SNLDAE 230V C165 sXt	220..240V, 50-60Hz, ta= -40...+55°C, tc max=85°C	EN 61347-1 EN 61347-2-13	ENEC
Control gear <i>Zasilacz</i>	A	Philips	Xi FP 110W 0.2-0.7A SNLDAE 230V C133 sXt	220..240V, 50-60Hz, ta= -40...+55°C, tc max=85°C	EN 61347-1 EN 61347-2-13	ENEC
Control gear <i>Zasilacz</i>	A	Philips	Xi FP 110W 0.3-1.0A NLD C150 230V sXt	220..240V, 50-60Hz, ta= -30...+60°C, tc max=90°C	EN 61347-1 EN 61347-2-13	ENEC
Control gear <i>Zasilacz</i>	A	Philips	Xi FP 110W 0.3-1.0A SNLDAE 230V C133 sXt	220..240V, 50-60Hz, ta= -40...+55°C, tc max=85°C	EN 61347-1 EN 61347-2-13	ENEC
Control gear <i>Zasilacz</i>	A	Philips	Xi FP 22W 0.2-0.7A SNLDAE 230V S175 sXt	220..240V, 50-60Hz, ta= -40...+55°C, tc max=85°C	EN 61347-1 EN 61347-2-13	ENEC
Control gear <i>Zasilacz</i>	A	Philips	Xi FP 22W 0.3-1.0A SNLDAE 230V S175 sXt	220..240V, 50-60Hz, ta= -40...+55°C, tc max=85°C	EN 61347-1 EN 61347-2-13	ENEC
Control gear <i>Zasilacz</i>	A	Philips	Xi FP 40W 0.2-7.0A SNLDAE 230V S175 sXt	220..240V, 50-60Hz, ta= -40...+55°C, tc max=85°C	EN 61347-1 EN 61347-2-13	ENEC
Control gear <i>Zasilacz</i>	A	Philips	Xi FP 40W 0.3-1.0A SNLDAE 230V S175 sXt	220..240V, 50-60Hz, ta= -40...+55°C, tc max=90°C	EN 61347-1 EN 61347-2-13	ENEC
Control gear <i>Zasilacz</i>	A	Philips	Xi FP 75W 0.2-0.7A SNLDAE 230V S240 sXt	220..240V, 50-60Hz, ta= -40...+55°C, tc max=85°C	EN 61347-1 EN 61347-2-13	ENEC
Control gear <i>Zasilacz</i>	A	Philips	Xi FP 75W 0.3-1.0A SNLDAE 230V S240 sXt	220..240V, 50-60Hz, ta= -40...+55°C, tc max=85°C	EN 61347-1 EN 61347-2-13	ENEC
Control gear <i>Zasilacz</i>	A	Philips	Xi SR 12W 0.2-0.7A SNEMP 230V C133 sXt	220..240V, 50-60Hz, ta= -40...+55°C, tc max=85°C	EN 61347-1 EN 61347-2-13	ENEC
Control gear <i>Zasilacz</i>	A	Philips	Xi SR 22W 0.2-0.7A SNEMP 230V C133 sXt	220..240V, 50-60Hz, ta= -40...+55°C, tc max=85°C	EN 61347-1 EN 61347-2-13	ENEC
Control gear <i>Zasilacz</i>	A	Philips	Xi SR 40W 0.2-0.7A SNEMP 230V C133 sXt	220..240V, 50-60Hz, ta= -40...+55°C, tc max=85°C	EN 61347-1 EN 61347-2-13	ENEC
Control gear <i>Zasilacz</i>	A	Philips	Xi SR 75W 0.2-0.7A SNEMP 230V C150 sXt	220..240V, 50-60Hz, ta= -40...+55°C, tc max=90°C	EN 61347-1 EN 61347-2-13	ENEC
Control gear <i>Zasilacz</i>	A	Philips	Xi SR 75W 2 0.3-1.0A SNEMPF C170 sXt	220..240V, 50-60Hz, ta= -40...+55°C, tc max=90°C	EN 61347-1 EN 61347-2-13	ENEC
Control gear <i>Zasilacz</i>	A	Philips	Xi SR 75W 0.2-0.7A SNEMP 230V S240 sXt	220..240V, 50-60Hz, ta= -40...+55°C, tc max=90°C	EN 61347-1 EN 61347-2-13	ENEC
Control gear <i>Zasilacz</i>	A	Philips	Xi SR 75W 0.3-1.0A SNEMP 230V S240 sXt	220..240V, 50-60Hz, ta= -40...+55°C, tc max=90°C	EN 61347-1 EN 61347-2-13	ENEC
Control gear <i>Zasilacz</i>	A	Philips	Xi SR 110W 0.2-0.7A SNEMP 230V C150 sXt	220..240V, 50-60Hz, ta= -40...+55°C, tc max=90°C	EN 61347-1 EN 61347-2-13	ENEC
Control gear <i>Zasilacz</i>	A	Philips	Xitanium 100W 2.1-4.2A AOC 230V I220	220..240V, 50-60Hz, ta= -40...+55°C, tc max=80°C	EN 61347-1 EN 61347-2-13	ENEC
Control gear <i>Zasilacz</i>	A	Philips	Xi LP 100W 0.3-1.05A S1 230V I175	220..240V, 50-60Hz, ta= -40...+55°C, tc max=80°C	EN 61347-1 EN 61347-2-13	ENEC

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Object / part No.	Code	Manufacturer/ trademark	Type / model	Technical data	Standard	Mark(s) of conformity ¹⁾
Control gear <i>Zasilacz</i>	A	Philips	Xitanium Dim 35W 0.7A 1-10V TWE I175	220..240V, 50-60Hz, ta= -40...+55°C, tc max=80°C	EN 61347-1 EN 61347-2- 13	ENEC
Control gear <i>Zasilacz</i>	A	Philips	Xitanium Dim 100W 0.7A 1-10V TWE I220	220..240V, 50-60Hz, ta= -40...+55°C, tc max=80°C	EN 61347-1 EN 61347-2- 13	ENEC
Control gear <i>Zasilacz</i>	A	Philips	Xitanium 75W 0.7A TWE I175	220..240V, 50-60Hz, ta= -40...+55°C, tc max=80°C	EN 61347-1 EN 61347-2- 13	ENEC
Control gear <i>Zasilacz</i>	A	Philips	Xitanium 75W 1.05A 1- 10V 230V C165 sXt	220..240V, 50-60Hz, ta= -40...+55°C, tc max=85°C	EN 61347-1 EN 61347-2- 13	ENEC
Control gear <i>Zasilacz</i>	A	Philips	Xitanium 75W 0.70A 1- 10V 230V C165 sXt	220..240V, 50-60Hz, ta= -40...+55°C, tc max=85°C	EN 61347-1 EN 61347-2- 13	ENEC
Control gear <i>Zasilacz</i>	A	Philips	Xitanium Dim 75W 0.70A 1-10V 230V I220	220..240V, 50-60Hz, ta= -40...+55°C, tc max=80°C	EN 61347-1 EN 61347-2- 13	ENEC
Control gear <i>Zasilacz</i>	A	Philips	Xitanium 75W 1-10V 230V C165	220..240V, 50-60Hz, ta= -40...+55°C, tc max=80°C	EN 61347-1 EN 61347-2- 13	ENEC
Control gear <i>Zasilacz</i>	A	Tridonic	LCA 120W 300-1050mA	220..240V, 50-60Hz, ta= -30...+55°C, tc max=85°C	EN 61347-1 EN 61347-2- 13	ENEC
Control gear <i>Zasilacz</i>	A	Tridonic	LCA 75W 250-750mA one	220..240V, 50-60Hz, ta= -40...+70°C, tc max=85°C	EN 61347-1 EN 61347-2- 13	ENEC
Control gear <i>Zasilacz</i>	A	Tridonic	LCA 120W 350- 1050mA one	220..240V, 50-60Hz, ta= -40...+70°C, tc max=85°C	EN 61347-1 EN 61347-2- 13	ENEC
Control gear <i>Zasilacz</i>	A	Tridonic	LCO 14/100-500/38 NF C ADV3	220..240V, 50-60Hz, ta= -40...+70°C, tc max=90°C	EN 61347-1 EN 61347-2- 13	ENEC
Control gear <i>Zasilacz</i>	A	Tridonic	LCO 24/200-1050/39 NF C ADV3	220..240V, 50-60Hz, ta= -40...+70°C, tc max=85°C	EN 61347-1 EN 61347-2- 13	ENEC
Control gear <i>Zasilacz</i>	A	Tridonic	LCO 40/200-1050/64 NF C ADV3	220..240V, 50-60Hz, ta= -40...+70°C, tc max=90°C	EN 61347-1 EN 61347-2- 13	ENEC
Control gear <i>Zasilacz</i>	A	Tridonic	LCO 60/200-1050/100 NF C ADV3	220..240V, 50-60Hz, ta= -40...+70°C, tc max=90°C	EN 61347-1 EN 61347-2- 13	ENEC
Control gear <i>Zasilacz</i>	A	Tridonic	LCO 90/200-1050/165 NF C ADV3	220..240V, 50-60Hz, ta= -40...+70°C, tc max=100°C	EN 61347-1 EN 61347-2- 13	ENEC
Control gear <i>Zasilacz</i>	A	Tridonic	LCO 14/100-500/38 o4a NF C EXC3	220..240V, 50-60Hz, ta= -40...+70°C, tc max=90°C	EN 61347-1 EN 61347-2- 13	ENEC
Control gear <i>Zasilacz</i>	A	Tridonic	LCO 24/200-1050/39 o4a NF C EXC3	220..240V, 50-60Hz, ta= -40...+70°C, tc max=85°C	EN 61347-1 EN 61347-2- 13	ENEC
Control gear <i>Zasilacz</i>	A	Tridonic	LCO 40/200-1050/64 o4a NF C EXC3	220..240V, 50-60Hz, ta= -40...+70°C, tc max=90°C	EN 61347-1 EN 61347-2- 13	ENEC
Control gear <i>Zasilacz</i>	A	Tridonic	LCO 60/200-1050/100 o4a NF C EXC3	220..240V, 50-60Hz, ta= -40...+70°C, tc max=95°C	EN 61347-1 EN 61347-2- 13	ENEC
Control gear <i>Zasilacz</i>	A	Tridonic	LCO 60/700-1500/43 o4a NFC C EXC3	220..240V, 50-60Hz, ta= -40...+70°C, tc max=95°C	EN 61347-1 EN 61347-2- 13	ENEC
Control gear <i>Zasilacz</i>	A	Tridonic	LCO 90/200-1050/165 o4a NF C EXC3	220..240V, 50-60Hz, ta= -40...+70°C, tc max=100°C	EN 61347-1 EN 61347-2- 13	ENEC
Control gear <i>Zasilacz</i>	A	Tridonic	LCO 100/1050/95 fixC L SNC2	220..240V, 50-60Hz, ta= -40...+65°C, tc max=80°C	EN 61347-1 EN 61347-2- 13	ENEC
Control gear <i>Zasilacz</i>	A	Tridonic	LCO 100/1400/71 fixC L SNC2	220..240V, 50-60Hz, ta= -40...+65°C, tc max=80°C	EN 61347-1 EN 61347-2- 13	ENEC
Control gear <i>Zasilacz</i>	A	Tridonic	LCO 100/500/200 fixC L SNC2	220..240V, 50-60Hz, ta= -40...+65°C, tc max=80°C	EN 61347-1 EN 61347-2- 13	ENEC

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Control gear <i>Zasilacz</i>	A	Tridonic	LCO 100/700/143 fixC L SNC2	220..240V, 50-60Hz, ta= -40...+65°C, tc max=80°C	EN 61347-1 EN 61347-2- 13	ENEC
Control gear <i>Zasilacz</i>	A	Tridonic	LCO 75/1050/72 fixC L SNC2	220..240V, 50-60Hz, ta= -40...+65°C, tc max=80°C	EN 61347-1 EN 61347-2- 13	ENEC
Control gear <i>Zasilacz</i>	A	Tridonic	LCO 75/1400/53 fixC L SNC2	220..240V, 50-60Hz, ta= -40...+65°C, tc max=80°C	EN 61347-1 EN 61347-2- 13	ENEC
Control gear <i>Zasilacz</i>	A	Tridonic	LCO 75/500/150 fixC L SNC2	220..240V, 50-60Hz, ta= -40...+65°C, tc max=80°C	EN 61347-1 EN 61347-2- 13	ENEC
Control gear <i>Zasilacz</i>	A	Tridonic	LCO 75/700/108 fixC L SNC2	220..240V, 50-60Hz, ta= -40...+65°C, tc max=80°C	EN 61347-1 EN 61347-2- 13	ENEC
Control gear <i>Zasilacz</i>	A	Tridonic	LCO 14W 100–550mA 38V pD+ NFC C PRE3	220..240V, 50-60Hz, ta= -40...+70°C, tc max=95°C	EN 61347-1 EN 61347-2- 13	ENEC
Control gear <i>Zasilacz</i>	A	Tridonic	LCO 24W 200–1050mA 39V pD+ NFC C PRE3	220..240V, 50-60Hz, ta= -40...+70°C, tc max=85°C	EN 61347-1 EN 61347-2- 13	ENEC
Control gear <i>Zasilacz</i>	A	Tridonic	LCO 40W 200–1050mA 64V pD+ NFC C PRE3	220..240V, 50-60Hz, ta= -40...+65°C, tc max=95°C	EN 61347-1 EN 61347-2- 13	ENEC
Control gear <i>Zasilacz</i>	A	Tridonic	LCO 40W 200–1050mA 58V 2xCH pD+ NF C PRE3	220..240V, 50-60Hz, ta= -40...+65°C, tc max=95°C	EN 61347-1 EN 61347-2- 13	ENEC
Control gear <i>Zasilacz</i>	A	Tridonic	LCO 60W 200–1050mA 100V pD+ NFC C PRE3	220..240V, 50-60Hz, ta= -40...+65°C, tc max=95°C	EN 61347-1 EN 61347-2- 13	ENEC
Control gear <i>Zasilacz</i>	A	Tridonic	LCO 80W 200–1050mA 91V 2xCH pD+ NF C PRE3	220..240V, 50-60Hz, ta= -40...+70°C, tc max=95°C	EN 61347-1 EN 61347-2- 13	ENEC
Control gear <i>Zasilacz</i>	A	Tridonic	LCO 90W 200–1050mA 165V pD+ NFC C PRE3	220..240V, 50-60Hz, ta= -40...+70°C, tc max=95°C	EN 61347-1 EN 61347-2- 13	ENEC
Control gear <i>Zasilacz</i>	A	Tridonic	LCO 120W 200– 1050mA 182V 2xCH pD+ NF C PRE3	220..240V, 50-60Hz, ta= -40...+70°C, tc max=95°C	EN 61347-1 EN 61347-2- 13	ENEC
Control gear <i>Zasilacz</i>	A	LACROIX	DL-PAK 70	220...240 50/60Hz, Ta =-25...+60 °C, Tc max =90 °C	EN 61347-1 EN 61347-2- 13	ENEC
Control gear <i>Zasilacz</i>	A	LACROIX	DL-Pak 100L	220...240 50/60Hz, Ta =-25...+55 °C, Tc max =90 °C	EN 61347-1 EN 61347-2- 13	ENEC
Control gear <i>Zasilacz</i>	A	DELTA	EUCI-040105GLA	220...240 V/50/60Hz, Ta =-40...+60 °C, Tc max =85 °C	EN 61347-1 EN 61347-2- 13	ENEC
Control gear <i>Zasilacz</i>	A	DELTA	EUCI-075105GLA	220...240 V/50/60Hz, Ta =-40...+55 °C, Tc max =85 °C	EN 61347-1 EN 61347-2- 13	ENEC
Control gear <i>Zasilacz</i>	A	Delta	EUCI-022105GLB	220...240V, 50/60Hz, Ta =-40...+55 °C, Tc max =85 °C	EN 61347-1 EN 61347-2- 13	ENEC
Control gear <i>Zasilacz</i>	A	Delta	EUCI-040105GLB	198...264V, 50/60Hz, Ta =-40...+55 °C, Tc max =90 °C	EN 61347-1 EN 61347-2- 13	ENEC
Control gear <i>Zasilacz</i>	A	Delta	EUCI-075105GLB	220...240 V/50/60Hz, Ta =-40...+55 °C, Tc max = 85 °C	EN 61347-1 EN 61347-2- 13	ENEC
Control gear <i>Zasilacz</i>	A	Delta	EUCI 022105GIA	220..240V, 50-60Hz, ta= -40...+60°C, tc max=85°C	EN 61347-1 EN 61347-2- 13	ENEC
Control gear <i>Zasilacz</i>	A	Delta	EUCI 040105GIA	220..240V, 50-60Hz, ta= -40...+60°C, tc max=85°C	EN 61347-1 EN 61347-2- 13	ENEC
Control gear <i>Zasilacz</i>	A	SOSEN	SS-50VP-72BH	220..240V, 50-60Hz, ta= -40...+60C, tc max=90C	EN 61347-1 EN 61347-2- 13	ENEC
Control gear <i>Zasilacz</i>	A	SOSEN	SS-75VP-108BH	220..240V, 50-60Hz, ta= -40...+60C, tc max=90C	EN 61347-1 EN 61347-2- 13	ENEC

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Control gear <i>Zasilacz</i>	A	SOSEN	SS-100VP-143BH	220..240V, 50-60Hz, ta= -40...+60C, tc max=90C	EN 61347-1 EN 61347-2-13	ENEC
Control gear <i>Zasilacz</i>	A	SOSEN	SS-22PA- 32B	220..240V, 50-60Hz, ta= -40...+60C, tc max=90C	EN 61347-1 EN 61347-2-13	ENEC
Control gear <i>Zasilacz</i>	A	SOSEN	SS-40PA-54B	220..240V, 50-60Hz, ta= -40...+60C, tc max=90C	EN 61347-1 EN 61347-2-13	ENEC
Control gear <i>Zasilacz</i>	A	SOSEN	SS-75PA-108B	220..240V, 50-60Hz, ta= -40...+60C, tc max=90C	EN 61347-1 EN 61347-2-13	ENEC
Control gear <i>Zasilacz</i>	A	SOSEN	SS-110PA-160B	220..240V, 50-60Hz, ta= -40...+60C, tc max=90C	EN 61347-1 EN 61347-2-13	ENEC
Control gear <i>Zasilacz</i>	A	SOSEN	SS-22PA- 32F	220..240V, 50-60Hz, ta= -40...+60C, tc max=90C	EN 61347-1 EN 61347-2-13	ENEC
Control gear <i>Zasilacz</i>	A	SOSEN	SS-22PA- 49F	220..240V, 50-60Hz, ta= -40...+60C, tc max=90C	EN 61347-1 EN 61347-2-13	ENEC
Control gear <i>Zasilacz</i>	A	SOSEN	SS-22PA- 72F	220..240V, 50-60Hz, ta= -40...+60C, tc max=90C	EN 61347-1 EN 61347-2-13	ENEC
Control gear <i>Zasilacz</i>	A	SOSEN	SS-40PA-57F	220..240V, 50-60Hz, ta= -40...+60C, tc max=90C	EN 61347-1 EN 61347-2-13	ENEC
Control gear <i>Zasilacz</i>	A	SOSEN	SS-40PA-80F	220..240V, 50-60Hz, ta= -40...+60C, tc max=90C	EN 61347-1 EN 61347-2-13	ENEC
Control gear <i>Zasilacz</i>	A	SOSEN	SS-40PA-133F	220..240V, 50-60Hz, ta= -40...+60C, tc max=90C	EN 61347-1 EN 61347-2-13	ENEC
Control gear <i>Zasilacz</i>	A	SOSEN	SS-75PA-114F	220..240V, 50-60Hz, ta= -40...+60C, tc max=90C	EN 61347-1 EN 61347-2-13	ENEC
Control gear <i>Zasilacz</i>	A	SOSEN	SS-75PA-178F	220..240V, 50-60Hz, ta= -40...+60C, tc max=90C	EN 61347-1 EN 61347-2-13	ENEC
Control gear <i>Zasilacz</i>	A	SOSEN	SS-75PA-245F	220..240V, 50-60Hz, ta= -40...+60C, tc max=90C	EN 61347-1 EN 61347-2-13	ENEC
Control gear <i>Zasilacz</i>	A	SOSEN	SS-110PA-105F	220..240V, 50-60Hz, ta= -40...+60C, tc max=90C	EN 61347-1 EN 61347-2-13	ENEC
Control gear <i>Zasilacz</i>	A	SOSEN	SS-110PA-160F	220..240V, 50-60Hz, ta= -40...+60C, tc max=90C	EN 61347-1 EN 61347-2-13	ENEC
Control gear <i>Zasilacz</i>	A	SOSEN	SS-110PA-245F	220..240V, 50-60Hz, ta= -40...+60C, tc max=90C	EN 61347-1 EN 61347-2-13	ENEC
Control gear <i>Zasilacz</i>	A	ELDO LED	OT50W/UNV/800C/2DI MLT2/P6	120..277V, 50-60Hz, ta= -40...+60C, tc max=90C	EN 61347-1 EN 61347-2-13	ENEC
Control gear <i>Zasilacz</i>	A	Moso	U6-040D057	220..240V, 50-60Hz, ta= -40...+55°C, tc max=85°C	EN 61347-1 EN 61347-2-13	ENEC
Control gear <i>Zasilacz</i>	A	Moso	U6-080D115	220..240V, 50-60Hz, ta= -40...+55°C, tc max=85°C	EN 61347-1 EN 61347-2-13	ENEC
Control gear <i>Zasilacz</i>	A	Moso	U6-120D172	220..240V, 50-60Hz, ta= -40...+55°C, tc max=85°C	EN 61347-1 EN 61347-2-13	ENEC
Control gear <i>Zasilacz</i>	A	Moso	U7-026D038	220..240V, 50-60Hz, ta= -40...+55°C, tc max=85°C	EN 61347-1 EN 61347-2-13	ENEC
Control gear <i>Zasilacz</i>	A	Moso	U7-040D057	220..240V, 50-60Hz, ta= -40...+55°C, tc max=85°C	EN 61347-1 EN 61347-2-13	ENEC
Control gear <i>Zasilacz</i>	A	Moso	U7-060D086	220..240V, 50-60Hz, ta= -40...+55°C, tc max=85°C	EN 61347-1 EN 61347-2-13	ENEC

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Control gear <i>Zasilacz</i>	A	Moso	U7-080D115	220..240V, 50-60Hz, ta= -40...+550C, tc max=90°C	EN 61347-1 EN 61347-2- 13	ENEC
Control gear <i>Zasilacz</i>	A	Moso	U7-120D172	220..240V, 50-60Hz, ta= -40...+500C, tc max=90°C	EN 61347-1 EN 61347-2- 13	ENEC
Control gear <i>Zasilacz</i>	A	Moso	LUP 120	220..240V, 50-60Hz, ta= -40...+60°C, tc max=85°C	EN 61347-1 EN 61347-2- 13	ENEC
Control gear <i>Zasilacz</i>	A	uPowerTek	APD-040	176..264V, 50-60Hz, ta= -40...+900C, tc max=900C	EN 61347-1 EN 61347-2- 13	ENEC
Control gear <i>Zasilacz</i>	A	uPowerTek	APD-075	176..264V, 50-60Hz, ta= -40...+900C, tc max=900C	EN 61347-1 EN 61347-2- 13	ENEC
Control gear <i>Zasilacz</i>	A	uPowerTek	APD-110	176..264V, 50-60Hz, ta= -40...+900C, tc max=900C	EN 61347-1 EN 61347-2- 13	ENEC
Control gear <i>Zasilacz</i>	A	uPowerTek	BLD-060	176..264V, 50-60Hz, ta= -40...+900C, tc max=900C	EN 61347-1 EN 61347-2- 13	ENEC
Control gear <i>Zasilacz</i>	A	uPowerTek	BLD-075	176..264V, 50-60Hz, ta= -40...+900C, tc max=900C	EN 61347-1 EN 61347-2- 13	ENEC
Control gear <i>Zasilacz</i>	A	uPowerTek	BLD-096	176..264V, 50-60Hz, ta= -40...+900C, tc max=900C	EN 61347-1 EN 61347-2- 13	ENEC
Control gear <i>Zasilacz</i>	A	uPowerTek	BLD-120	176..264V, 50-60Hz, ta= -40...+900C, tc max=900C	EN 61347-1 EN 61347-2- 13	ENEC
Control gear <i>Zasilacz</i>	A	TCI	MILANOinLED 75W/200-1050 AD	220..240V, 50-60Hz, ta= -40...+550C, tc max=850C	EN 61347-1 EN 61347-2- 13	ENEC
Control gear <i>Zasilacz</i>	A	TCI	MILANOinLED 20W/200-1050 1PN	220..240V, 50-60Hz, ta= -40...+60°C, tc max=75°C	EN 61347-1 EN 61347-2- 13	ENEC
Control gear <i>Zasilacz</i>	A	TCI	MILANOinLED 40W/200-1050 1PN	220..240V, 50-60Hz, ta= -40...+60°C, tc max=80°C	EN 61347-1 EN 61347-2- 13	ENEC
Control gear <i>Zasilacz</i>	A	TCI	MILANOinLED 75W/200-1050 1PN	220..240V, 50-60Hz, ta= -40...+55°C, tc max=85°C	EN 61347-1 EN 61347-2- 13	ENEC
Control gear <i>Zasilacz</i>	A	TCI	MILANOinLED 110W/200-1050 1PN	220..240V, 50-60Hz, ta= -40...+55°C, tc max=85°C	EN 61347-1 EN 61347-2- 13	ENEC
Control gear <i>Zasilacz</i>	A	TCI	MILANOinLED 20W/200-1050 4PN	220..240V, 50-60Hz, ta= -40...+60°C, tc max=75°C	EN 61347-1 EN 61347-2- 13	ENEC
Control gear <i>Zasilacz</i>	A	TCI	MILANOinLED 40W/200-1050 4PN	220..240V, 50-60Hz, ta= -40...+60°C, tc max=80°C	EN 61347-1 EN 61347-2- 13	ENEC
Control gear <i>Zasilacz</i>	A	TCI	MILANOinLED 75W/200-1050 4PN	220..240V, 50-60Hz, ta= -40...+55°C, tc max=85°C	EN 61347-1 EN 61347-2- 13	ENEC
Control gear <i>Zasilacz</i>	A	TCI	MILANOinLED 110W/200-1050 4PN	220..240V, 50-60Hz, ta= -40...+55°C, tc max=85°C	EN 61347-1 EN 61347-2- 13	ENEC
Control gear <i>Zasilacz</i>	A	TCI	VEGA 75/530-1050 FPD IP67	220..240V, 50-60Hz, ta= -40...+60°C, tc max=90°C	EN 61347-1 EN 61347-2- 13	ENEC
Control gear <i>Zasilacz</i>	A	TCI	VEGA 105/530-1050 FPD IP67	220..240V, 50-60Hz, ta= -40...+60°C, tc max=90°C	EN 61347-1 EN 61347-2- 13	ENEC
Control gear <i>Zasilacz</i>	A	TCI	SIRIO SQ 22W 200-700 1-10V	220..240V, 50-60Hz, ta= -40...+55°C, tc max=85°C	EN 61347-1 EN 61347-2- 13	ENEC
Control gear <i>Zasilacz</i>	A	TCI	SIRIO SQ 40W 200-700 1-10V	220..240V, 50-60Hz, ta= -40...+55°C, tc max=85°C	EN 61347-1 EN 61347-2- 13	ENEC
Control gear <i>Zasilacz</i>	A	TCI	SIRIO SQ 75W 200-700 1-10V	220..240V, 50-60Hz, ta= -40...+55°C, tc max=80°C	EN 61347-1 EN 61347-2- 13	ENEC

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Control gear <i>Zasilacz</i>	A	TCI	SIRIO SQ 110W 200-700 1-10V	220..240V, 50-60Hz, ta= -40...+55°C, tc max=90°C	EN 61347-1 EN 61347-2-13	ENEC
Control gear <i>Zasilacz</i>	A	TCI	SIRIO SQ 22W 200-700 4PN	220..240V, 50-60Hz, ta= -40...+55°C, tc max=85°C	EN 61347-1 EN 61347-2-13	ENEC
Control gear <i>Zasilacz</i>	A	TCI	SIRIO SQ 40W 200-700 4PN	220..240V, 50-60Hz, ta= -40...+55°C, tc max=85°C	EN 61347-1 EN 61347-2-13	ENEC
Control gear <i>Zasilacz</i>	A	TCI	SIRIO SQ 75W 200-700 4PN	220..240V, 50-60Hz, ta= -40...+55°C, tc max=80°C	EN 61347-1 EN 61347-2-13	ENEC
Control gear <i>Zasilacz</i>	A	TCI	SIRIO SQ 110W 200-700 4PN	220..240V, 50-60Hz, ta= -40...+55°C, tc max=85°C	EN 61347-1 EN 61347-2-13	ENEC
Control gear <i>Zasilacz</i>	A	TCI	SIRIO SQ 22W 200-700 AD	220..240V, 50-60Hz, ta= -40...+55°C, tc max=85°C	EN 61347-1 EN 61347-2-13	ENEC
Control gear <i>Zasilacz</i>	A	TCI	SIRIO SQ 40W 200-700 AD	220..240V, 50-60Hz, ta= -40...+55°C, tc max=85°C	EN 61347-1 EN 61347-2-13	ENEC
Control gear <i>Zasilacz</i>	A	TCI	SIRIO SQ 75W 200-700 AD	220..240V, 50-60Hz, ta= -40...+55°C, tc max=90°C	EN 61347-1 EN 61347-2-13	ENEC
Control gear <i>Zasilacz</i>	A	TCI	SIRIO SQ 110W 200-700 AD	220..240V, 50-60Hz, ta= -40...+55°C, tc max=90°C	EN 61347-1 EN 61347-2-13	ENEC
Control gear <i>Zasilacz</i>	A	Eaglerise	CKH-26-500 IP67 R	220..240V, 50-60Hz, ta= -40...+60°C, tc max=90°C	EN 61347-1 EN 61347-2-13	ENEC
Control gear <i>Zasilacz</i>	A	Ledants	URF A100-A	220..240V, 50-60Hz, ta= -40...+65°C, tc max=90°C	EN 61347-1 EN 61347-2-13	ENEC
Control gear <i>Zasilacz</i>	A	Vossloh schwabe	PRIMELINE ECXd 1050.639	220..240V, 50-60Hz, ta= -40...+55°C, tc max=85°C	EN 61347-1 EN 61347-2-13	ENEC
Control gear <i>Zasilacz</i>	A	Vossloh schwabe	PRIMELINE ECXd 1050.640	220..240V, 50-60Hz, ta= -40...+55°C, tc max=85°C	EN 61347-1 EN 61347-2-13	ENEC
Control gear <i>Zasilacz</i>	A	Vossloh schwabe	PRIMELINE ECXd 1050.641	220..240V, 50-60Hz, ta= -40...+55°C, tc max=85°C	EN 61347-1 EN 61347-2-13	ENEC
Control gear <i>Zasilacz</i>	A	Vossloh schwabe	PRIMELINE ECXd 1050.642	220..240V, 50-60Hz, ta= -40...+55°C, tc max=85°C	EN 61347-1 EN 61347-2-13	ENEC
Control gear <i>Zasilacz</i>	A	Vossloh schwabe	PRIMELINE ECXd 1050.659	220..240V, 50-60Hz, ta= -40...+55°C, tc max=85°C	EN 61347-1 EN 61347-2-13	ENEC
Control gear <i>Zasilacz</i>	A	Vossloh schwabe	PRIMELINE ECXd 1050.660	220..240V, 50-60Hz, ta= -40...+55°C, tc max=85°C	EN 61347-1 EN 61347-2-13	ENEC
Control gear <i>Zasilacz</i>	A	Vossloh schwabe	PRIMELINE ECXd 1050.682	220..240V, 50-60Hz, ta= -40...+55°C, tc max=85°C	EN 61347-1 EN 61347-2-13	ENEC
Control gear <i>Zasilacz</i>	A	Vossloh schwabe	PRIMELINE ECXd 1050.683	220..240V, 50-60Hz, ta= -40...+55°C, tc max=85°C	EN 61347-1 EN 61347-2-13	ENEC
Control gear <i>Zasilacz</i>	A	Vossloh schwabe	PRIMELINE ECXd 1050.684	220..240V, 50-60Hz, ta= -40...+55°C, tc max=85°C	EN 61347-1 EN 61347-2-13	ENEC
Control gear <i>Zasilacz</i>	A	Vossloh schwabe	PRIMELINE ECXd 1050.685	220..240V, 50-60Hz, ta= -40...+55°C, tc max=85°C	EN 61347-1 EN 61347-2-13	ENEC
Control gear <i>Zasilacz</i>	A	Lifud	LF-ACD040A/B	220..240V, 50-60Hz, ta= -40...+55°C, tc max=90°C	EN 61347-1 EN 61347-2-13	ENEC
Control gear <i>Zasilacz</i>	A	Lifud	LF-ACD075A/B/C	220..240V, 50-60Hz, ta= -40...+55°C, tc max=90°C	EN 61347-1 EN 61347-2-13	ENEC
Control gear <i>Zasilacz</i>	A	Lifud	LF-ACD120A/B	220..240V, 50-60Hz, ta= -40...+55°C, tc max=90°C	EN 61347-1 EN 61347-2-13	ENEC



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Object / part No.	Code	Manufacturer/ trademark	Type / model	Technical data	Standard	Mark(s) of conformity ¹⁾
Control gear <i>Zasilacz</i>	A	Lifud	LF-ACD165A/B	220..240V, 50-60Hz, ta= -40...+55°C, tc max=90°C	EN 61347-1 EN 61347-2- 13	ENEC
Wires LED <i>Przewody</i>	B	Mrowiec	H05V-U	500 V; 0,5 mm ²	EN 50525	BBJ
Internal wires <i>Przewody wewnętrzne</i>	B	Mrowiec	H05V-K	500 V; 1 mm ²	EN 50525	BBJ
Supply cord <i>Przewód zasilający</i>	B	TF Kable	H07RN-F	450/750 V;	EN 50525	BBJ
Internal wires <i>Przewody wewnętrzne</i>	A	E.M.C. Colosio	RD10-B	300/500 V; 0,5 mm ²	EN 50525	IMQ, <HAR>
Silicon Fiberglass Insulating Sleeving <i>Oplot izolacyjny z włókna szklanego</i>	B	Isolcavi	GVES 1500	min. 1500 Volt, Temp -60...+250°C	IEC 60684-3- 400	UL
Connector <i>Złącze</i>	B	Jiang Men Krealux Electrical	P02-M	17,5A; 450 V	EN 60988-1 EN 60998-2- 2	VDE
Connector <i>Złącze</i>	A	Openwise	925	16A; 450 V	EN 60988-1 EN 60998-2- 2	ENEC
Connector <i>Złącze</i>	A	Openwise	928	32A; 450 V	EN 60988-1 EN 60998-2- 2	ENEC
Connector <i>Złącze</i>	A	Greenway Electronics Co Ltd	M684	16A; 450 V	EN 61984, EN 60988-1, EN 60998-2- 1, EN 62444	ENEC
Terminal block <i>Listwa zaciskowa</i>	B	Stucchi	651/652	16A; 400 V	EN-61984	IMQ
Terminal block <i>Listwa zaciskowa</i>	B	Stucchi	661/662	6A; 400 V	EN-61984	IMQ
Connector <i>Złącze</i>	B	BJB	47.121.-303.93, 47.121.-305.80, 47.121.-702.14, 47.121.-705.84, 47.121.U301.80, 47.121.U303.80, 47.121.U304.80, 47.921.-801.68, 47.921.-802.68, 47.921.U801.81	2A, 24V DC, ta= -40°C to 100°C	EN 61984, UL773	CE, VDE
Connector <i>Złącze</i>	B	BJB	48.281	16A; 400 V	EN 60998-2- 2	VDE
Connector <i>Złącze</i>	B	BJB	46.412	16A; 450 V	EN 60998-2- 2	VDE
Connector <i>Złącze</i>	B	BJB	46.413	16A; 450 V	EN 60998-2- 2	VDE
Connector <i>Złącze</i>	B	BJB	46.414	16A; 450 V	EN 60998-2- 2	VDE
Connector <i>Złącze</i>	B	BJB	46.415	16A; 450 V	EN 60998-2- 2	VDE
Connector <i>Złącze</i>	B	BJB	46.455	16A; 450 V	EN 60998-2- 2	VDE
Connector <i>Złącze</i>	B	WAGO	224-101	24A; 400 V	EN 60998-2- 2	VDE
Connector <i>Złącze</i>	B	WAGO	224-112	24A; 400 V	EN 60998-2- 2	VDE
Connector <i>Złącze</i>	B	TE Connectivity	2834049 2834048 2834055 2834054	9A; 600 V	EN 61984	TUV
Terminal block <i>Listwa zaciskowa</i>	B	Wieland	GST 18I4S	20A; 400 V	EN 61535	VDE
Terminal block <i>Listwa zaciskowa</i>	B	Wieland	GST 15I2	16A; 250 V	EN 61535	VDE
Terminal block <i>Listwa zaciskowa</i>	B	Wieland	96.051.4153.6	20A; 250 V	EN 61535	VDE, UL
Terminal block <i>Listwa zaciskowa</i>	B	Wieland	96.031.4053.1	20A; 250 V	EN 61535	VDE, UL

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Object / part No.	Code	Manufacturer/ trademark	Type / model	Technical data	Standard	Mark(s) of conformity ¹⁾
Connector Złącze	B	EMC Colosio	M26B	17A; 300 V	EN 60598-1	IMQ
Knife switch (connector) Złącze nożowe	B	Longran	M29 M29 mini	16A; 450 V 16A; 250 V	EN 61984 EN 60998-2- 1 EN 60998-1	TUV
Connector Złącze	B	LONGJOIN	JL-700	1,5A, 30V	EN 61984	DEKRA
Connector Złącze	B	Tyco Electronics Corp.	2213795, 2213831, 2213837, 2213858, 2328823, 2329013	30V AC/DC 50/60Hz, 1,5A	EN 61984	CB certificate, UL EU, IEC
Connector Złącze	B	Tyco Electronics Corp.	1-2213871-1, 1-2213871-2, 2213871-1, 2213871-2, X-2213362-X, X-2213627-X	t= -40...+80°C, tc max=80°C 150/240/300VAC, 50/60Hz, 15/7.5/6 A, Signal Contacts: 30VDC, 1.5A	EN 61984	CB certificate, UL EU, IEC
Connector Złącze	B	LUG	iBlock	230V, 50Hz, Ta = -40°C do 70°C	EN61347-2- 11	Tested and accepted by ITE PREDOM Division TR No. Z7-2/016/B/20
Luminaire protection Zabezpieczenie oprawy	B	Vossloh schwabe	SP / 230 / 10K	220-240V, 50/60Hz, Ta = -30°C do 80°C	EN 60598-2- 3 EN 61643-11	VDE
Luminaire protection Zabezpieczenie oprawy	B	Vossloh schwabe	SP 3 / 230 / 10K	100-277V, 50/60Hz, Ta = -30°C do 80°C	EN 60598-2- 3 EN 61643-11	DEKRA
Luminaire protection Zabezpieczenie oprawy	B	Vossloh schwabe	SPC 3 / 230 / 10K / i	100-277V, 50/60Hz, Ta = -35°C do 80°C	EN 60598-2- 3 EN 61643-11	DEKRA
Luminaire protection Zabezpieczenie oprawy	B	Vossloh schwabe	SPC 3 / 230 / 10K / i- IP66	100-277V, 50/60Hz, Ta = -35°C do 80°C	EN 60598-2- 3 EN 61643-11	DEKRA
Luminaire protection Zabezpieczenie oprawy	B	Vossloh schwabe	SPC 230 / 10K / i	100-277V, 50/60Hz, Ta = -35°C do 80°C	EN 61643-11	DEKRA
Luminaire protection Zabezpieczenie oprawy	B	Tridonic	SPD 10kV CE SNC	100-277V, 50/60Hz, Ta = -40°C do 80°C	EN 61643-11	KEMA KEUR
Luminaire protection Zabezpieczenie oprawy	B	Inventronics	PU-20KX10KTXX	320Vac, 8A, 47-63Hz, Ta = -40°C do 85°C	EN 61643-11, EN 61643-21	CE, VDE
Luminaire protection Zabezpieczenie oprawy	B	Inventronics	PU-20Kx10KBx	320Vac, 15A, 47- 63Hz, Ta = -40°C do 85°C	EN 61643-11, EN 61643-21	CE, VDE
Luminaire protection Zabezpieczenie oprawy	B	Inventronics	PU-10Kx05KBx	320Vac, 8A, 47-63Hz, Ta = -40°C do 85°C	EN 61643-11, EN 61643-21	CE, VDE
Luminaire protection Zabezpieczenie oprawy	B	Linoya Electronic Technology	LYSPD10D	300Vac, 50Hz, IP67	EN 61643-11	TUV
Luminaire protection Zabezpieczenie oprawy	B	ESB	ESB-6K	220-240V, 50/60Hz, Ta = -30°C do 80°C	EN 61643-11	VDE
Connector Złącze	B	LONGJOIN Nema	JL-240	t= -40...+70°C, 480VAC, 50/60Hz, Signal Contacts: 30VDC, 0,25A	EN 61984	DEKRA
Connector Złącze	B	LONGJOIN Nema	JL-208	t= -40...+70°C, 480VAC, 50/60Hz, Signal Contacts: 30VDC, 0,25A	EN 61984	CB
Connector Złącze	B	Ojun Zhaga	OJ-M716, OJ-M718	t= -40...+70°C, 500V, 50/60Hz, 30VDC, 1,5A	EN 61984	DEKRA, CB, Kema Keur, UKCA
Connector Złącze	B	Optimum	OPT801, OPT805, OPT806	t= -40...+70°C, IP66, 50/60Hz, 60VDC, 1,5A	EN 61984	DEKRA, CB, Kema Keur, UKCA
Fixed resistor Rezystor	B	Uniroyal Electronics	MGR series	100k Ohm to 100 MOhm (+-5%), 2W, 2,5kV	EN IEC 62368-1	VDE



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Krakowiaków 53, 02-255 WARSAW
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Object / part No.	Code	Manufacturer/ trademark	Type / model	Technical data	Standard	Mark(s) of conformity ¹⁾
Luminaire protection <i>Zabezpieczenie oprawy</i>	B	RuiLongYuan	TP10D	100-277V, 50/60Hz, Ta = -40°C do 85°C	EN 61643-11 IEC 61643-11	TUV
Luminaire protection <i>Zabezpieczenie oprawy</i>	B	Greenway	GSPD 1	100-277V, 50/60Hz, Ta = -40°C do 85°C	EN 61643-11 IEC 61643-11	ETL / UL / TUV
Luminaire protection <i>Zabezpieczenie oprawy</i>	B	Greenway	GSPD 3	100-277V, 50/60Hz, Ta = -40°C do 85°C	EN 61643-11 IEC 61643-11	ETL / UL / TUV
Luminaire protection <i>Zabezpieczenie oprawy</i>	B	LINOYA	LYSPD10A	300Vac, 50Hz, IP67	EN 61643-11	UL
Luminaire protection <i>Zabezpieczenie oprawy</i>	B	ZP Lightning	ZP-LSP10-PL	100-277V, 50/60Hz, Ta = -40°C do 85°C	EN 61643-11 IEC 61643-11	UL
Luminaire protection <i>Zabezpieczenie oprawy</i>	B	ZP Lightning	ZP-LED-P10D	100-277V, 50/60Hz, Ta = -40°C do 85°C	EN 61643-11 IEC 61643-11	TUV
Luminaire protection <i>Zabezpieczenie oprawy</i>	B	ZP Lightning	ZP-LED-S10D	100-277V, 50/60Hz, Ta = -40°C do 85°C	EN 61643-11 IEC 61643-11	TUV
Luminaire protection <i>Zabezpieczenie oprawy</i>	B	ZP Lightning	ZP-LSP10-PR	100-277V, 50/60Hz, Ta = -40°C do 85°C	EN 61643-11 IEC 61643-11	TUV
Luminaire protection <i>Zabezpieczenie oprawy</i>	B	ZP Lightning	ZP-LSP10-PY/II	100-277V, 50/60Hz, Ta = -40°C do 85°C	EN 61643-11 IEC 61643-11	TUV
Luminaire protection <i>Zabezpieczenie oprawy</i>	B	ZP Lightning	ZP-LSP10-SR	100-277V, 50/60Hz, Ta = -40°C do 85°C	EN 61643-11 IEC 61643-11	TUV
Luminaire protection <i>Zabezpieczenie oprawy</i>	B	ZP Lightning	ZP-LSP10-SY/II	100-277V, 50/60Hz, Ta = -40°C do 85°C	EN 61643-11 IEC 61643-11	TUV
Luminaire protection <i>Zabezpieczenie oprawy</i>	B	Zhongyuan Technology	ZYS-P10WD, ZYS- P20WD	100-277V, 50/60Hz, Ta = -40°C do 85°C	EN 61643-11 IEC 61643-11	TUV
Luminaire protection <i>Zabezpieczenie oprawy</i>	B	Zhongyuan Technology	ZYS-P10SD, ZYS- P20SD, ZYS-P10SD/II, ZYS-P20SD/II	100-277V, 50/60Hz, Ta = -40°C do 85°C	EN 61643-11 IEC 61643-11	TUV
Supplementary information: ¹⁾ Provided evidence ensures the agreed level of compliance. See OD-CB2039. The codes above have the following meaning: A - The component is replaceable with another one, also certified, with equivalent characteristics B - The component is replaceable if authorised by the test house C - Integrated component tested together with the appliance D - Alternative component						

Date: 2024-10-01

Signature:

 Signed by /
 Podpisano przez:

 Paweł Andrzej
 Oziębło

 Date / Data:
 2024-10-01 15:49

 Manager of Certification Office
Kierownik Biura Certyfikacji



Test Report issued under the responsibility of:
Łukasiewicz - IMiF PREDOM Division

Testing Laboratory of IMiF PREDOM Division
Certificate PCA No. AB 003

TEST REPORT
IEC 60598-2-3
Luminaires
Part 2: Particular requirements
Section 3: Luminaires for road and street lighting

Report Number..... : B5-3/117/B/24
Date of issue..... : 2024-09-23
Total number of pages 65 + Attachment No. 1 (List of LED's and electronic led driver's system)

Name of Testing Laboratory preparing the Report Łukasiewicz - IMiF PREDOM Division
02-255 Warszawa, ul. Krakowiaków 53, Poland

Applicant's name LUG Light Factory Sp z.o.o.
Address..... : 65-127 Zielona Góra, ul. Gorzowska 11, Poland

Test specification:

Standard IEC 60598-2-3:2002, IEC 60598-2-3:2002/AMD1:2011 used in conjunction with IEC 60598-1:2020
Test procedure CB Scheme
Non-standard test method N/A

TRF template used..... : IECEE OD-2020-F1:2021, Ed.1.4

Test Report Form No. : IEC60598_2_3M

Test Report Form(s) Originator : Intertek Semko AB

Master TRF 2021-11-11

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General disclaimer:

The test results presented in this report relate only to the object tested.
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Test item description..... :	Luminaires for road and street lighting	
Trade Mark(s) :	LUG	
Manufacturer :	LUG Light Factory Sp z.o.o. Gorzowska 11; 65-127 Zielona Góra - Poland	
Model/Type reference :	URBINO LED S family cl I – series – see also “General product information	
Ratings :	220-240V, 50/60Hz, IP66, IK10, ta 50 °C or 55°C, cl.I – details see pages 4 - 7	
Responsible Testing Laboratory (as applicable), testing procedure and testing location(s):		
☐	CB Testing Laboratory:	Łukasiewicz - IMiF PREDOM Division
Testing location/ address..... :		02-255 Warszawa, ul. Krakowiaków 53, Poland
Tested by (name, function, signature)..... :		J. Śmigrodzki
Approved by (name, function, signature).... :		T. Małyska
☐	Testing procedure: CTF Stage 1:	
Testing location/ address..... :		
Tested by (name, function, signature)..... :		
Approved by (name, function, signature).... :		
☐	Testing procedure: CTF Stage 2:	
Testing location/ address..... :		
Tested by (name + signature) :		
Witnessed by (name, function, signature) . :		
Approved by (name, function, signature).... :		
☐	Testing procedure: CTF Stage 3:	
☐	Testing procedure: CTF Stage 4:	
Testing location/ address..... :		
Tested by (name, function, signature)..... :		
Witnessed by (name, function, signature) . :		
Approved by (name, function, signature).... :		
Supervised by (name, function, signature) :		

List of Attachments (including a total number of pages in each attachment): – Attachment No. 1 (Report Reference No. B5-3/117/B/1/24 - 2 pages)	
Summary of testing: Positive <i>According to ISO / IEC Guide 98-4 for the assessment of compliance of the measurement result with the requirements, criterion B was chosen. 50% risk of incorrect assessment decision belongs to the customer and 50% risk of incorrect assessment belongs to the laboratory</i>	
Tests performed (name of test and test clause): IEC 60598-2-3:2002, IEC 60598-2-3:2002/AMD1: 2011 used in conjunction with IEC 60598-1:2020 - all clauses	Testing location: Łukasiewicz - IMiF PREDOM Division 02-255 Warszawa, ul. Krakowiaków 53, Poland
Summary of compliance with National Differences (List of countries addressed): See Attachment No. 1 to this Test Report (Report Reference No. B5-3/117/B/1/24 - 2 pages)	
☒ The product fulfils the requirements of EN 60598-2-3:2003 + A1:2011 used in conjunction with EN IEC 60598-1:2021 + A11:2022	
Use of uncertainty of measurement for decisions on conformity (decision rule) : ☒ No decision rule is specified by the IEC standard, when comparing the measurement result with the applicable limit according to the specification in that standard. The decisions on conformity are made without applying the measurement uncertainty ("simple acceptance" decision rule, previously known as "accuracy method"). ☐ Other:... (to be specified, for example when required by the standard or client, or if national accreditation requirements apply)	
Information on uncertainty of measurement: The uncertainties of measurement are calculated by the laboratory based on application of criteria given by OD-5014 for test equipment and application of test methods, decision sheets and operational procedures of IECEE. IEC Guide 115 provides guidance on the application of measurement uncertainty principles and applying the decision rule when reporting test results within IECEE scheme, noting that the reporting of the measurement uncertainty for measurements is not necessary unless required by the test standard or customer. Calculations leading to the reported values are on file with the NCB and testing laboratory that conducted the testing.	

Copy of marking plate:



Test item particulars.....: Luminaire for road and street lighting	
Classification of installation and use.....: Normal use	
Supply Connection Connector	
Possible test case verdicts: - test case does not apply to the test object..... : N/A - test object does meet the requirement..... : P (Pass) - test object does not meet the requirement..... : F (Fail)	
Testing.....: Date of receipt of test item 2024-08-08 Date (s) of performance of tests 2024-08-08 - 2024-09-23	
General remarks:	
"(See Enclosure #)" refers to additional information appended to the report. "(See appended table)" refers to a table appended to the report. Throughout this report a ☒ comma / ☐ point is used as the decimal separator. Clause numbers between brackets refer to clauses in IEC 60598-1	
Manufacturer's Declaration per sub-clause 4.2.5 of IEC 60598-1:	
The application for obtaining a CB Test Certificate includes more than one factory location and a declaration from the Manufacturer stating that the sample(s) submitted for evaluation is (are) representative of the products from each factory has been provided :	☐ Yes ☒ Not applicable
When differences exist; they shall be identified in the General product information section.	
Name and address of factory (ies) : LUG Light Factory Sp. z o.o. ul. Gorzowska 11 65-127 Zielona Góra Poland	

General product information and other remarks:*Ogólne informacje o produkcie i inne uwagi:*

Nazwa i adres posiadacza certyfikatu: <i>Name and address of the license holder:</i>	LUG Light Factory Sp z o.o. ul. Gorzowska 11; 65-127 Zielona Góra - Poland
Nazwa i adres producenta: <i>Name and address of manufacturer:</i>	LUG Light Factory Sp z o.o. ul. Gorzowska 11; 65-127 Zielona Góra - Poland
Nazwa i adres miejsca produkcji: <i>Name and address of manufacturing place:</i>	LUG Light Factory Sp z o.o. ul. Gorzowska 11; 65-127 Zielona Góra - Poland
Nazwa wyrobu: <i>Name of the product:</i>	Luminaires for road and street lighting
Typ (model): <i>Type (model):</i>	URBINO LED S
Znak handlowy: <i>Trade mark:</i>	LUG
Dane techniczne: <i>Technical data</i>	
<i>Rated voltage</i>	220-240V
<i>Rated frequency:</i>	50/60Hz
<i>Protection against electric shock:</i>	Class I
<i>Degree of protection:</i>	IP66. IK10
<i>ta</i>	4,5W - 36W - Ta= -40°C / -35°C* / -30°C** ... +55°C
	37W - 76W - Ta= -40°C / -35°C* / -30°C**/-25°C*** ... +50°C

* - For luminaires equipped with:

- Vossloh Schwabe SP/230/10K/i

** - For luminaires equipped with:

- SPD Vossloh Schwabe SP/230/10K
- Xi FP 110W 0.3-0.1A NLP C150 230V
- Tridonic LCA 120W 300-1050mA

*** - For luminaires equipped with:

- LACROIX DL-PAK 70

Choice sheet of the luminaires Urbino LED S cl. I series:*Zbiór możliwości opraw Urbino LED S kl.I – seria***Example of symbol:***Przykładowy symbol (na naklejce):*

130772.7LR7B40S895.101.B.N.V.P.K.O

1 2 3 4 5 6 7 8 9

Designations used on the marking of luminaires (some designation may not appear in the name):
(Oznaczenia stosowane na naklejce znamionowej opraw (niektóre oznaczenia mogą nie występować w nazwie)):

1. 13077
13078

- Code of the series URBINO LED S - XPG3 SERIES *(Kod rodziny)*
- Code of the series URBINO LED S - LUXEON SERIES *(Kod rodziny)*

2. 2

- Color *(Kolor):*
- 2: grey

3. 7L	5: graphite 0: another - Control type (<i>Typ sterowania</i>): 2L - DIMM 1-10V 3L - DALI 5L - on-off 6L - on-off / DALI 7L - ZHAGA D4i PL - programmable
4. R7	- CRI: R7 = 70-79 R8 = 80-89
5. B40	- Color temperature (<i>Temperatura barwowa</i>): B22 = 2200 B27 = 2700 B30 = 3000 B40 = 4000 B57 = 5700 B65 = 6500
6. S895	- Luminous flux (<i>Strumień świetlny</i>) (e.g. (<i>Przykład</i>) 895 = 8950lm)
7. 1	- Safety Class I (<i>Klasa ochronności</i>)
8. 01	- Optic type – for road lighting (<i>Typ optyki – dla opraw ulicznych</i>) 01 to 99
9. B.N.V.P.K.O	- Additional equipment (<i>Dodatkowe wyposażenie</i>): A - additional corrosion protection (<i>Dodatkowa ochrona przed korozją</i>) B - Tool-free access to the LED Driver (<i>Beznarzędziowy dostęp do sterownika LED</i>) U - ø76mm pole (<i>ø76mm słup</i>) N - NEMA Socket (<i>Łącze NEMA</i>) Z - ZHAGA Socket (<i>Łącze ZHAGA</i>) T - NTC Sensor (<i>Czujnik NTC</i>) W - Twilight Sensor (<i>Czujnik zmierzchu</i>) V - Surge Device Protector 10kV (<i>Zabezpieczenie przeciwprzepięciowe 10kV</i>) Y - Surge Device Protector 20kV (<i>Zabezpieczenie przeciwprzepięciowe 20kV</i>) P- Anti pressure vent (<i>Odpowietrznik przeciwcisnieniowy</i>) I- iBloc ("URBAN" smart city system) (<i>System inteligentnego miasta „URBAN”</i>) K- Knife switch connector (<i>Złącze nożowe</i>) C - RAL Color (<i>Kolor RAL</i>) O - Investment luminaire (<i>Oprawa inwestycyjna</i>)

List of LED's and electronic led driver's system**See Attachment No. 1**

After review of technical documentation, model series, characteristic of particular models, differences between models, technical parameters, class of luminaires, IP code, light sources, components, etc., luminaires: 130782.5LR7B40S1130.117, has been tested as the representative of all models of luminaires.

IEC 60598-2-3			
Clause	Requirement + Test	Result - Remark	Verdict
3.2 (0)	GENERAL TEST REQUIREMENTS		P
3.2 (0.3)	More sections applicable	Yes ☐ No ☒ Section/s:	—
3.2 (0.5)	Components	(see Annex 1)	—
3.2 (0.7)	Information for luminaire design in light sources standards		—
3.2 (0.7.2)	Light source safety standard	EN62031	—
	Luminaire design in the light source safety standard		P

3.4 (2)	CLASSIFICATION OF LUMINAIRES		P
3.4 (2.2)	Type of protection	Class I	P
3.4 (2.3)	Degree of protection	IP66	P
3.4 (2.4)	Luminaire suitable for direct mounting on normally flammable surfaces	Yes ☒ No ☐	—
3.4 (2.5)	Luminaire for normal use	Yes ☒ No ☐	—
	Luminaire for rough service	Yes ☐ No ☒	—
3.4 (-)	Modes of installation of road or street lighting		—
	a) on a pipe	Yes ☒ No ☐	—
	b) on a mast arm	Yes ☒ No ☐	—
	c) on a post top	Yes ☒ No ☐	—
	d) on span or suspension wires	Yes ☐ No ☒	—
	e) on a wall	Yes ☐ No ☒	—

3.5 (3)	MARKING		P
3.5 (3.2)	Mandatory markings		P
	Position of the marking		P
	Format of symbols/text		P
3.5 (3.3)	Additional information		P
	Language of instructions		P
3.5 (3.3.1)	Combination luminaires		N/A
3.5 (3.3.2)	Nominal frequency in Hz		P
3.5 (3.3.3)	Operating temperature		P
3.5 (3.3.5)	Wiring diagram		P
3.5 (3.3.6)	Special conditions		N/A
3.5 (3.3.7)	Metal halide lamp luminaire – warning		N/A
3.5 (3.3.8)	Limitation for semi-luminaires		N/A

IEC 60598-2-3			
Clause	Requirement + Test	Result - Remark	Verdict
3.5 (3.3.9)	Power factor and supply current		P
3.5 (3.3.10)	Suitability for use indoors		N/A
3.5 (3.3.11)	Luminaires with remote control		N/A
3.5 (3.3.12)	Clip-mounted luminaire – warning		N/A
3.5 (3.3.13)	Specifications of protective shields		N/A
3.5 (3.3.14)	Symbol for nature of supply		P
3.5 (3.3.15)	Rated current of socket outlet		N/A
3.5 (3.3.16)	Rough service luminaire		N/A
3.5 (3.3.17)	Mounting instruction for type Y, type Z and some type X attachments		N/A
3.5 (3.3.18)	Non-ordinary luminaires with PVC cable		N/A
3.5 (3.3.19)	Protective conductor current in instruction if applicable		N/A
3.5 (3.3.20)	Provided with information if not intended to be mounted within arm's reach		N/A
3.5 (3.3.21)	Non replaceable and non-user replaceable light sources information provided		P
3.5 (3.3.22)	Controllable luminaires, classification of insulation provided		N/A
3.5 (3.3.23)	Luminaires without control gear provided with necessary information for selection of appropriate component		N/A
3.5 (3.3.24)	If not supplied with terminal block, information on the packaging		N/A
3.5 (3.3.25)	Luminaires employing light sources emitting UV on mains wiring, information provided		N/A
3.5 (3.3.26)	Wall mounted luminaire using external flexible cable or cord longer than 0.3 m, information provided		N/A
3.5 (3.4)	Test with water		P
	Test with hexane		P
	Legible after test		P
	Label attached		P
3.5 (-)	Additional information in instruction leaflet		P
	a) Design attitude		P
	b) Weight		P
	c) Overall dimensions		P
	d) Maximum projected area if applicable		P
	e) Cross-sectional area of wires if applicable		N/A
	f) Suitability for indoors use		N/A

IEC 60598-2-3			
Clause	Requirement + Test	Result - Remark	Verdict
	g) Dimensions of the compartment		N/A
	h) Torque setting to be applied to bolts or screws		P
	i) Maximum mounting height		P

3.6 (4)	CONSTRUCTION		P
3.6 (4.2)	Components replaceable without difficulty		P
3.6 (4.3)	Wireways smooth and free from sharp edges		P
3.6 (4.4)	Lampholders		N/A
3.6 (4.4.1)	Integral lampholder		N/A
3.6 (4.4.2)	Wiring connection		N/A
3.6 (4.4.3)	Lampholder for end-to-end mounting		N/A
3.6 (4.4.4)	Positioning		N/A
	- pressure test (N) :	N/A	—
	After test the lampholder comply with relevant standard sheets and show no damage		N/A
	After test on single-capped lampholder the lampholder have not moved from its position and show no permanent deformation		N/A
	- bending test (N) :	N/A	—
	After test the lampholder have not moved from its position and show no permanent deformation		N/A
3.6 (4.4.5)	Peak pulse voltage		N/A
3.6 (4.4.6)	Centre contact		N/A
3.6 (4.4.7)	Parts in rough service luminaires resistant to tracking		N/A
3.6 (4.4.8)	Lamp connectors		N/A
3.6 (4.4.9)	Caps and bases correctly used		N/A
3.6 (4.4.10)	Light source for lampholder or connection according IEC 60061 not connected another way		N/A
3.6 (4.5)	Starter holders		N/A
	Starter holder in luminaires other than class II		N/A
	Starter holder class II construction		N/A
3.6 (4.6)	Terminal blocks		N/A
	Tails		N/A
	Unsecured blocks		N/A
3.6 (4.7)	Terminals and supply connections		P
3.6 (4.7.1)	Contact to metal parts		N/A

IEC 60598-2-3			
Clause	Requirement + Test	Result - Remark	Verdict
3.6 (4.7.2)	Test 8 mm live conductor		P
	Test 8 mm earth conductor		P
3.6 (4.7.3)	Terminals for supply conductors		P
3.6 (4.7.3.1)	Welded method and material		N/A
	- stranded or solid conductor		N/A
	- spot welding		N/A
	- welding between wires		N/A
	- Type Z attachment		N/A
	- mechanical test according to 15.6.2		N/A
	- electrical test according to 15.6.3		N/A
	- heat test according to 15.6.3.2.3 and 15.6.3.2.4		N/A
3.6 (4.7.4)	Terminals other than supply connection		N/A
3.6 (4.7.5)	Heat-resistant wiring/sleeves		N/A
3.6 (4.7.6)	Multi-pole plug		N/A
	- test at 30 N		N/A
3.6 (4.8)	Switches		N/A
	- adequate rating		N/A
	- adequate fixing		N/A
	- polarized supply		N/A
	- compliance with IEC 61058-1 for electronic switches		N/A
3.6 (4.9)	Insulating lining and sleeves		N/A
3.6 (4.9.1)	Retainment		N/A
	Method of fixing :		N/A
3.6 (4.9.2)	Insulated linings and sleeves:		N/A
	Resistant to a temperature > 20 °C to the wire temperature or		N/A
	a) & c) Insulation resistance and electric strength		N/A
	b) Ageing test. Temperature (°C) :		N/A
3.6 (4.10)	Double or reinforced insulation		N/A
3.6 (4.10.1)	No contact, mounting surface – accessible metal parts – wiring of basic insulation		N/A
	Safe installation fixed luminaires		N/A
	Capacitors and switches		N/A
3.6 (4.10.2)	Assembly gaps:		N/A
	- not coincidental		N/A

IEC 60598-2-3			
Clause	Requirement + Test	Result - Remark	Verdict
	- no straight access with test probe		N/A
3.6 (4.10.3)	Retainment of insulation:		N/A
	- fixed		N/A
	- unable to be replaced; luminaire inoperative		N/A
	- sleeves retained in position		N/A
	- lining in lampholder		N/A
3.6 (4.10.4)	Protective impedance device		N/A
	Basic and supplementary insulation bridged by resistor(s) or appropriate capacitor		N/A
	Double or reinforced insulation bridged by appropriate and at least two resistors or two Y2 capacitors or one Y1 capacitor		N/A
	Capacitors comply with IEC 60384-14		N/A
	Resistors comply with test (a) in 14.1 of IEC 60065		N/A
3.6 (4.11)	Electrical connections and current-carrying parts		P
3.6 (4.11.1)	Contact pressure		P
3.6 (4.11.2)	Screws:		P
	- self-tapping screws		P
	- thread-cutting screws		P
3.6 (4.11.3)	Screw locking:		N/A
	- spring washer		N/A
	- rivets		N/A
3.6 (4.11.4)	Material of current-carrying parts		P
3.6 (4.11.5)	No contact to wood or mounting surface		P
3.6 (4.11.6)	Electro-mechanical contact systems		N/A
3.6 (4.12)	Screws and connections (mechanical) and glands		P
3.6 (4.12.1)	Screws not made of soft metal		P
	Screws of insulating material		N/A
	Torque test: torque (Nm); part..... :	LED Light Lens: 0,5 Nm	P
	Torque test: torque (Nm); part..... :	Control gear: 0,5 Nm Earthing: 0,5 Nm: 0,5 Nm	P
	Torque test: torque (Nm); part..... :	Spigot: 8 Nm	P
3.6 (4.12.2)	Screws with diameter < 3 mm screwed into metal		P
3.6 (4.12.4)	Locked connections:		N/A
	- fixed arms; torque (Nm) :		N/A

IEC 60598-2-3			
Clause	Requirement + Test	Result - Remark	Verdict
	- lampholder; torque (Nm)		N/A
	- push-button switches; torque 0,8 Nm		N/A
3.6 (4.12.5)	Screwed glands; force (Nm).....		N/A
3.6 (4.13)	Mechanical strength		P
3.6 (4.13.1)	Impact tests:		P
	- fragile parts; energy (Nm)	0,5 Nm	P
	- other parts; energy (Nm)	0,7 Nm	P
	1) live parts		P
	2) linings		N/A
	3) protection		P
	4) covers		P
3.6 (4.13.2)	Metal parts have adequate mechanical strength		N/A
3.6 (4.13.3)	Straight test finger		P
3.6 (4.13.4)	Rough service luminaires		N/A
	- IP54 or higher		N/A
	a) fixed		N/A
	b) hand-held		N/A
	c) delivered with a stand		N/A
	d) for temporary installations and suitable for mounting on a stand		N/A
3.6 (4.13.6)	Tumbling barrel		N/A
3.6 (4.14)	Suspensions, fixings and means of adjusting		P
3.6 (4.14.1)	Mechanical load:		P
	A) four times the weight		P
	B) torque 2,5 Nm		P
	C) bracket arm; bending moment (Nm).....		N/A
	D) load track-mounted luminaires		N/A
	E) clip-mounted luminaires, glass-shelve. Thickness (mm)		N/A
	Metal rod. diameter (mm)		N/A
	Fixed luminaire or independent control gear without fixing devices		N/A
3.6 (4.14.2)	Load to flexible cables		N/A
	Mass (kg)	N/A	—
	Stress in conductors (N/mm ²)		N/A
	Mass (kg) of semi-luminaire		N/A

IEC 60598-2-3			
Clause	Requirement + Test	Result - Remark	Verdict
	Bending moment (Nm) of semi-luminaire		N/A
3.6 (4.14.3)	Adjusting devices:		N/A
	- flexing test; number of cycles.....		N/A
	- strands broken		N/A
	- electric strength test afterwards		N/A
3.6 (4.14.4)	Telescopic tubes: cords not fixed to tube; no strain on conductors		N/A
3.6 (4.14.5)	Guide pulleys		N/A
3.6 (4.14.6)	Strain on socket-outlets		N/A
3.6 (4.15)	Flammable materials		N/A
	- glow-wire test 650°C	See Test Table 3.15 (13.3.2)	N/A
	- spacing ≥ 30 mm		N/A
	- screen withstanding test of 13.3.1		N/A
	- screen dimensions		N/A
	- no fiercely burning material		N/A
	- thermal protection		N/A
	- electronic circuits exempted		N/A
3.6 (4.15.2)	Luminaires made of thermoplastic material with lamp control gear		N/A
	a) construction		N/A
	b) temperature sensing control		N/A
	c) surface temperature		N/A
3.6 (4.16)	Luminaires for mounting on normally flammable surfaces		P
	No lamp control gear	(compliance with Section 12)	N/A
	Provided with adaptor for a track meet the requirements for direct mounting on normally flammable surfaces		N/A
3.6 (4.16.1)	Lamp control gear spacing:		N/A
	- spacing 35 mm		N/A
	- spacing 10 mm		N/A
3.6 (4.16.2)	Thermal protection:		P
	- in lamp control gear		N/A
	- external		N/A
	- fixed position		N/A
	- temperature marked lamp control gear	120°C	P
3.6 (4.16.3)	Design to satisfy the test of 12.6	(see clause 12.6)	N/A
3.6 (4.17)	Drain holes		N/A

IEC 60598-2-3			
Clause	Requirement + Test	Result - Remark	Verdict
	Clearance at least 5 mm		N/A
3.6 (4.18)	Resistance to corrosion		P
3.6 (4.18.1)	- rust-resistance		P
3.6 (4.18.2)	- season cracking in copper		N/A
3.6 (4.18.3)	- corrosion of aluminium		P
3.6 (4.19)	Igniters compatible with ballast		N/A
3.6 (4.20)	Rough service vibration		N/A
3.6 (4.21)	Protective shield		N/A
3.6 (4.21.1)	Shield fitted if tungsten halogen lamps or metal halide lamps		N/A
	Shield of glass if tungsten halogen lamps		N/A
3.6 (4.21.2)	Particles from a shattering lamp not impair safety		N/A
3.6 (4.21.3)	No direct path		N/A
3.6 (4.21.4)	Impact test on shield		N/A
	Glow-wire test on lamp compartment..... :	See Test Table 3.15 (13.3.2)	N/A
3.6 (4.22)	Attachments to lamps not cause overheating or damage		N/A
3.6 (4.23)	Semi-luminaires comply Class II		N/A
3.6 (4.24)	Photobiological hazards		P
3.6 (4.24.1)	No excessive UV radiation if tungsten halogen lamps and metal halide lamps (Annex P)		N/A
3.6 (4.24.2)	Retinal blue light hazard		P
	Class of risk group assessed according to IEC/TR 62778 :	RG1	—
	Luminaires with E_{thr} :		N/A
	a) Fixed luminaires		N/A
	- distance x m, borderline between RG1 and RG2 .. :		N/A
	- marking and instruction according 3.2.23		N/A
	b) Portable and handheld luminaires		N/A
	- marking according 3.2.23 if RG1 exceeded at 200 mm according to IEC/TR 62778		N/A
	Portable luminaires for children IEC 60598-2-10 and Mains socket outlet nightlights IEC 60598-2-12 not exceed RG1 at 200 mm according to IEC/62778		N/A
3.6 (4.25)	Mechanical hazard		P
	No sharp point or edges		P
3.6 (4.26)	Short-circuit protection		N/A

IEC 60598-2-3			
Clause	Requirement + Test	Result - Remark	Verdict
3.6 (4.26.1)	Adequate means of uninsulated accessible SELV parts		N/A
3.6 (4.26.2)	Short-circuit test with test chain according 4.26.3		N/A
	Supply source ES1 PSE		N/A
	Test chain not melt through		N/A
	Test sample not exceed values of Table 12.1 and 12.2		N/A
3.6 (4.27)	Terminal blocks with integrated screwless earthing contacts		P
	Test according Annex V		N/A
	Pull test of terminal fixing (20 N)		N/A
	After test, resistance < 0,05 Ω		N/A
	Pull test of mechanical connection (50 N)		N/A
	After test, resistance < 0,05 Ω		N/A
	Voltage drop test, resistance < 0,05 Ω		N/A
3.6 (4.28)	Fixing of thermal sensing control		N/A
	Not plug-in or easily replaceable type		N/A
	Reliably kept in position		N/A
	No adhesive fixing if UV radiations from a lamp can degrade the fixing		N/A
	Not outside the luminaire enclosure		N/A
	Test of adhesive fixing:		N/A
	Max. temperature on adhesive material (°C) :	N/A	—
	100 cycles between t min and t max		N/A
	Temperature sensing control still in position		N/A
3.6 (4.29)	Luminaires with non-replaceable light source		N/A
	Not possible to replace light source		N/A
	Live part not accessible after parts have been opened by hand or tools		N/A
3.6 (4.30)	Luminaires with non-user replaceable light source		P
	If protective cover provide protection against electric shock and marked with “caution, electric shock risk” symbol:		P
	At least one fixing means requiring use of tool		P
3.6 (4.31)	Insulation between circuits		N/A
	Circuits insulated from LV supply fulfil requirements according 4.31.1 – 4.31.3		N/A

IEC 60598-2-3			
Clause	Requirement + Test	Result - Remark	Verdict
	Controllable luminaires requiring same level of insulation for all components, the insulation between control terminals and LV supply fulfil requirements according 4.31.1 – 4.31.3		N/A
3.6 (4.31.1)	SELV or PELV circuits		N/A
	Used SELV/PELV source		N/A
	Voltage $\leq$ ELV		N/A
	Insulating of SELV/PELV circuits from LV supply		N/A
	Insulating of SELV/PELV circuits from other non SELV/PELV circuits		N/A
	Insulating of SELV/PELV circuits from FELV		N/A
	Insulating of SELV/PELV circuits from other SELV/PELV circuits		N/A
	SELV/PELV circuits insulated from accessible parts according Table X.1		N/A
	Plugs not able to make any electrical contact with socket-outlets of other voltage systems		N/A
	Socket outlets does not admit plugs of other voltage systems		N/A
	Plugs and socket-outlets does not have protective conductor contact		N/A
3.6 (4.31.2)	FELV circuits		N/A
	Used FELV source		N/A
	Voltage $\leq$ ELV		N/A
	Insulating of FELV circuits from LV supply		N/A
	FELV circuits insulated from accessible parts according Table X.1		N/A
	Plugs not able to make any electrical contact with socket-outlets of other voltage systems		N/A
	Socket outlets does not admit plugs of other voltage systems		N/A
	Socket-outlets does not have protective conductor contact		N/A
3.6 (4.31.3)	Other circuits		N/A
	Other circuits insulated from accessible parts according Table X.1		N/A
	Class II construction with equipotential bonding for protection against indirect contacts with live parts:		N/A
	- conductive parts are connected together		N/A
	- test according 7.2.3		N/A

IEC 60598-2-3			
Clause	Requirement + Test	Result - Remark	Verdict
	- conductive part not cause an electric shock in case of an insulation fault		N/A
	- equipotential bonding in master/slave applications		N/A
	- master luminaire provided with terminal for accessible conductive parts of slave luminaires		N/A
	- slave luminaire constructed as class I		N/A
3.6 (4.32)	Overvoltage protective devices		P
	Comply with IEC 61643-11		P
	External to controlgear and connected to earth:		N/A
	- only in fixed luminaires		N/A
	- only connected to protective earth		N/A
3.6 (4.33)	Luminaire powered via information technology communication cabling		N/A
	Requirements for Class III luminaire		N/A
	Rated voltage within the range of ES1 and does not exceed maximum voltage of used connector		N/A
	Luminaire does not create any hazard from overvoltage	(see Annex 2)	N/A
3.6 (4.34)	Electromagnetic fields (EMF)		N/A
	No harmful electromagnetic fields		N/A
3.6 (4.35)	Protection against moving fan blades		N/A
	Test with a standard test finger		N/A
	Test with test probe acc. to Figure 13 (IEC 61032) for portable luminaire		N/A
	-hardness less than D60 Shore		N/A
	-peripheral speed less than 15 m/s		N/A
	-input power of fan ≤ 2 W at rated voltage		N/A
3.6 (4.36)	Track-mounted luminaires		N/A
	Test in accordance with Annex A of IEC60570:2003/AMD2:2019		N/A
3.6.1 (-)	At least IP X3 or X5 respectively. IP	IP66	P
	Column-integrated luminaires:		N/A
	- parts below 2,5 m. IP		N/A
	- parts above 2,5 m. IP		N/A
3.6.2 (-)	Suspension on span wires		N/A
3.6.3 (-)	Means for attaching the luminaire or external parts to its support appropriate to the weight		P
3.6.3.1 (-)	Static load test		P

IEC 60598-2-3			
Clause	Requirement + Test	Result - Remark	Verdict
	- drag coefficient.....:	1,2	P
	- loaded area (m ²).....:	0,0942 m ²	P
	- used load (N).....:	187 N	P
	- measured deformation (cm/m)	< 1 cm/m	P
	- no rotation		P
3.6.4 (-)	Adjustable lampholders		N/A
3.6.5 (-)	Luminaires installed above 5 m, glass covers shall be:		P
	a) glass that fractures into small pieces (test according to 3.6.5.1), or		N/A
	b) glass having a high impact shock resistance (test according to 3.6.5.2), or	See Test Report No. B5-3/121/B/24	P
	c) protected by any means to retain glass fragments		N/A
	For tunnel luminaires 3.6.5.1 apply		N/A
	Method of protection declared by the manufacturer		N/A
3.6.5.1 (-)	Protection by the use of glass that fractures into small pieces		N/A
	- number of particles is more than 40.....:		N/A
3.6.5.2 (-)	Protection by the use of high impact resistant glass		N/A
3.6.5.2.1 (-)	Glass covers have high mechanical strength		N/A
	Test according IEC 62262 with test apparatus according IEC 60068-2-75 with impact energy of 5J on preconditioned sample		N/A
3.6.5.2.2 (-)	Glass covers not break into large pieces		N/A
	- test according 3.6.5.1, number of particles is more than 20		N/A
3.6.6 (-)	Connection compartment of column-integrated luminaire		N/A
	- provides adequate space		N/A
	- means for attachment		N/A
	- means for attachment of metal corrosion-resistant		N/A
3.6.7 (-)	Compliance with ISO standard or other		N/A
3.6.8 (-)	Doors of column-integrated luminaires:		N/A
	- corrosion-resistant		N/A
	- opening only possible for an authorized person		N/A
	- impact test 5 Nm		N/A
	- sample show no damage		N/A
3.6.9 (-)	Column-integrated luminaire:		N/A
	- dimension of the cable entry slot (mm)		N/A

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Clause	Requirement + Test	Result - Remark	Verdict
	- cable path from the slot to the connection compartment (mm)		N/A
	- cable path free from obstruction that might cause abrasion of the cable		N/A

3.7 (11)	CREEPAGE DISTANCES AND CLEARANCES		P
3.7 (11.2)	Creepage distances and clearances	See Table 3.7 (11.2)	P
	Impulse withstand category (Normal category II) (Category III Annex U, Table U.1)	Category II ☒ Category III ☐	—
	Protected against pollution, reduced creepage and clearance according Annex P of IEC 61347-1		N/A
3.7 (11.2.2)	Creepage distances for frequency up to 30 kHz	See Test Table 3.7 (11.2) I	P
	Creepage distances for frequency over 30 kHz:		N/A
	- Controlgear marked with $\hat{U}_{OUT}$ and f_{UOUT} according IEC 61347-1, clause 7.1, item w	See Test Table 3.7 (11.2) II	N/A
	- Requirements according IEC 60664-4 for controlgear not covered by IEC 61347	See Test Table 3.7 (11.2) II	N/A
3.7 (11.2.3)	Clearances for frequency up to 30 kHz	See Test Table 3.7 (11.2) I	P
	Clearances distances for frequency over 30 kHz:		N/A
	- Controlgear marked with U_P	See Test Table 3.7 (11.2) II	N/A
	- Requirements according IEC 60664-4 for controlgear not covered by IEC 61347	See Test Table 3.7 (11.2) II	N/A

3.8 (7)	PROVISION FOR EARTHING		P
3.8 (7.2.1 + 7.2.3)	Accessible metal parts		P
	Metal parts in contact with supporting surface		P
	Resistance $< 0,5 \Omega$	0,02 Ω	P
	Self-tapping screws used		N/A
	Thread-forming screws		N/A
	Thread-forming screw used in a groove		N/A
	Protective earth makes contact first		N/A
	Terminal blocks with integrated screwless protective earthing contacts tested according Annex V		N/A
	Protective earthing of the luminaire not via built-in control gear		P
3.8 (7.2.2 + 7.2.3)	Protective earth continuity in joints, etc.		N/A

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Clause	Requirement + Test	Result - Remark	Verdict
3.8 (7.2.4)	Locking of clamping means		P
	Compliance with 4.7.3		P
3.8 (7.2.5)	Protective earth terminal integral part of connector socket		N/A
3.8 (7.2.6)	Protective earth terminal adjacent to mains terminals		P
3.8 (7.2.7)	Electrolytic corrosion of the protective earth terminal		P
3.8 (7.2.8)	Material of protective earth terminal		P
	Contact surface bare metal		N/A
3.8 (7.2.10)	Class II luminaire for looping-in		N/A
	Double or reinforced insulation to functional earth		N/A
3.8 (7.2.11)	Protective earthing core coloured green-yellow		P
	Length of earth conductor		P
3.8 (7.2.12)	PELV circuit connected to protective earth for functional purpose		N/A

3.9 (14)	SCREW TERMINALS		N/A
	Separately approved; component list	(see Annex 1)	N/A
	Part of the luminaire	(see Annex 3)	N/A

3.9 (15)	SCREWLESS TERMINALS AND ELECTRICAL CONNECTIONS		P
	Separately approved; component list..... :	(see Annex 1)	P
	Part of the luminaire :	(see Annex 4)	N/A

3.10 (5)	EXTERNAL AND INTERNAL WIRING		P
3.10 (5.2)	Supply connection and external wiring		P
3.10 (5.2.1)	Means of connection :	Connector	P
	Outdoor luminaire has not PVC insulated external wiring if not Class III or SELV/PELV circuits ≤ 25 V AC/60 V DC/25 V peak interrupted DC voltage with frequency 10Hz -200 Hz or protected from outdoor environment		N/A
3.10 (5.2.2)	Type of cable :		N/A
	Nominal cross-sectional area (mm ²) :		N/A
	Cables equal to IEC 60227 or IEC 60245		N/A
3.10 (5.2.3)	Type of attachment, X, Y or Z		N/A
3.10 (5.2.5)	Type Z not connected to screws		N/A

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Clause	Requirement + Test	Result - Remark	Verdict
3.10 (5.2.6)	Cable entries:		P
	- suitable for introduction	Rubber grommet	P
	- adequate degree of protection		P
3.10 (5.2.7)	Cable entries through rigid material have rounded edges		N/A
3.10 (5.2.8)	Insulating bushings:		N/A
	- suitably fixed		N/A
	- material in bushings		N/A
	- material not likely to deteriorate		N/A
	- tubes or guards made of insulating material		N/A
3.10 (5.2.9)	Locking of screwed bushings		N/A
3.10 (5.2.10)	Cord anchorage:		P
	- covering protected from abrasion		P
	- clear how to be effective		P
	- no mechanical or thermal stress		P
	- no tying of cables into knots etc.		P
	- insulating material or lining		P
3.10 (5.2.10.1)	Cord anchorage for type X attachment:		N/A
	a) at least one part fixed		N/A
	b) types of cable		N/A
	c) no damaging of the cable		N/A
	d) whole cable can be mounted		N/A
	e) no touching of clamping screws		N/A
	f) metal screw not directly on cable		N/A
	g) replacement without special tool		N/A
	Glands not used as anchorage		N/A
	Labyrinth type anchorages		N/A
3.10 (5.2.10.2)	Adequate cord anchorage for type Y and type Z attachment		N/A
3.10 (5.2.10.3)	Tests:		N/A
	- impossible to push cable; unsafe		N/A
	- pull test: 25 times; pull (N) :		N/A
	- torque test: torque (Nm) :		N/A

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Clause	Requirement + Test	Result - Remark	Verdict
	- displacement ≤ 2 mm		N/A
	- no movement of conductors		N/A
	- no damage of cable or cord		N/A
	- function independent of electrical connection		N/A
3.10 (5.2.10.4)	Luminaire with/ designed for use with supply cord with maximum current of 2A:		N/A
	- Ordinary Class III luminaire supplied with SELV ≤ 25 V RMS/60V DC		N/A
	- Ordinary Class III luminaire supplied with PELV ≤ 12 V RMS/30V DC		N/A
	- Other than ordinary Class III luminaire supplied with voltage ≤ 12 V RMS/30V DC		N/A
	Pull test of 30N		N/A
3.10 (5.2.11)	External wiring passing into luminaire		N/A
3.10 (5.2.12)	Looping-in terminals		N/A
3.10 (5.2.13)	Wire ends not tinned		N/A
	Wire ends tinned: no cold flow		N/A
3.10 (5.2.14)	Mains plug same protection		N/A
	Class III luminaire plug		N/A
	No unsafe compatibility		N/A
3.10 (5.2.15)	Connectors for Class III luminaires (IEC 60603 or IEC 62680)		N/A
3.10 (5.2.16)	Appliance inlets (IEC 60320)		N/A
	Installation couplers (IEC 61535)		N/A
	Appliance inlet or connector systems (IEC 61984)		N/A
3.10 (5.2.17)	No standardized interconnecting cables properly assembled		N/A
3.10 (5.2.18)	Used plug in accordance with		N/A
	- IEC 60083		N/A
	- other standard		N/A
3.10 (5.3)	Internal wiring		P
3.10 (5.3.1)	Internal wiring of suitable size and type		P
	Through wiring		N/A

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Clause	Requirement + Test	Result - Remark	Verdict
	- not delivered/ mounting instruction		N/A
	- factory assembled		N/A
	- socket outlet loaded (A) :		N/A
	- temperatures :	(see Annex 2)	N/A
	Green-yellow for protective earth only		P
3.10 (5.3.1.1)	Internal wiring connected directly to fixed wiring		P
	Cross-sectional area (mm ²)..... :	0,5 mm ²	P
	Insulation thickness	0,6 mm	P
	Extra insulation added where necessary		N/A
3.10 (5.3.1.2)	Internal wiring connected to fixed wiring via internal current-limiting device		N/A
	Cross-sectional area (mm ²)..... :		N/A
3.10 (5.3.1.3)	Double or reinforced insulation for class II		N/A
3.10 (5.3.1.4)	Conductors without insulation		N/A
3.10 (5.3.1.5)	SELV/PELV current-carrying parts		N/A
3.10 (5.3.1.6)	Insulation thickness other than PVC or rubber		N/A
3.10 (5.3.2)	Sharp edges etc.		P
	No moving parts of switches etc.		N/A
	Joints, raising/lowering devices		N/A
	Telescopic tubes etc.		N/A
	No twisting over 360°		P
3.10 (5.3.3)	Insulating bushings:		N/A
	- suitable fixed		N/A
	- material in bushings		N/A
	- material not likely to deteriorate		N/A
	- cables with protective sheath		N/A
3.10 (5.3.4)	Joints and junctions effectively insulated		N/A
3.10 (5.3.5)	Strain on internal wiring		N/A
3.10 (5.3.6)	Wire carriers		N/A
3.10 (5.3.7)	Wire ends not tinned		N/A
	Wire ends tinned: no cold flow		N/A

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Clause	Requirement + Test	Result - Remark	Verdict
3.10 (5.4)	Test to determine suitability of conductors having a reduced cross-sectional area		N/A
	Under test the temperature of the luminaire wiring insulation not exceed the limits stated in Table 12.2	(see Annex 2)	N/A
	No damage to luminaire wiring after test		N/A
3.10.1 (-)	Cord anchorage if applicable		P
	- pull test: 25 times; pull (N):	60 N	P
	- torque test: torque (Nm):	0,25 Nm	P

3.11 (8)	PROTECTION AGAINST ELECTRIC SHOCK		P
3.11 (8.2.1)	Live parts not accessible		P
	Basic insulated parts not used on the outer surface without appropriate protection		P
	Basic insulated parts not accessible with standard test finger on portable, settable and adjustable luminaires		N/A
	Basic insulated parts not accessible with Ø 50 mm probe from outside, other types of luminaires		N/A
	Lamp and starterholders in portable and adjustable luminaires comply with double or reinforced insulation requirements		N/A
	Basic insulation only accessible under lamp or starter replacement		N/A
	Protection in any position		P
	Double-ended tungsten filament lamp		N/A
	Insulation lacquer not reliable		N/A
	Double-ended high pressure discharge lamp		N/A
	Relevant warning according to 3.2.18 fitted to the luminaire		N/A
3.11 (8.2.2)	Portable luminaire adjusted in most unfavourable position		N/A
3.11 (8.2.3.a)	Class II luminaire:		N/A
	- basic insulated metal parts not accessible during starter or lamp replacement		N/A
	- basic insulation not accessible other than during starter or lamp replacement		N/A
	- glass protective shields not used as supplementary insulation		N/A

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Clause	Requirement + Test	Result - Remark	Verdict
3.11 (8.2.3.b)	BC lamp holder of metal in class I luminaires shall be connected to protective earth		N/A
3.11 (8.2.3.c)	SELV circuits with exposed current carrying parts:		N/A
	Ordinary luminaire:		N/A
	- voltage under load/ no-load AC (V)..... :		N/A
	- voltage under load/ no-load DC (V)..... :		N/A
	- interrupted DC voltage (V) :		N/A
	- touch current if applicable (mA) :		N/A
	One conductive part insulated if required		N/A
	Other than ordinary luminaire:		N/A
	- voltage under load/ no-load AC (V)..... :		N/A
	- voltage under load/ no-load DC (V)..... :		N/A
	- interrupted DC voltage (V) :		N/A
	Class III luminaire only for connection to SELV		N/A
	Class III luminaire not provided with means for protective earthing		N/A
3.11 (8.2.3.d)	PELV circuits with exposed current carrying parts:		N/A
	Ordinary luminaire:		N/A
	- voltage under load/ no-load AC (V)..... :		N/A
	- voltage under load/ no-load DC (V)..... :		N/A
	Other than ordinary luminaire:		N/A
	- voltage under load/ no-load AC (V)..... :		N/A
	- voltage under load/ no-load DC (V)..... :		N/A
	One pole insulated if required		N/A
3.11 (8.2.4)	Portable luminaire have protection independent of supporting surface		N/A
3.11 (8.2.5)	Compliance with the standard test finger or relevant probe		P
3.11 (8.2.6)	Covers reliably secured		P
3.11 (8.2.7)	Luminaire other than below with capacitor > 0,5 μ F not exceed 50 V 1 min after disconnection		N/A
	Portable luminaire with capacitor > 0,1 μ F (0.25) not exceed 34 V 1 s after disconnection		N/A
	Other luminaires with capacitor > 0,1 μ F (0.25) with plug and track adaptors not exceed 60 V 5 s after disconnection		N/A

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Clause	Requirement + Test		Verdict
3.12 (12)	ENDURANCE TEST AND THERMAL TEST		P
3.12 (-)	If IP > IP 20 relevant test of (12.4), (12.5), (12.6) and (12.7) after (9.2) before (9.3) as specified in 3.13		—
3.12 (12.2)	Selection of lamps and ballasts		—
	Lamp used according Annex B	(Lamp used see Annex 2)	—
	Control gear if separate and not supplied	(Control gear used see Annex 2)	—
3.12 (12.3)	Endurance test:		P
	a) mounting-position	as normal use	—
	b) test temperature (°C)	50 + 10°C	—
	c) total duration (h)	240	—
	d) supply voltage (V)	264	—
	d) if not equipped with control gear, constant voltage/current (V) or (A)	N/A	—
3.12 (12.3.1d)	d) Class III luminaires powered via information technology communication cable:		N/A
	- voltage under normal operation (V).....	N/A	—
	- voltage under abnormal operation (V).....	N/A	—
	e) luminaire ceases to operate	N/A	—
	f) luminaire with constant light output function		N/A
3.12 (12.3.2)	After endurance test:		P
	- no part unserviceable		P
	- luminaire not unsafe		P
	- no damage to track system		N/A
	- marking legible		P
	- no cracks, deformation etc.		P
3.12 (12.4)	Thermal test (normal operation)	(see Annex 2)	P
3.12 (12.5)	Thermal test (abnormal operation)	(see Annex 2)	N/A
3.12 (12.6)	Thermal test (failed lamp control gear condition):		N/A
3.12 (12.6.1)	Through wiring or looping-in wiring loaded by a current of (A)	N/A	—
	- case of abnormal conditions	N/A	—
	- electronic lamp control gear		N/A
	- measured winding temperature (°C): at 1,1 Un	N/A	—

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Clause	Requirement + Test	Result - Remark	Verdict
	- measured mounting surface temperature (°C) at 1,1 Un		N/A
	- calculated mounting surface temperature (°C)		N/A
	- track-mounted luminaires		N/A
3.12 (12.6.2)	Temperature sensing control		N/A
	- case of abnormal conditions	N/A	—
	- thermal link		N/A
	- manual reset cut-out		N/A
	- auto reset cut-out		N/A
	- measured mounting surface temperature (°C)		N/A
	- track-mounted luminaires		N/A
3.12 (12.7)	Thermal test (failed lamp control gear in plastic luminaires):		N/A
3.12 (12.7.1)	Luminaire without temperature sensing control		N/A
3.12 (12.7.1.1)	Luminaire with fluorescent lamp ≤ 70W		N/A
	Test method 12.7.1.1 or Annex W	N/A	—
	Test according to 12.7.1.1:		N/A
	- case of abnormal conditions	N/A	—
	- Ballast failure at supply voltage (V)	N/A	—
	- Components retained in place after the test		N/A
	- Test with standard test finger after the test		N/A
	Test according to Annex W:		N/A
	- case of abnormal conditions	N/A	—
	- measured winding temperature (°C): at 1,1 Un	N/A	—
	- measured temperature of fixing point/exposed part (°C): at 1,1 Un	N/A	—
	- calculated temperature of fixing point/exposed part (°C)	N/A	—
	Ball-pressure test	See Table 3.15 (13.2.1)	N/A
3.12 (12.7.1.2)	Luminaire with discharge lamp, fluorescent lamp > 70W, transformer > 10 VA		N/A
	- case of abnormal conditions	N/A	—
	- measured winding temperature (°C): at 1,1 Un	N/A	—
	- measured temperature of fixing point/exposed part (°C): at 1,1 Un	N/A	—

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Clause	Requirement + Test	Result - Remark	Verdict
	- calculated temperature of fixing point/exposed part (°C)	N/A	—
	Ball-pressure test	See Table 3.15 (13.2.1)	N/A
3.12 (12.7.1.3)	Luminaire with short circuit proof transformers ≤ 10 VA		N/A
	- case of abnormal conditions	N/A	—
	- Components retained in place after the test		N/A
	- Test with standard test finger after the test		N/A
3.12 (12.7.2)	Luminaire with temperature sensing control		N/A
	- thermal link	Yes ☐ No ☐	—
	- manual reset cut-out	Yes ☐ No ☐	—
	- auto reset cut-out	Yes ☐ No ☐	—
	- case of abnormal conditions	N/A	—
	- highest measured temperature of fixing point/ exposed part (°C):	N/A	—
	Ball-pressure test:	See Table 3.15 (13.2.1)	N/A
3.12.1 (-)	Temperature reduction if for outdoor use only		P
3.12.2 (-)	(See above)		—
3.12.3 (-)	Glass covers used within the thermal limits declared by the glass manufacturer		N/A

3.13 (9)	RESISTANCE TO DUST AND MOISTURE		P
3.13.1 (-)	If IP > IP 20 the order of tests as specified in clause 3.12		P
3.13 (9.2)	Tests for ingress of dust, solid objects and moisture:		P
	- classification according to IP	IP66	—
	- mounting position during test	down-lighting	—
	- fixing screws tightened; torque (Nm)	N/A	—
	- tests according to clauses	9.2.2, 9.2.7	—
	- electric strength test afterwards		P
	a) no deposit in dust-proof luminaire		N/A
	b) no talcum in dust-tight luminaire	IP6X	P
	c) no trace of water on current-carrying parts or on insulation where it could become a hazard	IPX6	P
	c.1) For luminaires without drain holes – no water entry	IPX6	P

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Clause	Requirement + Test	Result - Remark	Verdict
	c.2) For luminaires with drain holes – no hazardous water entry		N/A
	d) no water in watertight, pressure watertight, high pressure and temperature water jet-proof or high pressure and cold water jet-proof luminaire		N/A
	e) no contact with live parts (IP 2X)		N/A
	e) no entry into enclosure (IP 3X and IP 4X)		N/A
	e) no contact with live parts through drain holes and ventilation slots (IP3X and IP4X)		N/A
	f) no trace of water on part of lamp requiring protection from splashing water		N/A
	g) no damage of protective shield or glass envelope		P
3.13 (9.3)	Humidity test 48 h		P

3.14 (10)	INSULATION RESISTANCE AND ELECTRIC STRENGTH		P
3.14 (10.2.1)	Insulation resistance test		P
	Cable or cord covered by metal foil or replaced by a metal rod of mm Ø		—
	Insulation resistance (MΩ)	See below	—
	SELV/PELV:		N/A
	- between current-carrying parts of different polarity :		N/A
	- between current-carrying parts and mounting surface..... :		N/A
	- between current-carrying parts and metal parts of the luminaire		N/A
	- between the outer surface of a flexible cord or cable where it is clamped in a cord anchorage and accessible metal parts..... :		N/A
	- Insulation bushings as described in Section 5		N/A
	Other than SELV/PELV:		N/A
	- between live parts of different polarity		P
	- between live parts and mounting surface	> 10 MΩ	P
	- between live parts and metal parts	> 10 MΩ	P
	- between live parts of different polarity through action of a switch..... :		N/A
	- between the outer surface of a flexible cord or cable where it is clamped in a cord anchorage and accessible metal parts..... :	> 10 MΩ	P
	- Insulation bushings as described in Section 5	> 10 MΩ	P

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Clause	Requirement + Test	Result - Remark	Verdict
3.14 (10.2.2)	Electric strength test		P
	Dummy lamp		N/A
	Luminaires with ignitors after 24 h test		N/A
	Luminaires with manual ignitors		N/A
	Test voltage (V)	See below	P
	SELV/PELV:		N/A
	- between current-carrying parts of different polarity :		N/A
	- between current-carrying parts and mounting surface..... :		N/A
	- between current-carrying parts and metal parts of the luminaire		N/A
	- between the outer surface of a flexible cord or cable where it is clamped in a cord anchorage and accessible metal parts..... :		N/A
	- Insulation bushings as described in Section 5		N/A
	Other than SELV/PELV:		P
	- between live parts of different polarity		N/A
	- between live parts and mounting surface	1480 V	P
	- between live parts and metal parts	1480 V	P
	- between live parts of different polarity through action of a switch..... :		N/A
	- between the outer surface of a flexible cord or cable where it is clamped in a cord anchorage and accessible metal parts..... :	1480 V	P
	- Insulation bushings as described in Section 5	1480 V	P
3.14 (10.3)	Touch current (mA)..... :		N/A
	Protective conductor current (mA)..... :	0,11 mA	P

3.15 (13)	RESISTANCE TO HEAT, FIRE AND TRACKING		P
3.15 (13.2.1)	Ball-pressure test	See Test Table 3.15 (13.2.1)	P
3.15 (13.3.1)	Needle-flame test (10 s)..... :	See Test Table 3.15 (13.3.1)	P
3.15 (13.3.2)	Glow-wire test (650°C)	See Test Table 3.15 (13.3.2)	N/A
3.15 (13.4)	Proof tracking test (IEC 60112)..... :	See Test Table 3.15 (13.4)	N/A

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Clause	Requirement + Test	Result - Remark	Verdict

3.7 (11.2)	TABLE I: Creepage distances and clearances							P
	Minimum distances (mm) for a.c. up to 30 kHz sinusoidal voltages							P
	Applicable part of IEC 60598-1 Table 11.1.A*, 11.1.B* and 11.2*							P
	Insulation type **	Measured clearance	Required		Measured creepage	Required		
			clearance	*Table		creepage	*Table	
Distance 1:	R	6,4 mm	1,5 mm	11.1.B	8,8 mm	220V - 2,3 mm 240V – 2,4 mm	11.1.A	
Working voltage (V)					220-240		—	
PTI					< 600 ☒ ≥ 600 ☐		—	
Pulse voltage or U_P if applicable (kV)							—	
Supplementary information:								
Distance 2:								
Working voltage (V)							—	
PTI					< 600 ☐ ≥ 600 ☐		—	
Pulse voltage or U_P if applicable (kV)							—	
Supplementary information								
Distance 3:								
Working voltage (V)							—	
PTI					< 600 ☐ ≥ 600 ☐		—	
Pulse voltage or U_P if applicable (kV)							—	
Supplementary information:								

** Insulation type: B – Basic; S – Supplementary; R – Reinforced. See also IEC 60598-1 Annex M.

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Clause	Requirement + Test	Result - Remark	Verdict

3.7 (11.2)	TABLE II: Creepage distances and clearances							N/A
Minimum distances (mm) for a.c. higher than 30 kHz sinusoidal voltages								
Applicable part of IEC 61347-1 Table 7 and 8* or IEC 60664-4 Table 1 and 2								
Distances	Insulation type **	Measured clearance	Required		Measured creepage	Required		
			clearance	*Table		creepage	*Table	
Distance 1:								
Working voltage (V)							—	
Frequency if applicable (kHz)							—	
PTI					< 600 ☐ ≥ 600 ☐		—	
Peak value of the working voltage $\hat{U}_{out}$ if applicable (kV)							—	
Supplementary information:								
Distance 2:								
Working voltage (V)							—	
Frequency if applicable (kHz)							—	
PTI					< 600 ☐ ≥ 600 ☐		—	
Peak value of the working voltage $\hat{U}_{out}$ if applicable (kV)							—	
Supplementary information:								
Distance 3:								
Working voltage (V)							—	
Frequency if applicable (kHz)							—	
PTI					< 600 ☐ ≥ 600 ☐		—	
Peak value of the working voltage $\hat{U}_{out}$ if applicable (kV)							—	
Supplementary information:								

** Insulation type: B – Basic; S – Supplementary; R – Reinforced.

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Clause	Requirement + Test		Result - Remark	Verdict
3.15 (13.2.1)	TABLE: Ball Pressure Test of Thermoplastics			P
Allowed impression diameter (mm) :		2		—
Object/ Part No./ Material		Manufacturer/ trademark	Test temperature (°C)	Impression diameter (mm)
Connector		BJB	125	1,0
Supplementary information:				

3.15 (13.3.1)	TABLE: Needle-flame test				P
Object/ Part No./ Material	Manufacturer/ trademark	Duration of application of test flame (ta); (s)	Ignition of specified layer Yes/No	Duration of burning (tb) (s)	Verdict
Connector	BJB	10	No	-	P
Supplementary information:					

3.15 (13.3.2)	TABLE: Resistance to heat and fire - Glow wire tests					N/A
Object/ Part No./ Material	Manufacturer/ trademark	Glow wire test (°C)				
		650		750		850
		te	ti	te	ti	
Ignition of the specified layer placed underneath the test specimen (Yes/No)..... :						
Supplementary information:						

3.15 (13.4)	TABLE: Proof tracking test				N/A
Test voltage PTI		175 V			—
Object/ Part No./ Material	Manufacturer/ trademark	Withstand 50 drops without failure on three places or on three specimens			Verdict
Supplementary information:					

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ANNEX 1	TABLE: Critical components information						P
Object / part No. <i>Nr obiektu / komponentu</i>	Code	Manufacturer/ trademark <i>Producent / znak towarowy</i>	Type / model <i>Typ / model</i>	Technical data <i>Dane techniczne</i>	Standard <i>Norma</i>	Mark(s) of conformity ¹⁾ <i>Znak zgodności</i>	
LED Modules <i>Moduły LED</i>	B	LUG	ML21XXXYY.WQQQ. UUV (LUXEON 5050 modules) (choice sheet below)	Tc -40°C to +85°C	EN 62031	Tested and accepted by IMiF PREDOM Division Test Report No. Z7-3/143/B/21/M1	

Choice sheet of the Urbino LED S series modules LUXEON 5050:
Zbiór możliwości modułów opraw Urbino LED S – seria
Example of symbol (Przykład):

ML21XXXYY.WQQQ.UUV

1 2 3 4 5 6 7 8

Designations used on the marking of LED boards (*Oznaczenia stosowane na modułach LED*):

- | | |
|--------|--|
| 1. ML | - PCB designation (<i>Oznaczenie PCB</i>)
(ML – LED module) (<i>ML – moduł LED</i>) |
| 2. 21 | - Year of the project (<i>Rok produkcji</i>)
21, 22, 23, 24 |
| 3. XXX | - Number of the project: (<i>Numer projektu</i>):
Luxeon - 660, 661, 663, 670, 671, 672, 673, 680, 681, 682, 683, 690, 691, 692, 693 |
| 4. YY | - Project variant (PCB design, milling, dimensions, soldermask color, laminate thickness, LED configuration):
(<i>Wariant projektu (projekt PCB, frezowanie, wymiary, kolor maski, grubość laminatu, konfiguracja LED)</i>):
00...99 |
| 5. W | Light color (<i>Kolor światła</i>) :
W: White (<i>Biały</i>) |
| 6. QQQ | - CRI and CCT:
722: CRI 70 and 2200K
727: CRI 70 and 2700K
730: CRI 70 and 3000K
735: CRI 70 and 3500K
740: CRI 70 and 4000K
750: CRI 70 and 5000K
757: CRI 70 and 5700K
765: CRI 70 and 6500K
822: CRI 80 and 2200K
827: CRI 80 and 2700K
830: CRI 80 and 3000K
835: CRI 80 and 3500K
840: CRI 80 and 4000K
850: CRI 80 and 5000K
857: CRI 80 and 5700K
865: CRI 80 and 6500K |
| 7. UU | - Assembly variant (selected components not mounted) (<i>Wariant montażowy (wybrane komponenty niezamontowane)</i>):
01...99 |
| 8. V | - NTC Thermistor type (<i>Typ termistora NTC</i>):
A - none
B – 10K
C – 47K |

IEC 60598-2-3			
Clause	Requirement + Test	Result - Remark	Verdict

ANNEX 1	TABLE: Critical components information						P
Object / part No. <i>Nr obiektu / komponentu</i>	Code	Manufacturer/ trademark <i>Producent / znak towarowy</i>	Type / model <i>Typ / model</i>	Technical data <i>Dane techniczne</i>	Standard <i>Norma</i>	Mark(s) of conformity ¹⁾ <i>Znak zgodności</i>	
LED Modules <i>Moduły LED</i>	B	LUG	ML21XXXXYY.WQQQ. UUV (CREE XPG3 modules) (choice sheet below)	Tc -40°C to +85°C	EN 62031	Tested and accepted by IMiF PREDOM Division Test Report No. B10- 3/089/B/22/M1	

Choice sheet of the Urbino LED S series modules CREE XPG3:
Zbiór możliwości modułów opraw Urbino LED S – seria
Example of symbol (Przykład):

ML21XXXYY.WQQQ.UUV

1 2 3 4 5 6 7 8

Designations used on the marking of LED boards (*Oznaczenia stosowane na modułach LED*):

- | | |
|--------|--|
| 1. ML | - PCB designation (<i>Oznaczenie PCB</i>)
(ML – LED module) (<i>ML – moduł LED</i>) |
| 2. 21 | - Year of the project (<i>Rok produkcji</i>)
21, 22, 23, 24 |
| 3. XXX | - Number of the project: (<i>Numer projektu</i>):
Cree - 600, 601, 610, 611 |
| 4. YY | - Project variant (PCB design, milling, dimensions, soldermask color, laminate thickness, LED configuration):
(<i>Wariant projektu (projekt PCB, frezowanie, wymiary, kolor maski, grubość laminatu, konfiguracja LED)</i>):
00...99 |
| 5. W | Light color (<i>Kolor światła</i>) :
W: White (<i>Biały</i>) |
| 6. QQQ | - CRI and CCT:
722: CRI 70 and 2200K
727: CRI 70 and 2700K
730: CRI 70 and 3000K
735: CRI 70 and 3500K
740: CRI 70 and 4000K
750: CRI 70 and 5000K
757: CRI 70 and 5700K
765: CRI 70 and 6500K
822: CRI 80 and 2200K
827: CRI 80 and 2700K
830: CRI 80 and 3000K
835: CRI 80 and 3500K
840: CRI 80 and 4000K
850: CRI 80 and 5000K
857: CRI 80 and 5700K
865: CRI 80 and 6500K |
| 7. UU | - Assembly variant (selected components not mounted): (<i>Wariant montażowy (wybrane komponenty niezamontowane)</i>):
01...99 |
| 8. V | - NTC Thermistor type (<i>Typ termistora NTC</i>):
A - none
B – 10K
C – 47K |

IEC 60598-2-3			
Clause	Requirement + Test	Result - Remark	Verdict

ANNEX 1	TABLE: Critical components information						P
Object / part No. <i>Nr obiektu / komponentu</i>	Code	Manufacturer/ trademark <i>Producent / znak towarowy</i>	Type / model <i>Typ / model</i>	Technical data <i>Dane techniczne</i>	Standard <i>Norma</i>	Mark(s) of conformity ¹⁾ <i>Znak zgodności</i>	
Control gear <i>Zasilacz</i>	A	OSRAM	OT100W/UNV/800C/2D IMLT2/P6	220..240V, 50-60Hz, ta= -40...+55°C, tc max=90°C	EN 61347-1 EN 61347-2-13	ENEC	
Control gear <i>Zasilacz</i>	A	OSRAM	OT 110/170...240/1A0 1DIMLT2 G1 CE	220..240V, 50-60Hz, ta= -40...+55°C, tc max=85°C	EN 61347-1 EN 61347-2-13	ENEC	
Control gear <i>Zasilacz</i>	A	OSRAM	OT 20/170-240/1A0 1DIM LT2 G1 CE	220..240V, 50-60Hz, ta= -40...+60°C, tc max=75°C	EN 61347-1 EN 61347-2-13	ENEC	
Control gear <i>Zasilacz</i>	A	OSRAM	OT 75/170...240/1A0 1DIMLT2 G1 CE	220..240V, 50-60Hz, ta= -40...+55°C, tc max=80°C	EN 61347-1 EN 61347-2-13	ENEC	
Control gear <i>Zasilacz</i>	A	OSRAM	OT DX 40/220...240/1A0 DIMA LT2 E	220..240V, 50-60Hz, ta= -40...+55°C, tc max=800C	EN 61347-1 EN 61347-2-13	ENEC	
Control gear <i>Zasilacz</i>	A	OSRAM	OT DX 75/220...240/1A0 DIMA LT2 E	220..240V, 50-60Hz, ta= -40...+55°C, tc max=850C	EN 61347-1 EN 61347-2-13	ENEC	
Control gear <i>Zasilacz</i>	A	OSRAM	OT DX 110/220...240/1A0 DIMA LT2 E	220..240V, 50-60Hz, ta= -40...+55°C, tc max=850C	EN 61347-1 EN 61347-2-13	ENEC	
Control gear <i>Zasilacz</i>	A	OSRAM	OT 20/170...240/1A0 4DIMLT2 G2 CE	220..240V, 50-60Hz, ta= -40...+60°C, tc max=750C	EN 61347-1 EN 61347-2-13	ENEC	
Control gear <i>Zasilacz</i>	A	OSRAM	OT 40/170...240/1A0 4DIMLT2 G2 CE	220..240V, 50-60Hz, ta= -40...+60°C, tc max=800C	EN 61347-1 EN 61347-2-13	ENEC	
Control gear <i>Zasilacz</i>	A	OSRAM	OT 75/170...240/1A0 4DIMLT2 G2 CE	220..240V, 50-60Hz, ta= -40...+55°C, tc max=850C	EN 61347-1 EN 61347-2-13	ENEC	
Control gear <i>Zasilacz</i>	A	OSRAM	OT 110/170...240/1A0 4DIMLT2 G2 CE	220..240V, 50-60Hz, ta= -40...+60°C, tc max=750C	EN 61347-1 EN 61347-2-13	ENEC	
Control gear <i>Zasilacz</i>	A	OSRAM	OT 20/170...240/1A0 1DIMLT2 G1 CE	220..240V, 50-60Hz, ta= -40...+55°C, tc max=850C	EN 61347-1 EN 61347-2-13	ENEC	
Control gear <i>Zasilacz</i>	A	OSRAM	OT 40/170...240/1A0 1DIMLT2 G1 CE	220..240V, 50-60Hz, ta= -40...+60°C, tc max=800C	EN 61347-1 EN 61347-2-13	ENEC	
Control gear <i>Zasilacz</i>	A	OSRAM	OT 40/120...277/1A0 4DIMLT2 E	220..240V, 50-60Hz, ta= -40...+60°C, tc max=800C	EN 61347-1 EN 61347-2-13	ENEC	
Control gear <i>Zasilacz</i>	A	OSRAM	OT 60/170...240/1A0 4DIMLT2 E	220..240V, 50-60Hz, ta= -40...+60°C, tc max=850C	EN 61347-1 EN 61347-2-13	ENEC	
Control gear <i>Zasilacz</i>	A	OSRAM	OT 90/170...240/1A0 4DIMLT2 E	220..240V, 50-60Hz, ta= -40...5500C, tc max=900C	EN 61347-1 EN 61347-2-13	ENEC	
Control gear <i>Zasilacz</i>	A	OSRAM	OT 50/120...277/800 2DIMLT2 P6	220..240V, 50-60Hz, ta= -40...+55°C, tc max=850C	EN 61347-1 EN 61347-2-13	ENEC	
Control gear <i>Zasilacz</i>	A	OSRAM	OT 50/120...277/1A2 2DIMLT2 P6	220..240V, 50-60Hz, ta= -40...+55°C, tc max=800C	EN 61347-1 EN 61347-2-13	ENEC	
Control gear <i>Zasilacz</i>	A	OSRAM	OT 100/120...277/800 2DIMLT2 P6	220..240V, 50-60Hz, ta= -40...+55°C, tc max=850C	EN 61347-1 EN 61347-2-13	ENEC	

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Clause	Requirement + Test	Result - Remark	Verdict

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Object / part No. <i>Nr obiektu / komponentu</i>	Code	Manufacturer/ trademark <i>Producent / znak towarowy</i>	Type / model <i>Typ / model</i>	Technical data <i>Dane techniczne</i>	Standard <i>Norma</i>	Mark(s) of conformity ¹⁾ <i>Znak zgodności</i>	
Control gear <i>Zasilacz</i>	A	OSRAM	OT 110/120...277/1A4 2DIMLT2 P6	220..240V, 50-60Hz, ta= -40...+55°C, tc max=85°C	EN 61347-1 EN 61347-2-13	ENEC	
Control gear <i>Zasilacz</i>	A	OSRAM	OT 60/220...240/1A4 1DIMA P7	220..240V, 50-60Hz, ta= -40...+55°C, tc max=85°C	EN 61347-1 EN 61347-2-13	ENEC	
Control gear <i>Zasilacz</i>	A	OSRAM	OT 100/220...240/1A4 1DIMA P7	220..240V, 50-60Hz, ta= -40...+55°C, tc max=85°C	EN 61347-1 EN 61347-2-13	ENEC	
Control gear <i>Zasilacz</i>	A	OSRAM	OT 75/UNV/1A0 2DIM P7	120..277V, 50-60Hz, ta= -40...+55°C, tc max=85°C	EN 61347-1 EN 61347-2-13	ENEC	
Control gear <i>Zasilacz</i>	A	OSRAM	OT 100/UNV/1A0 2DIM P7	120..277V, 50-60Hz, ta= -40...+55°C, tc max=85°C	EN 61347-1 EN 61347-2-13	ENEC	
Control gear <i>Zasilacz</i>	A	OSRAM	OT 100/ 220-240/1A4 2DIM P7	220..240V, 50-60Hz, ta= -40...+55°C, tc max=85°C	EN 61347-1 EN 61347-2-13	ENEC	
Control gear <i>Zasilacz</i>	A	OSRAM	IT DALI 20/220...240/1A0 E	220...240 V/50/60Hz, Ta =-40...+60 °C, Tc max =75 °C	EN 61347-1 EN 61347-2-13	ENEC	
Control gear <i>Zasilacz</i>	A	OSRAM	IT DALI 40/220...240/1A0 E	220...240 V/50/60Hz, Ta =-40...+60 °C, Tc max =85 °C	EN 61347-1 EN 61347-2-13	ENEC	
Control gear <i>Zasilacz</i>	A	OSRAM	IT DALI 75/220...240/1A0 E	220...240 V/50/60Hz, Ta =-40...+60 °C, Tc max =100 °C	EN 61347-1 EN 61347-2-13	ENEC	
Control gear <i>Zasilacz</i>	A	OSRAM	IT DALI 110/220...240/1A0 E	220...240 V/50/60Hz, Ta =-40...+60 °C, Tc max =90 °C	EN 61347-1 EN 61347-2-13	ENEC	
Control gear <i>Zasilacz</i>	A	OSRAM	OT 75 /220...240/1A0 1DIM G2 CE	220...240V, 50/60Hz, Ta =-40...+55 °C, Tc max =85 °C	EN 61347-1 EN 61347-2-13	ENEC	
Control gear <i>Zasilacz</i>	A	OSRAM	OT 50/120...277/700 P5	120..277V, 50-60Hz, ta= -40...+55°C, tc max=85°C	EN 61347-1 EN 61347-2-13	ENEC	
Control gear <i>Zasilacz</i>	A	OSRAM	OT 100/120...277/700 P5	120..277V, 50-60Hz, ta= -40...+55°C, tc max=85°C	EN 61347-1 EN 61347-2-13	ENEC	
Control gear <i>Zasilacz</i>	A	OSRAM	OT 100/220...240/4A2 P5	220..240V, 50-60Hz, ta= -40...+55°C, tc max=85°C	EN 61347-1 EN 61347-2-13	ENEC	
Control gear <i>Zasilacz</i>	A	OSRAM	OT 20/170...240/1A0 4DIM NFC G3 CE	220..240V, 50-60Hz, ta= -40...+60°C, tc max=75°C	EN 61347-1 EN 61347-2-13	ENEC	
Control gear <i>Zasilacz</i>	A	OSRAM	OT 40/170...240/0A7 4DIM NFC G3 CE	220..240V, 50-60Hz, ta= -40...+60°C, tc max=80°C	EN 61347-1 EN 61347-2-13	ENEC	
Control gear <i>Zasilacz</i>	A	OSRAM	OT 40/170...240/1A0 4DIM NFC G3 CE	220..240V, 50-60Hz, ta= -40...+60°C, tc max=80°C	EN 61347-1 EN 61347-2-13	ENEC	
Control gear <i>Zasilacz</i>	A	OSRAM	OT 75/170...240/0A7 4DIM NFC G3 CE	220..240V, 50-60Hz, ta= -40...+55°C, tc max=90°C	EN 61347-1 EN 61347-2-13	ENEC	

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Clause	Requirement + Test	Result - Remark	Verdict

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Object / part No. <i>Nr obiektu / komponentu</i>	Code	Manufacturer/ trademark <i>Producent / znak towarowy</i>	Type / model <i>Typ / model</i>	Technical data <i>Dane techniczne</i>	Standard <i>Norma</i>	Mark(s) of conformity ¹⁾ <i>Znak zgodności</i>	
Control gear <i>Zasilacz</i>	A	OSRAM	OT 75/170...240/1A0 4DIM NFC G3 CE	220..240V, 50-60Hz, ta= -40...+55°C, tc max=90°C	EN 61347-1 EN 61347-2-13	ENEC	
Control gear <i>Zasilacz</i>	A	OSRAM	OT 75/170...240/1A5 4DIM NFC G3 CE	220..240V, 50-60Hz, ta= -40...+60°C, tc max=85°C	EN 61347-1 EN 61347-2-13	ENEC	
Control gear <i>Zasilacz</i>	A	OSRAM	OT 110/170...240/0A7 4DIM NFC G3 CE	220..240V, 50-60Hz, ta= -40...+55°C, tc max=80°C	EN 61347-1 EN 61347-2-13	ENEC	
Control gear <i>Zasilacz</i>	A	OSRAM	OT 110/170...240/1A0 4DIM NFC G3 CE	220..240V, 50-60Hz, ta= -40...+55°C, tc max=85°C	EN 61347-1 EN 61347-2-13	ENEC	
Control gear <i>Zasilacz</i>	A	OSRAM	OT DX 40/170...240/1A0 DIMA NFC G2	170..240V, 50-60Hz, ta= -40...+55°C, tc max=75°C	EN 61347-1 EN 61347-2-13	ENEC	
Control gear <i>Zasilacz</i>	A	OSRAM	OT DX 75/170...240/1A0 DIMA NFC G2	170..240V, 50-60Hz, ta= -40...+55°C, tc max=85°C	EN 61347-1 EN 61347-2-13	ENEC	
Control gear <i>Zasilacz</i>	A	OSRAM	OT DX 110/170...240/1A0 DIMA NFC G2	170..240V, 50-60Hz, ta= -40...+55°C, tc max=85°C	EN 61347-1 EN 61347-2-13	ENEC	
Control gear <i>Zasilacz</i>	A	OSRAM	IT DALI 20/120...240/1A0 P7	120..240V, 50-60Hz, ta= -40...+70°C, tc max=80°C	EN 61347-1 EN 61347-2-13	ENEC	
Control gear <i>Zasilacz</i>	A	OSRAM	IT DALI 40/120...240/1A0 P7	120..240V, 50-60Hz, ta= -40...+65°C, tc max=80°C	EN 61347-1 EN 61347-2-13	ENEC	
Control gear <i>Zasilacz</i>	A	OSRAM	IT DALI 75/120...240/1A0 P7	120..240V, 50-60Hz, ta= -40...+65°C, tc max=80°C	EN 61347-1 EN 61347-2-13	ENEC	
Control gear <i>Zasilacz</i>	A	OSRAM	IT DALI 110/120...240/1A0 P7	120..240V, 50-60Hz, ta= -40...+60°C, tc max=85°C	EN 61347-1 EN 61347-2-13	ENEC	
Control gear <i>Zasilacz</i>	A	OSRAM	OT 20/170-240/1A0 1DIM NFC G3 CE	220..240V, 50-60Hz, ta= -40...+60°C, tc max=75°C	EN 61347-1 EN 61347-2-13	ENEC	
Control gear <i>Zasilacz</i>	A	OSRAM	OT 40/170-240/0A7 1DIM NFC G3 CE	220..240V, 50-60Hz, ta= -40...+60°C, tc max=80°C	EN 61347-1 EN 61347-2-13	ENEC	
Control gear <i>Zasilacz</i>	A	OSRAM	OT 40/170-240/1A0 1DIM NFC G3 CE	220..240V, 50-60Hz, ta= -40...+60°C, tc max=80°C	EN 61347-1 EN 61347-2-13	ENEC	
Control gear <i>Zasilacz</i>	A	OSRAM	OT 75/170-240/0A7 1DIM NFC G3 CE	220..240V, 50-60Hz, ta= -40...+55°C, tc max=90°C	EN 61347-1 EN 61347-2-13	ENEC	
Control gear <i>Zasilacz</i>	A	OSRAM	OT 75/170-240/1A0 1DIM NFC G3 CE	220..240V, 50-60Hz, ta= -40...+55°C, tc max=90°C	EN 61347-1 EN 61347-2-13	ENEC	
Control gear <i>Zasilacz</i>	A	OSRAM	OT 110/170-240/0A7 1DIM NFC G3 CE	220..240V, 50-60Hz, ta= -40...+55°C, tc max=80°C	EN 61347-1 EN 61347-2-13	ENEC	
Control gear <i>Zasilacz</i>	A	OSRAM	OT 110/170-240/1A0 1DIM NFC G3 CE	220..240V, 50-60Hz, ta= -40...+55°C, tc max=85°C	EN 61347-1 EN 61347-2-13	ENEC	

IEC 60598-2-3			
Clause	Requirement + Test	Result - Remark	Verdict

ANNEX 1	TABLE: Critical components information						P
Object / part No. <i>Nr obiektu / komponentu</i>	Code	Manufacturer/ trademark <i>Producent / znak towarowy</i>	Type / model <i>Typ / model</i>	Technical data <i>Dane techniczne</i>	Standard <i>Norma</i>	Mark(s) of conformity ¹⁾ <i>Znak zgodności</i>	
Control gear <i>Zasilacz</i>	A	Inventronics	EBS-025S045BT2	176..305V, 50-60Hz, ta= -40...+750C, tc max=900C	EN 61347-1 EN 61347-2-13	ENEC	
Control gear <i>Zasilacz</i>	A	Inventronics	EBS-025S070BT2	176..305V, 50-60Hz, ta= -40...+750C, tc max=900C	EN 61347-1 EN 61347-2-13	ENEC	
Control gear <i>Zasilacz</i>	A	Inventronics	EBS-025S105BT2	171..275V, 50-60Hz, ta= -40...+750C, tc max=900C	EN 61347-1 EN 61347-2-13	ENEC	
Control gear <i>Zasilacz</i>	A	Inventronics	EBS-040S045BT2	176..305V, 50-60Hz, ta= -40...+750C, tc max=900C	EN 61347-1 EN 61347-2-13	ENEC	
Control gear <i>Zasilacz</i>	A	Inventronics	EBS-040S070BT2	176..305V, 50-60Hz, ta= -40...+750C, tc max=900C	EN 61347-1 EN 61347-2-13	ENEC	
Control gear <i>Zasilacz</i>	A	Inventronics	EBS-040S105BT2	176..305V, 50-60Hz, ta= -40...+750C, tc max=900C	EN 61347-1 EN 61347-2-13	ENEC	
Control gear <i>Zasilacz</i>	A	Inventronics	EBS-080S070BT2	176..305V, 50-60Hz, ta= -40...+750C, tc max=900C	EN 61347-1 EN 61347-2-13	ENEC	
Control gear <i>Zasilacz</i>	A	Inventronics	EBS-080S105BT2	176..305V, 50-60Hz, ta= -40...+750C, tc max=900C	EN 61347-1 EN 61347-2-13	ENEC	
Control gear <i>Zasilacz</i>	A	Inventronics	EBS-080S150BT2	176..305V, 50-60Hz, ta= -40...+750C, tc max=900C	EN 61347-1 EN 61347-2-13	ENEC	
Control gear <i>Zasilacz</i>	A	Inventronics	EBS-120S070BT2	176..305V, 50-60Hz, ta= -40...+750C, tc max=900C	EN 61347-1 EN 61347-2-13	ENEC	
Control gear <i>Zasilacz</i>	A	Inventronics	EBS-120S105BT2	176..305V, 50-60Hz, ta= -40...+750C, tc max=900C	EN 61347-1 EN 61347-2-13	ENEC	
Control gear <i>Zasilacz</i>	A	Inventronics	EBS-120S150BT2	176..305V, 50-60Hz, ta= -40...+750C, tc max=900C	EN 61347-1 EN 61347-2-13	ENEC	
Control gear <i>Zasilacz</i>	A	Inventronics	EUM-075S	90..305V, 50-60Hz, ta= -40...+80°C, tc max=90°C	EN 61347-1 EN 61347-2-13	ENEC	
Control gear <i>Zasilacz</i>	A	Inventronics	EUM – 100S	100..277V, 50-60Hz, ta= -40...+75°C, tc max=90°C	EN 61347-1 EN 61347-2-13	ENEC	
Control gear <i>Zasilacz</i>	A	Philips	Xitanium 40W 0.7A Prog+ GL-J sXt	220..240V, 50-60Hz, ta= -40...+55°C, tc max=80°C	EN 61347-1 EN 61347-2-13	ENEC	
Control gear <i>Zasilacz</i>	A	Philips	Xitanium 75W 0.35- 0.70A GL Prog+ sXt	220..240V, 50-60Hz, ta= -40...+55°C, tc max=80°C	EN 61347-1 EN 61347-2-13	ENEC	
Control gear <i>Zasilacz</i>	A	Philips	Xitanium 75W 0.1-1.05A Prog GL F sXt	220..240V, 50-60Hz, ta= -40...+55°C, tc max=80°C	EN 61347-1 EN 61347-2-13	ENEC	
Control gear <i>Zasilacz</i>	A	Philips	Xitanium 100W 0.7A Prog+ GL-Z sXt	220..240V, 50-60Hz, ta= -40...+55°C, tc max=80°C	EN 61347-1 EN 61347-2-13	ENEC	

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Clause	Requirement + Test	Result - Remark	Verdict

ANNEX 1	TABLE: Critical components information						P
Object / part No. <i>Nr obiektu / komponentu</i>	Code	Manufacturer/ trademark <i>Producent / znak towarowy</i>	Type / model <i>Typ / model</i>	Technical data <i>Dane techniczne</i>	Standard <i>Norma</i>	Mark(s) of conformity ¹⁾ <i>Znak zgodności</i>	
Control gear <i>Zasilacz</i>	A	Philips	Xi BP 12W 0.1-0.5A S 230V C100	220..240V, 50-60Hz, ta= -40...+55°C, tc max=80°C	EN 61347-1 EN 61347-2-13	ENEC	
Control gear <i>Zasilacz</i>	A	Philips	Xi BP 22W 0.2-0.7A S 230V C123	220..240V, 50-60Hz, ta= -40...+55°C, tc max=85°C	EN 61347-1 EN 61347-2-13	ENEC	
Control gear <i>Zasilacz</i>	A	Philips	Xi BP 40W 0.2-0.7A S 230V C123	220..240V, 50-60Hz, ta= -40...+55°C, tc max=85°C	EN 61347-1 EN 61347-2-13	ENEC	
Control gear <i>Zasilacz</i>	A	Philips	Xi BP 40W 0.3-1.0A S 230V C123	220..240V, 50-60Hz, ta= -40...+55°C, tc max=80°C	EN 61347-1 EN 61347-2-13	ENEC	
Control gear <i>Zasilacz</i>	A	Philips	Xi BP 75W 0.2-0.7A S 230V C133 sXt	220..240V, 50-60Hz, ta= -40...+55°C, tc max=80°C	EN 61347-1 EN 61347-2-13	ENEC	
Control gear <i>Zasilacz</i>	A	Philips	Xi BP 75W 0.3-1.0A S 230V C133 sXt	220..240V, 50-60Hz, ta= -40...+55°C, tc max=85°C	EN 61347-1 EN 61347-2-13	ENEC	
Control gear <i>Zasilacz</i>	A	Philips	Xi BP 110W 0.2-0.7A S 230V C133 sXt	220..240V, 50-60Hz, ta= -40...+55°C, tc max=85°C	EN 61347-1 EN 61347-2-13	ENEC	
Control gear <i>Zasilacz</i>	A	Philips	Xi BP 110W 0.3-1.0A S 230V C133 sXt	220..240V, 50-60Hz, ta= -40...+55°C, tc max=80°C	EN 61347-1 EN 61347-2-13	ENEC	
Control gear <i>Zasilacz</i>	A	Philips	Xi LP 22W 0.2-0.7A S1 230V C123 sXt	220..240V, 50-60Hz, ta= -40...+55°C, tc max=85°C	EN 61347-1 EN 61347-2-13	ENEC	
Control gear <i>Zasilacz</i>	A	Philips	Xi LP 22W 0.3-1.0A S1 230V C123 sXt	220..240V, 50-60Hz, ta= -40...+55°C, tc max=85°C	EN 61347-1 EN 61347-2-13	ENEC	
Control gear <i>Zasilacz</i>	A	Philips	Xi LP 40W 0.2-0.7A S1 230V C123 sXt	220..240V, 50-60Hz, ta= -40...+55°C, tc max=85°C	EN 61347-1 EN 61347-2-13	ENEC	
Control gear <i>Zasilacz</i>	A	Philips	Xi LP 40W 0.3-1.0A S1 230V C123 sXt	220..240V, 50-60Hz, ta= -40...+55°C, tc max=85°C	EN 61347-1 EN 61347-2-13	ENEC	
Control gear <i>Zasilacz</i>	A	Philips	Xi LP 75W 0.2-0.7A S1 230V C133 sXt	220..240V, 50-60Hz, ta= -40...+55°C, tc max=80°C	EN 61347-1 EN 61347-2-13	ENEC	
Control gear <i>Zasilacz</i>	A	Philips	Xi LP 75W 0.3-1.0A S1 230V C133 sXt	220..240V, 50-60Hz, ta= -40...+55°C, tc max=80°C	EN 61347-1 EN 61347-2-13	ENEC	
Control gear <i>Zasilacz</i>	A	Philips	Xi LP 75W 0.5-1.5A S1 230V C133 sXt	220..240V, 50-60Hz, ta= -40...+55°C, tc max=80°C	EN 61347-1 EN 61347-2-13	ENEC	
Control gear <i>Zasilacz</i>	A	Philips	Xi LP 110W 0.2-0.7A S1 230V C133 sXt	220..240V, 50-60Hz, ta= -40...+55°C, tc max=90°C	EN 61347-1 EN 61347-2-13	ENEC	
Control gear <i>Zasilacz</i>	A	Philips	Xi LP 110W 0.3-1.0A S1 230V C133 sXt	220..240V, 50-60Hz, ta= -40...+55°C, tc max=90°C	EN 61347-1 EN 61347-2-13	ENEC	
Control gear <i>Zasilacz</i>	A	Philips	Xi LP 22W 0.2-0.7A S1 230V S175 sXt	220..240V, 50-60Hz, ta= -40...+55°C, tc max=80°C	EN 61347-1 EN 61347-2-13	ENEC	

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Clause	Requirement + Test	Result - Remark	Verdict

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Object / part No. <i>Nr obiektu / komponentu</i>	Code	Manufacturer/ trademark <i>Producent / znak towarowy</i>	Type / model <i>Typ / model</i>	Technical data <i>Dane techniczne</i>	Standard <i>Norma</i>	Mark(s) of conformity ¹⁾ <i>Znak zgodności</i>	
Control gear <i>Zasilacz</i>	A	Philips	Xi LP 22W 0.3-1.0A S1 230V S175 sXt	220..240V, 50-60Hz, ta= -40...+55°C, tc max=80°C	EN 61347-1 EN 61347-2-13	ENEC	
Control gear <i>Zasilacz</i>	A	Philips	Xi LP 40W 0.2 -0.7A S1 230V S175 sXt	220..240V, 50-60Hz, ta= -40...+55°C, tc max=80°C	EN 61347-1 EN 61347-2-13	ENEC	
Control gear <i>Zasilacz</i>	A	Philips	Xi LP 40W 0.2-0.7A SL 230V S175 sXt	220..240V, 50-60Hz, ta= -40...+55°C, tc max=80°C	EN 61347-1 EN 61347-2-13	ENEC	
Control gear <i>Zasilacz</i>	A	Philips	Xi LP 40W 0.3-1.0A S1 230V S175 sXt	220..240V, 50-60Hz, ta= -40...+55°C, tc max=80°C	EN 61347-1 EN 61347-2-13	ENEC	
Control gear <i>Zasilacz</i>	A	Philips	Xi LP 40W 0.3-1.0A SL 230V S175 sXt	220..240V, 50-60Hz, ta= -40...+55°C, tc max=80°C	EN 61347-1 EN 61347-2-13	ENEC	
Control gear <i>Zasilacz</i>	A	Philips	Xi LP 40W 0.2-0.7A SN 230V S175 sXt	220..240V, 50-60Hz, ta= -40...+55°C, tc max=80°C	EN 61347-1 EN 61347-2-13	ENEC	
Control gear <i>Zasilacz</i>	A	Philips	Xi LP 75W 0.2-0.7A S1 230V S240 sXt	220..240V, 50-60Hz, ta= -40...+55°C, tc max=90°C	EN 61347-1 EN 61347-2-13	ENEC	
Control gear <i>Zasilacz</i>	A	Philips	Xi LP 75W 0.2-0.7A SL 230V S240 sXt	220..240V, 50-60Hz, ta= -40...+55°C, tc max=85°C	EN 61347-1 EN 61347-2-13	ENEC	
Control gear <i>Zasilacz</i>	A	Philips	Xi LP 75W 0.3-1.0A S1 230V S240 sXt	220..240V, 50-60Hz, ta= -40...+55°C, tc max=90°C	EN 61347-1 EN 61347-2-13	ENEC	
Control gear <i>Zasilacz</i>	A	Philips	Xi LP 75W 0.3-1.0A SL 230V S240 sXt	220..240V, 50-60Hz, ta= -40...+55°C, tc max=85°C	EN 61347-1 EN 61347-2-13	ENEC	
Control gear <i>Zasilacz</i>	A	Philips	Xi LP 75W 0.2-0.7A SN 230V S240 sXt	220..240V, 50-60Hz, ta= -40...+55°C, tc max=85°C	EN 61347-1 EN 61347-2-13	ENEC	
Control gear <i>Zasilacz</i>	A	Philips	Xi LP 75W 0.5-1.5A S1 230V S240 sXt	220..240V, 50-60Hz, ta= -40...+55°C, tc max=85°C	EN 61347-1 EN 61347-2-13	ENEC	
Control gear <i>Zasilacz</i>	A	Philips	Xi FP 22W 0.2-0.7A SNLDAE 230V C123 sXt	220..240V, 50-60Hz, ta= -40...+55°C, tc max=85°C	EN 61347-1 EN 61347-2-13	ENEC	
Control gear <i>Zasilacz</i>	A	Philips	Xi FP 22W 0.3-1.0A SNLDAE 230V C123 sXt	220..240V, 50-60Hz, ta= -40...+55°C, tc max=85°C	EN 61347-1 EN 61347-2-13	ENEC	
Control gear <i>Zasilacz</i>	A	Philips	Xi FP 40W 0.2-0.7A SNLDAE 230V C123 sXt	220..240V, 50-60Hz, ta= -40...+55°C, tc max=85°C	EN 61347-1 EN 61347-2-13	ENEC	
Control gear <i>Zasilacz</i>	A	Philips	Xi FP 40W 0.3-1.0A SNLDAE 230V C123 sXt	220..240V, 50-60Hz, ta= -40...+55°C, tc max=85°C	EN 61347-1 EN 61347-2-13	ENEC	
Control gear <i>Zasilacz</i>	A	Philips	Xi FP 70W 0.3-1.0A NLD C150 230V sXt	220..240V, 50-60Hz, ta= -30...+60°C, tc max=90°C	EN 61347-1 EN 61347-2-13	ENEC	
Control gear <i>Zasilacz</i>	A	Philips	Xi FP 75W 0.2-0.7A SNLDAE 230V C133 sXt	220..240V, 50-60Hz, ta= -40...+55°C, tc max=80°C	EN 61347-1 EN 61347-2-13	ENEC	
Control gear <i>Zasilacz</i>	A	Philips	Xi FP 75W 0.3-1.0A SNLDAE 230V C133 sXt	220..240V, 50-60Hz, ta= -40...+55°C, tc max=80°C	EN 61347-1 EN 61347-2-13	ENEC	

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Object / part No. <i>Nr obiektu / komponentu</i>	Code	Manufacturer/ trademark <i>Producent / znak towarowy</i>	Type / model <i>Typ / model</i>	Technical data <i>Dane techniczne</i>	Standard <i>Norma</i>	Mark(s) of conformity ¹⁾ <i>Znak zgodności</i>	
Control gear <i>Zasilacz</i>	A	Philips	Xi FP 75W 0.5-1.5A SNLDAE 230V C133 sXt	220..240V, 50-60Hz, ta= -40...+55°C, tc max=80°C	EN 61347-1 EN 61347-2-13	ENEC	
Control gear <i>Zasilacz</i>	A	Philips	Xi FP 100W 0.2-0.7A SNLDAE 230V C165 sXt	220..240V, 50-60Hz, ta= -40...+55°C, tc max=85°C	EN 61347-1 EN 61347-2-13	ENEC	
Control gear <i>Zasilacz</i>	A	Philips	Xi FP 110W 0.2-0.7A SNLDAE 230V C133 sXt	220..240V, 50-60Hz, ta= -40...+55°C, tc max=85°C	EN 61347-1 EN 61347-2-13	ENEC	
Control gear <i>Zasilacz</i>	A	Philips	Xi FP 110W 0.3-1.0A NLD C150 230V sXt	220..240V, 50-60Hz, ta= -30...+60°C, tc max=90°C	EN 61347-1 EN 61347-2-13	ENEC	
Control gear <i>Zasilacz</i>	A	Philips	Xi FP 110W 0.3-1.0A SNLDAE 230V C133 sXt	220..240V, 50-60Hz, ta= -40...+55°C, tc max=85°C	EN 61347-1 EN 61347-2-13	ENEC	
Control gear <i>Zasilacz</i>	A	Philips	Xi FP 22W 0.2-0.7A SNLDAE 230V S175 sXt	220..240V, 50-60Hz, ta= -40...+55°C, tc max=85°C	EN 61347-1 EN 61347-2-13	ENEC	
Control gear <i>Zasilacz</i>	A	Philips	Xi FP 22W 0.3-1.0A SNLDAE 230V S175 sXt	220..240V, 50-60Hz, ta= -40...+55°C, tc max=85°C	EN 61347-1 EN 61347-2-13	ENEC	
Control gear <i>Zasilacz</i>	A	Philips	Xi FP 40W 0.2-7.0A SNLDAE 230V S175 sXt	220..240V, 50-60Hz, ta= -40...+55°C, tc max=85°C	EN 61347-1 EN 61347-2-13	ENEC	
Control gear <i>Zasilacz</i>	A	Philips	Xi FP 40W 0.3-1.0A SNLDAE 230V S175 sXt	220..240V, 50-60Hz, ta= -40...+55°C, tc max=90°C	EN 61347-1 EN 61347-2-13	ENEC	
Control gear <i>Zasilacz</i>	A	Philips	Xi FP 75W 0.2-0.7A SNLDAE 230V S240 sXt	220..240V, 50-60Hz, ta= -40...+55°C, tc max=85°C	EN 61347-1 EN 61347-2-13	ENEC	
Control gear <i>Zasilacz</i>	A	Philips	Xi FP 75W 0.3-1.0A SNLDAE 230V S240 sXt	220..240V, 50-60Hz, ta= -40...+55°C, tc max=85°C	EN 61347-1 EN 61347-2-13	ENEC	
Control gear <i>Zasilacz</i>	A	Philips	Xi SR 12W 0.2-0.7A SNEMP 230V C133 sXt	220..240V, 50-60Hz, ta= -40...+55°C, tc max=85°C	EN 61347-1 EN 61347-2-13	ENEC	
Control gear <i>Zasilacz</i>	A	Philips	Xi SR 22W 0.2-0.7A SNEMP 230V C133 sXt	220..240V, 50-60Hz, ta= -40...+55°C, tc max=85°C	EN 61347-1 EN 61347-2-13	ENEC	
Control gear <i>Zasilacz</i>	A	Philips	Xi SR 40W 0.2-0.7A SNEMP 230V C133 sXt	220..240V, 50-60Hz, ta= -40...+55°C, tc max=85°C	EN 61347-1 EN 61347-2-13	ENEC	
Control gear <i>Zasilacz</i>	A	Philips	Xi SR 75W 0.2-0.7A SNEMP 230V C150 sXt	220..240V, 50-60Hz, ta= -40...+55°C, tc max=90°C	EN 61347-1 EN 61347-2-13	ENEC	
Control gear <i>Zasilacz</i>	A	Philips	Xi SR 75W 2 0.3-1.0A SNEMPF C170 sXt	220..240V, 50-60Hz, ta= -40...+55°C, tc max=90°C	EN 61347-1 EN 61347-2-13	ENEC	
Control gear <i>Zasilacz</i>	A	Philips	Xi SR 75W 0.2-0.7A SNEMP 230V S240 sXt	220..240V, 50-60Hz, ta= -40...+55°C, tc max=90°C	EN 61347-1 EN 61347-2-13	ENEC	
Control gear <i>Zasilacz</i>	A	Philips	Xi SR 75W 0.3-1.0A SNEMP 230V S240 sXt	220..240V, 50-60Hz, ta= -40...+55°C, tc max=90°C	EN 61347-1 EN 61347-2-13	ENEC	

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Object / part No. <i>Nr obiektu / komponentu</i>	Code	Manufacturer/ trademark <i>Producent / znak towarowy</i>	Type / model <i>Typ / model</i>	Technical data <i>Dane techniczne</i>	Standard <i>Norma</i>	Mark(s) of conformity ¹⁾ <i>Znak zgodności</i>	
Control gear <i>Zasilacz</i>	A	Philips	Xi SR 110W 0.2-0.7A SNEMP 230V C150 sXt	220..240V, 50-60Hz, ta= -40...+55°C, tc max=90°C	EN 61347-1 EN 61347-2-13	ENEC	
Control gear <i>Zasilacz</i>	A	Philips	Xitanium 100W 2.1-4.2A AOC 230V I220	220..240V, 50-60Hz, ta= -40...+55°C, tc max=80°C	EN 61347-1 EN 61347-2-13	ENEC	
Control gear <i>Zasilacz</i>	A	Philips	Xi LP 100W 0.3-1.05A S1 230V I175	220..240V, 50-60Hz, ta= -40...+55°C, tc max=80°C	EN 61347-1 EN 61347-2-13	ENEC	
Control gear <i>Zasilacz</i>	A	Philips	Xitanium Dim 35W 0.7A 1-10V TWE I175	220..240V, 50-60Hz, ta= -40...+55°C, tc max=80°C	EN 61347-1 EN 61347-2-13	ENEC	
Control gear <i>Zasilacz</i>	A	Philips	Xitanium Dim 100W 0.7A 1-10V TWE I220	220..240V, 50-60Hz, ta= -40...+55°C, tc max=80°C	EN 61347-1 EN 61347-2-13	ENEC	
Control gear <i>Zasilacz</i>	A	Philips	Xitanium 75W 0.7A TWE I175	220..240V, 50-60Hz, ta= -40...+55°C, tc max=80°C	EN 61347-1 EN 61347-2-13	ENEC	
Control gear <i>Zasilacz</i>	A	Philips	Xitanium 75W 1.05A 1- 10V 230V C165 sXt	220..240V, 50-60Hz, ta= -40...+55°C, tc max=85°C	EN 61347-1 EN 61347-2-13	ENEC	
Control gear <i>Zasilacz</i>	A	Philips	Xitanium 75W 0.70A 1- 10V 230V C165 sXt	220..240V, 50-60Hz, ta= -40...+55°C, tc max=85°C	EN 61347-1 EN 61347-2-13	ENEC	
Control gear <i>Zasilacz</i>	A	Philips	Xitanium Dim 75W 0.70A 1-10V 230V I220	220..240V, 50-60Hz, ta= -40...+55°C, tc max=80°C	EN 61347-1 EN 61347-2-13	ENEC	
Control gear <i>Zasilacz</i>	A	Philips	Xitanium 75W 1-10V 230V C165	220..240V, 50-60Hz, ta= -40...+55°C, tc max=80°C	EN 61347-1 EN 61347-2-13	ENEC	
Control gear <i>Zasilacz</i>	A	Tridonic	LCA 120W 300-1050mA	220..240V, 50-60Hz, ta= -30...+55°C, tc max=850C	EN 61347-1 EN 61347-2-13	ENEC	
Control gear <i>Zasilacz</i>	A	Tridonic	LCA 75W 250-750mA one	220..240V, 50-60Hz, ta= -40...+700C, tc max=850C	EN 61347-1 EN 61347-2-13	ENEC	
Control gear <i>Zasilacz</i>	A	Tridonic	LCA 120W 350- 1050mA one	220..240V, 50-60Hz, ta= -40...+700C, tc max=850C	EN 61347-1 EN 61347-2-13	ENEC	
Control gear <i>Zasilacz</i>	A	Tridonic	LCO 14/100-500/38 NF C ADV3	220..240V, 50-60Hz, ta= -40...+70°C, tc max=90°C	EN 61347-1 EN 61347-2-13	ENEC	
Control gear <i>Zasilacz</i>	A	Tridonic	LCO 24/200-1050/39 NF C ADV3	220..240V, 50-60Hz, ta= -40...+70°C, tc max=85°C	EN 61347-1 EN 61347-2-13	ENEC	
Control gear <i>Zasilacz</i>	A	Tridonic	LCO 40/200-1050/64 NF C ADV3	220..240V, 50-60Hz, ta= -40...+70°C, tc max=90°C	EN 61347-1 EN 61347-2-13	ENEC	
Control gear <i>Zasilacz</i>	A	Tridonic	LCO 60/200-1050/100 NF C ADV3	220..240V, 50-60Hz, ta= -40...+70°C, tc max=90°C	EN 61347-1 EN 61347-2-13	ENEC	
Control gear <i>Zasilacz</i>	A	Tridonic	LCO 90/200-1050/165 NF C ADV3	220..240V, 50-60Hz, ta= -40...+70°C, tc max=100°C	EN 61347-1 EN 61347-2-13	ENEC	

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Control gear <i>Zasilacz</i>	A	Tridonic	LCO 14/100-500/38 o4a NF C EXC3	220..240V, 50-60Hz, ta= -40...+70°C, tc max=90°C	EN 61347-1 EN 61347-2-13	ENEC	
Control gear <i>Zasilacz</i>	A	Tridonic	LCO 24/200-1050/39 o4a NF C EXC3	220..240V, 50-60Hz, ta= -40...+70°C, tc max=85°C	EN 61347-1 EN 61347-2-13	ENEC	
Control gear <i>Zasilacz</i>	A	Tridonic	LCO 40/200-1050/64 o4a NF C EXC3	220..240V, 50-60Hz, ta= -40...+70°C, tc max=90°C	EN 61347-1 EN 61347-2-13	ENEC	
Control gear <i>Zasilacz</i>	A	Tridonic	LCO 60/200-1050/100 o4a NF C EXC3	220..240V, 50-60Hz, ta= -40...+70°C, tc max=95°C	EN 61347-1 EN 61347-2-13	ENEC	
Control gear <i>Zasilacz</i>	A	Tridonic	LCO 60/700-1500/43 o4a NFC C EXC3	220..240V, 50-60Hz, ta= -40...+70°C, tc max=95°C	EN 61347-1 EN 61347-2-13	ENEC	
Control gear <i>Zasilacz</i>	A	Tridonic	LCO 90/200-1050/165 o4a NF C EXC3	220..240V, 50-60Hz, ta= -40...+70°C, tc max=100°C	EN 61347-1 EN 61347-2-13	ENEC	
Control gear <i>Zasilacz</i>	A	Tridonic	LCO 100/1050/95 fixC L SNC2	220..240V, 50-60Hz, ta= -40...+65°C, tc max=80°C	EN 61347-1 EN 61347-2-13	ENEC	
Control gear <i>Zasilacz</i>	A	Tridonic	LCO 100/1400/71 fixC L SNC2	220..240V, 50-60Hz, ta= -40...+65°C, tc max=80°C	EN 61347-1 EN 61347-2-13	ENEC	
Control gear <i>Zasilacz</i>	A	Tridonic	LCO 100/500/200 fixC L SNC2	220..240V, 50-60Hz, ta= -40...+65°C, tc max=80°C	EN 61347-1 EN 61347-2-13	ENEC	
Control gear <i>Zasilacz</i>	A	Tridonic	LCO 100/700/143 fixC L SNC2	220..240V, 50-60Hz, ta= -40...+65°C, tc max=80°C	EN 61347-1 EN 61347-2-13	ENEC	
Control gear <i>Zasilacz</i>	A	Tridonic	LCO 75/1050/72 fixC L SNC2	220..240V, 50-60Hz, ta= -40...+65°C, tc max=80°C	EN 61347-1 EN 61347-2-13	ENEC	
Control gear <i>Zasilacz</i>	A	Tridonic	LCO 75/1400/53 fixC L SNC2	220..240V, 50-60Hz, ta= -40...+65°C, tc max=80°C	EN 61347-1 EN 61347-2-13	ENEC	
Control gear <i>Zasilacz</i>	A	Tridonic	LCO 75/500/150 fixC L SNC2	220..240V, 50-60Hz, ta= -40...+65°C, tc max=80°C	EN 61347-1 EN 61347-2-13	ENEC	
Control gear <i>Zasilacz</i>	A	Tridonic	LCO 75/700/108 fixC L SNC2	220..240V, 50-60Hz, ta= -40...+65°C, tc max=80°C	EN 61347-1 EN 61347-2-13	ENEC	
Control gear <i>Zasilacz</i>	A	Tridonic	LCO 14W 100–550mA 38V pD+ NFC C PRE3	220..240V, 50-60Hz, ta= -40...+70°C, tc max=950C	EN 61347-1 EN 61347-2-13	ENEC	
Control gear <i>Zasilacz</i>	A	Tridonic	LCO 24W 200–1050mA 39V pD+ NFC C PRE3	220..240V, 50-60Hz, ta= -40...+70°C, tc max=850C	EN 61347-1 EN 61347-2-13	ENEC	
Control gear <i>Zasilacz</i>	A	Tridonic	LCO 40W 200–1050mA 64V pD+ NFC C PRE3	220..240V, 50-60Hz, ta= -40...+650C, tc max=950C	EN 61347-1 EN 61347-2-13	ENEC	
Control gear <i>Zasilacz</i>	A	Tridonic	LCO 40W 200–1050mA 58V 2xCH pD+ NF C PRE3	220..240V, 50-60Hz, ta= -40...+650C, tc max=950C	EN 61347-1 EN 61347-2-13	ENEC	

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Clause	Requirement + Test	Result - Remark	Verdict

ANNEX 1	TABLE: Critical components information						P
Object / part No. <i>Nr obiektu / komponentu</i>	Code	Manufacturer/ trademark <i>Producent / znak towarowy</i>	Type / model <i>Typ / model</i>	Technical data <i>Dane techniczne</i>	Standard <i>Norma</i>	Mark(s) of conformity ¹⁾ <i>Znak zgodności</i>	
Control gear <i>Zasilacz</i>	A	Tridonic	LCO 60W 200–1050mA 100V pD+ NFC C PRE3	220..240V, 50-60Hz, ta= -40...+650C, tc max=950C	EN 61347-1 EN 61347-2-13	ENEC	
Control gear <i>Zasilacz</i>	A	Tridonic	LCO 80W 200–1050mA 91V 2xCH pD+ NF C PRE3	220..240V, 50-60Hz, ta= -40...+700C, tc max=950C	EN 61347-1 EN 61347-2-13	ENEC	
Control gear <i>Zasilacz</i>	A	Tridonic	LCO 90W 200–1050mA 165V pD+ NFC C PRE3	220..240V, 50-60Hz, ta= -40...+700C, tc max=950C	EN 61347-1 EN 61347-2-13	ENEC	
Control gear <i>Zasilacz</i>	A	Tridonic	LCO 120W 200– 1050mA 182V 2xCH pD+ NF C PRE3	220..240V, 50-60Hz, ta= -40...+700C, tc max=950C	EN 61347-1 EN 61347-2-13	ENEC	
Control gear <i>Zasilacz</i>	A	LACROIX	DL-PAK 70	220...240 50/60Hz, Ta =-25...+60 °C, Tc max =90 °C	EN 61347-1 EN 61347-2-13	ENEC	
Control gear <i>Zasilacz</i>	A	LACROIX	DL-Pak 100L	220...240 50/60Hz, Ta =-25...+55 °C, Tc max =90 °C	EN 61347-1 EN 61347-2-13	ENEC	
Control gear <i>Zasilacz</i>	A	DELTA	EUCI-040105GLA	220...240 V/50/60Hz, Ta =-40...+60 °C, Tc max =85 °C	EN 61347-1 EN 61347-2-13	ENEC	
Control gear <i>Zasilacz</i>	A	DELTA	EUCI-075105GLA	220...240 V/50/60Hz, Ta =-40...+55 °C, Tc max =85 °C	EN 61347-1 EN 61347-2-13	ENEC	
Control gear <i>Zasilacz</i>	A	Delta	EUCI-022105GLB	220...240V, 50/60Hz, Ta =-40...+55 °C, Tc max =85 °C	EN 61347-1 EN 61347-2-13	ENEC	
Control gear <i>Zasilacz</i>	A	Delta	EUCI-040105GLB	198...264V, 50/60Hz, Ta =-40...+55 °C, Tc max =90 °C	EN 61347-1 EN 61347-2-13	ENEC	
Control gear <i>Zasilacz</i>	A	Delta	EUCI-075105GLB	220...240 V/50/60Hz, Ta =-40...+55 °C, Tc max = 85 °C	EN 61347-1 EN 61347-2-13	ENEC	
Control gear <i>Zasilacz</i>	A	Delta	EUCI 022105GIA	220..240V, 50-60Hz, ta= -40...+60°C, tc max=85°C	EN 61347-1 EN 61347-2-13	ENEC	
Control gear <i>Zasilacz</i>	A	Delta	EUCI 040105GIA	220..240V, 50-60Hz, ta= -40...+60°C, tc max=85°C	EN 61347-1 EN 61347-2-13	ENEC	
Control gear <i>Zasilacz</i>	A	SOSEN	SS-50VP-72BH	220..240V, 50-60Hz, ta= -40...+60C, tc max=90C	EN 61347-1 EN 61347-2-13	ENEC	
Control gear <i>Zasilacz</i>	A	SOSEN	SS-75VP-108BH	220..240V, 50-60Hz, ta= -40...+60C, tc max=90C	EN 61347-1 EN 61347-2-13	ENEC	
Control gear <i>Zasilacz</i>	A	SOSEN	SS-100VP-143BH	220..240V, 50-60Hz, ta= -40...+60C, tc max=90C	EN 61347-1 EN 61347-2-13	ENEC	
Control gear <i>Zasilacz</i>	A	SOSEN	SS-22PA- 32B	220..240V, 50-60Hz, ta= -40...+60C, tc max=90C	EN 61347-1 EN 61347-2-13	ENEC	
Control gear <i>Zasilacz</i>	A	SOSEN	SS-40PA-54B	220..240V, 50-60Hz, ta= -40...+60C, tc max=90C	EN 61347-1 EN 61347-2-13	ENEC	

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Clause	Requirement + Test	Result - Remark	Verdict

ANNEX 1	TABLE: Critical components information						P
Object / part No. <i>Nr obiektu / komponentu</i>	Code	Manufacturer/ trademark <i>Producent / znak towarowy</i>	Type / model <i>Typ / model</i>	Technical data <i>Dane techniczne</i>	Standard <i>Norma</i>	Mark(s) of conformity ¹⁾ <i>Znak zgodności</i>	
Control gear <i>Zasilacz</i>	A	SOSEN	SS-75PA-108B	220..240V, 50-60Hz, ta= -40...+60C, tc max=90C	EN 61347-1 EN 61347-2-13	ENEC	
Control gear <i>Zasilacz</i>	A	SOSEN	SS-110PA-160B	220..240V, 50-60Hz, ta= -40...+60C, tc max=90C	EN 61347-1 EN 61347-2-13	ENEC	
Control gear <i>Zasilacz</i>	A	SOSEN	SS-22PA- 32F	220..240V, 50-60Hz, ta= -40...+60C, tc max=90C	EN 61347-1 EN 61347-2-13	ENEC	
Control gear <i>Zasilacz</i>	A	SOSEN	SS-22PA- 49F	220..240V, 50-60Hz, ta= -40...+60C, tc max=90C	EN 61347-1 EN 61347-2-13	ENEC	
Control gear <i>Zasilacz</i>	A	SOSEN	SS-22PA- 72F	220..240V, 50-60Hz, ta= -40...+60C, tc max=90C	EN 61347-1 EN 61347-2-13	ENEC	
Control gear <i>Zasilacz</i>	A	SOSEN	SS-40PA-57F	220..240V, 50-60Hz, ta= -40...+60C, tc max=90C	EN 61347-1 EN 61347-2-13	ENEC	
Control gear <i>Zasilacz</i>	A	SOSEN	SS-40PA-80F	220..240V, 50-60Hz, ta= -40...+60C, tc max=90C	EN 61347-1 EN 61347-2-13	ENEC	
Control gear <i>Zasilacz</i>	A	SOSEN	SS-40PA-133F	220..240V, 50-60Hz, ta= -40...+60C, tc max=90C	EN 61347-1 EN 61347-2-13	ENEC	
Control gear <i>Zasilacz</i>	A	SOSEN	SS-75PA-114F	220..240V, 50-60Hz, ta= -40...+60C, tc max=90C	EN 61347-1 EN 61347-2-13	ENEC	
Control gear <i>Zasilacz</i>	A	SOSEN	SS-75PA-178F	220..240V, 50-60Hz, ta= -40...+60C, tc max=90C	EN 61347-1 EN 61347-2-13	ENEC	
Control gear <i>Zasilacz</i>	A	SOSEN	SS-75PA-245F	220..240V, 50-60Hz, ta= -40...+60C, tc max=90C	EN 61347-1 EN 61347-2-13	ENEC	
Control gear <i>Zasilacz</i>	A	SOSEN	SS-110PA-105F	220..240V, 50-60Hz, ta= -40...+60C, tc max=90C	EN 61347-1 EN 61347-2-13	ENEC	
Control gear <i>Zasilacz</i>	A	SOSEN	SS-110PA-160F	220..240V, 50-60Hz, ta= -40...+60C, tc max=90C	EN 61347-1 EN 61347-2-13	ENEC	
Control gear <i>Zasilacz</i>	A	SOSEN	SS-110PA-245F	220..240V, 50-60Hz, ta= -40...+60C, tc max=90C	EN 61347-1 EN 61347-2-13	ENEC	
Control gear <i>Zasilacz</i>	A	ELDO LED	OT50W/UNV/800C/2DI MLT2/P6	120..277V, 50-60Hz, ta= -40...+60C, tc max=90C	EN 61347-1 EN 61347-2-13	ENEC	
Control gear <i>Zasilacz</i>	A	Moso	U6-040D057	220..240V, 50-60Hz, ta= -40...+55°C, tc max=85°C	EN 61347-1 EN 61347-2-13	ENEC	
Control gear <i>Zasilacz</i>	A	Moso	U6-080D115	220..240V, 50-60Hz, ta= -40...+55°C, tc max=85°C	EN 61347-1 EN 61347-2-13	ENEC	
Control gear <i>Zasilacz</i>	A	Moso	U6-120D172	220..240V, 50-60Hz, ta= -40...+55°C, tc max=85°C	EN 61347-1 EN 61347-2-13	ENEC	

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Clause	Requirement + Test	Result - Remark	Verdict

ANNEX 1	TABLE: Critical components information						P
Object / part No. <i>Nr obiektu / komponentu</i>	Code	Manufacturer/ trademark <i>Producent / znak towarowy</i>	Type / model <i>Typ / model</i>	Technical data <i>Dane techniczne</i>	Standard <i>Norma</i>	Mark(s) of conformity ¹⁾ <i>Znak zgodności</i>	
Control gear <i>Zasilacz</i>	A	Moso	U7-026D038	220..240V, 50-60Hz, ta= -40...+55°C, tc max=85°C	EN 61347-1 EN 61347-2-13	ENEC	
Control gear <i>Zasilacz</i>	A	Moso	U7-040D057	220..240V, 50-60Hz, ta= -40...+55°C, tc max=85°C	EN 61347-1 EN 61347-2-13	ENEC	
Control gear <i>Zasilacz</i>	A	Moso	U7-060D086	220..240V, 50-60Hz, ta= -40...+55°C, tc max=85°C	EN 61347-1 EN 61347-2-13	ENEC	
Control gear <i>Zasilacz</i>	A	Moso	U7-080D115	220..240V, 50-60Hz, ta= -40...+55°C, tc max=90°C	EN 61347-1 EN 61347-2-13	ENEC	
Control gear <i>Zasilacz</i>	A	Moso	U7-120D172	220..240V, 50-60Hz, ta= -40...+50°C, tc max=90°C	EN 61347-1 EN 61347-2-13	ENEC	
Control gear <i>Zasilacz</i>	A	Moso	LUP 120	220..240V, 50-60Hz, ta= -40...+60°C, tc max=85°C	EN 61347-1 EN 61347-2-13	ENEC	
Control gear <i>Zasilacz</i>	A	uPowerTek	APD-040	176..264V, 50-60Hz, ta= -40...+90°C, tc max=90°C	EN 61347-1 EN 61347-2-13	ENEC	
Control gear <i>Zasilacz</i>	A	uPowerTek	APD-075	176..264V, 50-60Hz, ta= -40...+90°C, tc max=90°C	EN 61347-1 EN 61347-2-13	ENEC	
Control gear <i>Zasilacz</i>	A	uPowerTek	APD-110	176..264V, 50-60Hz, ta= -40...+90°C, tc max=90°C	EN 61347-1 EN 61347-2-13	ENEC	
Control gear <i>Zasilacz</i>	A	uPowerTek	BLD-060	176..264V, 50-60Hz, ta= -40...+90°C, tc max=90°C	EN 61347-1 EN 61347-2-13	ENEC	
Control gear <i>Zasilacz</i>	A	uPowerTek	BLD-075	176..264V, 50-60Hz, ta= -40...+90°C, tc max=90°C	EN 61347-1 EN 61347-2-13	ENEC	
Control gear <i>Zasilacz</i>	A	uPowerTek	BLD-096	176..264V, 50-60Hz, ta= -40...+90°C, tc max=90°C	EN 61347-1 EN 61347-2-13	ENEC	
Control gear <i>Zasilacz</i>	A	uPowerTek	BLD-120	176..264V, 50-60Hz, ta= -40...+90°C, tc max=90°C	EN 61347-1 EN 61347-2-13	ENEC	
Control gear <i>Zasilacz</i>	A	TCI	MILANOinLED 75W/200-1050 AD	220..240V, 50-60Hz, ta= -40...+55°C, tc max=85°C	EN 61347-1 EN 61347-2-13	ENEC	
Control gear <i>Zasilacz</i>	A	TCI	MILANOinLED 20W/200-1050 1PN	220..240V, 50-60Hz, ta= -40...+60°C, tc max=75°C	EN 61347-1 EN 61347-2-13	ENEC	
Control gear <i>Zasilacz</i>	A	TCI	MILANOinLED 40W/200-1050 1PN	220..240V, 50-60Hz, ta= -40...+60°C, tc max=80°C	EN 61347-1 EN 61347-2-13	ENEC	
Control gear <i>Zasilacz</i>	A	TCI	MILANOinLED 75W/200-1050 1PN	220..240V, 50-60Hz, ta= -40...+55°C, tc max=85°C	EN 61347-1 EN 61347-2-13	ENEC	
Control gear <i>Zasilacz</i>	A	TCI	MILANOinLED 110W/200-1050 1PN	220..240V, 50-60Hz, ta= -40...+55°C, tc max=85°C	EN 61347-1 EN 61347-2-13	ENEC	

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Object / part No. <i>Nr obiektu / komponentu</i>	Code	Manufacturer/ trademark <i>Producent / znak towarowy</i>	Type / model <i>Typ / model</i>	Technical data <i>Dane techniczne</i>	Standard <i>Norma</i>	Mark(s) of conformity ¹⁾ <i>Znak zgodności</i>	
Control gear <i>Zasilacz</i>	A	TCI	MILANOinLED 20W/200-1050 4PN	220..240V, 50-60Hz, ta= -40...+60°C, tc max=75°C	EN 61347-1 EN 61347-2-13	ENEC	
Control gear <i>Zasilacz</i>	A	TCI	MILANOinLED 40W/200-1050 4PN	220..240V, 50-60Hz, ta= -40...+60°C, tc max=80°C	EN 61347-1 EN 61347-2-13	ENEC	
Control gear <i>Zasilacz</i>	A	TCI	MILANOinLED 75W/200-1050 4PN	220..240V, 50-60Hz, ta= -40...+55°C, tc max=85°C	EN 61347-1 EN 61347-2-13	ENEC	
Control gear <i>Zasilacz</i>	A	TCI	MILANOinLED 110W/200-1050 4PN	220..240V, 50-60Hz, ta= -40...+55°C, tc max=85°C	EN 61347-1 EN 61347-2-13	ENEC	
Control gear <i>Zasilacz</i>	A	TCI	VEGA 75/530-1050 FPD IP67	220..240V, 50-60Hz, ta= -40...+60°C, tc max=90°C	EN 61347-1 EN 61347-2-13	ENEC	
Control gear <i>Zasilacz</i>	A	TCI	VEGA 105/530-1050 FPD IP67	220..240V, 50-60Hz, ta= -40...+60°C, tc max=90°C	EN 61347-1 EN 61347-2-13	ENEC	
Control gear <i>Zasilacz</i>	A	TCI	SIRIO SQ 22W 200-700 1-10V	220..240V, 50-60Hz, ta= -40...+55°C, tc max=85°C	EN 61347-1 EN 61347-2-13	ENEC	
Control gear <i>Zasilacz</i>	A	TCI	SIRIO SQ 40W 200-700 1-10V	220..240V, 50-60Hz, ta= -40...+55°C, tc max=85°C	EN 61347-1 EN 61347-2-13	ENEC	
Control gear <i>Zasilacz</i>	A	TCI	SIRIO SQ 75W 200-700 1-10V	220..240V, 50-60Hz, ta= -40...+55°C, tc max=80°C	EN 61347-1 EN 61347-2-13	ENEC	
Control gear <i>Zasilacz</i>	A	TCI	SIRIO SQ 110W 200- 700 1-10V	220..240V, 50-60Hz, ta= -40...+55°C, tc max=90°C	EN 61347-1 EN 61347-2-13	ENEC	
Control gear <i>Zasilacz</i>	A	TCI	SIRIO SQ 22W 200-700 4PN	220..240V, 50-60Hz, ta= -40...+55°C, tc max=85°C	EN 61347-1 EN 61347-2-13	ENEC	
Control gear <i>Zasilacz</i>	A	TCI	SIRIO SQ 40W 200-700 4PN	220..240V, 50-60Hz, ta= -40...+55°C, tc max=85°C	EN 61347-1 EN 61347-2-13	ENEC	
Control gear <i>Zasilacz</i>	A	TCI	SIRIO SQ 75W 200-700 4PN	220..240V, 50-60Hz, ta= -40...+55°C, tc max=80°C	EN 61347-1 EN 61347-2-13	ENEC	
Control gear <i>Zasilacz</i>	A	TCI	SIRIO SQ 110W 200- 700 4PN	220..240V, 50-60Hz, ta= -40...+55°C, tc max=85°C	EN 61347-1 EN 61347-2-13	ENEC	
Control gear <i>Zasilacz</i>	A	TCI	SIRIO SQ 22W 200-700 AD	220..240V, 50-60Hz, ta= -40...+55°C, tc max=85°C	EN 61347-1 EN 61347-2-13	ENEC	
Control gear <i>Zasilacz</i>	A	TCI	SIRIO SQ 40W 200-700 AD	220..240V, 50-60Hz, ta= -40...+55°C, tc max=85°C	EN 61347-1 EN 61347-2-13	ENEC	
Control gear <i>Zasilacz</i>	A	TCI	SIRIO SQ 75W 200-700 AD	220..240V, 50-60Hz, ta= -40...+55°C, tc max=90°C	EN 61347-1 EN 61347-2-13	ENEC	
Control gear <i>Zasilacz</i>	A	TCI	SIRIO SQ 110W 200- 700 AD	220..240V, 50-60Hz, ta= -40...+55°C, tc max=90°C	EN 61347-1 EN 61347-2-13	ENEC	
Control gear <i>Zasilacz</i>	A	Eaglerise	CKH-26-500 IP67 R	220..240V, 50-60Hz, ta= -40...+60°C, tc max=90°C	EN 61347-1 EN 61347-2-13	ENEC	

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Object / part No. <i>Nr obiektu / komponentu</i>	Code	Manufacturer/ trademark <i>Producent / znak towarowy</i>	Type / model <i>Typ / model</i>	Technical data <i>Dane techniczne</i>	Standard <i>Norma</i>	Mark(s) of conformity ¹⁾ <i>Znak zgodności</i>	
Control gear <i>Zasilacz</i>	A	Ledants	URF A100-A	220..240V, 50-60Hz, ta= -40...+65°C, tc max=90°C	EN 61347-1 EN 61347-2-13	ENEC	
Control gear <i>Zasilacz</i>	A	Vossloh schwabe	PRIMELINE ECXd 1050.639	220..240V, 50-60Hz, ta= -40...+55°C, tc max=85°C	EN 61347-1 EN 61347-2-13	ENEC	
Control gear <i>Zasilacz</i>	A	Vossloh schwabe	PRIMELINE ECXd 1050.640	220..240V, 50-60Hz, ta= -40...+55°C, tc max=85°C	EN 61347-1 EN 61347-2-13	ENEC	
Control gear <i>Zasilacz</i>	A	Vossloh schwabe	PRIMELINE ECXd 1050.641	220..240V, 50-60Hz, ta= -40...+55°C, tc max=85°C	EN 61347-1 EN 61347-2-13	ENEC	
Control gear <i>Zasilacz</i>	A	Vossloh schwabe	PRIMELINE ECXd 1050.642	220..240V, 50-60Hz, ta= -40...+55°C, tc max=85°C	EN 61347-1 EN 61347-2-13	ENEC	
Control gear <i>Zasilacz</i>	A	Vossloh schwabe	PRIMELINE ECXd 1050.659	220..240V, 50-60Hz, ta= -40...+55°C, tc max=85°C	EN 61347-1 EN 61347-2-13	ENEC	
Control gear <i>Zasilacz</i>	A	Vossloh schwabe	PRIMELINE ECXd 1050.660	220..240V, 50-60Hz, ta= -40...+55°C, tc max=85°C	EN 61347-1 EN 61347-2-13	ENEC	
Control gear <i>Zasilacz</i>	A	Vossloh schwabe	PRIMELINE ECXd 1050.682	220..240V, 50-60Hz, ta= -40...+55°C, tc max=85°C	EN 61347-1 EN 61347-2-13	ENEC	
Control gear <i>Zasilacz</i>	A	Vossloh schwabe	PRIMELINE ECXd 1050.683	220..240V, 50-60Hz, ta= -40...+55°C, tc max=85°C	EN 61347-1 EN 61347-2-13	ENEC	
Control gear <i>Zasilacz</i>	A	Vossloh schwabe	PRIMELINE ECXd 1050.684	220..240V, 50-60Hz, ta= -40...+55°C, tc max=85°C	EN 61347-1 EN 61347-2-13	ENEC	
Control gear <i>Zasilacz</i>	A	Vossloh schwabe	PRIMELINE ECXd 1050.685	220..240V, 50-60Hz, ta= -40...+55°C, tc max=85°C	EN 61347-1 EN 61347-2-13	ENEC	
Control gear <i>Zasilacz</i>	A	Lifud	LF-ACD040A/B	220..240V, 50-60Hz, ta= -40...+55°C, tc max=90°C	EN 61347-1 EN 61347-2-13	ENEC	
Control gear <i>Zasilacz</i>	A	Lifud	LF-ACD075A/B/C	220..240V, 50-60Hz, ta= -40...+55°C, tc max=90°C	EN 61347-1 EN 61347-2-13	ENEC	
Control gear <i>Zasilacz</i>	A	Lifud	LF-ACD120A/B	220..240V, 50-60Hz, ta= -40...+55°C, tc max=90°C	EN 61347-1 EN 61347-2-13	ENEC	
Control gear <i>Zasilacz</i>	A	Lifud	LF-ACD165A/B	220..240V, 50-60Hz, ta= -40...+55°C, tc max=90°C	EN 61347-1 EN 61347-2-13	ENEC	
Wires LED <i>Przewody</i>	B	Mrowiec	H05V-U	500 V; 0,5 mm ²	EN 50525	BBJ	
Internal wires <i>Przewody wewnętrzne</i>	B	Mrowiec	H05V-K	500 V; 1 mm ²	EN 50525	BBJ	
Supply cord <i>Przewód zasilający</i>	B	TF Kable	H07RN-F	450/750 V;	EN 50525	BBJ	
Internal wires <i>Przewody wewnętrzne</i>	A	E.M.C. Colosio	RD10-B	300/500 V; 0,5 mm ²	EN 50525	IMQ, <HAR>	

IEC 60598-2-3			
Clause	Requirement + Test	Result - Remark	Verdict

ANNEX 1	TABLE: Critical components information						P
Object / part No. <i>Nr obiektu / komponentu</i>	Code	Manufacturer/ trademark <i>Producent / znak towarowy</i>	Type / model <i>Typ / model</i>	Technical data <i>Dane techniczne</i>	Standard <i>Norma</i>	Mark(s) of conformity ¹⁾ <i>Znak zgodności</i>	
Silicon Fiberglass Insulating Sleeving <i>Oplot izolacyjny z włókna szklanego</i>	B	Isolcavi	GVES 1500	min. 1500 Volt, Temp -60...+250°C	IEC 60684-3-400	UL	
Connector <i>Złącze</i>	B	Jiang Men Krealux Electrical	P02-M	17,5A; 450 V	EN 60988-1 EN 60998-2-2	VDE	
Connector <i>Złącze</i>	A	Openwise	925	16A; 450 V	EN 60988-1 EN 60998-2-2	ENEC	
Connector <i>Złącze</i>	A	Openwise	928	32A; 450 V	EN 60988-1 EN 60998-2-2	ENEC	
Connector <i>Złącze</i>	A	Greenway Electronics Co Ltd	M684	16A; 450 V	EN 61984, EN 60988-1, EN 60998-2-1, EN 62444	ENEC	
Terminal block <i>Listwa zaciskowa</i>	B	Stucchi	651/652	16A; 400 V	EN-61984	IMQ	
Terminal block <i>Listwa zaciskowa</i>	B	Stucchi	661/662	6A; 400 V	EN-61984	IMQ	
Connector <i>Złącze</i>	B	BJB	47.121.-303.93, 47.121.-305.80, 47.121.-702.14, 47.121.-705.84, 47.121.U301.80, 47.121.U303.80, 47.121.U304.80, 47.921.-801.68, 47.921.-802.68, 47.921.U801.81	2A, 24V DC, ta= -40°C to 100°C	EN 61984, UL773	CE, VDE	
Connector <i>Złącze</i>	B	BJB	48.281	16A; 400 V	EN 60998-2-2	VDE	
Connector <i>Złącze</i>	B	BJB	46.412	16A; 450 V	EN 60998-2-2	VDE	
Connector <i>Złącze</i>	B	BJB	46.413	16A; 450 V	EN 60998-2-2	VDE	
Connector <i>Złącze</i>	B	BJB	46.414	16A; 450 V	EN 60998-2-2	VDE	
Connector <i>Złącze</i>	B	BJB	46.415	16A; 450 V	EN 60998-2-2	VDE	
Connector <i>Złącze</i>	B	BJB	46.455	16A; 450 V	EN 60998-2-2	VDE	
Connector <i>Złącze</i>	B	WAGO	224-101	24A; 400 V	EN 60998-2-2	VDE	
Connector <i>Złącze</i>	B	WAGO	224-112	24A; 400 V	EN 60998-2-2	VDE	
Connector <i>Złącze</i>	B	TE Connectivity	2834049 2834048 2834055 2834054	9A; 600 V	EN 61984	TUV	

IEC 60598-2-3			
Clause	Requirement + Test	Result - Remark	Verdict

ANNEX 1	TABLE: Critical components information						P
Object / part No. <i>Nr obiektu / komponentu</i>	Code	Manufacturer/ trademark <i>Producent / znak towarowy</i>	Type / model <i>Typ / model</i>	Technical data <i>Dane techniczne</i>	Standard <i>Norma</i>	Mark(s) of conformity ¹⁾ <i>Znak zgodności</i>	
Terminal block <i>Listwa zaciskowa</i>	B	Wieland	GST 18I4S	20A; 400 V	EN 61535	VDE	
Terminal block <i>Listwa zaciskowa</i>	B	Wieland	GST 15I2	16A; 250 V	EN 61535	VDE	
Terminal block <i>Listwa zaciskowa</i>	B	Wieland	96.051.4153.6	20A; 250 V	EN 61535	VDE, UL	
Terminal block <i>Listwa zaciskowa</i>	B	Wieland	96.031.4053.1	20A; 250 V	EN 61535	VDE, UL	
Connector <i>Złącze</i>	B	EMC Colosio	M26B	17A; 300 V	EN 60598-1	IMQ	
Knife switch (connector) <i>Złącze nożowe</i>	B	Longran	M29 M29 mini	16A; 450 V 16A; 250 V	EN 61984 EN 60998-2-1 EN 60998-1	TUV	
Connector <i>Złącze</i>	B	LONGJOIN	JL-700	1,5A, 30V	EN 61984	DEKRA	
Connector <i>Złącze</i>	B	Tyco Electronics Corp.	2213795, 2213831, 2213837, 2213858, 2328823, 2329013	30V AC/DC 50/60Hz, 1,5A	EN 61984	CB certificate, UL EU, IEC	
Connector <i>Złącze</i>	B	Tyco Electronics Corp.	1-2213871-1, 1-2213871-2, 2213871-1, 2213871-2, X-2213362-X, X-2213627-X	t= -40...+80°C, tc max=80°C 150/240/300VAC, 50/60Hz, 15/7.5/6 A, Signal Contacts: 30VDC, 1.5A	EN 61984	CB certificate, UL EU, IEC	
Connector <i>Złącze</i>	B	LUG	iBlock	230V, 50Hz, Ta =-40°C do 70°C	EN61347-2-11	Tested and accepted by ITE PREDOM Division TR No. Z7-2/016/B/20	
Luminaire protection <i>Zabezpieczenie oprawy</i>	B	Vossloh schwabe	SP / 230 / 10K	220-240V, 50/60Hz, Ta = -30°C do 80°C	EN 60598-2-3 EN 61643-11	VDE	
Luminaire protection <i>Zabezpieczenie oprawy</i>	B	Vossloh schwabe	SP 3 / 230 / 10K	100-277V, 50/60Hz, Ta = -30°C do 80°C	EN 60598-2-3 EN 61643-11	DEKRA	
Luminaire protection <i>Zabezpieczenie oprawy</i>	B	Vossloh schwabe	SPC 3 / 230 / 10K / i	100-277V, 50/60Hz, Ta = -35°C do 80°C	EN 60598-2-3 EN 61643-11	DEKRA	
Luminaire protection <i>Zabezpieczenie oprawy</i>	B	Vossloh schwabe	SPC 3 / 230 / 10K / i-IP66	100-277V, 50/60Hz, Ta = -35°C do 80°C	EN 60598-2-3 EN 61643-11	DEKRA	
Luminaire protection <i>Zabezpieczenie oprawy</i>	B	Vossloh schwabe	SPC 230 / 10K / i	100-277V, 50/60Hz, Ta = -35°C do 80°C	EN 61643-11	DEKRA	
Luminaire protection <i>Zabezpieczenie oprawy</i>	B	Tridonic	SPD 10kV CE SNC	100-277V, 50/60Hz, Ta = -40°C do 80°C	EN 61643-11	KEMA KEUR	
Luminaire protection <i>Zabezpieczenie oprawy</i>	B	Inventronics	PU-20KX10KTX	320Vac, 8A, 47-63Hz, Ta = -40°C do 85°C	EN 61643-11, EN 61643-21	CE, VDE	
Luminaire protection <i>Zabezpieczenie oprawy</i>	B	Inventronics	PU-20Kx10KBx	320Vac, 15A, 47-63Hz, Ta = -40°C do 85°C	EN 61643-11, EN 61643-21	CE, VDE	

IEC 60598-2-3			
Clause	Requirement + Test	Result - Remark	Verdict

ANNEX 1	TABLE: Critical components information						P
Object / part No. <i>Nr obiektu / komponentu</i>	Code	Manufacturer/ trademark <i>Producent / znak towarowy</i>	Type / model <i>Typ / model</i>	Technical data <i>Dane techniczne</i>	Standard <i>Norma</i>	Mark(s) of conformity ¹⁾ <i>Znak zgodności</i>	
Luminaire protection <i>Zabezpieczenie oprawy</i>	B	Inventronics	PU-10Kx05KBx	320Vac, 8A, 47-63Hz, Ta = -40°C do 85°C	EN 61643-11, EN 61643-21	CE, VDE	
Luminaire protection <i>Zabezpieczenie oprawy</i>	B	Linoya Electronic Technology	LYSPD10D	300Vac, 50Hz, IP67	EN 61643-11	TUV	
Luminaire protection <i>Zabezpieczenie oprawy</i>	B	ESB	ESB-6K	220-240V, 50/60Hz, Ta = -30°C do 80°C	EN 61643-11	VDE	
Connector <i>Złącze</i>	B	LONGJOIN Nema	JL-240	t= -40...+70°C, 480VAC, 50/60Hz, Signal Contacts: 30VDC, 0,25A	EN 61984	DEKRA	
Connector <i>Złącze</i>	B	LONGJOIN Nema	JL-208	t= -40...+70°C, 480VAC, 50/60Hz, Signal Contacts: 30VDC, 0,25A	EN 61984	CB	
Connector <i>Złącze</i>	B	Ojun Zhaga	OJ-M716, OJ-M718	t= -40...+70°C, 500V, 50/60Hz, 30VDC, 1,5A	EN 61984	DEKRA, CB, Kema Keur, UKCA	
Connector <i>Złącze</i>	B	Optimum	OPT801, OPT805, OPT806	t= -40...+70°C, IP66, 50/60Hz, 60VDC, 1,5A	EN 61984	DEKRA, CB, Kema Keur, UKCA	
Fixed resistor <i>Rezystor</i>	B	Uniroyal Electronics	MGR series	100k Ohm to 100 MOhm (+-5%), 2W, 2,5kV	EN IEC 62368-1	VDE	
Luminaire protection <i>Zabezpieczenie oprawy</i>	B	RuiLongYuan	TP10D	100-277V, 50/60Hz, Ta = -40°C do 85°C	EN 61643-11 IEC 61643-11	TUV	
Luminaire protection <i>Zabezpieczenie oprawy</i>	B	Greenway	GSPD 1	100-277V, 50/60Hz, Ta = -40°C do 85°C	EN 61643-11 IEC 61643-11	ETL / UL / TUV	
Luminaire protection <i>Zabezpieczenie oprawy</i>	B	Greenway	GSPD 3	100-277V, 50/60Hz, Ta = -40°C do 85°C	EN 61643-11 IEC 61643-11	ETL / UL / TUV	
Luminaire protection <i>Zabezpieczenie oprawy</i>	B	LINOYA	LYSPD10A	300Vac, 50Hz, IP67	EN 61643-11	UL	
Luminaire protection <i>Zabezpieczenie oprawy</i>	B	ZP Lightning	ZP-LSP10-PL	100-277V, 50/60Hz, Ta = -40°C do 85°C	EN 61643-11 IEC 61643-11	UL	
Luminaire protection <i>Zabezpieczenie oprawy</i>	B	ZP Lightning	ZP-LED-P10D	100-277V, 50/60Hz, Ta = -40°C do 85°C	EN 61643-11 IEC 61643-11	TUV	
Luminaire protection <i>Zabezpieczenie oprawy</i>	B	ZP Lightning	ZP-LED-S10D	100-277V, 50/60Hz, Ta = -40°C do 85°C	EN 61643-11 IEC 61643-11	TUV	
Luminaire protection <i>Zabezpieczenie oprawy</i>	B	ZP Lightning	ZP-LSP10-PR	100-277V, 50/60Hz, Ta = -40°C do 85°C	EN 61643-11 IEC 61643-11	TUV	
Luminaire protection <i>Zabezpieczenie oprawy</i>	B	ZP Lightning	ZP-LSP10-PY/II	100-277V, 50/60Hz, Ta = -40°C do 85°C	EN 61643-11 IEC 61643-11	TUV	
Luminaire protection <i>Zabezpieczenie oprawy</i>	B	ZP Lightning	ZP-LSP10-SR	100-277V, 50/60Hz, Ta = -40°C do 85°C	EN 61643-11 IEC 61643-11	TUV	
Luminaire protection <i>Zabezpieczenie oprawy</i>	B	ZP Lightning	ZP-LSP10-SY/II	100-277V, 50/60Hz, Ta = -40°C do 85°C	EN 61643-11 IEC 61643-11	TUV	

IEC 60598-2-3			
Clause	Requirement + Test	Result - Remark	Verdict

ANNEX 1	TABLE: Critical components information						P
Object / part No. <i>Nr obiektu / komponentu</i>	Code	Manufacturer/ trademark <i>Producent / znak towarowy</i>	Type / model <i>Typ / model</i>	Technical data <i>Dane techniczne</i>	Standard <i>Norma</i>	Mark(s) of conformity ¹⁾ <i>Znak zgodności</i>	
Luminaire protection <i>Zabezpieczenie oprawy</i>	B	Zhongyuan Technology	ZYS-P10WD, ZYS-P20WD	100-277V, 50/60Hz, Ta = -40°C do 85°C	EN 61643-11 IEC 61643-11	TUV	
Luminaire protection <i>Zabezpieczenie oprawy</i>	B	Zhongyuan Technology	ZYS-P10SD, ZYS-P20SD, ZYS-P10SD/II, ZYS-P20SD/II	100-277V, 50/60Hz, Ta = -40°C do 85°C	EN 61643-11 IEC 61643-11	TUV	
Supplementary information: ¹⁾ Provided evidence ensures the agreed level of compliance. See OD-CB2039. The codes above have the following meaning: A - The component is replaceable with another one, also certified, with equivalent characteristics B - The component is replaceable if authorised by the test house C - Integrated component tested together with the appliance D - Alternative component							

IEC 60598-2-3							
Clause	Requirement + Test	Result - Remark	Verdict				
ANNEX 2	TABLE: Thermal tests of Section 12		P				
	Type reference :	130782.5LR7B40S1130.117	—				
	Lamp used..... :	ML2167232 W730-01B	—				
	Lamp control gear used :	OPTOTRONIC OT 75/170-240/1A0 4DIMLT2 G2 CE	—				
	Mounting position of luminaire :	on the mast arm	—				
	Supply wattage (W) :	77,4 W	—				
	Supply current (A) :	0,347 A	—				
	Temperatures in test 1 - 4 below are corrected for ta (°C) :	50 °C	—				
	- abnormal operating mode :	N/A	—				
3.12 (12.4)	- test 1: rated voltage :	240 V	—				
	- test 2: 1,06 times rated voltage or 1,05 times rated wattage or 1,1 times constant voltage/current :	254,4 V	—				
	- test 3: Load on wiring to socket-outlet, 1,06 times voltage or 1,05 times wattage :	N/A	—				
	Through wiring or looping-in wiring loaded by a current of A during the test :	N/A	—				
3.12 (12.5)	- test 4: 1,1 times rated voltage or 1,05 times rated wattage or 1,1 times constant voltage/current or 130/150% of rated input voltage :	N/A	—				
Temperature measurements (°C)							
Part	Ambient	Cl. 12.4 – normal				Cl. 12.5 – abnormal	
		test 1	test 2	test 3	limit	test 4	limit
LED Module	50	81	N/A	N/A	85	N/A	N/A
Control gear	50	78	N/A	N/A	85	N/A	N/A
Connector	50	N/A	60	N/A	85	N/A	N/A
Internal wires	50	N/A	63	N/A	90	N/A	N/A
Supplementary information:							

IEC 60598-2-3			
Clause	Requirement + Test	Result - Remark	Verdict
ANNEX 3	Screw terminals (part of the luminaire)		N/A
(14)	SCREW TERMINALS		N/A
(14.2)	Type of terminal..... :	N/A	—
	Rated current (A)..... :	N/A	—
(14.3.2.1)	One or more conductors		N/A
(14.3.2.2)	Special preparation		N/A
(14.3.2.3)	Terminal size		N/A
	Cross-sectional area (mm ²)..... :	N/A	—
(14.3.3)	Conductor space (mm)..... :		N/A
(14.4)	Mechanical tests		N/A
(14.4.1)	Minimum distance		N/A
(14.4.2)	Cannot slip out		N/A
(14.4.3)	Special preparation		N/A
(14.4.4)	Nominal diameter of thread (metric ISO thread) :	M	N/A
	External wiring		N/A
	No soft metal		N/A
(14.4.5)	Corrosion		N/A
(14.4.6)	Nominal diameter of thread (mm) :		N/A
	Torque (Nm) :		N/A
(14.4.7)	Between metal surfaces		N/A
	Lug terminal		N/A
	Mantle terminal		N/A
	Pull test; pull (N)..... :		N/A
(14.4.8)	Without undue damage		N/A

IEC 60598-2-3			
Clause	Requirement + Test	Result - Remark	Verdict
ANNEX 4	Screwless terminals (part of the luminaire)		N/A
(15)	SCREWLESS TERMINALS		N/A
(15.2)	Type of terminal..... :	N/A	—
	Rated current (A) :	N/A	—
(15.3.1)	Material		N/A
(15.3.2)	Clamping		N/A
(15.3.3)	Stop		N/A
(15.3.4)	Unprepared conductors		N/A
(15.3.5)	Pressure on insulating material		N/A
(15.3.6)	Clear connection method		N/A
(15.3.7)	Clamping independently		N/A
(15.3.8)	Fixed in position		N/A
(15.3.10)	Conductor size		N/A
	Type of conductor		N/A
(15.5)	Terminals and connections for internal wiring		N/A
(15.5.1)	Mechanical tests		N/A
(15.5.1.1.1)	Pull test spring-type terminals (4 N, 4 samples) :		N/A
(15.5.1.1.2)	Pull test pin or tab terminals (4 N, 4 samples) :		N/A
	Insertion force not exceeding 50 N		N/A
(15.5.1.2)	Permanent connections: pull-off test (20 N)		N/A
(15.5.2)	Electrical tests		N/A
	Voltage drop (mV) after 1 h (4 samples) :		N/A
	Voltage drop of two inseparable joints		N/A
	Number of cycles:		—
	Voltage drop (mV) after 10th alt. 25th cycle (4 samples)..... :		N/A
	Voltage drop (mV) after 50th alt. 100th cycle (4 samples)..... :		N/A
	After ageing, voltage drop (mV) after 10th alt. 25th cycle (4 samples) :		N/A
	After ageing, voltage drop (mV) after 50th alt. 100th cycle (4 samples) :		N/A
(15.6)	Terminals and connections for external wiring		N/A
(15.6.1)	Conductors		N/A
	Terminal size and rating		N/A

IEC 60598-2-3			
Clause	Requirement + Test	Result - Remark	Verdict
15.6.2	Mechanical tests		N/A
(15.6.2.1)	Pull test spring-type terminals or welded connections (4 samples); pull (N)		N/A
(15.6.2.2)	Pull test pin or tab terminals (4 samples); pull (N)		N/A
(15.6.3)	Electrical tests		N/A
	Tests according 15.6.3.1 + 15.6.3.2 in IEC 60598-1		N/A

(15.6.3.1) (15.6.3.2)	TABLE: Contact resistance test / Heating tests										N/A
	Voltage drop (mV) after 1 h										—
terminal	1	2	3	4	5	6	7	8	9	10	
voltage drop (mV)											
	Voltage drop of two inseparable joints										
	Voltage drop after 10th alt. 25th cycle										
	Max. allowed voltage drop (mV) :										—
terminal	1	2	3	4	5	6	7	8	9	10	
voltage drop (mV)											
	Voltage drop after 50th alt. 100th cycle										
	Max. allowed voltage drop (mV) :										—
terminal	1	2	3	4	5	6	7	8	9	10	
voltage drop (mV)											
	Continued ageing: voltage drop after 10th alt. 25th cycle										
	Max. allowed voltage drop (mV) :										—
terminal	1	2	3	4	5	6	7	8	9	10	
voltage drop (mV)											
	Continued ageing: voltage drop after 50th alt. 100th cycle										
	Max. allowed voltage drop (mV) :										—
terminal	1	2	3	4	5	6	7	8	9	10	
voltage drop (mV)											
Supplementary information:											

List of test equipment used:

A completed list of used test equipment shall be provided in the Test Reports when a Customer's Testing Facility according to CTF stage 1 or CTF stage 2 procedure has been used.

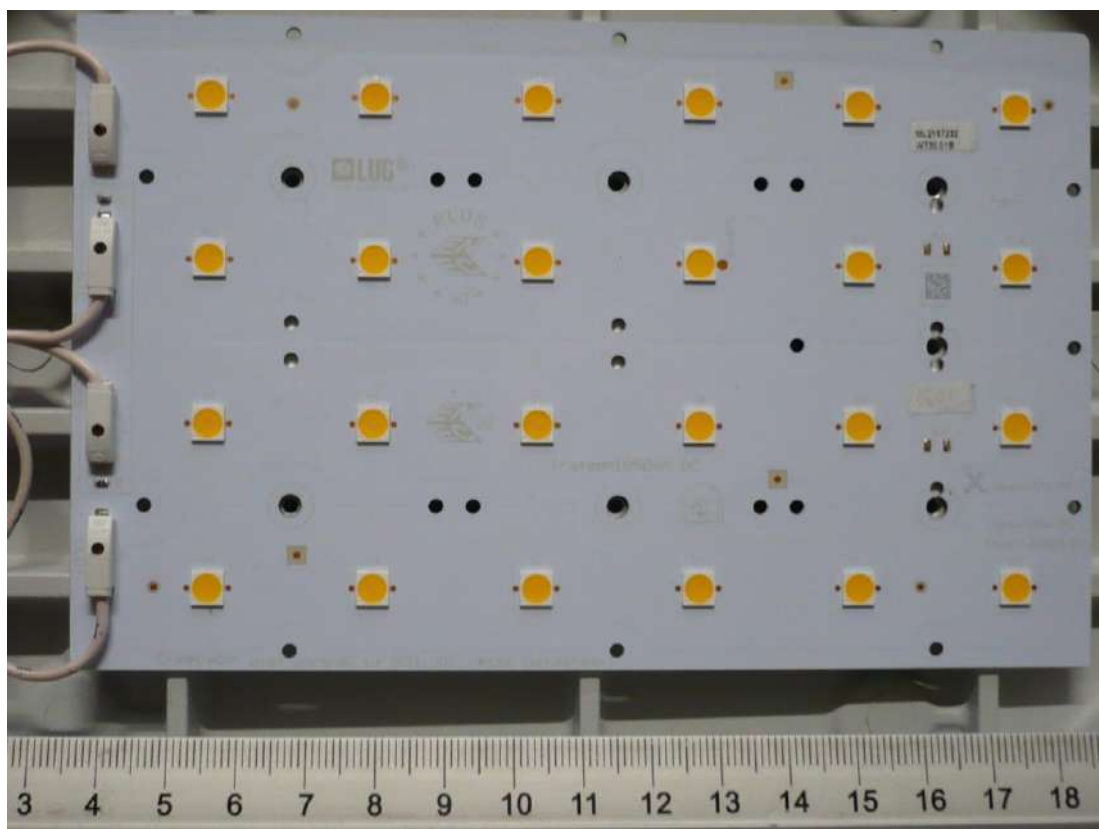
Note: This page may be removed when CTF stage 1 or CTF stage 2 are not used. See also clause 4.8 in OD 2020 for more details.

Clause	Measurement / testing	Testing / measuring equipment / material used, (Equipment ID)	Range used	Last Calibration date	Calibration due date

Photos







IEC60598_2_3M ATTACHMENT			
Clause	Requirement + Test	Result - Remark	Verdict
ATTACHMENT TO TEST REPORT B5-3/092/B/1/23 IEC 60598-2-3 EUROPEAN GROUP DIFFERENCES AND NATIONAL DIFFERENCES Luminaires Part 2: Particular requirements Section 3: Luminaires for road and street lighting			
Differences according to : EN 60598-2-3:2003 + A1:2011 used in conjunction with EN IEC 60598-1:2021 + A11:2022			
TRF template used : IECEE OD-2020-F2:2020, Ed. 1.1			
Attachment Form No. : EU_GD_IEC60598_2_3M			
Attachment Originator : UL(Demko)			
Master Attachment : 2022-05-24			
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	CENELEC COMMON MODIFICATIONS (EN)		P
3.5 (3)	MARKING		N/A
3.5 (3.2.12)	Note 4 deleted		N/A
3.6 (4)	CONSTRUCTION		N/A
4.7 (4.11.6)	Electro-mechanical contact systems: electric strength test at 1 500 V		N/A
3.10 (5)	EXTERNAL AND INTERNAL WIRING		P
3.10 (5.2.2)	Cables equal to EN 50525 (all parts)		P
	Paragraph 2 deleted		P
	Replace table 5.1 – Supply cord		N/A
3.12 (12)	ENDURANCE TESTS AND THERMAL TESTS		N/A
3.12 (12.4.2c)	Thermal test (normal operation) see footnote c to table 12.2 relating to unsleeved fixed wiring		N/A
ZB	ANNEX ZB, SPECIAL NATIONAL CONDITIONS (EN)		N/A
(3.3)	DK: power supply cords of class I luminaires with label		N/A
(5.2.1)	CY, DK, FI, UK: type of plug		N/A

IEC60598_2_3M ATTACHMENT			
Clause	Requirement + Test	Result - Remark	Verdict
(5.2.18)	DK: socket-outlets		N/A
ZC	ANNEX ZC, NATIONAL DEVIATIONS (EN)		N/A
(4 & 5)	FR: Shuttered socket-outlets 10/16A		N/A
	FR: Safety requirements for high buildings <i>(Decree of 30 December 2011 on safety regulations for the construction of high-rise buildings and their protection against fire and panic risks; Section VIII; Article GH 48, Lighting)</i> Glow-wire test for outer parts of luminaires:		N/A
	- 850°C for luminaires in stairways and horizontal travel paths		N/A
	- 650°C for indoor luminaires		N/A
	UK: Requirements according to United Kingdom Building Regulation		N/A

LABORATORY SURVEILLANCE CERTIFICATE

Ref. No. LSC/01/24

It is hereby confirmed that the Laboratory of Quality

LUG Light Factory Sp. z o.o.
ul. Gorzowska 11
65-127 Zielona Góra
Poland

is authorized by Łukasiewicz- IMiF PREDOM Division to perform research in the field of:

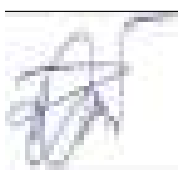
EN 13032-1	Light and lighting - Measurement and presentation of photometric data of lamps and luminaires - Part 1: Measurement and file format
EN 13032-4	Light and lighting - Measurement and presentation of photometric data of lamps and luminaires - Part 4: LED lamps, modules and luminaires
CIE 13.3	Method of Measuring and Specifying Colour Rendering Properties of Light Sources
CIE 15	Colorimetry / 4rd edition
CIE 121	The photometry & goniophotometry of luminaires
ANSI/IES LM-79	Optical and Electrical Measurements of Solid State Lighting Products

For the products and standards as referred in the Report No. B5-3/010/2024 dated 03.06.2024 performed by Łukasiewicz-IMiF PREDOM Division (Accreditation PCA no. AB 003).

The proof has been given in the assessment carried out by Łukasiewicz- IMiF PREDOM Division

This certificate is valid if the laboratory observes the requirements of the above mentioned standard and under conditions of the Contract No. 05/2022 dated 05.12.2022.

This certificate is valid until: **2028-06-07**



Signed by /
Podpisano przez:

Paweł Andrzej
Oziębło

Date / Data:
2024-06-07 13:09

Manager of Certification Office



Warsaw, 2024.06.07



Łukasiewicz – IMiF Oddział PREDOM
Centrum Badań i Certyfikacji
02-255 Warszawa, ul. Krakowiaków 53



CERTYFIKAT NADZORU LABORATORIUM Nr. LSC/01/24

Niniejszym potwierdza się, że Laboratorium

LUG Light Factory Sp. z o.o.
ul. Gorzowska 11
65-127 Zielona Góra
Polska

posiada uprawnienia Łukasiewicz-IMiF PREDOM Oddział do wykonywania badań w zakresie:

EN 13032-1	Światło i oświetlenie -- Pomiar i prezentacja danych fotometrycznych lamp i opraw oświetleniowych -- Część 1: Pomiar i format pliku
EN 13032-4	Światło i oświetlenie -- Pomiar i prezentacja danych fotometrycznych lamp i opraw oświetleniowych -- Część 4: Lampy, moduły i oprawy oświetleniowe LED
CIE 13.3	Metoda pomiaru i określania właściwości oddawania barw źródeł światła
CIE 15	Kolorymetria, wydanie 4
CIE 121	Fotometria i goniofotometria opraw oświetleniowych
ANSI/IES LM-79	Pomiary optyczne i elektryczne półprzewodnikowych produktów oświetleniowych

wyrobów oraz norm wyszczególnionych w Raporcie nr B5-3/010/2024 z dnia 03.06.2024 wykonanym przez Łukasiewicz-IMiF Oddział PREDOM (Akredytacja PCA nr AB 003)

Dowodem jest ocena przeprowadzona przez Łukasiewicz-IMiF Oddział PREDOM.

Certyfikat ten jest ważny pod warunkiem, że laboratorium spełnia wymagania w/w. norm zgodnie z warunkami Umowy nr 05/2022 z dnia 05.12.2022r.

Certyfikat jest ważny do dnia: **2028-06-07**

Signed by /
Podpisano przez:

Paweł Andrzej
Oziębło

Date / Data:
2024-06-07 13:09

Kierownik Biura certyfikacji



Warszawa, 2024.06.07

Niniejszy Certyfikat nie upoważnia producenta do posługiwania się jakimkolwiek znakiem Łukasiewicz-IMiF Oddział PREDOM.



Management Service

CERTIFICATE

Certificate Registration No.: **12 100 23152 TMS** / Order No.: **73423157**

The Certification Body
of TÜV SÜD Management Service GmbH

certifies that the organization



LUG LIGHT FACTORY Sp. z o.o.
ul. Gorzowska 11
65-127 Zielona Góra
Poland

for the scope

Design, production and sale of lighting Systems**including the sites see enclosure**

has established and applies a Quality Management System.

An audit was performed and has furnished proof
that the requirements according to

DIN EN ISO 9001:2015

are fulfilled.

The certificate is valid from **2024-04-03** until **2027-04-02**.

Fred Wenke
Head of Certification Body
Munich, 2024-02-19





Management Service

ENCLOSURE OF CERTIFICATE

Certificate Registration No.: **12 100 23152 TMS** / Order No.: **73423157**

certificate holder:

LUG LIGHT FACTORY Sp. z o.o.
ul. Gorzowska 11
65-127 Zielona Góra
Poland

at the sites	at the sites
LUG LIGHT FACTORY Sp. z o.o. ul. Gorzowska 11 65-127 Zielona Góra Poland	LUG LIGHT FACTORY Sp. z o.o. ul. Gorzowska 11 65-127 Zielona Góra Poland
LUG LIGHT FACTORY Sp. z o.o. ul. Nowa 7 66-002 Nowy Kisielin Poland	LUG LIGHT FACTORY Sp. z o.o. ul. Nowa 7 66-002 Nowy Kisielin Poland

Fred Wenke
 Head of Certification Body
 Munich, 2024-02-19

Page 2 of 2





Management Service

CERTIFICATE

Certificate Registration No.: **12 104 23152 TMS** / Order No.: **73423157**

**The Certification Body
of TÜV SÜD Management Service GmbH**

certifies that the organization



LUG LIGHT FACTORY Sp. z o.o.

**ul. Gorzowska 11
65-127 Zielona Góra
Poland**

for the scope

Design, production and sale of lighting Systems

including the sites see enclosure

has established and applies an Environmental Management System.

An audit was performed and has furnished proof
that the requirements according to

DIN EN ISO 14001:2015

are fulfilled.

The certificate is valid from **2024-04-03** until **2027-04-02**.

Fred Wenke
Head of Certification Body
Munich, 2024-02-19

Page 1 of 2





Management Service

ZERTIFIKAT ◆ CERTIFICATE ◆ 認證證書 ◆ CERTIFICADO ◆ CERTIFICAT

ENCLOSURE OF CERTIFICATE

Certificate Registration No.: **12 104 23152 TMS** / Order No.: **73423157**

certificate holder:

LUG LIGHT FACTORY Sp. z o.o.
ul. Gorzowska 11
65-127 Zielona Góra
Poland

at the sites	scope
LUG LIGHT FACTORY Sp. z o.o. ul. Gorzowska 11 65-127 Zielona Góra Poland	Design, production and sale of lighting systems.
LUG LIGHT FACTORY Sp. z o.o. ul. Nowa 7 66-002 Nowy Kisielin Poland	Design and production of lighting systems.

Fred Wenke
Head of Certification Body
Munich, 2024-02-19

Page 2 of 2



Test method	Tested Characteristics	Testing standard
MB-60598-1 Luminaires - Part 1: General requirements and tests	Characteristics and properties for safety assessment of use: - durability of marking, - current and power consumption, - durability of electrical and mechanical connections,	PN-EN IEC 60598-1:2021-07 PN-EN IEC 60598-1:2021-07/A11:2022-12 EN IEC 60598-1:2021 EN IEC 60598-1/A11:2022 IEC 60598-1:2020
MB-60598-2-1 Luminaires - Part 2-1: Particular requirements - Fixed general purpose luminaires	- mechanical strength and resistance to mechanical shocks,	PN-EN IEC 60598-2-1:2021-09 EN IEC 60598-2-1:2021 IEC 60598-2-1:2020
MB-60598-2-2 Luminaires - Part 2-2: Particular requirements - Recessed luminaires	- hanging and fixing security, - photobiological hazard, - insulation resistance,	PN-EN 60598-2-2:2012 EN IEC 60598-2-2:2012 IEC 60598-2-2:2011
MB-60598-2-3 Luminaires - Part 2-3: Particular requirements - Luminaires for road and street lighting	- electrical insulation strength, - continuity and resistance of the protective circuit, - leakage current, - resistance to dust, solid objects and water ingress, - creepage distances and clearances	PN-EN 60598-2-3:2006 PN-EN 60598-2-3:2006/A1:2012 EN 60598-2-3:2003 EN 60598-2-3:2003/corrigendum Aug. 2005 EN 60598-2-3:2003/A1:2011 IEC 60598-2-3:2002 IEC 60598-2-3:2002/AMD1:2011
MB-60598-2-4 Luminaires - Part 2-4: Particular requirements - Portable general purpose luminaires	- thermal endurance - temperature of parts, - resistance to heat, fire and ignition	PN-EN 60598-2-4:2018-06 EN 60598-2-4:2018 IEC 60598-2-4:2017
MB-60598-2-5 Luminaires - Part 2-5: Particular requirements - Floodlights	- corrosion resistance, - linear dimensions, - resistance to moisture, - stability.	PN-EN 60598-2-5:2016-2 EN 60598-2-5:2015 IEC 60598-2-5:2015
MB-60598-2-13 Luminaires - Part 2-13: Particular requirements - Ground recessed luminaires		PN-EN 60598-2-13:2007 PN-EN 60598-2-13:2007/A1:2012 PN-EN 60598-2-13:2007/A11:2021-09 IEC 60598-2-13:2006 IEC 60598-2-13:2006/A1:2011 IEC 60598-2-13:2006+AMD1:2011+AMD2:2016
MB-60598-2-24 Luminaires - Part 2-24: Particular requirements - Luminaires with limited surface temperatures		PN-EN 60598-2-24:2014-02 EN 60598-2-24:2013 IEC 60598-2-24:2013
MB-60598-2-25 Luminaires - Part 2: Particular requirements - Section 25: Luminaires for use in clinical areas of hospitals and health care buildings		PN-EN 60598-2-25:2000 PN-EN 60598-2-25:2000/A1:2005 IEC 60598-2-25:1994 IEC 60598-2-25:1994/AMD1:2004
MB-60598-2-22 Luminaires - Part 2-22: Particular requirements - Luminaires for emergency lighting	Characteristics and properties for safety assessment of use as for luminaires in general use, and: - emergency operation, - switching operation.	PN-EN 60598-2-22:2022-11 EN IEC 60598-2-22:2022 IEC 60598-2-22:2014/AMD1:2017 IEC 60598-2-22:2021
MB-62031 LED modules for general lighting - Safety specifications	Characteristics and properties for safety assessment of use: - durability of marking, - dimensions and design of the terminals, - durability of electrical and mechanical connections - continuity of protective connections, - resistance of protective circuits, - protection against contact with live parts, - resistance to moisture, - resistance and electrical strength of insulation, - over-power condition, - temperature rise, - insulation creepage and clearances, - resistance to heat, flame and creepage currents, - resistance to corrosion, - photobiological hazard.	PN-EN IEC 62031:2020-08 PN-EN IEC 62031:2020-08/A11:2022-02 EN IEC 62031:2020 EN IEC 62031:2020/A11:2021 IEC 62031:2018
MB-61347-1 Lamp controlgear - Part 1: General and safety requirements	Characteristics and properties for safety assessment of use: - durability of marking, - voltage, current and electric power consumption, shape of the current curve, - dimensions and design of the terminals,	PN-EN 61347-1:2015-09 PN-EN 61347-1:2015-09/A1:2021-06 EN 61347-1:2015 EN 61347-1:2015/A1:2021 IEC 61347-1:2015 IEC 61347-1:2015+AMD1:2017

MB-61347-2-11 Lamp controlgear - Part 2-11: Particular requirements for miscellaneous electronic circuits used with luminaires	- continuity of protective connections, - resistance of protective circuits, - protection against accidental contact with live parts, - resistance to moisture, - resistance and electrical strength of insulation, - temperature rise under normal and abnormal conditions, including protected, thermally shielded or overheated equipment, - high-voltage pulse test, - surface and air insulation clearances, - durability of electrical and mechanical connections, - resistance to heat, fire and creepage currents, - resistance to corrosion, - short-circuit and overload protection, - fail-safe.	PN-EN 61347-2-11:2005 PN-EN 61347-2-11:2005/AC:2011P PN-EN 61347-2-11:2005/A1:2019-09 EN 61347-2-11:2001 EN 61347-2-11:2001/corrigendum Jan. 2002 EN 61347-2-11:2001/A1:2019 IEC 61347-2-11:2001 IEC 61347-2-11:2001/COR1:2001 IEC 61347-2-11:2001/AMD1:2017
MB-61347-2-7 Lamp controlgear - Part 2-7: Particular requirements for electric source for safety services (ESSS) supplied electronic controlgear for emergency lighting (self-contained)	Characteristics and properties for the evaluation of safety in use, as for a variety of electronic systems and: - emergency operation, - switching operation.	PN-EN 61347-2-7:2012 PN-EN 61347-2-7:2012/A1:2019-11 EN 61347-2-7:2012 EN 61347-2-7:2012/A1:2019 IEC 61347-2-7:2011 IEC 61347-2-7:2011/AMD1:2017
MB-62368-1 Audio/video, information and communication technology equipment - Part 1: Safety requirements	Characteristics and properties for safety assessment of use: - durability of marking, - current and power consumption, - durability of electrical and mechanical connections, - mechanical strength and resistance to mechanical shocks, - hanging and fixing security, - photobiological hazard, - resistance of AC and DC insulation, - electrical strength of AC and DC insulation, - continuity and resistance of the protective circuit, - leakage current, - resistance to dust, solids and water ingress, - insulation clearances - thermal endurance - temperature of parts, - resistance to heat, fire and ignition - corrosion resistance, - linear dimensions, - resistance to moisture, - stability.	PN-EN IEC 62368-1:2020-11 EN IEC 62368-1:2020 IEC 62368-1:2018 PN-EN IEC 62368-1:2020-11/A11:2020-12 EN IEC 62368-1:2020/A11:2020
MB-60529 Degrees of protection provided by enclosures (IP Code)	Functional features - resistant to water, - resistant to dust and solid state objects.	PN-EN 60529:2003 PN-EN 60529:2003/AC:2017-12P PN-EN 60529:2003/AC:2020-01P PN-EN 60529:2003+A2:2014-07 EN 60529:1991 EN 60529:1991/A1:2000 EN 60529:1991/A2:2013 IEC 60529:1989 IEC 60529:1989/AMD2:2013
MB-62262 Degrees of protection provided by enclosures for electrical equipment against external mechanical impacts (IK code)	Functional features: - mechanical impact resistance	PN-EN 62262:2003 PN-EN 62262:2003/Ap1:2022-01E PN-EN 62262:2003/A1:2022-06 EN 62262:2002 EN 62262:2002/A1:2021 IEC 62262:2002 IEC 62262:2002/AMD1:2021 IEC TR 62696:2011



Polska

MB-62471 Photobiological safety of lamps and lamp systems	Characteristics and properties for the photobiological safety assessment of continuous light sources: - spectral radiance and luminance, - spectral irradiance and illuminance, - spectral distribution and the calculated characteristics,	PN-EN 62471:2010 EN 62471:2008 IEC 62471:2006 IEC TR 62471-2:2009 IEC/TR 62778:2014 PN-EN IEC 62471-7:2023-10 PN-EN IEC 62471-7:2023-10/AC:2023-10E EN IEC 62471-7:2023 IEC 62471-7:2023
MB-62471-7 Photobiological safety of lamps and lamp systems - Part 7: Light sources and luminaires primarily emitting visible radiation	- correlated colour temperature (CCT), - colour rendering index (Ra), - chromaticity coordinates.	
MB-62493 Assessment of lighting equipment related to human exposure to electromagnetic fields	Conformity assessment: - without testing, - based on subcontracted testing.	PN-EN 62493:2015-11 PN-EN 62493:2015-11/A1:2023-03 EN 62493:2015 EN 62493:2015/A1:2022 IEC 62493:2015 IEC 62493:2015/AMD1:2022
MB-61000-4-2 Electromagnetic compatibility (EMC) - Part 4-2: Testing and measurement techniques - Electrostatic discharge immunity test	Electrostatic discharge resistance (ESD).	PN-EN 61000-4-2:2011 EN 61000-4-2:2009 IEC 61000-4-2:2008
MB-61000-4-4 Electromagnetic compatibility (EMC) - Part 4-4: Testing and measurement techniques - Electrical fast transient/burst immunity test	Resistance to a series of fast electrical transients.	PN-EN 61000-4-4:2013-05 EN 61000-4-4:2012 IEC 61000-4-4:2012
MB-61000-4-5 Electromagnetic compatibility (EMC) - Part 4-5: Testing and measurement techniques - Surge immunity test	Surge Immunity Test	PN-EN 61000-4-5:2014-10 EN 61000-4-5:2014 IEC 61000-4-5:2014 PN-EN 61000-4-5:2014-10/A1:2018-01 EN 61000-4-5:2014/A1:2017 IEC 61000-4-5:2014/AMD1:2017
MB-61000-4-11 Electromagnetic compatibility (EMC) - Part 4-11: Testing and measurement techniques - Voltage dips, short interruptions and voltage variations immunity tests for equipment with input current up to 16 A per phase	Resistance to Voltage dips, short interruptions and voltage variations	PN-EN IEC 61000-4-11:2020-11 EN IEC 61000-4-11:2020 IEC 61000-4-11:2020
MB-61547 Equipment for general lighting purposes - EMC immunity requirements	Resistance to: - electrostatic discharge (ESD); - series of fast electrical transients; - surges (Surge Immunity Test); - voltage dips, short interruptions and voltage variations	PN-EN IEC 61547:2023-10 EN IEC 61547:2023 IEC 61547:2020 PN-EN 61547:2009 EN 61547:2009 IEC 61547:2009
MB-55015 Limits and methods of measurement of radio disturbance characteristics of electrical lighting and similar equipment	Disturbance voltage at power supply terminals (9kHz + 30MHz)	PN-EN IEC 55015:2019-11 EN IEC 55015:2019 CISPR 15:2018 PN-EN IEC 55015:2019-11/A11:2020-07 EN IEC 55015:2019/A11:2020
MB-55032 Electromagnetic compatibility of multimedia equipment - Emission Requirements		PN-EN 55032:2015-09 EN 55032:2015 CISPR 32:2015 PN-EN 55032:2015-09/A1:2021-05 EN 55032:2015/A1:2020 CISPR 32:2015/AMD1:2019 PN-EN 55032:2015-09/A11:2020-07 EN 55032:2015/A11:2020
MB-61000-3-2 Electromagnetic compatibility (EMC) - Part 3-2: Limits - Limits for harmonic current emissions (equipment input current ≤ 16 A per phase)	Current Harmonics	PN-EN IEC 61000-3-2:2019-04 EN IEC 61000-3-2:2019 IEC 61000-3-2:2018 PN-EN IEC 61000-3-2:2019-04/A1:2021-08 EN IEC 61000-3-2:2019/A1:2021 IEC 61000-3-2:2018/AMD1:2020 PN-EN 61000-3-2:2014-10 EN 61000-3-2:2014 IEC 61000-3-2:2014

MB-61000-3-3 Electromagnetic compatibility (EMC) - Part 3-3: Limits - Limitation of voltage changes, voltage fluctuations and flicker in public low-voltage supply systems, for equipment with rated current ≤16 A per phase and not subject to conditional connection	- conformity assessment without testing, - voltage variation tests.	PN-EN 61000-3-3:2013-10 EN 61000-3-3:2013 IEC 61000-3-3:2013 PN-EN 61000-3-3:2013-10/A1:2019-10 EN 61000-3-3:2013/A1:2019 IEC 61000-3-3:2013/AMD1:2017 PN-EN 61000-3-3:2013-10/A2:2022-04 EN 61000-3-3:2013/A2:2021 IEC 61000-3-3:2013/AMD2:2021
MB-301 489-1 Electromagnetic compatibility and Radio spectrum Matters (ERM); ElectroMagnetic Compatibility (EMC) standard for radio equipment and services; Part 1: Common technical requirements	Disturbance voltage at power supply terminals (9kHz + 30MHz) Resistance to: - electrostatic discharge (ESD); - series of fast electrical transients; - surges (Surge Immunity Test);	ETSI EN 301 489-1 V1.9.2 (2011-09) ETSI EN 301 489-1 V2.2.3 (2019-11)
MB-301 489-17 Electromagnetic compatibility and Radio spectrum Matters (ERM); ElectroMagnetic Compatibility (EMC) standard for radio equipment; Part 17: Specific conditions for Broadband Data Transmission Systems	- Voltage dips, short interruptions and voltage variations. - Current Harmonics	ETSI EN 301 489-17 V3.2.6 (2023-06)
MB-301 489-19 ElectroMagnetic Compatibility (EMC) standard for radio equipment and services; Part 19: Specific conditions for Receive Only Mobile Earth Stations (ROMES) operating in the 1,5 GHz band providing data communications and GNSS receivers operating in the RNSS band providing positioning, navigation, and timing data; Harmonised Standard for ElectroMagnetic Compatibility		ETSI EN 301 489-19 V2.2.1 (2022-09)
MB-301 489-52 ElectroMagnetic Compatibility (EMC) standard for radio equipment and services; Part 52: Specific conditions for Cellular Communication User Equipment (UE) radio and ancillary equipment; Harmonised Standard for ElectroMagnetic Compatibility		ETSI EN 301 489-52 V1.2.1 (2021-11)
MB-62722-1 Luminaire performance - Part 1: General requirements	Functional characteristics: - luminous flux - light distribution - illuminance, - spectral distribution and the calculated characteristics, - correlated colour temperature (CCT), - colour rendering index (Ra), - chromaticity coordinates, - active, reactive and apparent power, - current harmonics, Current Total Harmonic Distortion (THDI), - luminous efficacy.	PN-EN 62722-1:2016-07 PN-EN IEC 62722-1:2023-03 EN 62722-1:2016 EN IEC 62722-1:2022 IEC 62722-1:2014 IEC 62722-1:2022
MB-62722-2-1 Luminaire performance - Part 2-1: Particular requirements - LED luminaires		PN-EN 62722-2-1:2016-07 PN-EN IEC 62722-2-1:2023-10 EN 62722-2-1:2016 EN IEC 62722-2-1:2023 IEC 62722-2-1:2014 IEC 62722-2-1:2023
MB-62717 LED modules for general lighting - Performance requirements		PN-EN 62717:2017-11 PN-EN 62717:2017-11/A2:2019-07 EN 62717:2017 EN 62717:2017/A2:2019 IEC 62717:2014 IEC 62717:2014/AMD1:2015 IEC 62717:2014/AMD2:2019
MB-13032-1 Light and lighting - Measurement and presentation of photometric data of lamps and luminaires - Part 1: Measurement and file format		PN-EN 13032-1:2010+A1:2012 EN 13032-1:2004+A1:2012
MB-13032-4 Light and lighting - Measurement and presentation of photometric data of lamps and luminaires - Part 4: LED lamps, modules and luminaires		PN-EN 13032-4+A1:2019-09 EN 13032-4:2015+A1:2019

MB-LM-79 Optical and Electrical Measurements of Solid State Lighting Products		ANSI/IES LM-79-19
MB-61547-1 Equipment for general lighting purposes - EMC immunity requirements - Part 1: Objective light flickermeter and voltage fluctuation immunity test method	Light intensity as a function of time and the coefficients calculated from it: - Flicker Index, - Percent Flicker - Stroboscopic Visibility Measure (SVM), - flicker index, short-term light modulation (P_{st}^{LM}).	IEC TR 61547-1:2020
MB-LM-82 Characterization of Optical and Electrical Properties of Solid-State Lighting Products as a Function of Temperature	Functional characteristics as a function of ambient temperature: - illuminance, - spectral distribution and the calculated characteristics, - correlated colour temperature (CCT), - colour rendering index (Ra), - chromaticity coordinates, - active, reactive and apparent power, - current harmonics, Current Total Harmonic Distortion (THDI).	ANSI/IES LM-82-20
MB-TM-21 Projecting Long-Term Luminous, Photon, and Radiant Flux Maintenance of LED Light Sources	Predicting light flux decrease as a function of time.	IES TM-21-11 ANSI/IES TM-21-19
MB-01 Calibration of spring hammers 0.2-1J	Construction and functional characteristics: - geometrical dimensions, - trigger force of the mechanism, - kinetic energy.	PN-EN 60068-2-75:2015-01
MB-02 Calibration of pendulum hammer 2-50J	Construction and functional characteristics: - geometrical dimensions - mass of the elements, - kinetic energy (calculated).	
MB-03 Calibration of callipers	Measurement errors: - with the outer jaws, - with the inner jaws, - depth with depth extension gauge.	-
MB-04 Calibration of protractors	Errors in angle measurements.	-
MB-05 Calibration of tape measures	Measuring errors: - Length with the moving blade hooked, - length with the moving blade resting.	-
MB-06 Calibration of Type K thermocouple sensors	Thermocouple errors.	-

Artur Labus



Head of Industry Service Department

CERTIFICATE OF APPROVAL LABORATORY

No. TSP-17025-LB-006.01

Laboratory
LUG LIGHT FACTORY Sp. z o.o.

ul. Gorzowska 11
65-127 Zielona Góra, Polska

meeting the criteria for the requirements specified in the
"TÜV SÜD Polska Sp. z o.o. General Guidelines for the Approval of
Testing Laboratories with regard to the Requirements
of PN-EN ISO IEC 17025 standard"

has been approved by TÜV SÜD Polska for conducting tests.

Scope of testing methods included in the approval is specified in the
annex to the Certificate of Approval of the Laboratory

Approval validity date: from 02.04.2024 to 01.04.2027

TÜV SÜD Polska Sp. z o.o.
00-252 Warszawa, ul. Podwale 17



Artur Labus
Director of Industry Service Department

Chorzów, 02.04.2024

**The Certification Body
of TÜV SÜD Management Service GmbH**
certifies that



LUG LIGHT FACTORY Sp. z o.o.
ul. Gorzowska 11
65-127 Zielona Góra
Poland

has established and applies
an Occupational Health and Safety Management System for

Designing, production and sales of lighting systems

including the sites see enclosure.

An audit was performed, Order No. 73438131.

Proof has been furnished that the requirements
according to

DIN ISO 45001:2018

are fulfilled.

The certificate is valid from **2023-03-20** until **2026-03-19**.

Certificate Registration No.: 12 117 23152 TMS.

Red Vell

Head of Certification Body
Munich, 2023-02-28





Management Service

Enclosure of Certificate Registration No.: 12 117 23152 TMS

Sites	Scope of application
LUG LIGHT FACTORY Sp. z o.o. ul. Gorzowska 11 65-127 Zielona Góra Poland	Design, production and sales of lighting systems
LUG LIGHT FACTORY Sp. z o.o. ul. Nowa 7 66-002 Nowy Kisielin Poland	Design and production of lighting systems

ZERTIFIKAT ◆ CERTIFICATE ◆ 認 證 證 書 ◆ CERTIFICADO ◆ CERTIFICAT

Head of Certification Body
Munich, 2023-02-28





Management Service

CERTIFICAT

CERTIFICADO

СЕРТИФИКАТ

認證證書

CERTIFICATE

ZERTIFIKAT

CERTIFICATE

Certificate Registration No.: **12 340 23152 TMS** / Order No.: **73424337**

**The Certification Body
of TÜV SÜD Management Service GmbH**

certifies that the organization



LUG LIGHT FACTORY Sp. z o.o.
ul. Gorzowska 11
65-127 Zielona Góra
Poland

for the scope

Design, production and sale of lighting Systems
including the sites see enclosure

has established and applies an Energy Management System.

An audit was performed and has furnished proof
that the requirements according to

DIN EN ISO 50001:2018

are fulfilled.

The certificate is valid from **2024-04-18** until **2027-04-17**.

Fred Wenke
Head of Certification Body
Munich, 2024-02-29

Page 1 of 2





Management Service

ENCLOSURE OF CERTIFICATE

Certificate Registration No.: **12 340 23152 TMS** / Order No.: **73424337**

certificate holder:

LUG LIGHT FACTORY Sp. z o.o.
ul. Gorzowska 11
65-127 Zielona Góra
Poland

at the sites	scope
LUG LIGHT FACTORY Sp. z o.o. ul. Gorzowska 11 65-127 Zielona Góra Poland	Design, production and sale of lighting systems
LUG LIGHT FACTORY Sp. z o.o. ul. Nowa 7 66-002 Nowy Kisielin Poland	Design and production of lighting systems

Fred Wenke
Head of Certification Body
Munich, 2024-02-29

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Light is OSRAM



DURIS[®] S 8 White (CCT 4000 K – 6500 K)

IES LM-80-15 Test Report

Test Documentation No.: 180258W7 (Document No.: OSRM020-01-220) – 20th Jan 2021





LM80 17000 Hour Interval Test Report

IES LM-80-15 Approved Method for Measuring Lumen Maintenance of LED Light Sources

CSA Group Report: OSRM020-01-220

December 18, 2020

Manufacturer: **OSRAM**

Models tested: **GW P9LT31.PM**

Test conditions: 24 devices @ 55.0 C, 0.065 A
24 devices @ 85.0 C, 0.065 A
24 devices @ 105.0 C, 0.065 A

Prepared for:

OSRAM Opto Semiconductors (Malaysia) Sdn.
Bayan Lepas Free Industrial Zone Phase 1,
11900 Bayan Lepas, Penang, Malaysia

Attn:

Testing performed by:

CSA Group Seattle
14833 NE 87th St
Redmond, WA 98052
425-605-8500
www.csagroupseattle.org

Test report prepared by:

Gabriel Trippel

Project Engineer,
Test and Measurement Services

Test report approved by:

KC Fletcher

Project Manager,
Test and Measurement Services

1.0 Statement of test conditions, summary of results, and reporting requirements:

Part number: GW P9LT31.PM					
Life test conditions				Summary of results	
Test condition	Drive current (A)	Case temperature (°C)	Elapsed life test time (hrs)	Average lumen maintenance (%)	Average chromaticity shift ($\Delta u'v'$)
TC1	0.065	55	17000	101.2	0.0004
TC2	0.065	85	17000	99.3	0.0011
TC3	0.065	105	17000	95.9	0.0030
LM80-15 Reporting requirements					
1. Number of samples tested:			24 per test condition		
2. Description of LED light sources			LED Package ¹		
3. Description of auxiliary equipment			see section 6.1 below		
4. Operating cycle			LED packages are driven at constant current for life test and are pulsed for photometric test.		
5. Ambient conditions, airflow, relative humidity			LED's are operated on controlled thermal plates in an environment that complies with the requirements given in Section 4.4 of LM80-15. Case temperature (Ts): controlled to within -2°C, Surrounding air temp: controlled to within -5°C of Ts, Humidity: < 65 RH, No forced air flow		
6. Case temperature (test point temperature)			See summary table above for test conditions. The temperature measurement point is shown in Sec. 6.3.		
7. Drive current during life test			see summary table above		
8. Initial luminous flux and forward voltage			see data tables for individual test conditions		
9. Lumen maintenance data for each individual LED light source			see data tables for individual test conditions		
10. Observation of LED light source failures			see data tables for individual test conditions		
11. LED light source monitoring intervals			see data tables for individual test conditions		
12. Photometric measurement uncertainty			k=2 expanded measurement uncertainty for relative luminous flux measurements is $\pm 2.0\%$		
13. Chromaticity shift reported over the measurement time			see data tables for individual test conditions		
14. Test start date			August 11, 2017		
15. ANSI target and calculated CCT values			see data tables		

Notes:

- per ANSI/IESNA RP-16-05 Addendum b, *Nomenclature and Definitions for Illuminating Engineering*

TABLE 1.1 - Initial ANSI Target & Calculated CCT Results

GW P9LT31.PM

Load board ID	Device number	Zero hour measurements	
		ANSI Target* CCT (K)	Initial Calculated CCT (K)
2A0000109518031C	D2	3985±275	4010
	D5	3985±275	4020
	D6	3985±275	3943
	D7	3985±275	3995
5F0000109023031C	D1	3985±275	4001
	D2	3985±275	3977
	D3	3985±275	3997
	D4	3985±275	3981
	D5	3985±275	3971
	D6	3985±275	3955
	D7	3985±275	3971
	D8	3985±275	4005
7200001078CD031C	D1	3985±275	3985
	D2	3985±275	3969
	D4	3985±275	3975
	D5	3985±275	3963
	D6	3985±275	3979
	D7	3985±275	3995
	D8	3985±275	3939
270000107E62031C	D4	3985±275	3965
	D5	3985±275	3977
	D7	3985±275	3985
	D8	3985±275	3977
3D0000107F32031C	D1	3985±275	3951
	D2	3985±275	3979
	D3	3985±275	3952
	D6	3985±275	3969
	D8	3985±275	3964
530000108B52031C	D1	3985±275	3984
	D2	3985±275	4002
	D3	3985±275	3981
	D4	3985±275	3971
	D5	3985±275	3967
	D6	3985±275	3986
	D7	3985±275	3947
	D8	3985±275	3963
0C0000109714031C	D2	3985±275	3991
	D3	3985±275	4014
	D4	3985±275	3999
	D5	3985±275	3985
	D6	3985±275	3992
	D7	3985±275	3995
6E00001090FC031C	D1	3985±275	4008
	D2	3985±275	4016
	D3	3985±275	4018
	D4	3985±275	4031
	D6	3985±275	4002
	D7	3985±275	4010
	D8	3985±275	4002
AC0000109557031C	D1	3985±275	4004
	D2	3985±275	3951
	D3	3985±275	4001
	D4	3985±275	3989
	D6	3985±275	3963
	D7	3985±275	3956

* target CCT as defined in ANSI C78.377-2008

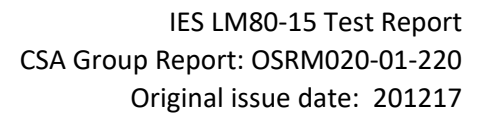
Load board ID	Device number	Zero hour measurements	
		ANSI Target* CCT (K)	Initial Calculated CCT (K)
BC0000108EEE031C	D2	3985±275	4014
	D3	3985±275	3975
	D4	3985±275	3967
	D5	3985±275	4003
	D8	3985±275	3896

Load board ID	Device number	Zero hour measurements	
		ANSI Target* CCT (K)	Initial Calculated CCT (K)
7A0000107484031C	D1	3985±275	4021
	D3	3985±275	3999
	D4	3985±275	3997
	D5	3985±275	3978
	D6	3985±275	3971
	D7	3985±275	3979
	D8	3985±275	3992

Load board ID	Device number	Zero hour measurements	
		ANSI Target* CCT (K)	Initial Calculated CCT (K)
BF00001078CC031C	D4	3985±275	3987
	D5	3985±275	3972
	D6	3985±275	3953
	D7	3985±275	3980
	D8	3985±275	3984

* target CCT as defined in ANSI C78.377-2008

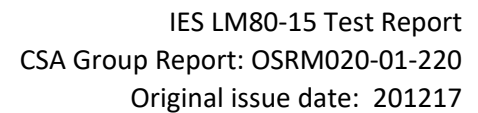
Test Condition 1 55 °C 0.065 A														
TABLE 2.0 - LUMEN MAINTENANCE RESULTS														
Test Condition 1 55 °C 0.065 A														
Load board ID	Device number	Zero hour measurements		Photometric test drive current: 0.065 A Photometric test ambient temperature: 25 ± 2 °C Failures observed: none										
		Flux (lm)	Vf (V)	Lumen Maintenance (%)										
				1000	2000	3000	4000	5000	6000	7000	8000	9000	10000	11000
2A0000109518031C	D2	304.94	28.50	99.6	100.2	100.3	100.4	100.5	100.4	100.6	100.6	100.6	100.6	100.5
	D5	299.14	28.45	98.9	99.6	99.7	99.8	99.9	99.8	100.0	100.1	100.0	100.0	100.0
	D6	302.75	28.57	99.7	100.2	100.4	100.5	100.6	100.6	100.8	100.9	100.9	100.9	100.9
	D7	301.09	28.48	98.9	99.5	99.7	99.8	99.9	99.8	99.9	100.1	100.0	100.0	100.0
5F0000109023031C	D1	299.49	28.44	100.0	100.6	100.7	100.7	100.9	100.8	100.8	101.0	101.0	100.9	101.0
	D2	302.95	28.49	100.2	100.7	100.8	100.8	100.9	100.9	100.9	101.1	101.1	101.1	101.1
	D3	303.22	28.49	100.0	100.5	100.6	100.7	100.7	100.7	100.7	100.9	100.9	100.9	100.9
	D4	308.82	28.49	99.2	99.9	100.0	100.1	100.2	100.2	100.2	100.4	100.4	100.4	100.4
	D5	300.74	28.48	100.2	100.8	100.9	101.0	101.1	101.0	101.0	101.3	101.3	101.2	101.3
	D6	301.60	28.35	99.9	100.4	100.4	100.5	100.6	100.5	100.5	100.8	100.7	100.7	100.7
	D7	302.80	28.48	100.2	100.8	100.8	100.9	101.0	101.0	101.0	101.2	101.2	101.2	101.2
	D8	310.28	28.48	99.9	100.4	100.4	100.5	100.6	100.5	100.6	100.7	100.7	100.7	100.7
7200001078CD031C	D1	303.46	28.41	99.3	99.9	99.9	100.0	100.0	100.0	100.0	100.2	100.2	100.2	100.2
	D2	310.35	28.51	99.5	100.1	100.2	100.3	100.4	100.4	100.5	100.7	100.6	100.6	100.7
	D4	317.78	28.51	99.7	100.3	100.4	100.5	100.6	100.5	100.5	100.5	100.7	100.7	100.7
	D5	318.20	28.49	99.7	100.3	100.3	100.3	100.4	100.4	100.3	100.5	100.5	100.4	100.4
	D6	309.85	28.49	99.9	100.4	100.4	100.5	100.6	100.5	100.5	100.7	100.7	100.7	100.7
	D7	312.55	28.50	99.9	100.4	100.4	100.5	100.5	100.5	100.5	100.7	100.7	100.6	100.6
	D8	320.20	28.51	99.8	100.2	100.3	100.3	100.4	100.3	100.3	100.5	100.4	100.4	100.4



GW P9LT31.PM

Load board ID	Device number	Zero hour measurements		Photometric test drive current: 0.065 A Photometric test ambient temperature: 25 ± 2 °C Failures observed: none										
		Flux (lm)	Vf (V)	Lumen Maintenance (%)										
				1000	2000	3000	4000	5000	6000	7000	8000	9000	10000	11000
BC0000108EEE031C	D2	300.90	28.46	99.8	100.4	100.5	100.5	100.6	100.5	100.6	100.8	100.7	100.7	100.7
	D3	300.16	28.48	100.3	101.0	101.0	101.1	101.2	101.2	101.2	101.5	101.4	101.3	101.4
	D4	310.44	28.47	99.5	100.2	100.2	100.3	100.5	100.4	100.4	100.6	100.5	100.5	100.5
	D5	309.26	28.43	99.7	100.1	100.1	100.2	100.4	100.4	100.4	100.7	100.7	100.6	100.6
	D8	299.99	28.50	99.9	100.5	100.5	100.5	100.6	100.6	100.6	100.9	100.8	100.8	100.8
n				24	24	24	24	24	24	24	24	24	24	24
				99.7	100.3	100.4	100.5	100.5	100.5	100.5	100.7	100.7	100.7	100.7
				99.8	100.3	100.4	100.5	100.6	100.5	100.5	100.7	100.7	100.7	100.7
				0.4	0.4	0.3	0.3	0.3	0.3	0.3	0.4	0.3	0.3	0.4
				98.9	99.5	99.7	99.8	99.9	99.8	99.9	100.1	100.0	100.0	100.0
				100.3	101.0	101.0	101.1	101.2	101.2	101.2	101.5	101.4	101.3	101.4

Test Condition 1 55 °C 0.065 A														
TABLE 2.0 - LUMEN MAINTENANCE RESULTS														
Test Condition 1 55 °C 0.065 A														
Load board ID	Device number	Zero hour measurements		Photometric test drive current: 0.065 A Photometric test ambient temperature: 25 ± 2 °C Failures observed: none										
		Flux (lm)	Vf (V)	Lumen Maintenance (%)										
				12000	13000	14000	15000	16000	17000					
2A0000109518031C	D2	304.94	28.50	100.8	100.7	100.9	100.8	100.9	101.0					
	D5	299.14	28.45	100.1	100.1	100.3	100.3	100.4	100.4					
	D6	302.75	28.57	101.1	101.1	101.2	101.3	101.4	101.4					
	D7	301.09	28.48	100.2	100.2	100.4	100.3	100.4	100.5					
5F0000109023031C	D1	299.49	28.44	101.1	101.1	101.3	101.3	101.3	101.4					
	D2	302.95	28.49	101.2	101.2	101.4	101.4	101.4	101.5					
	D3	303.22	28.49	101.1	101.1	101.3	101.3	101.4	101.5					
	D4	308.82	28.49	100.5	100.5	100.7	100.7	100.8	100.9					
	D5	300.74	28.48	101.4	101.4	101.6	101.6	101.6	101.8					
	D6	301.60	28.35	100.8	100.8	101.0	101.0	101.1	101.1					
	D7	302.80	28.48	101.4	101.4	101.5	101.5	101.6	101.7					
	D8	310.28	28.48	100.9	100.9	101.0	101.0	101.1	101.2					
7200001078CD031C	D1	303.46	28.41	100.4	100.3	100.5	100.4	100.5	100.6					
	D2	310.35	28.51	100.9	100.9	101.0	101.1	101.2	101.2					
	D4	317.78	28.51	100.9	100.9	101.0	101.0	101.1	101.2					
	D5	318.20	28.49	100.5	100.5	100.6	100.6	100.7	100.7					
	D6	309.85	28.49	100.9	100.9	101.0	101.0	101.1	101.2					
	D7	312.55	28.50	100.8	100.8	100.9	100.9	101.0	101.1					
	D8	320.20	28.51	100.6	100.5	100.7	100.7	100.8	100.8					



GW P9LT31.PM

Load board ID	Device number	Zero hour measurements		Photometric test drive current: 0.065 A Photometric test ambient temperature: 25 ± 2 °C Failures observed: none										
		Flux (lm)	Vf (V)	Lumen Maintenance (%)										
				12000	13000	14000	15000	16000	17000					
BC0000108EEE031C	D2	300.90	28.46	100.9	100.8	101.0	101.0	101.1	101.2					
	D3	300.16	28.48	101.6	101.7	101.8	101.8	101.8	102.0					
	D4	310.44	28.47	100.7	100.7	100.8	100.9	100.9	101.0					
	D5	309.26	28.43	100.8	100.8	101.0	101.0	101.0	101.1					
	D8	299.99	28.50	101.1	101.0	101.1	101.2	101.2	101.4					
	n			24	24	24	24	24	24					
	mean			100.9	100.8	101.0	101.0	101.1	101.2					
	median			100.9	100.9	101.0	101.0	101.1	101.2					
	std. dev.			0.4	0.4	0.4	0.4	0.4	0.4					
	min			100.1	100.1	100.3	100.3	100.4	100.4					
	max			101.6	101.7	101.8	101.8	101.8	102.0					

Test Condition 1 55 °C 0.065 A															
TABLE 2.1 - CHROMATICITY SHIFT RESULTS															GW P9LT31.PM
Test Condition 1 55 °C 0.065 A															
Load board ID	Device number	Zero hour measurements			Photometric test drive current: 0.065 A Photometric test ambient temperature: 25 ± 2 °C Failures observed: none										
		u'	v'		Chromaticity shift ($\Delta u'v'$)										
					1000	2000	3000	4000	5000	6000	7000	8000	9000	10000	11000
2A0000109518031C	D2	0.2246	0.5020		0.0005	0.0003	0.0002	0.0002	0.0002	0.0002	0.0002	0.0001	0.0002	0.0002	0.0002
	D5	0.2250	0.5007		0.0005	0.0002	0.0002	0.0002	0.0001	0.0002	0.0002	0.0002	0.0003	0.0002	0.0002
	D6	0.2250	0.5052		0.0003	0.0002	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001
	D7	0.2258	0.5004		0.0005	0.0002	0.0002	0.0002	0.0002	0.0002	0.0002	0.0002	0.0002	0.0002	0.0002
5F0000109023031C	D1	0.2244	0.5031		0.0005	0.0002	0.0002	0.0001	0.0001	0.0002	0.0002	0.0002	0.0002	0.0002	0.0002
	D2	0.2249	0.5035		0.0004	0.0002	0.0002	0.0002	0.0001	0.0002	0.0002	0.0002	0.0002	0.0002	0.0002
	D3	0.2247	0.5027		0.0004	0.0002	0.0002	0.0002	0.0001	0.0001	0.0002	0.0002	0.0002	0.0002	0.0002
	D4	0.2247	0.5035		0.0004	0.0002	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001	0.0002	0.0002	0.0002
	D5	0.2249	0.5036		0.0005	0.0003	0.0002	0.0002	0.0002	0.0002	0.0003	0.0002	0.0003	0.0002	0.0002
	D6	0.2256	0.5032		0.0005	0.0003	0.0003	0.0002	0.0002	0.0002	0.0003	0.0002	0.0002	0.0002	0.0002
	D7	0.2250	0.5034		0.0005	0.0002	0.0002	0.0002	0.0002	0.0002	0.0002	0.0002	0.0002	0.0002	0.0002
	D8	0.2244	0.5027		0.0005	0.0002	0.0002	0.0002	0.0002	0.0002	0.0002	0.0002	0.0002	0.0002	0.0002
7200001078CD031C	D1	0.2241	0.5047		0.0005	0.0003	0.0003	0.0003	0.0002	0.0002	0.0003	0.0003	0.0003	0.0002	0.0003
	D2	0.2243	0.5051		0.0004	0.0002	0.0002	0.0002	0.0001	0.0001	0.0002	0.0001	0.0002	0.0002	0.0002
	D4	0.2248	0.5038		0.0005	0.0004	0.0003	0.0002	0.0002	0.0002	0.0003	0.0003	0.0002	0.0003	0.0003
	D5	0.2250	0.5040		0.0004	0.0003	0.0002	0.0002	0.0002	0.0002	0.0002	0.0002	0.0002	0.0002	0.0002
	D6	0.2245	0.5041		0.0005	0.0003	0.0002	0.0002	0.0002	0.0002	0.0002	0.0002	0.0002	0.0002	0.0002
	D7	0.2246	0.5030		0.0005	0.0003	0.0002	0.0002	0.0002	0.0002	0.0003	0.0003	0.0002	0.0003	0.0003
	D8	0.2255	0.5044		0.0004	0.0003	0.0002	0.0002	0.0001	0.0001	0.0002	0.0002	0.0002	0.0002	0.0002

TABLE 2.1 - CHROMATICITY SHIFT RESULTS
GW P9LT31.PM
Test Condition 1 55 °C 0.065 A

Load board ID	Device number	Zero hour measurements			Photometric test drive current: 0.065 A Photometric test ambient temperature: 25 ± 2 °C Failures observed: none										
		u'	v'		Chromaticity shift (Δu'v')										
					1000	2000	3000	4000	5000	6000	7000	8000	9000	10000	11000
BC0000108EE031C	D2	0.2240	0.5031		0.0005	0.0003	0.0002	0.0002	0.0001	0.0001	0.0002	0.0002	0.0002	0.0002	0.0002
	D3	0.2247	0.5040		0.0005	0.0003	0.0002	0.0002	0.0002	0.0002	0.0003	0.0003	0.0002	0.0003	0.0002
	D4	0.2247	0.5044		0.0004	0.0002	0.0001	0.0001	0.0001	0.0000	0.0002	0.0001	0.0001	0.0001	0.0002
	D5	0.2243	0.5031		0.0005	0.0003	0.0002	0.0002	0.0001	0.0001	0.0002	0.0002	0.0002	0.0002	0.0002
	D8	0.2264	0.5051		0.0005	0.0003	0.0002	0.0002	0.0001	0.0001	0.0002	0.0002	0.0002	0.0002	0.0002
n					24	24	24	24	24	24	24	24	24	24	24
	mean				0.0005	0.0003	0.0002	0.0002	0.0002	0.0002	0.0002	0.0002	0.0002	0.0002	0.0002
	median				0.0005	0.0003	0.0002	0.0002	0.0002	0.0002	0.0002	0.0002	0.0002	0.0002	0.0002
	std. dev.				0.0000	0.0000	0.0000	0.0000	0.0000	0.0001	0.0000	0.0001	0.0000	0.0000	0.0000
	min				0.0003	0.0002	0.0001	0.0001	0.0001	0.0000	0.0001	0.0001	0.0001	0.0001	0.0001
	max				0.0005	0.0004	0.0003	0.0003	0.0002	0.0002	0.0003	0.0003	0.0003	0.0003	0.0003

Test Condition 1 55 °C 0.065 A														
TABLE 2.1 - CHROMATICITY SHIFT RESULTS														
Test Condition 1 55 °C 0.065 A														
Load board ID	Device number	Zero hour measurements			Photometric test drive current: 0.065 A Photometric test ambient temperature: 25 ± 2 °C Failures observed: none									
		u'	v'		Chromaticity shift ($\Delta u'v'$)									
					12000	13000	14000	15000	16000	17000				
2A0000109518031C	D2	0.2246	0.5020		0.0002	0.0002	0.0003	0.0003	0.0003	0.0004				
	D5	0.2250	0.5007		0.0003	0.0003	0.0003	0.0003	0.0004	0.0004				
	D6	0.2250	0.5052		0.0001	0.0001	0.0002	0.0002	0.0002	0.0002				
	D7	0.2258	0.5004		0.0002	0.0003	0.0003	0.0003	0.0003	0.0003				
5F0000109023031C	D1	0.2244	0.5031		0.0002	0.0002	0.0002	0.0002	0.0003	0.0004				
	D2	0.2249	0.5035		0.0002	0.0003	0.0003	0.0003	0.0003	0.0004				
	D3	0.2247	0.5027		0.0002	0.0002	0.0002	0.0002	0.0003	0.0003				
	D4	0.2247	0.5035		0.0002	0.0002	0.0002	0.0002	0.0003	0.0003				
	D5	0.2249	0.5036		0.0003	0.0003	0.0003	0.0003	0.0003	0.0004				
	D6	0.2256	0.5032		0.0003	0.0003	0.0003	0.0003	0.0004	0.0004				
	D7	0.2250	0.5034		0.0002	0.0002	0.0003	0.0003	0.0003	0.0004				
	D8	0.2244	0.5027		0.0002	0.0002	0.0002	0.0003	0.0003	0.0003				
7200001078CD031C	D1	0.2241	0.5047		0.0003	0.0003	0.0003	0.0003	0.0003	0.0004				
	D2	0.2243	0.5051		0.0002	0.0002	0.0002	0.0002	0.0003	0.0003				
	D4	0.2248	0.5038		0.0003	0.0003	0.0003	0.0003	0.0003	0.0004				
	D5	0.2250	0.5040		0.0002	0.0003	0.0003	0.0003	0.0003	0.0004				
	D6	0.2245	0.5041		0.0002	0.0003	0.0003	0.0003	0.0003	0.0004				
	D7	0.2246	0.5030		0.0003	0.0003	0.0003	0.0003	0.0004	0.0004				
	D8	0.2255	0.5044		0.0002	0.0002	0.0003	0.0003	0.0003	0.0004				

TABLE 2.1 - CHROMATICITY SHIFT RESULTS
GW P9LT31.PM
Test Condition 1 55 °C 0.065 A

Load board ID	Device number	Zero hour measurements			Photometric test drive current: 0.065 A Photometric test ambient temperature: 25 ± 2 °C Failures observed: none									
		u'	v'		Chromaticity shift ($\Delta u'v'$)									
					12000	13000	14000	15000	16000	17000				
BC0000108EEE031C	D2	0.2240	0.5031		0.0002	0.0002	0.0002	0.0003	0.0003	0.0003				
	D3	0.2247	0.5040		0.0002	0.0003	0.0003	0.0003	0.0003	0.0004				
	D4	0.2247	0.5044		0.0001	0.0002	0.0001	0.0002	0.0002	0.0003				
	D5	0.2243	0.5031		0.0002	0.0003	0.0002	0.0003	0.0003	0.0003				
	D8	0.2264	0.5051		0.0002	0.0002	0.0002	0.0003	0.0003	0.0004				
n					24	24	24	24	24	24				
mean					0.0002	0.0002	0.0003	0.0003	0.0003	0.0004				
median					0.0002	0.0002	0.0003	0.0003	0.0003	0.0004				
std. dev.					0.0000	0.0001	0.0000	0.0000	0.0000	0.0000				
min					0.0001	0.0001	0.0001	0.0002	0.0002	0.0002				
max					0.0003	0.0003	0.0003	0.0003	0.0004	0.0004				

Test Condition 1 55 °C 0.065 A														
TABLE 2.2 - FORWARD VOLTAGE MAINTENANCE RESULTS														
Test Condition 1 55 °C 0.065 A														
Load board ID	Device number	Zero hour measurements		Photometric test drive current: 0.065 A Photometric test ambient temperature: 25 ± 2 °C Failures observed: none										
		Vf (V)		Forward Voltage Maintainence (%)										
				1000	2000	3000	4000	5000	6000	7000	8000	9000	10000	11000
2A0000109518031C	D2		28.50	99.88	99.94	99.92	99.93	99.93	99.93	99.94	99.95	99.95	99.96	99.95
	D5		28.45	100.00	100.03	100.04	100.04	100.05	100.05	100.05	100.06	100.06	100.07	100.06
	D6		28.57	99.93	99.98	99.99	100.00	100.01	100.01	100.01	100.03	100.04	100.04	100.04
	D7		28.48	100.00	100.03	100.03	100.04	100.04	100.04	100.04	100.05	100.05	100.06	100.06
5F0000109023031C	D1		28.44	100.01	100.05	100.07	100.07	100.08	100.07	100.08	100.09	100.10	100.10	100.11
	D2		28.49	100.03	100.07	100.09	100.10	100.11	100.12	100.13	100.14	100.15	100.16	100.17
	D3		28.49	99.92	99.95	99.97	99.98	99.99	100.00	100.01	100.02	100.03	100.04	100.05
	D4		28.49	99.97	100.01	100.02	100.02	100.03	100.03	100.04	100.05	100.06	100.06	100.06
	D5		28.48	100.01	100.07	100.09	100.10	100.11	100.12	100.13	100.14	100.15	100.16	100.16
	D6		28.35	99.98	100.03	100.05	100.06	100.07	100.08	100.09	100.10	100.11	100.12	100.13
	D7		28.48	100.03	100.09	100.12	100.13	100.14	100.15	100.16	100.18	100.19	100.19	100.20
	D8		28.48	99.96	100.01	100.03	100.05	100.06	100.07	100.08	100.09	100.10	100.11	100.12
7200001078CD031C	D1		28.41	100.00	100.05	100.05	100.06	100.05	100.07	100.07	100.07	100.08	100.08	100.09
	D2		28.51	99.94	100.00	100.02	100.04	100.05	100.06	100.07	100.09	100.10	100.11	100.12
	D4		28.51	99.92	99.96	99.98	99.99	99.99	99.99	100.00	99.98	100.02	100.02	100.03
	D5		28.49	99.88	99.92	99.93	99.94	99.95	99.96	99.97	99.97	100.00	100.00	100.01
	D6		28.49	99.92	99.95	99.97	99.98	99.99	100.00	100.00	100.01	100.02	100.03	100.04
	D7		28.50	99.91	99.96	99.97	99.98	99.99	100.00	100.01	100.01	100.03	100.03	100.04
	D8		28.51	99.92	99.98	100.00	100.02	100.03	100.04	100.06	100.07	100.09	100.10	100.11

TABLE 2.2 - FORWARD VOLTAGE MAINTENANCE RESULTS

GW P9LT31.PM

Test Condition 1				55 °C		0.065 A									
Load board ID	Device number	Zero hour measurements		Photometric test drive current: 0.065 A											
				Photometric test ambient temperature: 25 ± 2 °C											
		Vf (V)		Failures observed: none											
				Forward Voltage Maintenance (%)											
				1000	2000	3000	4000	5000	6000	7000	8000	9000	10000	11000	
BC0000108EEE031C	D2		28.46	100.00	100.05	100.06	100.06	100.07	100.07	100.08	100.09	100.09	100.10	100.10	
	D3		28.48	100.02	100.08	100.10	100.11	100.13	100.13	100.14	100.16	100.17	100.18	100.19	
	D4		28.47	99.98	100.04	100.05	100.06	100.07	100.08	100.08	100.10	100.10	100.11	100.12	
	D5		28.43	99.98	100.03	100.05	100.06	100.07	100.08	100.09	100.10	100.11	100.12	100.12	
	D8		28.50	99.92	99.97	99.98	99.99	100.00	100.01	100.02	100.03	100.04	100.05	100.05	
n				24	24	24	24	24	24	24	24	24	24	24	
mean				100.0	100.0	100.0	100.0	100.0	100.0	100.1	100.1	100.1	100.1	100.1	
median				100.0	100.0	100.0	100.0	100.0	100.0	100.1	100.1	100.1	100.1	100.1	
std. dev.				0.0	0.0	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	
min				99.9	99.9	99.9	99.9	99.9	99.9	99.9	99.9	100.0	100.0	99.9	
max				100.0	100.1	100.1	100.1	100.1	100.2	100.2	100.2	100.2	100.2	100.2	

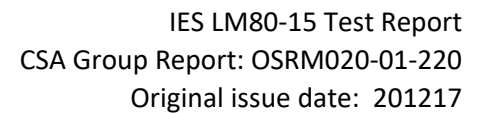
Test Condition 1 55 °C 0.065 A													
TABLE 2.2 - FORWARD VOLTAGE MAINTENANCE RESULTS													GW P9LT31.PM
Test Condition 1 55 °C 0.065 A													
Load board ID	Device number	Zero hour measurements		Photometric test drive current: 0.065 A Photometric test ambient temperature: 25 ± 2 °C Failures observed: none									
		Vf (V)		Forward Voltage Maintenance (%)									
				12000	13000	14000	15000	16000	17000				
2A0000109518031C	D2		28.50	99.97	99.97	99.98	99.97	99.98	99.99				
	D5		28.45	100.08	100.08	100.08	100.07	100.08	100.09				
	D6		28.57	100.06	100.06	100.07	100.06	100.07	100.08				
	D7		28.48	100.07	100.06	100.07	100.06	100.07	100.07				
5F0000109023031C	D1		28.44	100.12	100.12	100.13	100.11	100.12	100.13				
	D2		28.49	100.18	100.18	100.19	100.19	100.19	100.20				
	D3		28.49	100.06	100.07	100.08	100.07	100.08	100.09				
	D4		28.49	100.07	100.07	100.08	100.07	100.08	100.09				
	D5		28.48	100.18	100.18	100.19	100.18	100.19	100.20				
	D6		28.35	100.14	100.14	100.15	100.15	100.16	100.17				
	D7		28.48	100.22	100.22	100.23	100.22	100.23	100.24				
	D8		28.48	100.13	100.13	100.15	100.15	100.15	100.16				
7200001078CD031C	D1		28.41	100.10	100.10	100.11	100.10	100.10	100.11				
	D2		28.51	100.13	100.14	100.15	100.15	100.15	100.16				
	D4		28.51	100.04	100.04	100.05	100.04	100.05	100.05				
	D5		28.49	100.03	100.03	100.04	100.04	100.05	100.06				
	D6		28.49	100.05	100.05	100.06	100.06	100.07	100.07				
	D7		28.50	100.05	100.05	100.06	100.06	100.06	100.07				
	D8		28.51	100.13	100.13	100.15	100.14	100.16	100.17				

Test Condition 2 85 °C 0.065 A														
TABLE 3.0 - LUMEN MAINTENANCE RESULTS														
Test Condition 2 85 °C 0.065 A														
Load board ID	Device number	Zero hour measurements		Photometric test drive current: 0.065 A Photometric test ambient temperature: 25 ± 2 °C Failures observed: none										
		Flux (lm)	Vf (V)	Lumen Maintenance (%)										
				1000	2000	3000	4000	5000	6000	7000	8000	9000	10000	11000
270000107E62031C	D4	318.36	28.42	99.6	99.8	99.8	99.9	99.7	99.5	99.6	99.6	99.4	99.2	99.2
	D5	319.18	28.49	99.5	99.8	99.6	99.7	99.4	99.2	99.1	99.3	99.0	98.8	98.7
	D7	313.41	28.46	99.5	100.0	99.9	100.0	99.8	99.6	99.7	99.8	99.6	99.4	99.4
	D8	313.65	28.50	99.5	100.0	99.8	99.9	99.6	99.5	99.4	99.5	99.4	99.1	99.1
3D0000107F32031C	D1	313.62	28.51	99.6	100.0	100.0	100.0	99.9	99.7	99.7	99.8	99.6	99.4	99.4
	D2	306.07	28.47	99.6	99.8	99.7	99.7	99.6	99.4	99.4	99.4	99.2	99.1	99.1
	D3	318.00	28.44	99.9	100.1	99.9	99.9	99.8	99.5	99.7	99.6	99.4	99.3	99.3
	D6	319.65	28.45	99.6	99.8	99.7	99.7	99.6	99.3	99.3	99.4	99.2	99.0	99.1
	D8	308.90	28.49	99.8	100.1	100.0	100.0	99.9	99.6	99.6	99.7	99.4	99.3	99.4
530000108B52031C	D1	307.04	28.48	99.2	99.5	99.5	99.6	99.5	99.3	99.4	99.3	99.1	99.0	99.0
	D2	296.14	28.46	99.1	99.4	99.3	99.4	99.2	99.0	99.0	99.2	98.9	98.8	98.8
	D3	294.47	28.45	99.6	100.0	99.9	99.9	99.8	99.6	99.6	99.8	99.6	99.5	99.4
	D4	296.79	28.47	99.5	99.7	99.8	99.8	99.6	99.4	99.5	99.6	99.4	99.2	99.2
	D5	308.44	28.47	99.9	100.2	100.1	100.2	100.1	100.0	100.0	100.1	99.8	99.7	99.7
	D6	295.38	28.48	100.1	100.4	100.4	100.4	100.3	100.1	100.1	100.2	100.0	99.8	99.9
	D7	301.87	28.48	99.9	100.2	100.1	100.2	100.0	99.8	99.7	99.9	99.6	99.4	99.5
	D8	305.39	28.38	99.9	100.3	100.3	100.3	100.2	100.0	100.0	100.1	99.9	99.7	99.8

TABLE 3.0 - LUMEN MAINTENANCE RESULTS
GW P9LT31.PM
Test Condition 2 85 °C 0.065 A

Load board ID	Device number	Zero hour measurements		Photometric test drive current: 0.065 A Photometric test ambient temperature: 25 ± 2 °C Failures observed: none										
		Flux (lm)	Vf (V)	Lumen Maintenance (%)										
				1000	2000	3000	4000	5000	6000	7000	8000	9000	10000	11000
7A000107484031C	D1	304.49	28.44	99.1	99.5	99.5	99.5	99.4	99.2	99.3	99.1	99.1	99.0	99.0
	D3	300.40	28.59	98.3	98.7	98.7	98.7	98.6	98.4	98.5	98.4	98.4	98.2	98.3
	D4	306.80	28.52	99.5	100.0	99.9	100.0	99.9	99.7	99.8	99.6	99.6	99.5	99.6
	D5	304.54	28.37	100.0	100.3	100.2	100.2	100.0	99.8	100.0	99.8	99.7	99.5	99.6
	D6	308.99	28.41	99.9	100.2	100.2	100.2	100.0	99.8	100.0	99.8	99.7	99.6	99.7
	D7	307.53	28.44	99.4	99.8	99.7	99.8	99.6	99.4	99.6	99.4	99.3	99.1	99.0
	D8	306.37	28.51	99.4	99.8	99.8	99.9	99.8	99.5	99.9	99.5	99.5	99.4	99.5
n				24	24	24	24	24	24	24	24	24	24	24
mean				99.6	99.9	99.8	99.9	99.7	99.5	99.6	99.6	99.4	99.3	99.3
median				99.6	100.0	99.9	99.9	99.8	99.5	99.6	99.6	99.4	99.3	99.3
std. dev.				0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4
min				98.3	98.7	98.7	98.7	98.6	98.4	98.5	98.4	98.4	98.2	98.3
max				100.1	100.4	100.4	100.4	100.3	100.1	100.1	100.2	100.0	99.8	99.9

Test Condition 2 85 °C 0.065 A														
TABLE 3.0 - LUMEN MAINTENANCE RESULTS														
Test Condition 2 85 °C 0.065 A														
Load board ID	Device number	Zero hour measurements		Photometric test drive current: 0.065 A Photometric test ambient temperature: 25 ± 2 °C Failures observed: none										
		Flux (lm)	Vf (V)	Lumen Maintenance (%)										
				12000	13000	14000	15000	16000	17000					
270000107E62031C	D4	318.36	28.42	99.2	99.1	99.3	99.2	99.3	99.3					
	D5	319.18	28.49	98.6	98.6	98.6	98.7	98.7	98.7					
	D7	313.41	28.46	99.4	99.2	99.4	99.3	99.3	99.4					
	D8	313.65	28.50	99.0	98.9	99.1	99.0	99.1	99.1					
3D0000107F32031C	D1	313.62	28.51	99.2	99.3	99.4	99.4	99.4	99.5					
	D2	306.07	28.47	99.0	98.9	99.0	99.0	99.0	99.0					
	D3	318.00	28.44	99.3	99.1	99.3	99.2	99.3	99.3					
	D6	319.65	28.45	98.9	98.8	99.0	98.9	99.0	99.0					
	D8	308.90	28.49	99.2	99.2	99.3	99.3	99.3	99.3					
530000108B52031C	D1	307.04	28.48	99.0	98.6	98.7	98.7	98.7	98.8					
	D2	296.14	28.46	98.7	98.6	98.7	98.7	98.7	98.8					
	D3	294.47	28.45	99.4	99.4	99.6	99.5	99.6	99.6					
	D4	296.79	28.47	99.1	99.1	99.2	99.2	99.2	99.3					
	D5	308.44	28.47	99.7	99.5	99.7	99.6	99.7	99.8					
	D6	295.38	28.48	99.7	99.7	99.8	99.8	99.9	99.9					
	D7	301.87	28.48	99.3	99.2	99.4	99.3	99.4	99.5					
	D8	305.39	28.38	99.6	99.6	99.8	99.7	99.8	99.8					



GW P9LT31.PM

Load board ID	Device number	Zero hour measurements		Photometric test drive current: 0.065 A Photometric test ambient temperature: 25 ± 2 °C Failures observed: none										
		Flux (lm)	Vf (V)	Lumen Maintenance (%)										
				12000	13000	14000	15000	16000	17000					
7A0000107484031C	D1	304.49	28.44	98.9	98.8	98.9	98.8	98.9	98.9					
	D3	300.40	28.59	98.1	98.1	98.2	98.0	98.3	98.3					
	D4	306.80	28.52	99.5	99.4	99.5	99.5	99.6	99.6					
	D5	304.54	28.37	99.5	99.4	99.5	99.5	99.5	99.6					
	D6	308.99	28.41	99.6	99.5	99.6	99.5	99.6	99.6					
	D7	307.53	28.44	99.1	98.9	99.0	99.0	99.0	99.1					
	D8	306.37	28.51	99.5	99.3	99.5	99.4	99.4	99.5					
	n			24	24	24	24	24	24					
	mean			99.2	99.1	99.2	99.2	99.2	99.3					
	median			99.2	99.1	99.3	99.2	99.3	99.3					
	std. dev.			0.4	0.4	0.4	0.4	0.4	0.4					
	min			98.1	98.1	98.2	98.0	98.3	98.3					
	max			99.7	99.7	99.8	99.8	99.9	99.9					

Test Condition 2 85 °C 0.065 A															
TABLE 3.1 - CHROMATICITY SHIFT RESULTS															GW P9LT31.PM
Test Condition 2 85 °C 0.065 A															
Load board ID	Device number	Zero hour measurements			Photometric test drive current: 0.065 A Photometric test ambient temperature: 25 ± 2 °C Failures observed: none										
		u'	v'		Chromaticity shift ($\Delta u'v'$)										
					1000	2000	3000	4000	5000	6000	7000	8000	9000	10000	11000
270000107E62031C	D4	0.2249	0.5041		0.0005	0.0003	0.0003	0.0003	0.0004	0.0004	0.0004	0.0006	0.0006	0.0007	0.0007
	D5	0.2249	0.5034		0.0005	0.0003	0.0004	0.0005	0.0005	0.0006	0.0006	0.0009	0.0009	0.0009	0.0010
	D7	0.2246	0.5036		0.0005	0.0003	0.0003	0.0004	0.0004	0.0005	0.0005	0.0007	0.0007	0.0007	0.0007
	D8	0.2245	0.5042		0.0005	0.0002	0.0004	0.0004	0.0004	0.0005	0.0005	0.0006	0.0007	0.0007	0.0008
3D0000107F32031C	D1	0.2249	0.5049		0.0004	0.0003	0.0003	0.0004	0.0004	0.0005	0.0005	0.0007	0.0007	0.0008	0.0008
	D2	0.2248	0.5035		0.0006	0.0004	0.0004	0.0005	0.0006	0.0007	0.0006	0.0008	0.0008	0.0008	0.0010
	D3	0.2252	0.5043		0.0004	0.0004	0.0004	0.0004	0.0005	0.0006	0.0006	0.0007	0.0007	0.0008	0.0008
	D6	0.2245	0.5048		0.0005	0.0003	0.0004	0.0004	0.0004	0.0005	0.0005	0.0007	0.0007	0.0008	0.0008
	D8	0.2251	0.5037		0.0005	0.0003	0.0003	0.0004	0.0004	0.0005	0.0005	0.0007	0.0007	0.0008	0.0008
530000108B52031C	D1	0.2247	0.5035		0.0005	0.0003	0.0003	0.0004	0.0004	0.0005	0.0005	0.0006	0.0007	0.0007	0.0008
	D2	0.2242	0.5036		0.0005	0.0003	0.0004	0.0004	0.0005	0.0005	0.0005	0.0007	0.0007	0.0008	0.0009
	D3	0.2248	0.5034		0.0005	0.0003	0.0004	0.0004	0.0004	0.0005	0.0005	0.0006	0.0006	0.0007	0.0008
	D4	0.2247	0.5041		0.0005	0.0004	0.0004	0.0004	0.0005	0.0005	0.0005	0.0007	0.0007	0.0008	0.0009
	D5	0.2249	0.5040		0.0004	0.0002	0.0003	0.0004	0.0004	0.0005	0.0004	0.0006	0.0006	0.0007	0.0007
	D6	0.2247	0.5032		0.0005	0.0003	0.0003	0.0004	0.0004	0.0005	0.0005	0.0006	0.0007	0.0008	0.0008
	D7	0.2254	0.5041		0.0005	0.0003	0.0004	0.0005	0.0005	0.0006	0.0006	0.0008	0.0008	0.0009	0.0009
	D8	0.2251	0.5037		0.0004	0.0002	0.0003	0.0003	0.0004	0.0004	0.0004	0.0006	0.0006	0.0007	0.0007

TABLE 3.1 - CHROMATICITY SHIFT RESULTS
GW P9LT31.PM
Test Condition 2 85 °C 0.065 A

Load board ID	Device number	Zero hour measurements			Photometric test drive current: 0.065 A Photometric test ambient temperature: 25 ± 2 °C Failures observed: none										
		u'	v'		Chromaticity shift ($\Delta u'v'$)										
					1000	2000	3000	4000	5000	6000	7000	8000	9000	10000	11000
7A0000107484031C	D1	0.2245	0.5017		0.0004	0.0002	0.0003	0.0003	0.0004	0.0005	0.0006	0.0007	0.0006	0.0007	0.0007
	D3	0.2255	0.5008		0.0006	0.0004	0.0005	0.0005	0.0005	0.0006	0.0007	0.0008	0.0008	0.0009	0.0009
	D4	0.2254	0.5012		0.0004	0.0002	0.0002	0.0003	0.0003	0.0003	0.0005	0.0006	0.0005	0.0006	0.0006
	D5	0.2253	0.5025		0.0004	0.0003	0.0003	0.0004	0.0004	0.0005	0.0005	0.0007	0.0007	0.0007	0.0008
	D6	0.2255	0.5025		0.0004	0.0002	0.0002	0.0003	0.0003	0.0004	0.0004	0.0006	0.0005	0.0006	0.0007
	D7	0.2254	0.5022		0.0004	0.0003	0.0003	0.0003	0.0004	0.0004	0.0005	0.0007	0.0007	0.0008	0.0008
	D8	0.2252	0.5018		0.0004	0.0002	0.0002	0.0003	0.0003	0.0004	0.0004	0.0006	0.0006	0.0006	0.0007
n					24	24	24	24	24	24	24	24	24	24	24
mean					0.0005	0.0003	0.0003	0.0004	0.0004	0.0005	0.0005	0.0007	0.0007	0.0007	0.0008
median					0.0005	0.0003	0.0003	0.0004	0.0004	0.0005	0.0005	0.0007	0.0007	0.0008	0.0008
std. dev.					0.0001	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001
min					0.0004	0.0002	0.0002	0.0003	0.0003	0.0003	0.0004	0.0006	0.0005	0.0006	0.0006
max					0.0006	0.0004	0.0005	0.0005	0.0006	0.0007	0.0007	0.0009	0.0009	0.0009	0.0010

Test Condition 2 85 °C 0.065 A														
TABLE 3.1 - CHROMATICITY SHIFT RESULTS														
Test Condition 2 85 °C 0.065 A														
Load board ID	Device number	Zero hour measurements			Photometric test drive current: 0.065 A Photometric test ambient temperature: 25 ± 2 °C Failures observed: none									
		u'	v'		Chromaticity shift ($\Delta u'v'$)									
					12000	13000	14000	15000	16000	17000				
270000107E62031C	D4	0.2249	0.5041		0.0007	0.0008	0.0009	0.0009	0.0009	0.0010				
	D5	0.2249	0.5034		0.0010	0.0011	0.0012	0.0012	0.0013	0.0013				
	D7	0.2246	0.5036		0.0007	0.0009	0.0010	0.0010	0.0011	0.0012				
	D8	0.2245	0.5042		0.0007	0.0009	0.0010	0.0011	0.0011	0.0012				
3D0000107F32031C	D1	0.2249	0.5049		0.0008	0.0009	0.0010	0.0011	0.0012	0.0012				
	D2	0.2248	0.5035		0.0009	0.0010	0.0011	0.0012	0.0012	0.0013				
	D3	0.2252	0.5043		0.0009	0.0010	0.0010	0.0011	0.0011	0.0011				
	D6	0.2245	0.5048		0.0008	0.0009	0.0010	0.0011	0.0011	0.0011				
	D8	0.2251	0.5037		0.0008	0.0009	0.0010	0.0011	0.0011	0.0012				
530000108B52031C	D1	0.2247	0.5035		0.0008	0.0010	0.0010	0.0011	0.0010	0.0011				
	D2	0.2242	0.5036		0.0008	0.0010	0.0010	0.0011	0.0011	0.0012				
	D3	0.2248	0.5034		0.0007	0.0009	0.0009	0.0010	0.0010	0.0010				
	D4	0.2247	0.5041		0.0008	0.0010	0.0011	0.0011	0.0012	0.0012				
	D5	0.2249	0.5040		0.0007	0.0008	0.0009	0.0010	0.0010	0.0010				
	D6	0.2247	0.5032		0.0008	0.0009	0.0010	0.0010	0.0010	0.0011				
	D7	0.2254	0.5041		0.0009	0.0011	0.0012	0.0012	0.0012	0.0013				
	D8	0.2251	0.5037		0.0007	0.0008	0.0009	0.0009	0.0009	0.0010				

TABLE 3.1 - CHROMATICITY SHIFT RESULTS
GW P9LT31.PM
Test Condition 2 85 °C 0.065 A

Load board ID	Device number	Zero hour measurements			Photometric test drive current: 0.065 A Photometric test ambient temperature: 25 ± 2 °C Failures observed: none									
		u'	v'		Chromaticity shift ($\Delta u'v'$)									
					12000	13000	14000	15000	16000	17000				
7A0000107484031C	D1	0.2245	0.5017		0.0008	0.0009	0.0009	0.0010	0.0010	0.0011				
	D3	0.2255	0.5008		0.0009	0.0010	0.0011	0.0012	0.0012	0.0012				
	D4	0.2254	0.5012		0.0007	0.0007	0.0008	0.0008	0.0009	0.0010				
	D5	0.2253	0.5025		0.0008	0.0009	0.0010	0.0010	0.0010	0.0012				
	D6	0.2255	0.5025		0.0006	0.0008	0.0009	0.0009	0.0009	0.0010				
	D7	0.2254	0.5022		0.0007	0.0009	0.0010	0.0011	0.0011	0.0012				
	D8	0.2252	0.5018		0.0006	0.0008	0.0009	0.0009	0.0010	0.0011				
n					24	24	24	24	24	24				
mean					0.0008	0.0009	0.0010	0.0010	0.0011	0.0011				
median					0.0008	0.0009	0.0010	0.0011	0.0011	0.0011				
std. dev.					0.0001	0.0001	0.0001	0.0001	0.0001	0.0001				
min					0.0006	0.0007	0.0008	0.0008	0.0009	0.0010				
max					0.0010	0.0011	0.0012	0.0012	0.0013	0.0013				

Test Condition 2 85 °C 0.065 A														
TABLE 3.2 - FORWARD VOLTAGE MAINTENANCE RESULTS														
Test Condition 2 85 °C 0.065 A														
Load board ID	Device number	Zero hour measurements		Photometric test drive current: 0.065 A Photometric test ambient temperature: 25 ± 2 °C Failures observed: none										
		Vf (V)		Forward Voltage Maintainence (%)										
				1000	2000	3000	4000	5000	6000	7000	8000	9000	10000	11000
270000107E62031C	D4		28.42	99.95	100.03	100.08	100.10	100.13	100.14	100.20	100.19	100.21	100.23	100.26
	D5		28.49	99.94	100.01	100.04	100.07	100.09	100.10	100.16	100.15	100.16	100.18	100.21
	D7		28.46	100.00	100.06	100.08	100.11	100.12	100.13	100.16	100.16	100.18	100.18	100.20
	D8		28.50	99.92	99.98	100.00	100.02	100.03	100.05	100.08	100.08	100.09	100.10	100.12
3D0000107F32031C	D1		28.51	100.07	100.16	100.18	100.20	100.22	100.23	100.27	100.26	100.28	100.29	100.28
	D2		28.47	100.03	100.09	100.11	100.13	100.14	100.15	100.18	100.18	100.19	100.20	100.19
	D3		28.44	99.95	100.04	100.08	100.12	100.15	100.17	100.23	100.23	100.25	100.27	100.28
	D6		28.45	99.92	100.00	100.04	100.08	100.10	100.12	100.17	100.16	100.19	100.21	100.22
	D8		28.49	99.93	99.98	100.00	100.03	100.04	100.04	100.07	100.07	100.09	100.09	100.10
530000108B52031C	D1		28.48	100.01	100.11	100.07	100.08	100.08	100.08	100.09	100.11	100.12	100.12	100.12
	D2		28.46	100.00	100.05	100.06	100.07	100.08	100.09	100.10	100.10	100.12	100.12	100.12
	D3		28.45	100.01	100.07	100.09	100.11	100.12	100.12	100.15	100.15	100.16	100.16	100.19
	D4		28.47	100.06	100.13	100.16	100.19	100.21	100.21	100.25	100.24	100.27	100.27	100.30
	D5		28.47	100.00	100.06	100.07	100.10	100.11	100.12	100.15	100.15	100.16	100.18	100.20
	D6		28.48	100.06	100.15	100.16	100.19	100.21	100.22	100.26	100.26	100.28	100.29	100.31
	D7		28.48	100.01	100.07	100.10	100.11	100.12	100.13	100.16	100.15	100.17	100.18	100.19
	D8		28.38	100.00	100.08	100.12	100.13	100.15	100.17	100.21	100.19	100.21	100.22	100.25

TABLE 3.2 - FORWARD VOLTAGE MAINTENANCE RESULTS

GW P9LT31.PM

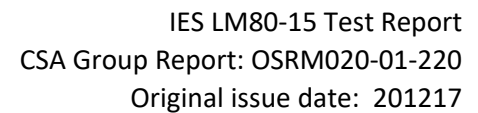
Test Condition 2				85 °C		0.065 A									
Load board ID	Device number	Zero hour measurements		Photometric test drive current: 0.065 A Photometric test ambient temperature: 25 ± 2 °C Failures observed: none											
		Vf (V)		Forward Voltage Maintenance (%)											
				1000	2000	3000	4000	5000	6000	7000	8000	9000	10000	11000	
7A0000107484031C	D1		28.44	100.00	100.04	100.05	100.05	100.05	100.06	100.07	100.07	100.08	100.08	100.10	
	D3		28.59	99.98	100.01	100.02	100.03	100.03	100.03	100.04	100.04	100.05	100.05	100.06	
	D4		28.52	100.01	100.08	100.11	100.14	100.15	100.17	100.19	100.20	100.22	100.23	100.24	
	D5		28.37	100.00	100.08	100.10	100.12	100.14	100.15	100.19	100.18	100.20	100.21	100.23	
	D6		28.41	100.01	100.09	100.11	100.13	100.15	100.17	100.20	100.19	100.22	100.23	100.24	
	D7		28.44	100.01	100.06	100.07	100.08	100.09	100.09	100.12	100.11	100.12	100.12	100.13	
	D8		28.51	100.02	100.06	100.07	100.08	100.09	100.09	100.12	100.11	100.12	100.12	100.13	
n				24	24	24	24	24	24	24	24	24	24	24	
mean				100.0	100.1	100.1	100.1	100.1	100.1	100.2	100.2	100.2	100.2	100.2	
median				100.0	100.1	100.1	100.1	100.1	100.1	100.2	100.2	100.2	100.2	100.2	
std. dev.				0.0	0.0	0.0	0.0	0.1	0.1	0.1	0.1	0.1	0.1	0.1	
min				99.9	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.1	100.1	
max				100.1	100.2	100.2	100.2	100.2	100.2	100.3	100.3	100.3	100.3	100.3	

Test Condition 2 85 °C 0.065 A														
TABLE 3.2 - FORWARD VOLTAGE MAINTENANCE RESULTS														
Test Condition 2 85 °C 0.065 A														
Load board ID	Device number	Zero hour measurements		Photometric test drive current: 0.065 A Photometric test ambient temperature: 25 ± 2 °C Failures observed: none										
		Vf (V)		Forward Voltage Maintenance (%)										
				12000	13000	14000	15000	16000	17000					
270000107E62031C	D4		28.42	100.28	100.27	100.29	100.31	100.33	100.34					
	D5		28.49	100.23	100.22	100.23	100.25	100.27	100.28					
	D7		28.46	100.23	100.22	100.22	100.23	100.25	100.26					
	D8		28.50	100.15	100.13	100.14	100.15	100.16	100.17					
3D0000107F32031C	D1		28.51	100.32	100.32	100.33	100.33	100.35	100.36					
	D2		28.47	100.21	100.22	100.23	100.23	100.25	100.25					
	D3		28.44	100.32	100.33	100.35	100.36	100.39	100.40					
	D6		28.45	100.26	100.26	100.29	100.29	100.32	100.33					
	D8		28.49	100.12	100.12	100.14	100.14	100.15	100.15					
530000108B52031C	D1		28.48	100.14	100.13	100.14	100.14	100.15	100.15					
	D2		28.46	100.13	100.13	100.14	100.14	100.15	100.15					
	D3		28.45	100.19	100.18	100.19	100.19	100.22	100.21					
	D4		28.47	100.31	100.30	100.31	100.31	100.35	100.34					
	D5		28.47	100.21	100.21	100.22	100.22	100.24	100.25					
	D6		28.48	100.34	100.33	100.35	100.35	100.37	100.38					
	D7		28.48	100.21	100.21	100.22	100.22	100.25	100.24					
	D8		28.38	100.27	100.26	100.28	100.28	100.31	100.31					

TABLE 3.2 - FORWARD VOLTAGE MAINTENANCE RESULTS
GW P9LT31.PM

Test Condition 2			85 °C	0.065 A											
Load board ID	Device number	Zero hour measurements		Photometric test drive current: 0.065 A Photometric test ambient temperature: 25 ± 2 °C Failures observed: none											
		Vf (V)	Forward Voltage Maintenance (%)												
			12000	13000	14000	15000	16000	17000							
7A0000107484031C	D1		28.44	100.09	100.10	100.10	100.09	100.10	100.11						
	D3		28.59	100.06	100.06	100.06	100.03	100.07	100.08						
	D4		28.52	100.25	100.26	100.27	100.26	100.28	100.30						
	D5		28.37	100.26	100.24	100.26	100.25	100.27	100.28						
	D6		28.41	100.27	100.26	100.28	100.28	100.29	100.30						
	D7		28.44	100.14	100.14	100.14	100.15	100.15	100.16						
	D8		28.51	100.14	100.14	100.14	100.15	100.15	100.16						
n				24	24	24	24	24	24						
mean				100.2	100.2	100.2	100.2	100.2	100.2						
median				100.2	100.2	100.2	100.2	100.2	100.3						
std. dev.				0.1	0.1	0.1	0.1	0.1	0.1						
min				100.1	100.1	100.1	100.0	100.1	100.1						
max				100.3	100.3	100.3	100.4	100.4	100.4						

Test Condition 3 105 °C 0.065 A														
TABLE 4.0 - LUMEN MAINTENANCE RESULTS														
Test Condition 3 105 °C 0.065 A														
Load board ID	Device number	Zero hour measurements		Photometric test drive current: 0.065 A Photometric test ambient temperature: 25 ± 2 °C Failures observed: none										
		Flux (lm)	Vf (V)	Lumen Maintenance (%)										
				1000	2000	3000	4000	5000	6000	7000	8000	9000	10000	11000
OC0000109714031C	D2	307.04	28.47	99.4	99.0	98.5	98.2	97.8	97.5	97.3	97.1	97.0	96.8	96.7
	D3	299.64	28.48	98.8	98.6	97.9	97.7	97.3	97.0	96.8	96.7	96.5	96.3	96.1
	D4	304.38	28.44	98.9	98.5	98.1	97.8	97.4	97.1	96.9	96.7	96.5	96.3	96.2
	D5	306.56	28.48	99.4	99.0	98.5	98.2	97.8	97.5	97.3	97.2	97.0	96.7	96.6
	D6	313.36	28.46	98.6	98.3	97.9	97.7	97.4	97.1	96.9	96.7	96.6	96.4	96.2
	D7	309.27	28.43	99.0	98.6	98.2	97.9	97.6	97.3	97.1	96.9	96.8	96.5	96.4
6E00001090FC031C	D1	300.55	28.53	98.2	97.9	97.4	97.1	96.8	96.5	96.3	96.2	96.0	95.8	95.7
	D2	301.73	28.52	98.3	98.1	97.6	97.3	97.0	96.6	96.5	96.3	96.1	95.9	95.8
	D3	305.20	28.48	98.9	98.7	98.2	97.7	97.6	97.3	97.2	97.0	96.9	96.7	96.6
	D4	302.34	28.51	98.2	97.9	97.5	97.0	96.9	96.6	96.4	96.2	96.1	95.9	95.7
	D6	306.17	28.48	98.5	97.7	97.8	97.4	97.3	96.9	96.7	96.6	96.5	96.3	96.1
	D7	304.10	28.47	98.8	98.1	98.1	97.7	97.6	97.3	97.0	96.9	96.8	96.6	96.4
	D8	302.97	28.45	98.6	97.9	97.8	97.3	97.2	96.8	96.6	96.5	96.2	96.0	95.9
AC0000109557031C	D1	305.56	28.25	99.2	99.0	98.5	98.3	98.0	97.7	97.6	97.4	97.3	97.1	97.0
	D2	301.43	28.49	99.4	99.0	98.3	98.2	97.8	97.5	97.3	97.1	96.9	96.7	96.6
	D3	292.81	28.47	98.7	98.4	97.9	97.7	97.3	97.1	96.9	96.7	96.5	96.4	96.3
	D4	304.99	28.49	99.3	99.0	98.4	98.1	97.7	97.3	97.2	97.0	96.7	96.5	96.4
	D6	304.40	28.37	99.4	99.0	98.4	98.1	97.8	97.5	97.2	97.1	96.9	96.7	96.6
	D7	309.57	28.46	99.5	99.2	98.7	98.5	98.2	97.9	97.7	97.5	97.3	97.2	97.1



GW P9LT31.PM

Load board ID	Device number	Zero hour measurements		Photometric test drive current: 0.065 A Photometric test ambient temperature: 25 ± 2 °C Failures observed: none										
		Flux (lm)	Vf (V)	Lumen Maintenance (%)										
				1000	2000	3000	4000	5000	6000	7000	8000	9000	10000	11000
BF00001078CC031C	D4	319.94	28.41	98.8	98.4	98.0	97.7	97.4	97.0	96.8	96.7	96.5	96.3	96.1
	D5	309.18	28.46	99.2	98.7	98.1	97.8	97.4	97.0	96.7	96.6	96.4	96.1	96.0
	D6	308.02	28.50	99.1	98.7	98.3	98.0	97.7	97.3	97.1	97.0	96.8	96.5	96.3
	D7	310.41	28.53	99.1	98.8	98.2	97.9	97.5	97.1	96.9	96.7	96.5	96.3	96.1
	D8	313.66	28.41	99.1	98.5	98.0	97.7	97.3	96.9	96.7	96.6	96.4	96.2	96.0
n				24	24	24	24	24	24	24	24	24	24	24
mean				98.9	98.6	98.1	97.8	97.5	97.2	97.0	96.8	96.6	96.4	96.3
median				99.0	98.6	98.1	97.8	97.5	97.1	96.9	96.7	96.6	96.4	96.3
std. dev.				0.4	0.4	0.3	0.4	0.3	0.3	0.4	0.3	0.3	0.3	0.4
min				98.2	97.7	97.4	97.0	96.8	96.5	96.3	96.2	96.0	95.8	95.7
max				99.5	99.2	98.7	98.5	98.2	97.9	97.7	97.5	97.3	97.2	97.1

Test Condition 3 105 °C 0.065 A														
TABLE 4.0 - LUMEN MAINTENANCE RESULTS														
Test Condition 3 105 °C 0.065 A														
Load board ID	Device number	Zero hour measurements		Photometric test drive current: 0.065 A Photometric test ambient temperature: 25 ± 2 °C Failures observed: none										
		Flux (lm)	Vf (V)	Lumen Maintenance (%)										
				12000	13000	14000	15000	16000	17000					
0C0000109714031C	D2	307.04	28.47	96.4	96.3	96.3	96.2	96.2	96.1					
	D3	299.64	28.48	96.0	95.9	96.0	95.9	95.9	95.9					
	D4	304.38	28.44	96.0	95.9	95.9	95.9	95.8	95.7					
	D5	306.56	28.48	96.5	96.3	96.4	96.3	96.3	96.3					
	D6	313.36	28.46	96.1	95.9	96.1	95.9	95.9	95.9					
	D7	309.27	28.43	96.5	96.0	96.2	96.0	96.0	95.9					
6E00001090FC031C	D1	300.55	28.53	95.5	95.5	95.5	95.4	95.4	95.4					
	D2	301.73	28.52	95.7	95.5	95.6	95.5	95.4	95.4					
	D3	305.20	28.48	96.5	96.3	96.3	96.2	96.2	96.2					
	D4	302.34	28.51	95.6	95.4	95.5	95.4	95.4	95.3					
	D6	306.17	28.48	96.1	95.8	95.8	95.7	95.7	95.7					
	D7	304.10	28.47	96.5	96.3	96.3	96.2	96.2	96.1					
	D8	302.97	28.45	95.9	95.7	95.7	95.6	95.5	95.5					
AC0000109557031C	D1	305.56	28.25	97.0	96.6	96.7	96.6	96.5	96.5					
	D2	301.43	28.49	96.4	96.3	96.3	96.2	96.2	96.1					
	D3	292.81	28.47	96.1	96.0	96.1	96.0	96.0	96.0					
	D4	304.99	28.49	96.3	96.1	96.2	96.1	96.1	96.0					
	D6	304.40	28.37	96.4	96.3	96.3	96.2	96.2	96.2					
	D7	309.57	28.46	97.2	96.8	96.7	96.6	96.6	96.5					

TABLE 4.0 - LUMEN MAINTENANCE RESULTS

GW P9LT31.PM

Test Condition 3	105 °C	0.065 A
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Load board ID	Device number	Zero hour measurements		Photometric test drive current: 0.065 A Photometric test ambient temperature: 25 ± 2 °C Failures observed: none										
		Flux (lm)	Vf (V)	Lumen Maintenance (%)										
				12000	13000	14000	15000	16000	17000					
BF00001078CC031C	D4	319.94	28.41	96.1	95.9	95.9	95.8	95.8	95.7					
	D5	309.18	28.46	95.9	95.7	95.7	95.6	95.6	95.6					
	D6	308.02	28.50	96.4	96.0	96.1	95.9	95.9	95.8					
	D7	310.41	28.53	96.0	95.8	95.8	95.8	95.7	95.7					
	D8	313.66	28.41	96.2	95.7	95.8	95.7	95.7	95.6					
	n			24	24	24	24	24	24					
	mean			96.2	96.0	96.1	95.9	95.9	95.9					
	median			96.2	96.0	96.1	95.9	95.9	95.9					
	std. dev.			0.4	0.3	0.3	0.3	0.3	0.3					
	min			95.5	95.4	95.5	95.4	95.4	95.3					
	max			97.2	96.8	96.7	96.6	96.6	96.5					

Test Condition 3 105 °C 0.065 A															
TABLE 4.1 - CHROMATICITY SHIFT RESULTS															GW P9LT31.PM
Test Condition 3 105 °C 0.065 A															
Load board ID	Device number	Zero hour measurements			Photometric test drive current: 0.065 A Photometric test ambient temperature: 25 ± 2 °C Failures observed: none										
		u'	v'		Chromaticity shift ($\Delta u'v'$)										
					1000	2000	3000	4000	5000	6000	7000	8000	9000	10000	11000
0C0000109714031C	D2	0.2245	0.5035		0.0007	0.0009	0.0012	0.0013	0.0015	0.0016	0.0019	0.0020	0.0021	0.0022	0.0024
	D3	0.2241	0.5030		0.0007	0.0009	0.0011	0.0012	0.0014	0.0015	0.0017	0.0018	0.0019	0.0021	0.0022
	D4	0.2243	0.5033		0.0007	0.0009	0.0012	0.0013	0.0015	0.0016	0.0018	0.0019	0.0021	0.0022	0.0023
	D5	0.2250	0.5027		0.0007	0.0009	0.0011	0.0012	0.0014	0.0015	0.0018	0.0019	0.0020	0.0021	0.0022
	D6	0.2244	0.5037		0.0007	0.0009	0.0011	0.0013	0.0015	0.0016	0.0018	0.0019	0.0021	0.0021	0.0023
	D7	0.2247	0.5027		0.0007	0.0009	0.0012	0.0013	0.0015	0.0016	0.0018	0.0020	0.0021	0.0022	0.0023
6E00001090FC031C	D1	0.2253	0.5007		0.0008	0.0011	0.0013	0.0015	0.0017	0.0019	0.0021	0.0022	0.0024	0.0025	0.0026
	D2	0.2253	0.5004		0.0008	0.0010	0.0012	0.0014	0.0017	0.0018	0.0021	0.0022	0.0023	0.0025	0.0026
	D3	0.2250	0.5009		0.0007	0.0009	0.0011	0.0014	0.0015	0.0016	0.0019	0.0020	0.0021	0.0022	0.0023
	D4	0.2252	0.4997		0.0008	0.0010	0.0013	0.0015	0.0017	0.0019	0.0021	0.0022	0.0024	0.0025	0.0026
	D6	0.2254	0.5008		0.0007	0.0006	0.0011	0.0013	0.0014	0.0016	0.0018	0.0019	0.0021	0.0022	0.0023
	D7	0.2252	0.5009		0.0006	0.0006	0.0011	0.0013	0.0014	0.0015	0.0018	0.0019	0.0020	0.0021	0.0022
	D8	0.2252	0.5014		0.0007	0.0007	0.0012	0.0014	0.0016	0.0018	0.0020	0.0021	0.0023	0.0025	0.0025
AC0000109557031C	D1	0.2245	0.5025		0.0007	0.0009	0.0011	0.0012	0.0014	0.0016	0.0018	0.0019	0.0020	0.0021	0.0022
	D2	0.2252	0.5042		0.0008	0.0011	0.0013	0.0014	0.0016	0.0018	0.0019	0.0020	0.0022	0.0023	0.0024
	D3	0.2242	0.5036		0.0006	0.0008	0.0010	0.0012	0.0014	0.0015	0.0017	0.0018	0.0019	0.0020	0.0021
	D4	0.2248	0.5029		0.0008	0.0010	0.0013	0.0014	0.0016	0.0017	0.0019	0.0020	0.0022	0.0023	0.0025
	D6	0.2253	0.5032		0.0007	0.0009	0.0012	0.0013	0.0015	0.0016	0.0018	0.0019	0.0021	0.0022	0.0023
	D7	0.2254	0.5034		0.0006	0.0008	0.0011	0.0011	0.0014	0.0015	0.0016	0.0018	0.0019	0.0021	0.0021

TABLE 4.1 - CHROMATICITY SHIFT RESULTS

GW P9LT31.PM

Test Condition 3

105 °C

0.065 A

Load board ID	Device number	Zero hour measurements			Photometric test drive current: 0.065 A Photometric test ambient temperature: 25 ± 2 °C Failures observed: none										
		u'	v'		Chromaticity shift (Δu'v')										
					1000	2000	3000	4000	5000	6000	7000	8000	9000	10000	11000
BF00001078CC031C	D4	0.2245	0.5037		0.0007	0.0009	0.0011	0.0013	0.0014	0.0016	0.0018	0.0019	0.0020	0.0021	0.0022
	D5	0.2244	0.5048		0.0005	0.0008	0.0011	0.0013	0.0015	0.0017	0.0018	0.0020	0.0020	0.0022	0.0023
	D6	0.2249	0.5047		0.0006	0.0009	0.0011	0.0013	0.0015	0.0017	0.0019	0.0020	0.0022	0.0023	0.0024
	D7	0.2247	0.5036		0.0007	0.0009	0.0013	0.0014	0.0017	0.0018	0.0020	0.0022	0.0023	0.0024	0.0025
	D8	0.2247	0.5035		0.0007	0.0011	0.0013	0.0016	0.0017	0.0019	0.0021	0.0023	0.0024	0.0025	0.0026
n					24	24	24	24	24	24	24	24	24	24	24
mean					0.0007	0.0009	0.0012	0.0013	0.0015	0.0017	0.0019	0.0020	0.0021	0.0023	0.0024
median					0.0007	0.0009	0.0012	0.0013	0.0015	0.0016	0.0018	0.0020	0.0021	0.0022	0.0023
std. dev.					0.0001	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001	0.0002	0.0002
min					0.0005	0.0006	0.0010	0.0011	0.0014	0.0015	0.0016	0.0018	0.0019	0.0020	0.0021
max					0.0008	0.0011	0.0013	0.0016	0.0017	0.0019	0.0021	0.0023	0.0024	0.0025	0.0026

Test Condition 3															105 °C		0.065 A		
TABLE 4.1 - CHROMATICITY SHIFT RESULTS																	GW P9LT31.PM		
Test Condition 3															105 °C		0.065 A		
Load board ID	Device number	Zero hour measurements			Photometric test drive current: 0.065 A Photometric test ambient temperature: 25 ± 2 °C Failures observed: none														
		u'	v'		Chromaticity shift (Δu'v')														
					12000	13000	14000	15000	16000	17000									
0C0000109714031C	D2	0.2245	0.5035		0.0024	0.0026	0.0027	0.0027	0.0029	0.0030									
	D3	0.2241	0.5030		0.0022	0.0024	0.0024	0.0025	0.0026	0.0027									
	D4	0.2243	0.5033		0.0024	0.0025	0.0027	0.0027	0.0028	0.0029									
	D5	0.2250	0.5027		0.0023	0.0025	0.0026	0.0026	0.0027	0.0028									
	D6	0.2244	0.5037		0.0023	0.0024	0.0026	0.0027	0.0028	0.0028									
	D7	0.2247	0.5027		0.0024	0.0025	0.0026	0.0027	0.0028	0.0029									
6E00001090FC031C	D1	0.2253	0.5007		0.0027	0.0028	0.0030	0.0031	0.0031	0.0032									
	D2	0.2253	0.5004		0.0027	0.0028	0.0030	0.0030	0.0031	0.0032									
	D3	0.2250	0.5009		0.0024	0.0025	0.0026	0.0027	0.0028	0.0030									
	D4	0.2252	0.4997		0.0027	0.0028	0.0029	0.0030	0.0031	0.0032									
	D6	0.2254	0.5008		0.0023	0.0025	0.0026	0.0027	0.0028	0.0029									
	D7	0.2252	0.5009		0.0023	0.0024	0.0026	0.0026	0.0027	0.0029									
	D8	0.2252	0.5014		0.0026	0.0027	0.0029	0.0030	0.0031	0.0032									
AC0000109557031C	D1	0.2245	0.5025		0.0023	0.0024	0.0026	0.0027	0.0028	0.0029									
	D2	0.2252	0.5042		0.0024	0.0026	0.0027	0.0029	0.0029	0.0030									
	D3	0.2242	0.5036		0.0022	0.0023	0.0025	0.0026	0.0026	0.0028									
	D4	0.2248	0.5029		0.0025	0.0026	0.0028	0.0029	0.0029	0.0030									
	D6	0.2253	0.5032		0.0023	0.0025	0.0027	0.0028	0.0028	0.0029									
	D7	0.2254	0.5034		0.0021	0.0023	0.0025	0.0026	0.0026	0.0028									

TABLE 4.1 - CHROMATICITY SHIFT RESULTS

GW P9LT31.PM

Test Condition 3 105 °C 0.065 A

Load board ID	Device number	Zero hour measurements			Photometric test drive current: 0.065 A Photometric test ambient temperature: 25 ± 2 °C Failures observed: none									
		u'	v'		Chromaticity shift ($\Delta u'v'$)									
					12000	13000	14000	15000	16000	17000				
BF00001078CC031C	D4	0.2245	0.5037		0.0023	0.0024	0.0026	0.0026	0.0027	0.0028				
	D5	0.2244	0.5048		0.0023	0.0025	0.0026	0.0027	0.0027	0.0029				
	D6	0.2249	0.5047		0.0025	0.0027	0.0028	0.0029	0.0030	0.0031				
	D7	0.2247	0.5036		0.0026	0.0028	0.0029	0.0030	0.0031	0.0032				
	D8	0.2247	0.5035		0.0026	0.0029	0.0030	0.0031	0.0031	0.0033				
n					24	24	24	24	24	24				
mean					0.0024	0.0026	0.0027	0.0028	0.0029	0.0030				
median					0.0024	0.0025	0.0027	0.0027	0.0028	0.0029				
std. dev.					0.0002	0.0002	0.0002	0.0002	0.0002	0.0002				
min					0.0021	0.0023	0.0024	0.0025	0.0026	0.0027				
max					0.0027	0.0029	0.0030	0.0031	0.0031	0.0033				

Test Condition 3 105 °C 0.065 A														
TABLE 4.2 - FORWARD VOLTAGE MAINTENANCE RESULTS														GW P9LT31.PM
Test Condition 3 105 °C 0.065 A														
Load board ID	Device number	Zero hour measurements		Photometric test drive current: 0.065 A Photometric test ambient temperature: 25 ± 2 °C Failures observed: none										
		Vf (V)		Forward Voltage Maintenance (%)										
				1000	2000	3000	4000	5000	6000	7000	8000	9000	10000	11000
0C0000109714031C	D2		28.47	100.13	100.25	100.33	100.41	100.47	100.51	100.56	100.60	100.65	100.69	100.73
	D3		28.48	100.05	100.08	100.10	100.12	100.13	100.14	100.15	100.17	100.18	100.19	100.20
	D4		28.44	100.07	100.11	100.15	100.17	100.19	100.20	100.22	100.24	100.25	100.27	100.28
	D5		28.48	99.96	100.01	100.03	100.06	100.08	100.09	100.10	100.12	100.13	100.14	100.16
	D6		28.46	100.00	100.05	100.06	100.08	100.09	100.10	100.12	100.12	100.13	100.15	100.16
	D7		28.43	100.03	100.10	100.13	100.16	100.19	100.20	100.23	100.24	100.25	100.27	100.29
6E00001090FC031C	D1		28.53	100.00	100.04	100.05	100.06	100.07	100.07	100.08	100.10	100.13	100.11	100.11
	D2		28.52	99.99	100.03	100.04	100.06	100.07	100.06	100.07	100.09	100.10	100.09	100.09
	D3		28.48	100.02	100.07	100.08	100.10	100.11	100.12	100.12	100.13	100.14	100.15	100.16
	D4		28.51	99.99	100.03	100.04	100.05	100.06	100.06	100.07	100.07	100.08	100.08	100.09
	D6		28.48	100.00	100.06	100.05	100.06	100.07	100.08	100.09	100.10	100.10	100.12	100.12
	D7		28.47	100.00	100.05	100.05	100.06	100.07	100.07	100.09	100.10	100.11	100.32	100.12
	D8		28.45	100.01	100.05	100.06	100.08	100.09	100.09	100.11	100.12	100.13	100.33	100.14
AC0000109557031C	D1		28.25	100.05	100.09	100.12	100.14	100.16	100.17	100.20	100.22	100.23	100.24	100.27
	D2		28.49	100.05	100.10	100.13	100.16	100.18	100.20	100.23	100.25	100.26	100.28	100.31
	D3		28.47	100.02	100.07	100.09	100.11	100.13	100.13	100.14	100.15	100.16	100.17	100.18
	D4		28.49	99.96	100.02	100.05	100.08	100.10	100.12	100.14	100.15	100.17	100.18	100.20
	D6		28.37	100.04	100.12	100.16	100.19	100.22	100.24	100.26	100.28	100.30	100.32	100.34
	D7		28.46	100.02	100.09	100.13	100.15	100.17	100.19	100.22	100.24	100.26	100.28	100.30

TABLE 4.2 - FORWARD VOLTAGE MAINTENANCE RESULTS
GW P9LT31.PM
Test Condition 3 105 °C 0.065 A

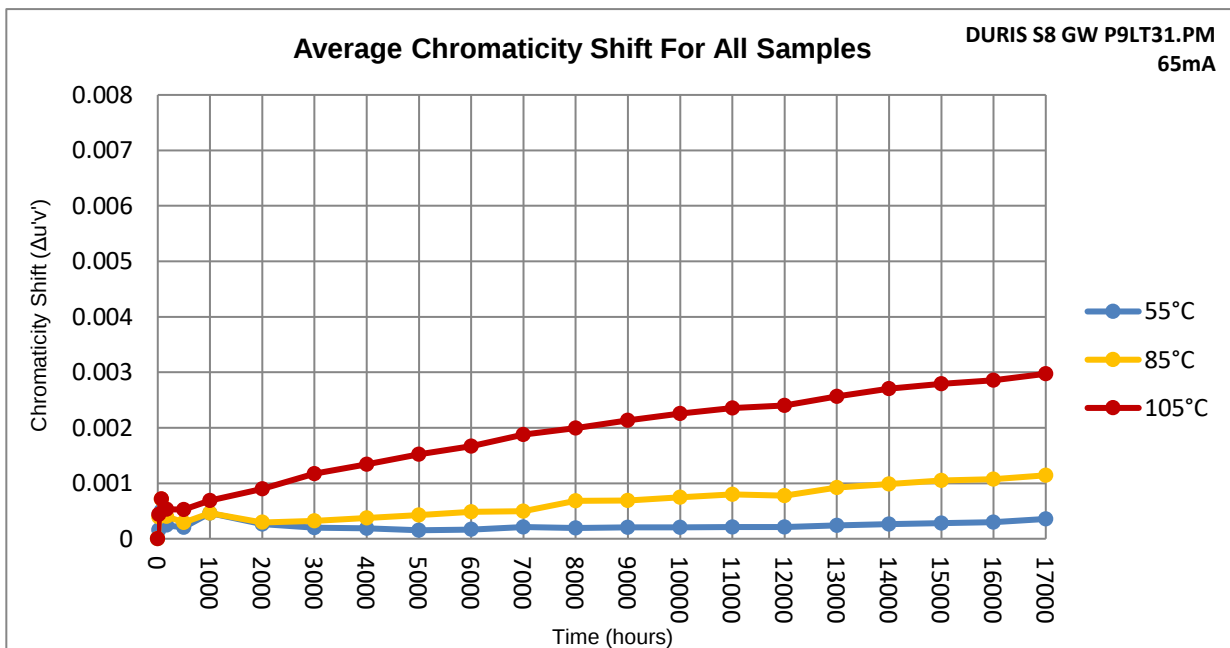
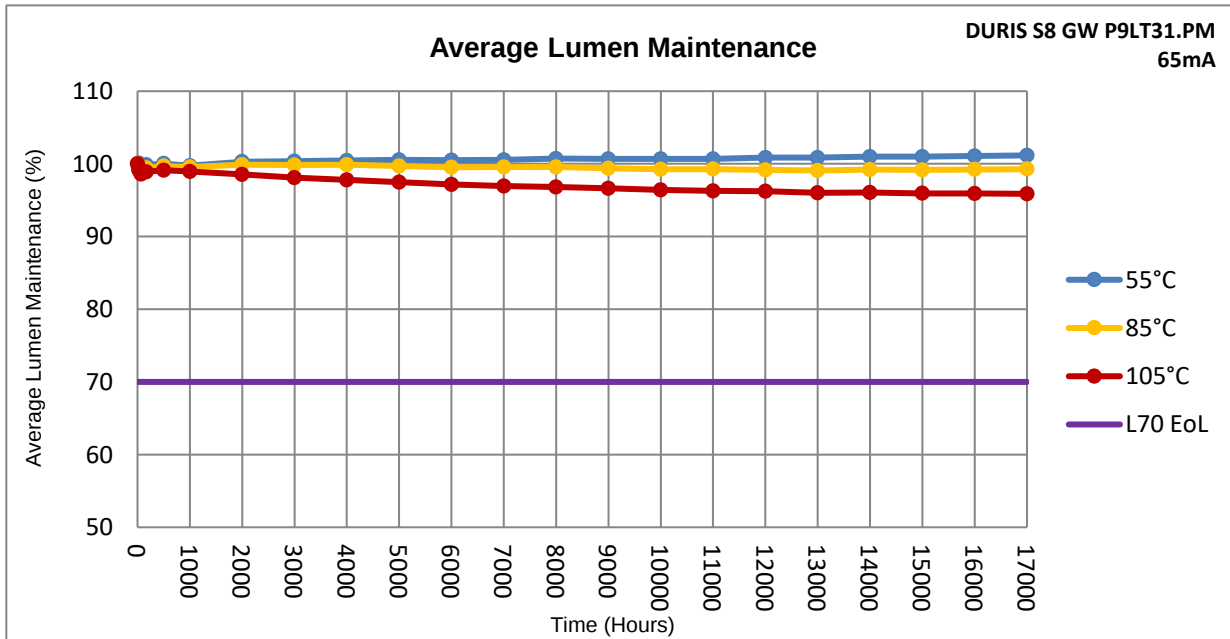
Load board ID	Device number	Zero hour measurements		Photometric test drive current: 0.065 A Photometric test ambient temperature: 25 ± 2 °C Failures observed: none										
		Vf (V)		Forward Voltage Maintenance (%)										
				1000	2000	3000	4000	5000	6000	7000	8000	9000	10000	11000
BF00001078CC031C	D4		28.41	100.02	100.12	100.16	100.21	100.25	100.29	100.33	100.36	100.40	100.43	100.47
	D5		28.46	100.07	100.14	100.17	100.18	100.20	100.22	100.23	100.24	100.25	100.26	100.28
	D6		28.50	100.03	100.06	100.09	100.10	100.12	100.15	100.15	100.17	100.18	100.20	100.21
	D7		28.53	100.06	100.14	100.20	100.23	100.26	100.29	100.32	100.33	100.36	100.38	100.40
	D8		28.41	100.07	100.13	100.18	100.20	100.21	100.24	100.26	100.27	100.28	100.30	100.32
n				24	24	24	24	24	24	24	24	24	24	24
mean				100.0	100.1	100.1	100.1	100.2	100.2	100.2	100.2	100.2	100.2	100.2
median				100.0	100.1	100.1	100.1	100.1	100.1	100.2	100.2	100.2	100.3	100.2
std. dev.				0.0	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1
min				100.0	100.0	100.0	100.1	100.1	100.1	100.1	100.1	100.1	100.1	100.1
max				100.1	100.3	100.3	100.4	100.5	100.5	100.6	100.6	100.6	100.7	100.7

Test Condition 3				105 °C	0.065 A											
TABLE 4.2 - FORWARD VOLTAGE MAINTENANCE RESULTS															GW P9LT31.PM	
Test Condition 3				105 °C	0.065 A											
Load board ID	Device number	Zero hour measurements		Photometric test drive current: 0.065 A Photometric test ambient temperature: 25 ± 2 °C Failures observed: none												
		Vf (V)		Forward Voltage Maintainence (%)												
				12000	13000	14000	15000	16000	17000							
0C0000109714031C	D2		28.47	100.76	100.82	100.88	100.91	100.95	100.99							
	D3		28.48	100.20	100.22	100.24	100.24	100.25	100.26							
	D4		28.44	100.29	100.30	100.33	100.33	100.34	100.36							
	D5		28.48	100.19	100.18	100.20	100.21	100.22	100.23							
	D6		28.46	100.18	100.18	100.19	100.20	100.21	100.23							
	D7		28.43	100.32	100.33	100.34	100.35	100.37	100.39							
6E00001090FC031C	D1		28.53	100.12	100.14	100.14	100.15	100.16	100.20							
	D2		28.52	100.11	100.11	100.12	100.12	100.14	100.16							
	D3		28.48	100.18	100.19	100.20	100.22	100.22	100.22							
	D4		28.51	100.09	100.10	100.10	100.13	100.12	100.12							
	D6		28.48	100.13	100.14	100.15	100.14	100.15	100.16							
	D7		28.47	100.77	100.14	100.15	100.14	100.15	100.16							
	D8		28.45	100.77	100.17	100.18	100.17	100.19	100.18							
AC0000109557031C	D1		28.25	100.29	100.30	100.31	100.32	100.34	100.35							
	D2		28.49	100.33	100.34	100.35	100.36	100.38	100.39							
	D3		28.47	100.20	100.22	100.22	100.22	100.24	100.24							
	D4		28.49	100.23	100.25	100.26	100.26	100.29	100.29							
	D6		28.37	100.38	100.38	100.39	100.41	100.43	100.46							
	D7		28.46	100.33	100.34	100.40	100.37	100.39	100.41							

TABLE 4.2 - FORWARD VOLTAGE MAINTENANCE RESULTS
GW P9LT31.PM
Test Condition 3 105 °C 0.065 A

Load board ID	Device number	Zero hour measurements		Photometric test drive current: 0.065 A Photometric test ambient temperature: 25 ± 2 °C Failures observed: none										
		Vf (V)		Forward Voltage Maintenance (%)										
				12000	13000	14000	15000	16000	17000					
BF00001078CC031C	D4		28.41	100.51	100.52	100.55	100.57	100.60	100.63					
	D5		28.46	100.30	100.29	100.31	100.32	100.33	100.35					
	D6		28.50	100.23	100.23	100.25	100.26	100.28	100.30					
	D7		28.53	100.44	100.45	100.47	100.49	100.51	100.53					
	D8		28.41	100.35	100.35	100.36	100.39	100.39	100.45					
n				24	24	24	24	24	24					
mean				100.3	100.3	100.3	100.3	100.3	100.3					
median				100.3	100.2	100.3	100.3	100.3	100.3					
std. dev.				0.2	0.2	0.2	0.2	0.2	0.2					
min				100.1	100.1	100.1	100.1	100.1	100.1					
max				100.8	100.8	100.9	100.9	101.0	101.0					

5.0 Charts:



6.0 Additional Information

6.1 Auxilliary Equipment

Lifetest thermal chamber:	Orb Optronix Thermal Platform - resistive heating, liquid cooling, no forced air flow
Lifetest current source:	Orb Optronix 12-channel driver
Photometric test current source:	Keithley 2425
Photometric test thermal control:	Orb Optronix TEC-100
Spectrometer:	Instrument Systems, CAS 140CT
Integrating Sphere:	Gamma Scientific 20"
Photometric reference standards:	LabSphere SCL-50

6.2 Additional Test Information

6.3 Photographs



Fig. 1 DURIS S8 load board example.

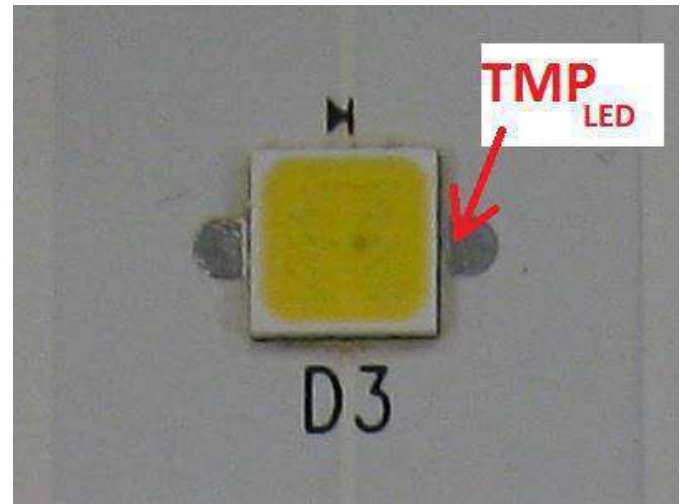


Fig. 2 DURIS S8 type LED model GW P9LT31.PM and temperature measurement point.

6.4 Dimensional Drawing*

* all dimension in millimeters

This report alone may not be used to claim product certification, approval or endorsement by NVLAP, NIST, or any agency of the Federal Government.

- END OF REPORT -

Appendix A:

Energy Star® LM-80 Application

ENERGY STAR® LM-80 Cover Page

Administrative Information

Tested subcomponent series	DURIS® S 8
Tested subcomponent model number	GW P9LT31.PM
Report issue date	18 th Dec 2020
Report revision date (if applicable)	Not Applicable
Testing start date	11 th August 2017
Testing completion date	18 th Dec 2020
DUT sampling method	According to ANSI/IES LM-80 Test Method

DUT Identification

DUT manufacturer's name	OSRAM Opto Semiconductors (Malaysia) Sdn Bhd
DUT identification	GW P9LT31.PM
Description of DUT	LED Package

DUT Characteristics

Total input power (W)	1.85
Average current density per LED die (mA/mm ²)	130
Average power density per LED Package (W/mm ²)	0.07
Representative CRI (Ra) of the tested sample set	70
Minimum die edge to die edge spacing (mm)	0.2

Appendix B:

Lumen Maintenance Projection (IES TM-21-11)

For Information Only!

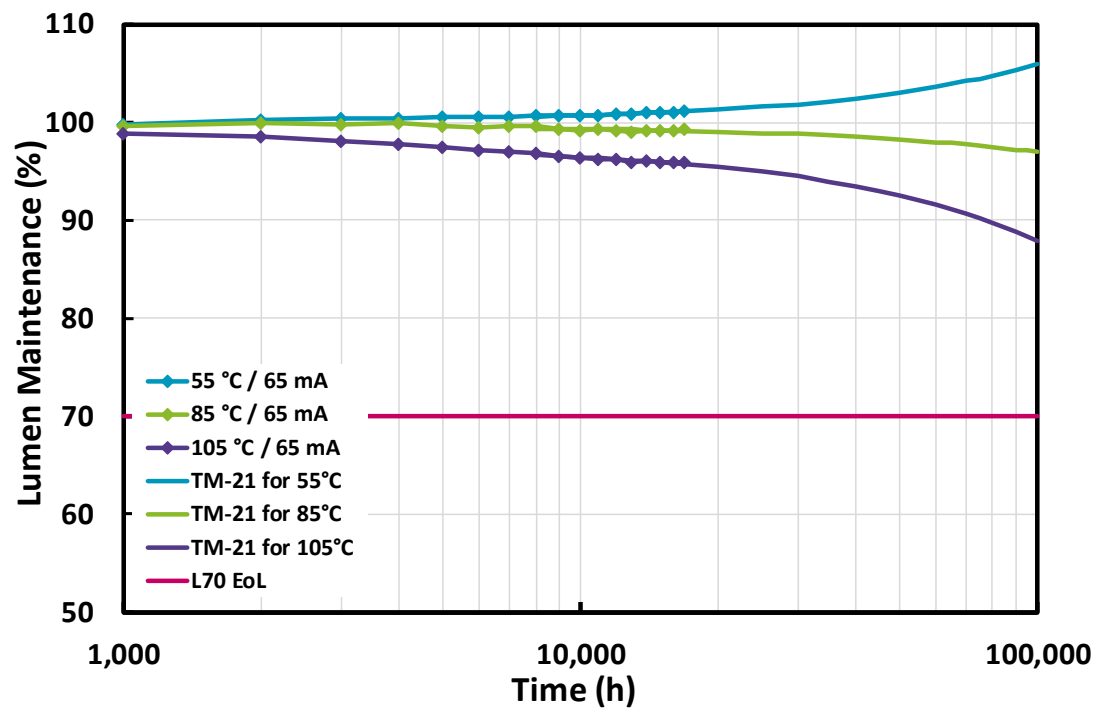
1. General Information

Description of LED light source tested	DURIS® S 8 GW P9LT31.PM
Sample size per temperature	24
LED drive current used in the test	65 mA
Current per die	65 mA
Test duration	17,000 hours
Test duration used for projection	8,000 hours to 17,000 hours

2. Projection Data

	I	II	III
Case temperature (solder point)	$T_s = 55\text{ °C}$	$T_s = 85\text{ °C}$	$T_s = 105\text{ °C}$
α	-5.632E-07	2.670E-07	1.034E-06
B	1.002E+00	9.960E-01	9.747E-01
Reported L70	> 102,000 hours	> 102,000 hours	> 102,000 hours
Reported L80	> 102,000 hours	> 102,000 hours	> 102,000 hours
Reported L90	> 102,000 hours	> 102,000 hours	77,107 hours

3. Graphic chart



Appendix C: Additional Models Covered By Testing

The 28 September 2017 *ENERGY STAR® Requirements for the Use of LM-80 Data defines conditions for which a LM-80 report is applied to cover models that have not been directly tested.*

The test results in this report applies to the following list of models:

- | | |
|--------------------------------|--------------------------------------|
| • DURIS® S 8 GW P9LT31.PM | with CCT 4000 K – 6500 K up to 65mA |
| • DURIS® S 8 GW P9LR31.PM | with CCT 4000 K – 6500 K up to 65mA |
| • DURIS® S 8 GW P9LT32.PM | with CCT 4000 K – 6500 K up to 325mA |
| • DURIS® S 8 GW P9LR34.PM | with CCT 4000 K – 6500 K up to 74mA |
| • DURIS® S 8 GW P9LR34.PM Gen5 | with CCT 4000 K – 6500 K up to 74mA |
| • DURIS® S 8 GW P9LR35.PM | with CCT 4000 K – 6500 K up to 296mA |
| • DURIS® S 8 GW P9LR35.PM Gen5 | with CCT 4000 K – 6500 K up to 296mA |

Note: The devices are stressed and tested at average current density per LED die of 130mA/mm². This report can be referenced when the current employed in application is lower than the specified current of the respective devices as stated above.

Disclaimer

Please carefully read the below terms and conditions before using the Information.
If you do not agree with any of these terms and conditions, do not use the Information.

The Information contained in this document does not constitute an independent warranty. The committed behavior is described in the Product data sheet.

Further explanations:

Data: The Data used in this Document consider the reliability test results under the mentioned driving conditions only. For Product information on the maximum operating conditions please refer to the Product data sheet or contact your local sales partner.

Conditions: The conditions for the generation of the data are as follows:

1. The Data and curves shown in this Document are based on experiments carried out under laboratory conditions on a random sample size of LED with readouts at discrete readout times (where applicable). Thus, the Data above represent a limited number of production lots only and may differ between different assembly lots over time (including chip or package changes). Thus, the behavior of the LED in the final application may differ from the Data. The behavior of the LED at conditions or readout times deviating from those stated above may not be deduced from the Data.
2. For long term operation additional failure modes of the chip or package can occur which are not shown in this Document.
3. Possible differences in the thermal management of OSRAM OS and customer's setup may lead to a different aging behavior.
4. The lifetime projection data presented in this Document has been evaluated in accordance with the lifetime extrapolation method described and defined in IES TM-21-11. The lifetime projection is based on the Data shown in this Document. The Data had been collected and assembled according to IES LM-80-15.

END OF DOCUMENT

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OSRAM
Opto Semiconductors

XLamp® XP-G3 Standard White LEDs

GENERAL TEST INFORMATION

Manufacturer's name	Cree LED
Product series & applicable order codes in this report	XLamp XP-G3 Standard White LEDs XPGDWT-x1-xxxx-xxxxx XPGDWT-x3-xxxx-xxxxx
Test Equipment	Instrument Systems ISP-500 Integrating Sphere Instrument Systems CAS-140 Spectrometer Keithley 2420 Sourcemeter
Drive level type	Constant direct current (DC)
Description of air movement	LED packages are operated in environmental control chambers. The temperature of the ambient air around the LED packages is actively controlled by air flowing through the chamber. Air flow : 800 CFM
Relative humidity (RH) level	< 45%
Photometric measurement uncertainty	Cree LED maintains a tolerance of $\pm 2.0\%$ on flux measurements for LM-80 testing.
Testing agency identification	CreeLED SSL Laboratory 4400 Silicon Drive Durham, NC 27703 USA
Testing agency third-party accreditation	 Lab Code 500041-0
Test report authorization	Ryan Zienert, Components Reliability Laboratory Manager

REVISION HISTORY

Revision	Date	Change
0	Jan 7, 2016	Date of first issue
1	Apr 8, 2016	Added additional test duration to data set 1, removed successor status, added data set 2.
2	Aug 17, 2016	Extended data set #1 & 2 with additional test duration.
3	Sept 9, 2016	Added data sets #3 - 12
4	Sept 13, 2016	Fixed report error in data set 10
5	Dec 02, 2016	Extended data set #2 with additional test duration. Added data set #13.
6	Feb 28, 2017	Removed data sets #1 & 2. Added data set #14. Extended data sets #3, 4, 6, 7, 9 & 11 with additional test duration.
7	May 15, 2017	Extended data sets #3, 4, 6, 7, 9, 11 & 14 with additional test duration.
8	Nov 15, 2017	Added data set #15. Extended data sets #3, 4, 5, 6, 7, 8, 9 & 11 with additional test duration. Revised TM-21 graph for all data sets. Added color shift graph and Test Results Summary tables for all data sets.
9	May 30, 2018	Extended data sets #6 & 11 with additional test duration. Revised product name and order codes to refer to XLamp XP-G3 Standard.
10	Oct 18, 2018	Extended data sets #3, 4, 6, 7, 9 & 15 with additional test duration. Corrected calculation errors in color shift (du'v) values for all data sets #3, 4, 6, 7, 9 & 15.
10A	Jan 3, 2019	Removed data set #10.
11	Dec 17, 2019	Extended data sets #6, 9 & 11 with additional test duration. Adjusted data reporting interval to 1008 hrs for data sets #6 & 11. Corrected calculation errors in color shift (du'v) values for data sets #5, 8, 11, 12, 13 & 14.
12	Oct 26, 2020	Added data set #16.
13	May 4, 2021	Updated CreeLED testing agency information. Converted document style & information to Cree LED.
14	Jun 11, 2021	Extended data set #16 with additional test duration.
15	Jun 27, 2022	Extended data set #16 with additional test duration. Added data set #17.

TEST RESULTS SUMMARY

Data Set	Case Temp. [T _s]	Ambient Temp. [T _a]	Drive Current [I _p]	ANSI CCT Target	Sample Count	Test Duration	Reported TM-21 Lifetimes
17	85°C	85°C	350 mA	2700K	20	18,144 hrs	L90(18k) > 109,000 hrs L80(18k) > 109,000 hrs L70(18k) > 109,000 hrs
3	85°C	85°C	350 mA	3000K	25	15,120 hrs	L90(15k) > 90,700 hrs L80(15k) > 90,700 hrs L70(15k) > 90,700 hrs
4	105°C	105°C	350 mA	3000K	25	15,120 hrs	L90(15k) > 90,700 hrs L80(15k) > 90,700 hrs L70(15k) > 90,700 hrs
5	120°C	120°C	350 mA	3000K	25	8,568 hrs	L90(9k) > 51,400 hrs L80(9k) > 51,400 hrs L70(9k) > 51,400 hrs
6	85°C	85°C	700 mA	3000K	25	24,192 hrs	L90(24k) > 145,000 hrs L80(24k) > 145,000 hrs L70(24k) > 145,000 hrs
16	85°C	85°C	700 mA	2700K	20	18,144 hrs	L90(18k) > 109,000 hrs L80(18k) > 109,000 hrs L70(18k) > 109,000 hrs
7	105°C	105°C	700 mA	3000K	25	15,120 hrs	L90(15k) > 90,700 hrs L80(15k) > 90,700 hrs L70(15k) > 90,700 hrs
8	120°C	120°C	700 mA	3000K	25	8,568 hrs	L90(9k) = 39,600 hrs L80(9k) > 51,400 hrs L70(9k) > 51,400 hrs
9	85°C	85°C	1050 mA	3000K	25	15,120 hrs	L90(15k) > 90,700 hrs L80(15k) > 90,700 hrs L70(15k) > 90,700 hrs
15	105°C	105°C	1050 mA	3000K	25	12,096 hrs	L90(12k) > 72,600 hrs L80(12k) > 72,600 hrs L70(12k) > 72,600 hrs
11	85°C	85°C	1500 mA	3000K	25	24,192 hrs	L90(24k) > 145,000 hrs L80(24k) > 145,000 hrs L70(24k) > 145,000 hrs
14	105°C	105°C	1500 mA	3000K	25	10,080 hrs	L90(10k) = 27,900 hrs L80(10k) > 60,500 hrs L70(10k) > 60,500 hrs
12	120°C	120°C	1500 mA	3000K	20	6,048 hrs	L90(6k) = 7,830 hrs L80(6k) = 20,800 hrs L70(6k) = 35,500 hrs
13	85°C	85°C	2000 mA	3000K	25	6,048 hrs	L90(6k) = 17,500 hrs L80(6k) > 36,300 hrs L70(6k) > 36,300 hrs

DATA SET 17: 85°C; 350 mA (2700K)

Tested LED Package Series	XLamp XP-G3 Standard White LEDs
Tested Drive Current [I_F]	350 mA
Testing Initiation Date	March 27, 2019
Case Temperature [T_s]	85°C
Ambient Temperature [T_A]	85°C
Failures observed	None

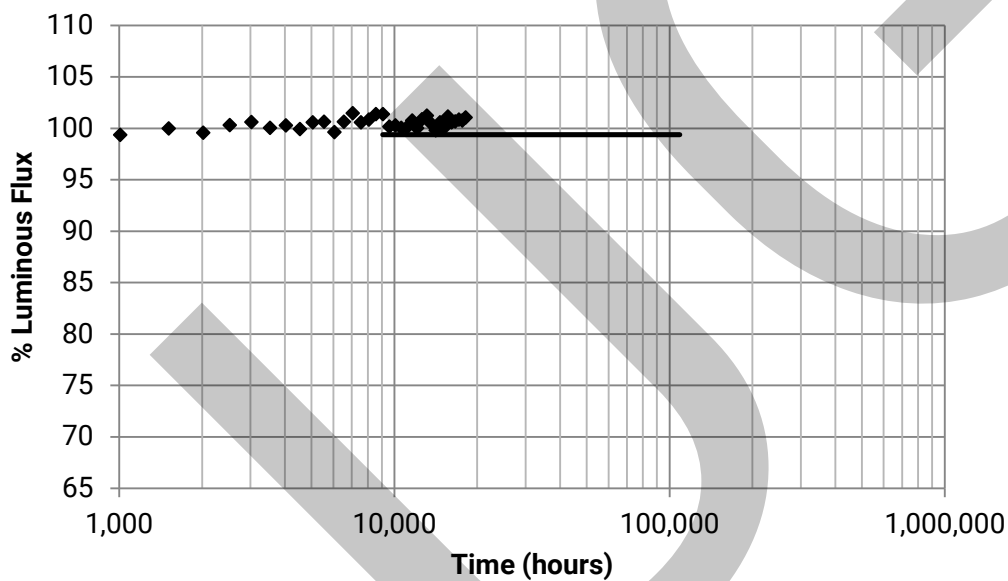
Test Results Summary

Test Duration (hrs)	Relative Luminous Flux	Relative Color Shift ($\Delta u'v'$)	Relative CRI Shift (ΔRa)	Relative Voltage Shift ($\% \Delta V_F$)	Test Duration (hrs)	Relative Luminous Flux	Relative Color Shift ($\Delta u'v'$)	Relative CRI Shift (ΔRa)	Relative Voltage Shift ($\% \Delta V_F$)
0	100.00%	0.0000	0.0	0.0%	10080	100.28%	0.0005	-0.3	0.0%
168	100.24%	0.0004	-0.1	-0.1%	10584	100.06%	0.0006	-0.4	0.0%
1008	99.38%	0.0004	-0.1	-0.1%	11088	100.07%	0.0005	-0.4	0.0%
1512	99.98%	0.0005	0.0	0.0%	11592	100.76%	0.0005	-0.4	0.0%
2016	99.56%	0.0005	0.0	-0.1%	12096	100.03%	0.0005	-0.3	0.1%
2520	100.31%	0.0005	0.0	0.0%	12600	100.88%	0.0005	-0.4	0.0%
3024	100.61%	0.0005	-0.1	0.0%	13104	101.23%	0.0005	-0.4	0.0%
3528	100.04%	0.0004	0.0	0.0%	13608	100.43%	0.0003	-0.4	0.0%
4032	100.30%	0.0004	0.0	0.0%	14112	99.80%	0.0004	-0.4	0.0%
4536	99.92%	0.0005	-0.1	0.0%	14616	100.59%	0.0004	-0.3	0.0%
5040	100.57%	0.0004	-0.4	0.0%	15120	100.05%	0.0003	-0.3	0.0%
5544	100.63%	0.0003	-0.4	0.0%	15624	101.14%	0.0002	-0.3	0.0%
6048	99.64%	0.0002	-0.4	0.0%	16128	100.58%	0.0004	-0.3	0.0%
6552	100.64%	0.0005	-0.4	0.0%	16632	100.68%	0.0003	-0.4	0.0%
7056	101.47%	0.0005	-0.5	0.0%	17136	100.84%	0.0004	-0.4	0.0%
7560	100.57%	0.0004	-0.3	0.0%	17640	100.75%	0.0003	-0.1	0.0%
8064	100.86%	0.0004	-0.4	0.0%	18144	101.07%	0.0002	-0.1	0.0%
8568	101.38%	0.0005	-0.4	0.0%					
9072	101.38%	0.0005	-0.4	0.0%					
9576	100.16%	0.0004	-0.4	0.0%					

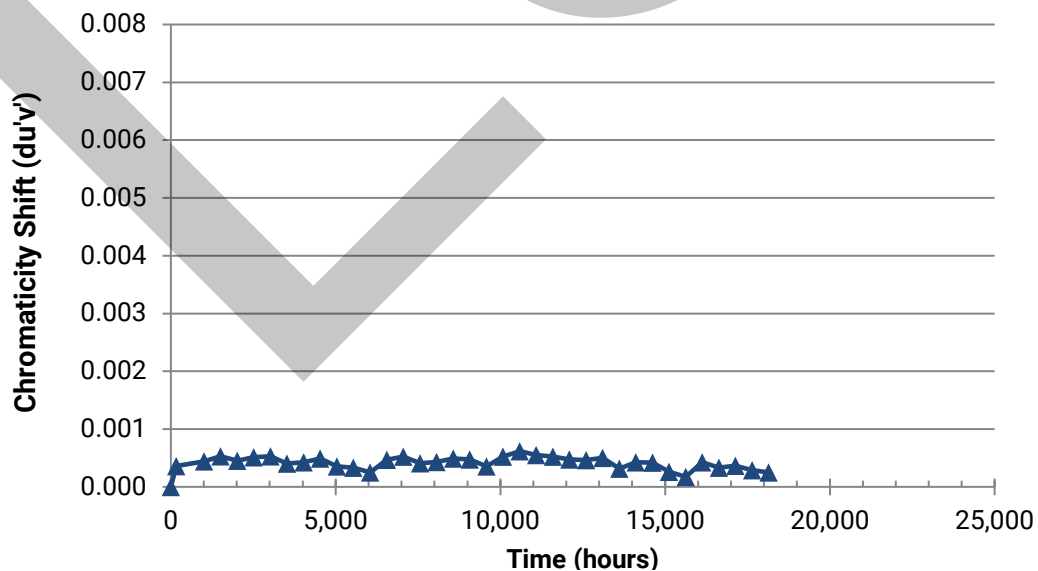
DATA SET 17: 85°C; 350 mA (2700K)

TM-21 Projection

Test duration	18,144 hours
Test duration used for projection	t=9,072 to t=18,144
α	-4.057E-07
β	1.000E+00
Reported Lifetimes	L90(18k) > 109,000 hrs
	L80(18k) > 109,000 hrs
	L70(18k) > 109,000 hrs



Color Shift Graph



DATA SET 17: 85°C; 350 mA (2700K)

Lamp #	Initial (0 hrs)				Lumen Maintenance (%)											
	LF (lm)	V _F (V)	Calc. CCT	ANSI Target	168	1008	1512	2016	2520	3024	3528	4032	4536	5040	5544	6048
1	179	2.84	2677	2700	100.90	99.94	100.39	100.11	100.34	100.84	100.73	100.84	100.90	100.95	101.12	100.00
2	170	2.82	2711	2700	100.53	99.59	100.18	99.77	100.29	100.76	100.29	100.35	100.18	101.06	101.00	99.77
3	173	2.82	2700	2700	100.06	98.90	99.71	99.31	100.40	100.64	100.00	100.52	100.00	100.52	100.46	99.36
4	181	2.82	2681	2700	100.39	99.78	100.39	100.11	100.55	101.16	100.17	100.39	100.33	101.38	101.33	100.22
5	173	2.80	2689	2700	100.29	99.48	100.00	99.48	100.06	100.40	99.94	99.83	99.13	100.46	100.69	99.71
6	166	2.88	2636	2700	99.88	98.92	99.70	99.64	100.12	100.60	100.06	100.12	100.00	101.02	100.96	99.88
7	173	2.81	2692	2700	100.35	99.65	100.17	100.00	100.52	101.04	100.46	100.46	100.41	101.27	101.04	99.88
8	172	2.82	2660	2700	99.71	98.78	99.53	99.19	100.12	100.12	99.71	100.06	99.77	100.29	100.52	99.48
9	173	2.80	2690	2700	100.64	99.77	100.29	99.83	100.35	100.98	100.64	100.75	100.46	99.83	100.17	99.77
10	185	2.80	2739	2700	100.38	99.73	99.84	99.40	99.89	100.54	100.00	100.11	99.02	100.00	100.00	99.24
11	173	2.81	2689	2700	100.41	99.36	100.29	99.88	100.98	101.10	100.46	100.81	99.48	100.00	100.29	99.42
12	170	2.84	2688	2700	99.94	99.71	100.41	100.06	100.94	100.94	100.41	100.88	100.65	101.53	101.65	100.59
13	168	2.84	2692	2700	99.70	98.63	99.47	98.93	99.88	100.06	99.52	99.82	99.64	100.59	100.48	99.47
14	177	2.82	2681	2700	100.28	99.38	100.06	99.43	100.17	100.34	99.38	100.00	99.66	100.74	100.85	99.60
15	185	2.80	2707	2700	100.22	99.19	99.30	98.81	99.78	100.00	99.57	100.05	99.57	99.40	99.40	98.76
16	168	2.82	2673	2700	100.00	99.11	99.70	99.17	100.00	100.18	99.23	99.58	99.41	100.59	100.54	99.23
17	175	2.81	2707	2700	100.17	99.37	100.06	99.66	100.46	100.69	100.00	100.29	100.11	100.63	100.51	99.54
18	177	2.84	2659	2700	100.45	99.55	99.72	99.27	100.23	100.39	100.00	100.23	100.00	100.51	100.56	99.55
19	170	2.84	2695	2700	100.35	99.35	100.12	99.71	100.59	100.59	100.18	100.47	99.88	99.59	100.06	99.35
20	179	2.83	2725	2700	100.22	99.39	100.17	99.50	100.50	100.78	100.11	100.50	99.89	101.01	101.06	100.06
n	20	20	20	20	20	20	20	20	20	20	20	20	20	20	20	20
Mean	174	2.82	2690		100.24	99.38	99.98	99.56	100.31	100.61	100.04	100.30	99.92	100.57	100.63	99.64
Median	173	2.82	2689		100.29	99.39	100.06	99.57	100.32	100.62	100.03	100.32	99.95	100.59	100.55	99.58
σ	5	0.02	23		0.30	0.36	0.33	0.38	0.32	0.35	0.41	0.36	0.49	0.59	0.52	0.40
Min.	166	2.80	2636		99.70	98.63	99.30	98.81	99.78	100.00	99.23	99.58	99.02	99.40	99.40	98.76
Max.	185	2.88	2739		100.90	99.94	100.41	100.11	100.98	101.16	100.73	100.88	100.90	101.53	101.65	100.59

Lamp #	Initial (0 hrs)				Chromaticity Shift (Δu'v')											
	CCx	CCy	Calc. CCT	ANSI Target	168	1008	1512	2016	2520	3024	3528	4032	4536	5040	5544	6048
1	0.4576	0.4042	2677	2700	0.0007	0.0008	0.0008	0.0008	0.0008	0.0008	0.0008	0.0008	0.0010	0.0007	0.0007	0.0006
2	0.4512	0.3970	2711	2700	0.0004	0.0005	0.0007	0.0006	0.0006	0.0007	0.0006	0.0007	0.0006	0.0004	0.0005	0.0003
3	0.4527	0.3983	2700	2700	0.0003	0.0005	0.0007	0.0006	0.0007	0.0008	0.0007	0.0008	0.0008	0.0007	0.0006	0.0004
4	0.4570	0.4037	2681	2700	0.0004	0.0005	0.0005	0.0005	0.0005	0.0006	0.0003	0.0003	0.0004	0.0005	0.0006	0.0004
5	0.4591	0.4083	2689	2700	0.0004	0.0003	0.0003	0.0002	0.0003	0.0003	0.0002	0.0001	0.0002	0.0002	0.0002	0.0002
6	0.4622	0.4073	2636	2700	0.0003	0.0003	0.0004	0.0004	0.0004	0.0004	0.0003	0.0003	0.0005	0.0004	0.0004	0.0004
7	0.4541	0.3999	2692	2700	0.0003	0.0004	0.0006	0.0006	0.0007	0.0007	0.0006	0.0005	0.0006	0.0005	0.0003	0.0002
8	0.4534	0.3950	2660	2700	0.0004	0.0005	0.0007	0.0006	0.0007	0.0006	0.0006	0.0006	0.0006	0.0004	0.0004	0.0003
9	0.4578	0.4061	2690	2700	0.0004	0.0005	0.0006	0.0005	0.0005	0.0006	0.0005	0.0005	0.0004	0.0002	0.0002	0.0002
10	0.4547	0.4065	2739	2700	0.0004	0.0004	0.0004	0.0003	0.0003	0.0004	0.0003	0.0002	0.0002	0.0001	0.0001	0.0001
11	0.4579	0.4062	2689	2700	0.0003	0.0004	0.0006	0.0005	0.0007	0.0007	0.0005	0.0005	0.0005	0.0004	0.0004	0.0003
12	0.4568	0.4041	2688	2700	0.0003	0.0005	0.0007	0.0006	0.0007	0.0006	0.0005	0.0006	0.0007	0.0005	0.0005	0.0005
13	0.4579	0.4065	2692	2700	0.0002	0.0002	0.0003	0.0002	0.0002	0.0003	0.0001	0.0002	0.0003	0.0002	0.0001	0.0000
14	0.4532	0.3970	2681	2700	0.0004	0.0004	0.0006	0.0004	0.0004	0.0004	0.0001	0.0002	0.0002	0.0002	0.0002	0.0000
15	0.4578	0.4082	2707	2700	0.0004	0.0004	0.0003	0.0003	0.0003	0.0003	0.0002	0.0002	0.0002	0.0001	0.0002	0.0002
16	0.4599	0.4077	2673	2700	0.0003	0.0004	0.0004	0.0003	0.0003	0.0003	0.0001	0.0002	0.0003	0.0003	0.0003	0.0002
17	0.4529	0.3995	2707	2700	0.0003	0.0005	0.0007	0.0006	0.0007	0.0007	0.0006	0.0006	0.0006	0.0004	0.0003	0.0002
18	0.4607	0.4074	2659	2700	0.0004	0.0003	0.0002	0.0002	0.0003	0.0004	0.0002	0.0003	0.0005	0.0003	0.0001	0.0001
19	0.4580	0.4071	2695	2700	0.0004	0.0005	0.0006	0.0005	0.0006	0.0006	0.0004	0.0005	0.0005	0.0002	0.0003	0.0003
20	0.4517	0.3995	2725	2700	0.0004	0.0005	0.0007	0.0005	0.0006	0.0006	0.0005	0.0006	0.0005	0.0004	0.0004	0.0003
n	20	20	20	20	20	20	20	20	20	20	20	20	20	20	20	20
Mean	0.4563	0.4035	2690		0.0004	0.0004	0.0005	0.0005	0.0005	0.0005	0.0004	0.0004	0.0005	0.0004	0.0003	0.0002
Median	0.4573	0.4052	2689		0.0004	0.0005	0.0006	0.0005	0.0005	0.0006	0.0004	0.0005	0.0005	0.0004	0.0003	0.0003
σ	0.0031	0.0044	23		0.0001	0.0001	0.0002	0.0002	0.0002	0.0002	0.0002	0.0002	0.0002	0.0002	0.0002	0.0002
Min.	0.4512	0.3950	2636		0.0002	0.0002	0.0002	0.0002	0.0002	0.0003	0.0001	0.0001	0.0002	0.0001	0.0001	0.0000
Max.	0.4622	0.4083	2739		0.0007	0.0008	0.0008	0.0008	0.0008	0.0008	0.0008	0.0008	0.0010	0.0007	0.0007	0.0006

DATA SET 17: 85°C; 350 mA (2700K)

Lamp #	Initial (0 hrs)				Lumen Maintenance (%)											
	LF (lm)	V _F (V)	Calc. CCT	ANSI Target	6552	7056	7560	8064	8568	9072	9576	10080	10584	11088	11592	12096
1	179	2.84	2677	2700	101.12	101.68	100.62	101.06	101.90	101.73	100.39	100.67	100.50	100.39	100.73	100.06
2	170	2.82	2711	2700	100.70	101.82	100.88	101.12	101.58	101.64	100.41	100.70	100.23	99.82	100.94	100.18
3	173	2.82	2700	2700	100.52	101.33	100.35	100.69	101.33	101.33	100.17	99.88	99.83	100.12	100.81	100.06
4	181	2.82	2681	2700	101.27	102.10	101.33	101.27	101.93	102.04	100.88	100.88	100.72	100.61	101.49	100.83
5	173	2.80	2689	2700	99.08	101.16	100.40	100.69	100.92	101.04	99.60	99.65	99.83	99.71	99.54	99.83
6	166	2.88	2636	2700	100.72	101.69	100.84	100.90	101.14	101.27	100.12	100.30	99.88	100.00	100.66	100.00
7	173	2.81	2692	2700	100.87	101.97	101.10	101.16	101.68	101.50	100.23	100.46	100.17	100.00	101.04	99.88
8	172	2.82	2660	2700	100.41	101.40	100.17	100.70	101.05	101.05	100.06	100.17	99.88	99.59	100.41	99.83
9	173	2.80	2690	2700	100.87	101.62	101.04	101.27	102.14	102.02	100.93	101.10	100.75	100.87	101.62	100.23
10	185	2.80	2739	2700	100.43	100.65	100.22	100.65	100.60	100.70	98.86	99.35	99.30	99.40	99.84	99.51
11	173	2.81	2689	2700	100.64	101.51	100.58	100.93	101.27	101.04	100.64	100.81	100.46	100.75	101.33	100.35
12	170	2.84	2688	2700	101.71	102.47	101.35	101.59	102.24	102.41	101.12	101.30	100.94	100.82	101.65	100.53
13	168	2.84	2692	2700	100.48	101.19	100.24	100.53	101.19	101.07	100.00	100.12	99.76	99.64	100.48	99.76
14	177	2.82	2681	2700	100.74	101.47	100.51	100.91	101.41	101.53	100.17	100.11	100.11	100.06	100.62	100.11
15	185	2.80	2707	2700	100.11	100.32	99.78	100.11	100.76	100.87	99.08	99.46	99.30	99.40	100.32	99.57
16	168	2.82	2673	2700	100.48	101.01	100.18	100.12	100.71	101.01	99.70	99.76	99.58	99.64	100.42	99.46
17	175	2.81	2707	2700	100.57	101.26	100.11	100.74	101.26	101.26	100.34	100.11	99.89	100.11	100.74	99.83
18	177	2.84	2659	2700	100.56	101.30	100.23	100.51	101.18	100.73	99.32	99.66	99.66	99.89	100.39	99.83
19	170	2.84	2695	2700	100.35	101.30	100.59	101.06	101.65	101.89	100.77	100.65	100.53	100.53	101.42	100.59
20	179	2.83	2725	2700	101.23	102.07	100.84	101.23	101.56	101.56	100.45	100.45	99.94	100.06	100.78	100.11
n	20	20	20	20	20	20	20	20	20	20	20	20	20	20	20	20
Mean	174	2.82	2690		100.64	101.47	100.57	100.86	101.38	101.38	100.16	100.28	100.06	100.07	100.76	100.03
Median	173	2.82	2689		100.61	101.44	100.55	100.91	101.30	101.30	100.20	100.24	99.92	100.03	100.74	100.03
σ	5	0.02	23		0.52	0.50	0.43	0.38	0.46	0.47	0.61	0.55	0.47	0.46	0.56	0.36
Min.	166	2.80	2636		99.08	100.32	99.78	100.11	100.60	100.70	98.86	99.35	99.30	99.40	99.54	99.46
Max.	185	2.88	2739		101.71	102.47	101.35	101.59	102.24	102.41	101.12	101.30	100.94	100.87	101.65	100.83

Lamp #	Initial (0 hrs)				Chromaticity Shift (Δu'v')											
	CCx	CCy	Calc. CCT	ANSI Target	6552	7056	7560	8064	8568	9072	9576	10080	10584	11088	11592	12096
1	0.4576	0.4042	2677	2700	0.0008	0.0008	0.0007	0.0008	0.0009	0.0009	0.0006	0.0009	0.0010	0.0008	0.0007	0.0007
2	0.4512	0.3970	2711	2700	0.0006	0.0006	0.0006	0.0005	0.0005	0.0004	0.0004	0.0006	0.0007	0.0006	0.0006	0.0004
3	0.4527	0.3983	2700	2700	0.0007	0.0007	0.0007	0.0007	0.0009	0.0008	0.0005	0.0007	0.0009	0.0009	0.0009	0.0008
4	0.4570	0.4037	2681	2700	0.0006	0.0006	0.0006	0.0005	0.0006	0.0005	0.0005	0.0006	0.0008	0.0007	0.0007	0.0006
5	0.4591	0.4083	2689	2700	0.0002	0.0004	0.0003	0.0003	0.0003	0.0003	0.0002	0.0003	0.0005	0.0003	0.0004	0.0003
6	0.4622	0.4073	2636	2700	0.0005	0.0005	0.0005	0.0004	0.0004	0.0004	0.0003	0.0004	0.0005	0.0005	0.0004	0.0003
7	0.4541	0.3999	2692	2700	0.0004	0.0006	0.0006	0.0005	0.0006	0.0006	0.0004	0.0008	0.0008	0.0008	0.0008	0.0006
8	0.4534	0.3950	2660	2700	0.0005	0.0006	0.0004	0.0005	0.0005	0.0005	0.0004	0.0007	0.0007	0.0005	0.0005	0.0004
9	0.4578	0.4061	2690	2700	0.0004	0.0005	0.0003	0.0004	0.0006	0.0005	0.0004	0.0006	0.0006	0.0006	0.0005	0.0005
10	0.4547	0.4065	2739	2700	0.0003	0.0003	0.0001	0.0003	0.0003	0.0003	0.0003	0.0002	0.0004	0.0003	0.0004	0.0004
11	0.4579	0.4062	2689	2700	0.0005	0.0005	0.0003	0.0004	0.0005	0.0004	0.0003	0.0005	0.0005	0.0005	0.0004	0.0005
12	0.4568	0.4041	2688	2700	0.0008	0.0008	0.0006	0.0007	0.0007	0.0006	0.0006	0.0008	0.0009	0.0008	0.0007	0.0005
13	0.4579	0.4065	2692	2700	0.0003	0.0003	0.0002	0.0002	0.0003	0.0003	0.0002	0.0003	0.0003	0.0003	0.0004	0.0004
14	0.4532	0.3970	2681	2700	0.0003	0.0003	0.0002	0.0003	0.0003	0.0004	0.0002	0.0004	0.0005	0.0004	0.0003	0.0003
15	0.4578	0.4082	2707	2700	0.0002	0.0003	0.0001	0.0003	0.0003	0.0003	0.0002	0.0003	0.0003	0.0003	0.0004	0.0004
16	0.4599	0.4077	2673	2700	0.0004	0.0005	0.0004	0.0003	0.0004	0.0004	0.0003	0.0003	0.0005	0.0004	0.0004	0.0004
17	0.4529	0.3995	2707	2700	0.0005	0.0005	0.0005	0.0004	0.0005	0.0005	0.0004	0.0006	0.0008	0.0008	0.0006	0.0005
18	0.4607	0.4074	2659	2700	0.0003	0.0004	0.0003	0.0003	0.0003	0.0003	0.0002	0.0002	0.0003	0.0004	0.0003	0.0004
19	0.4580	0.4071	2695	2700	0.0005	0.0006	0.0004	0.0005	0.0006	0.0006	0.0005	0.0006	0.0006	0.0005	0.0006	0.0005
20	0.4517	0.3995	2725	2700	0.0006	0.0006	0.0006	0.0005	0.0005	0.0005	0.0004	0.0007	0.0007	0.0007	0.0007	0.0006
n	20	20	20	20	20	20	20	20	20	20	20	20	20	20	20	20
Mean	0.4563	0.4035	2690		0.0005	0.0005	0.0004	0.0004	0.0005	0.0005	0.0004	0.0005	0.0006	0.0005	0.0005	0.0005
Median	0.4573	0.4052	2689		0.0005	0.0005	0.0004	0.0004	0.0005	0.0005	0.0004	0.0006	0.0006	0.0005	0.0005	0.0004
σ	0.0031	0.0044	23		0.0002	0.0002	0.0002	0.0002	0.0002	0.0002	0.0001	0.0002	0.0002	0.0002	0.0002	0.0001
Min.	0.4512	0.3950	2636		0.0002	0.0003	0.0001	0.0002	0.0003	0.0003	0.0002	0.0002	0.0003	0.0003	0.0003	0.0003
Max.	0.4622	0.4083	2739		0.0008	0.0008	0.0007	0.0008	0.0009	0.0009	0.0006	0.0009	0.0010	0.0009	0.0009	0.0008

DATA SET 17: 85°C; 350 mA (2700K)

Lamp #	Initial (0 hrs)				Lumen Maintenance (%)											
	LF (lm)	V _F (V)	Calc. CCT	ANSI Target	12600	13104	13608	14112	14616	15120	15624	16128	16632	17136	17640	18144
1	179	2.84	2677	2700	101.18	100.90	100.06	99.72	100.50	100.00	101.23	100.56	100.62	100.84	100.90	101.23
2	170	2.82	2711	2700	101.35	101.64	100.88	100.00	100.76	100.29	101.47	100.82	101.12	101.12	101.06	101.06
3	173	2.82	2700	2700	100.35	100.98	100.23	99.71	100.64	99.94	100.98	100.46	100.75	100.92	100.64	101.10
4	181	2.82	2681	2700	101.66	101.99	101.22	100.33	101.16	100.66	101.66	101.05	101.33	101.49	101.38	101.33
5	173	2.80	2689	2700	100.58	100.06	100.17	99.48	100.17	99.65	100.69	100.12	100.12	100.17	100.00	100.58
6	166	2.88	2636	2700	101.14	101.51	100.54	99.82	100.72	100.00	101.08	100.54	100.66	101.02	100.90	101.08
7	173	2.81	2692	2700	101.16	101.39	100.75	100.06	100.75	100.23	101.04	100.69	100.93	101.04	100.87	101.22
8	172	2.82	2660	2700	100.23	100.93	100.17	99.48	100.41	99.65	100.87	100.41	100.52	100.58	100.29	100.47
9	173	2.80	2690	2700	101.50	101.85	101.27	100.40	101.39	100.75	101.74	101.21	101.21	101.50	101.50	101.68
10	185	2.80	2739	2700	100.33	100.11	100.16	99.51	100.27	99.89	100.92	100.38	100.11	100.54	100.38	100.87
11	173	2.81	2689	2700	101.16	101.74	100.93	100.23	100.06	100.52	101.62	100.98	101.27	101.33	101.16	101.51
12	170	2.84	2688	2700	101.83	102.36	101.24	100.29	101.30	100.88	101.94	101.24	101.53	101.65	101.59	101.83
13	168	2.84	2692	2700	100.36	100.95	99.94	99.52	100.42	99.76	100.83	100.24	100.53	100.77	100.59	100.89
14	177	2.82	2681	2700	100.74	101.41	100.34	99.49	100.34	99.94	100.96	100.45	100.57	100.45	100.51	101.02
15	185	2.80	2707	2700	100.27	100.87	100.00	99.40	100.16	99.57	100.70	100.43	99.84	100.00	100.05	100.49
16	168	2.82	2673	2700	100.30	100.89	99.41	99.29	100.06	99.35	100.48	99.82	99.76	99.88	99.88	100.42
17	175	2.81	2707	2700	100.80	101.26	100.17	99.77	100.57	100.00	100.97	100.51	100.63	100.80	100.80	101.14
18	177	2.84	2659	2700	100.06	100.28	99.55	99.44	100.23	99.66	100.85	100.17	100.06	100.23	100.28	100.62
19	170	2.84	2695	2700	101.59	101.83	100.77	100.06	101.18	100.41	101.36	100.71	100.88	101.12	101.18	101.42
20	179	2.83	2725	2700	101.06	101.56	100.78	99.94	100.78	99.94	101.34	100.78	101.23	101.40	101.12	101.45
n	20	20	20	20	20	20	20	20	20	20	20	20	20	20	20	20
Mean	174	2.82	2690		100.88	101.23	100.43	99.80	100.59	100.05	101.14	100.58	100.68	100.84	100.75	101.07
Median	173	2.82	2689		100.93	101.33	100.29	99.75	100.54	99.97	101.01	100.53	100.65	100.88	100.84	101.09
σ	5	0.02	23		0.55	0.62	0.54	0.35	0.41	0.42	0.39	0.37	0.51	0.52	0.50	0.41
Min.	166	2.80	2636		100.06	100.06	99.41	99.29	100.06	99.35	100.48	99.82	99.76	99.88	99.88	100.42
Max.	185	2.88	2739		101.83	102.36	101.27	100.40	101.39	100.88	101.94	101.24	101.53	101.65	101.59	101.83

Lamp #	Initial (0 hrs)				Chromaticity Shift (Δu'v')											
	CCx	CCy	Calc. CCT	ANSI Target	12600	13104	13608	14112	14616	15120	15624	16128	16632	17136	17640	18144
1	0.4576	0.4042	2677	2700	0.0007	0.0004	0.0003	0.0008	0.0008	0.0005	0.0004	0.0008	0.0005	0.0006	0.0008	0.0007
2	0.4512	0.3970	2711	2700	0.0004	0.0004	0.0003	0.0005	0.0004	0.0003	0.0001	0.0005	0.0003	0.0004	0.0003	0.0002
3	0.4527	0.3983	2700	2700	0.0005	0.0007	0.0005	0.0007	0.0008	0.0005	0.0003	0.0008	0.0003	0.0006	0.0004	0.0006
4	0.4570	0.4037	2681	2700	0.0005	0.0006	0.0004	0.0006	0.0006	0.0003	0.0002	0.0005	0.0002	0.0003	0.0004	0.0002
5	0.4591	0.4083	2689	2700	0.0004	0.0005	0.0002	0.0003	0.0003	0.0003	0.0001	0.0002	0.0003	0.0003	0.0002	0.0002
6	0.4622	0.4073	2636	2700	0.0003	0.0004	0.0002	0.0004	0.0005	0.0002	0.0002	0.0006	0.0005	0.0004	0.0005	0.0004
7	0.4541	0.3999	2692	2700	0.0005	0.0005	0.0004	0.0007	0.0007	0.0004	0.0002	0.0007	0.0004	0.0005	0.0005	0.0004
8	0.4534	0.3950	2660	2700	0.0003	0.0004	0.0003	0.0004	0.0005	0.0002	0.0001	0.0005	0.0003	0.0003	0.0002	0.0001
9	0.4578	0.4061	2690	2700	0.0005	0.0005	0.0003	0.0004	0.0003	0.0002	0.0001	0.0002	0.0002	0.0003	0.0001	0.0001
10	0.4547	0.4065	2739	2700	0.0005	0.0008	0.0003	0.0003	0.0002	0.0002	0.0002	0.0002	0.0003	0.0003	0.0002	0.0002
11	0.4579	0.4062	2689	2700	0.0004	0.0004	0.0002	0.0003	0.0002	0.0001	0.0001	0.0003	0.0003	0.0003	0.0001	0.0001
12	0.4568	0.4041	2688	2700	0.0006	0.0006	0.0005	0.0005	0.0007	0.0003	0.0003	0.0005	0.0003	0.0004	0.0005	0.0004
13	0.4579	0.4065	2692	2700	0.0005	0.0005	0.0004	0.0003	0.0002	0.0003	0.0003	0.0004	0.0005	0.0004	0.0002	0.0003
14	0.4532	0.3970	2681	2700	0.0004	0.0004	0.0002	0.0002	0.0002	0.0002	0.0003	0.0003	0.0004	0.0003	0.0001	0.0001
15	0.4578	0.4082	2707	2700	0.0005	0.0005	0.0003	0.0003	0.0002	0.0003	0.0002	0.0001	0.0004	0.0003	0.0002	0.0003
16	0.4599	0.4077	2673	2700	0.0004	0.0004	0.0003	0.0004	0.0003	0.0001	0.0000	0.0004	0.0004	0.0003	0.0002	0.0001
17	0.4529	0.3995	2707	2700	0.0005	0.0005	0.0003	0.0005	0.0006	0.0004	0.0002	0.0007	0.0003	0.0004	0.0004	0.0004
18	0.4607	0.4074	2659	2700	0.0004	0.0005	0.0002	0.0002	0.0002	0.0002	0.0001	0.0002	0.0002	0.0002	0.0001	0.0001
19	0.4580	0.4071	2695	2700	0.0005	0.0005	0.0004	0.0004	0.0004	0.0001	0.0001	0.0003	0.0002	0.0002	0.0001	0.0001
20	0.4517	0.3995	2725	2700	0.0005	0.0006	0.0004	0.0006	0.0006	0.0003	0.0002	0.0005	0.0003	0.0005	0.0003	0.0003
n	20	20	20	20	20	20	20	20	20	20	20	20	20	20	20	20
Mean	0.4563	0.4035	2690		0.0005	0.0005	0.0003	0.0004	0.0004	0.0003	0.0002	0.0004	0.0003	0.0004	0.0003	0.0002
Median	0.4573	0.4052	2689		0.0005	0.0005	0.0003	0.0004	0.0004	0.0003	0.0002	0.0004	0.0003	0.0003	0.0002	0.0002
σ	0.0031	0.0044	23		0.0001	0.0001	0.0001	0.0002	0.0002	0.0001	0.0001	0.0002	0.0001	0.0001	0.0002	0.0002
Min.	0.4512	0.3950	2636		0.0003	0.0004	0.0002	0.0002	0.0002	0.0001	0.0000	0.0001	0.0002	0.0002	0.0001	0.0001
Max.	0.4622	0.4083	2739		0.0007	0.0008	0.0005	0.0008	0.0008	0.0005	0.0004	0.0008	0.0005	0.0006	0.0008	0.0007

DATA SET 3: 85°C; 350 mA

Tested LED Package Series	XLamp XP-G3 Standard White LEDs
Tested Drive Current [IF]	350 mA
Testing Initiation Date	November 2, 2015
Case Temperature [Ts]	85°C
Ambient Temperature [TA]	85°C
Failures observed	None

Test Results Summary

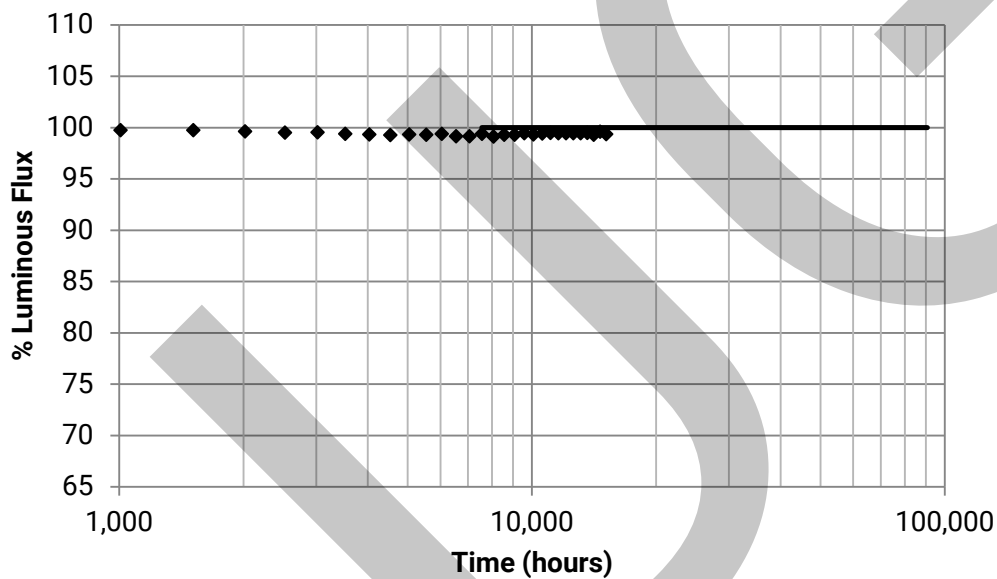
Test Duration (hrs)	Relative Luminous Flux	Relative Color Shift ($\Delta u'v'$)	Relative CRI Shift (ΔRa)	Relative Voltage Shift ($\% \Delta V_F$)	Test Duration (hrs)	Relative Luminous Flux	Relative Color Shift ($\Delta u'v'$)	Relative CRI Shift (ΔRa)	Relative Voltage Shift ($\% \Delta V_F$)
0	100.00%	0.0000	0.0	0.0%	10080	99.33%	0.0010	-0.2	N/R
168	99.97%	0.0005	-0.1	N/R	10584	99.42%	0.0010	-0.2	-1.0%
1008	99.76%	0.0007	0.0	N/R	11088	99.49%	0.0010	-0.2	-1.1%
1512	99.75%	0.0007	0.0	N/R	11592	99.46%	0.0009	-0.2	-1.1%
2016	99.62%	0.0007	-0.1	N/R	12096	99.45%	0.0010	-0.3	-1.0%
2520	99.51%	0.0007	-0.1	N/R	12600	99.46%	0.0010	-0.2	-1.1%
3024	99.55%	0.0007	-0.1	N/R	13104	99.44%	0.0009	-0.3	-1.3%
3528	99.39%	0.0007	-0.1	N/R	13608	99.48%	0.0009	-0.2	-1.1%
4032	99.33%	0.0008	-0.1	N/R	14112	99.32%	0.0010	-0.3	-1.3%
4536	99.27%	0.0008	-0.1	N/R	14616	99.59%	0.0009	-0.3	-1.2%
5040	99.34%	0.0008	-0.1	N/R	15120	99.35%	0.0008	-0.3	-1.2%
5544	99.32%	0.0008	-0.1	N/R					
6048	99.38%	0.0009	-0.1	N/R					
6552	99.15%	0.0008	-0.1	N/R					
7056	99.15%	0.0008	-0.1	N/R					
7560	99.38%	0.0009	-0.1	N/R					
8064	99.12%	0.0009	-0.2	N/R					
8568	99.31%	0.0009	-0.2	N/R					
9072	99.31%	0.0009	-0.2	N/R					
9576	99.44%	0.0010	-0.2	N/R					

Note: "N/R" indicates data points that are not reported

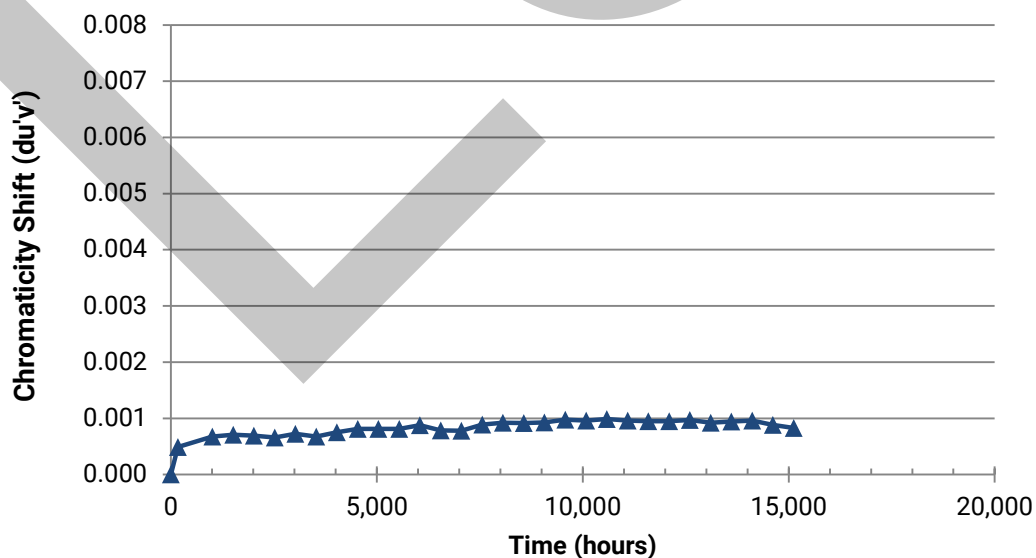
DATA SET 3: 85°C; 350 mA

TM-21 Projection

Test duration	15,120 hours
Test duration used for projection	t=7,560 to t=15,120
α	-2.352E-07
β	9.913E-01
Reported Lifetimes	L90(15k) > 90,700 hours
	L80(15k) > 90,700 hours
	L70(15k) > 90,700 hours



Color Shift Graph



DATA SET 3: 85°C; 350 mA

Lamp #	Initial (0 hrs)				Lumen Maintenance (%)											
	LF (lm)	V _F (V)	Calc. CCT	ANSI Target	168	1008	1512	2016	2520	3024	3528	4032	4536	5040	5544	6048
1	162	2.83	3106	3000	100.12	100.25	99.88	100.12	100.06	99.82	99.75	99.75	99.69	99.57	99.57	99.51
2	155	2.87	3016	3000	99.81	99.87	99.74	99.35	99.29	99.61	99.29	99.22	99.03	99.35	99.10	99.29
3	153	2.82	3084	3000	100.00	99.61	99.54	99.87	99.93	99.61	99.35	99.54	99.54	99.80	99.54	99.74
4	158	2.83	3067	3000	99.75	100.19	100.06	100.00	99.24	99.18	98.73	98.54	98.29	98.48	98.54	98.54
5	150	2.84	3083	3000	99.73	99.87	100.07	99.93	99.67	99.80	99.80	99.80	99.73	99.80	100.13	100.13
6	159	2.86	3035	3000	100.13	100.13	99.62	99.81	99.31	99.56	99.31	99.18	98.74	98.74	98.87	98.74
7	157	2.83	3053	3000	99.87	99.55	99.49	98.98	98.79	98.79	98.85	98.79	98.47	98.98	98.79	98.72
8	153	2.85	3021	3000	100.26	99.67	99.87	99.54	99.22	99.41	99.54	99.48	99.61	99.41	99.48	99.41
9	162	2.85	3036	3000	100.00	100.12	100.00	99.57	99.57	99.32	99.07	98.89	98.83	99.14	99.01	99.01
10	158	2.89	3033	3000	100.06	100.19	100.00	100.13	100.06	100.06	99.49	99.49	99.30	99.56	99.49	99.62
11	157	2.82	3009	3000	100.13	99.68	100.06	100.00	100.13	100.00	99.94	99.87	99.81	99.94	100.00	100.13
12	157	2.82	3058	3000	100.32	100.13	99.94	100.19	100.13	100.13	100.19	100.06	100.00	100.06	100.13	100.38
13	154	2.87	2965	3000	100.26	100.06	100.19	99.94	99.94	100.26	99.87	99.61	99.81	100.06	100.19	100.00
14	155	2.87	3002	3000	100.13	100.06	100.19	99.74	99.81	99.87	99.94	99.94	99.81	99.81	100.06	100.00
15	161	2.84	2993	3000	99.56	99.13	99.19	99.07	99.13	99.25	99.07	99.25	99.07	99.19	99.31	99.31
16	154	2.87	3009	3000	100.26	99.68	99.48	99.61	99.42	99.48	99.16	99.09	99.16	99.42	99.48	99.48
17	149	2.82	3019	3000	99.80	99.66	99.66	99.60	99.26	99.13	98.79	99.06	99.19	98.93	99.06	99.26
18	155	2.81	2950	3000	100.13	100.00	99.94	99.74	99.35	99.74	99.87	99.61	99.81	99.61	99.55	99.87
19	153	2.82	2998	3000	99.74	99.74	99.61	99.34	99.61	99.80	99.74	99.80	99.54	99.48	99.41	99.93
20	157	2.87	2979	3000	100.06	99.55	99.36	99.62	99.43	99.30	99.87	99.62	99.68	99.55	99.43	98.85
21	155	2.87	2996	3000	99.87	99.35	99.29	98.97	99.23	99.68	99.10	98.84	98.97	99.03	98.97	98.97
22	159	2.84	3035	3000	99.94	99.37	100.19	99.12	99.44	99.31	98.93	98.49	98.43	98.49	98.62	98.74
23	158	2.81	3015	3000	99.68	99.24	99.49	98.99	98.86	98.86	98.67	98.67	98.55	98.29	98.23	98.48
24	160	2.84	3056	3000	99.94	99.69	99.75	99.87	99.81	99.69	99.62	99.62	99.62	99.75	99.31	99.25
25	151	2.87	3007	3000	99.60	99.14	99.21	99.34	99.01	99.01	98.88	99.01	99.01	98.94	98.81	99.07
n	25	25	25	25	25	25	25	25	25	25	25	25	25	25	25	25
Mean	156	2.84			99.97	99.76	99.75	99.62	99.51	99.55	99.39	99.33	99.27	99.34	99.32	99.38
Median	157	2.84			100.00	99.69	99.75	99.62	99.43	99.61	99.35	99.48	99.30	99.42	99.41	99.31
σ	3	0.02			0.22	0.34	0.31	0.38	0.39	0.39	0.45	0.46	0.51	0.50	0.53	0.55
Min.	149	2.81			99.56	99.13	99.19	98.97	98.79	98.79	98.67	98.49	98.29	98.29	98.23	98.48
Max.	162	2.89			100.32	100.25	100.19	100.19	100.13	100.26	100.19	100.06	100.00	100.06	100.19	100.38

Lamp #	Initial (0 hrs)				Chromaticity Shift (Δu'v')											
	CCx	CCy	Calc. CCT	ANSI Target	168	1008	1512	2016	2520	3024	3528	4032	4536	5040	5544	6048
1	0.4346	0.4116	3106	3000	0.0002	0.0005	0.0005	0.0005	0.0003	0.0004	0.0005	0.0007	0.0006	0.0007	0.0005	0.0007
2	0.4395	0.4108	3016	3000	0.0005	0.0006	0.0006	0.0008	0.0008	0.0008	0.0008	0.0009	0.0009	0.0008	0.0008	0.0009
3	0.4361	0.4121	3084	3000	0.0001	0.0003	0.0004	0.0004	0.0003	0.0001	0.0003	0.0004	0.0003	0.0004	0.0004	0.0004
4	0.4378	0.4136	3067	3000	0.0006	0.0006	0.0006	0.0006	0.0006	0.0007	0.0007	0.0008	0.0008	0.0008	0.0009	0.0008
5	0.4357	0.4111	3083	3000	0.0004	0.0006	0.0006	0.0006	0.0004	0.0007	0.0007	0.0010	0.0010	0.0010	0.0010	0.0010
6	0.4390	0.4122	3035	3000	0.0003	0.0004	0.0005	0.0005	0.0004	0.0006	0.0007	0.0007	0.0007	0.0007	0.0008	0.0007
7	0.4378	0.4118	3053	3000	0.0002	0.0005	0.0006	0.0007	0.0005	0.0007	0.0008	0.0008	0.0009	0.0008	0.0008	0.0007
8	0.4376	0.4074	3021	3000	0.0003	0.0006	0.0007	0.0006	0.0008	0.0007	0.0009	0.0010	0.0010	0.0011	0.0010	0.0009
9	0.4381	0.4103	3036	3000	0.0003	0.0007	0.0005	0.0006	0.0007	0.0007	0.0006	0.0007	0.0007	0.0007	0.0008	0.0008
10	0.4377	0.4091	3033	3000	0.0004	0.0007	0.0006	0.0006	0.0008	0.0007	0.0007	0.0008	0.0007	0.0008	0.0008	0.0009
11	0.4437	0.4187	3009	3000	0.0009	0.0011	0.0012	0.0011	0.0010	0.0011	0.0010	0.0010	0.0012	0.0012	0.0012	0.0012
12	0.4384	0.4138	3058	3000	0.0005	0.0008	0.0008	0.0007	0.0007	0.0009	0.0005	0.0006	0.0008	0.0008	0.0008	0.0011
13	0.4460	0.4177	2965	3000	0.0009	0.0011	0.0012	0.0011	0.0011	0.0011	0.0011	0.0011	0.0013	0.0012	0.0012	0.0013
14	0.4420	0.4142	3002	3000	0.0008	0.0012	0.0011	0.0012	0.0011	0.0012	0.0009	0.0011	0.0012	0.0011	0.0012	0.0014
15	0.4455	0.4204	2993	3000	0.0005	0.0005	0.0007	0.0007	0.0007	0.0007	0.0006	0.0006	0.0008	0.0007	0.0007	0.0007
16	0.4417	0.4145	3009	3000	0.0007	0.0009	0.0012	0.0010	0.0011	0.0010	0.0010	0.0010	0.0011	0.0011	0.0011	0.0012
17	0.4422	0.4169	3019	3000	0.0006	0.0007	0.0006	0.0005	0.0006	0.0007	0.0005	0.0006	0.0007	0.0007	0.0008	0.0008
18	0.4481	0.4201	2950	3000	0.0005	0.0004	0.0006	0.0006	0.0006	0.0005	0.0005	0.0006	0.0006	0.0007	0.0007	0.0006
19	0.4445	0.4189	2998	3000	0.0006	0.0008	0.0008	0.0009	0.0010	0.0009	0.0008	0.0010	0.0010	0.0010	0.0010	0.0011
20	0.4453	0.4181	2979	3000	0.0006	0.0008	0.0008	0.0009	0.0006	0.0008	0.0006	0.0008	0.0008	0.0008	0.0009	0.0009
21	0.4429	0.4153	2996	3000	0.0006	0.0008	0.0007	0.0006	0.0004	0.0007	0.0004	0.0006	0.0007	0.0007	0.0007	0.0008
22	0.4417	0.4178	3035	3000	0.0006	0.0007	0.0005	0.0006	0.0007	0.0007	0.0006	0.0006	0.0007	0.0008	0.0008	0.0008
23	0.4437	0.4194	3015	3000	0.0005	0.0005	0.0006	0.0005	0.0005	0.0004	0.0004	0.0005	0.0004	0.0005	0.0005	0.0006
24	0.4411	0.4193	3056	3000	0.0004	0.0005	0.0007	0.0007	0.0007	0.0007	0.0005	0.0006	0.0008	0.0007	0.0007	0.0008
25	0.4410	0.4128	3007	3000	0.0006	0.0007	0.0006	0.0006	0.0007	0.0008	0.0007	0.0005	0.0007	0.0008	0.0005	0.0008
n	25	25	25	25	25	25	25	25	25	25	25	25	25	25	25	25
Mean					0.0005	0.0007	0.0007	0.0007	0.0007	0.0007	0.0007	0.0008	0.0008	0.0008	0.0008	0.0009
Median					0.0005	0.0007	0.0006	0.0006	0.0007	0.0007	0.0007	0.0007	0.0008	0.0008	0.0008	0.0008
σ					0.0002	0.0002	0.0002	0.0002	0.0002	0.0002	0.0002	0.0002	0.0002	0.0002	0.0002	0.0002
Min.					0.0001	0.0003	0.0004	0.0004	0.0003	0.0001	0.0003	0.0004	0.0003	0.0004	0.0004	0.0004
Max.					0.0009	0.0012	0.0012	0.0012	0.0011	0.0012	0.0011	0.0011	0.0013	0.0012	0.0012	0.0014

DATA SET 3: 85°C; 350 mA

Lamp #	Initial (0 hrs)				Lumen Maintenance (%)											
	LF (lm)	V _F (V)	Calc. CCT	ANSI Target	6552	7056	7560	8064	8568	9072	9576	10080	10584	11088	11592	12096
1	162	2.83	3106	3000	99.57	99.75	99.82	99.45	99.63	99.57	99.88	99.75	100.12	100.12	99.69	99.69
2	155	2.87	3016	3000	99.48	99.68	99.68	99.16	99.10	98.77	99.42	99.29	99.55	99.87	100.06	100.00
3	153	2.82	3084	3000	98.89	99.61	99.54	98.89	99.35	99.28	99.61	99.67	100.26	99.67	100.00	99.74
4	158	2.83	3067	3000	98.22	98.48	98.79	98.35	98.22	98.73	98.29	98.22	98.22	98.73	98.86	98.79
5	150	2.84	3083	3000	99.73	99.67	99.80	100.00	99.60	99.80	100.20	100.40	100.07	100.13	99.73	99.60
6	159	2.86	3035	3000	98.74	98.81	98.93	98.74	99.31	98.49	98.24	98.18	99.12	98.99	98.99	99.12
7	157	2.83	3053	3000	98.47	99.04	99.36	98.79	99.11	98.27	99.11	98.85	98.79	98.91	99.42	99.49
8	153	2.85	3021	3000	99.67	99.67	99.61	98.96	100.13	100.33	99.87	99.74	99.48	100.00	99.87	99.93
9	162	2.85	3036	3000	99.26	99.20	99.69	99.20	99.51	99.38	99.88	99.81	99.32	99.63	100.06	99.44
10	158	2.89	3033	3000	100.00	100.06	99.75	99.24	99.81	100.06	100.44	100.19	100.32	100.00	100.32	100.19
11	157	2.82	3009	3000	99.49	99.11	99.49	99.68	99.81	99.87	99.74	99.68	100.13	100.13	100.32	99.87
12	157	2.82	3058	3000	100.00	99.87	100.58	100.26	100.06	100.19	100.32	100.96	101.28	100.64	100.13	100.26
13	154	2.87	2965	3000	99.87	99.42	99.29	99.61	99.68	99.55	100.06	100.19	100.00	99.87	99.68	100.13
14	155	2.87	3002	3000	99.35	99.22	100.00	99.68	99.74	99.42	99.87	99.94	99.81	100.13	100.32	100.58
15	161	2.84	2993	3000	98.88	99.19	99.44	98.82	99.38	99.31	99.00	99.13	99.13	99.63	99.63	99.19
16	154	2.87	3009	3000	99.55	99.61	99.68	99.35	99.42	99.81	99.16	98.90	98.96	99.03	98.90	99.03
17	149	2.82	3019	3000	98.79	98.66	98.59	98.93	98.99	98.59	98.59	98.19	98.46	98.05	97.79	97.99
18	155	2.81	2950	3000	99.61	99.16	99.29	99.55	99.55	99.35	99.81	99.81	99.55	100.13	100.00	99.87
19	153	2.82	2998	3000	99.54	99.15	99.21	99.67	99.74	99.54	99.61	99.74	99.74	100.20	99.48	100.07
20	157	2.87	2979	3000	98.85	99.11	99.43	98.92	98.85	99.68	100.13	99.24	99.17	99.55	98.92	99.30
21	155	2.87	2996	3000	98.45	98.32	98.97	98.58	98.84	99.35	98.77	98.71	98.84	99.03	99.23	99.55
22	159	2.84	3035	3000	98.24	98.56	98.56	98.68	98.68	98.12	98.31	98.12	98.31	97.99	97.87	97.55
23	158	2.81	3015	3000	98.48	98.04	98.92	98.36	98.42	98.67	98.80	98.80	98.80	98.67	99.11	99.11
24	160	2.84	3056	3000	99.37	98.87	99.12	98.50	99.00	99.37	99.44	98.69	98.62	98.94	99.12	98.56
25	151	2.87	3007	3000	98.22	98.61	98.88	98.55	98.88	99.34	99.41	99.01	99.47	99.14	99.07	99.14
n	25	25	25	25	25	25	25	25	25	25	25	25	25	25	25	25
Mean	156	2.84			99.15	99.15	99.38	99.12	99.31	99.31	99.44	99.33	99.42	99.49	99.46	99.45
Median	157	2.84			99.35	99.16	99.43	98.96	99.38	99.37	99.61	99.29	99.47	99.63	99.63	99.55
σ	3	0.02			0.58	0.52	0.47	0.52	0.49	0.59	0.65	0.76	0.73	0.70	0.69	0.71
Min.	149	2.81			98.22	98.04	98.56	98.35	98.22	98.12	98.24	98.12	98.22	97.99	97.79	97.55
Max.	162	2.89			100.00	100.06	100.58	100.26	100.13	100.33	100.44	100.96	101.28	100.64	100.32	100.58

Lamp #	Initial (0 hrs)				Chromaticity Shift (Δu'v')											
	CCx	CCy	Calc. CCT	ANSI Target	6552	7056	7560	8064	8568	9072	9576	10080	10584	11088	11592	12096
1	0.4346	0.4116	3106	3000	0.0006	0.0005	0.0007	0.0006	0.0007	0.0007	0.0008	0.0008	0.0008	0.0007	0.0007	0.0007
2	0.4395	0.4108	3016	3000	0.0008	0.0008	0.0008	0.0008	0.0008	0.0009	0.0009	0.0009	0.0010	0.0009	0.0009	0.0009
3	0.4361	0.4121	3084	3000	0.0003	0.0002	0.0004	0.0003	0.0006	0.0005	0.0006	0.0005	0.0006	0.0005	0.0005	0.0006
4	0.4378	0.4136	3067	3000	0.0009	0.0008	0.0009	0.0009	0.0009	0.0010	0.0011	0.0010	0.0010	0.0010	0.0010	0.0009
5	0.4357	0.4111	3083	3000	0.0009	0.0009	0.0009	0.0009	0.0010	0.0009	0.0010	0.0011	0.0011	0.0010	0.0010	0.0010
6	0.4390	0.4122	3035	3000	0.0006	0.0006	0.0006	0.0007	0.0007	0.0007	0.0008	0.0008	0.0008	0.0007	0.0007	0.0007
7	0.4378	0.4118	3053	3000	0.0007	0.0008	0.0008	0.0008	0.0009	0.0008	0.0010	0.0009	0.0008	0.0008	0.0008	0.0008
8	0.4376	0.4074	3021	3000	0.0009	0.0008	0.0009	0.0009	0.0010	0.0010	0.0011	0.0011	0.0010	0.0010	0.0009	0.0010
9	0.4381	0.4103	3036	3000	0.0008	0.0006	0.0008	0.0009	0.0009	0.0009	0.0010	0.0008	0.0009	0.0008	0.0007	0.0009
10	0.4377	0.4091	3033	3000	0.0009	0.0008	0.0010	0.0009	0.0010	0.0010	0.0010	0.0010	0.0010	0.0009	0.0009	0.0009
11	0.4437	0.4187	3009	3000	0.0009	0.0009	0.0010	0.0011	0.0010	0.0010	0.0011	0.0011	0.0011	0.0012	0.0011	0.0011
12	0.4384	0.4138	3058	3000	0.0010	0.0010	0.0012	0.0012	0.0012	0.0012	0.0012	0.0013	0.0012	0.0012	0.0011	0.0011
13	0.4460	0.4177	2965	3000	0.0011	0.0012	0.0012	0.0013	0.0013	0.0013	0.0014	0.0014	0.0013	0.0011	0.0013	0.0013
14	0.4420	0.4142	3002	3000	0.0013	0.0014	0.0015	0.0015	0.0016	0.0016	0.0016	0.0016	0.0016	0.0015	0.0015	0.0014
15	0.4455	0.4204	2993	3000	0.0008	0.0007	0.0008	0.0009	0.0007	0.0008	0.0008	0.0008	0.0009	0.0009	0.0008	0.0009
16	0.4417	0.4145	3009	3000	0.0011	0.0011	0.0012	0.0012	0.0009	0.0008	0.0008	0.0007	0.0009	0.0009	0.0009	0.0009
17	0.4422	0.4169	3019	3000	0.0006	0.0007	0.0005	0.0008	0.0007	0.0009	0.0009	0.0013	0.0014	0.0016	0.0018	0.0017
18	0.4481	0.4201	2950	3000	0.0006	0.0007	0.0008	0.0008	0.0008	0.0008	0.0008	0.0008	0.0008	0.0009	0.0008	0.0008
19	0.4445	0.4189	2998	3000	0.0010	0.0010	0.0011	0.0011	0.0012	0.0012	0.0012	0.0012	0.0012	0.0012	0.0012	0.0013
20	0.4453	0.4181	2979	3000	0.0008	0.0008	0.0010	0.0010	0.0010	0.0011	0.0011	0.0010	0.0011	0.0010	0.0010	0.0010
21	0.4429	0.4153	2996	3000	0.0006	0.0008	0.0009	0.0010	0.0008	0.0009	0.0009	0.0007	0.0008	0.0009	0.0008	0.0008
22	0.4417	0.4178	3035	3000	0.0006	0.0007	0.0008	0.0008	0.0008	0.0008	0.0009	0.0008	0.0009	0.0009	0.0009	0.0007
23	0.4437	0.4194	3015	3000	0.0006	0.0005	0.0007	0.0007	0.0008	0.0008	0.0008	0.0008	0.0008	0.0009	0.0008	0.0007
24	0.4411	0.4193	3056	3000	0.0007	0.0006	0.0008	0.0009	0.0009	0.0009	0.0009	0.0009	0.0009	0.0008	0.0008	0.0009
25	0.4410	0.4128	3007	3000	0.0006	0.0007	0.0008	0.0009	0.0009	0.0008	0.0009	0.0009	0.0008	0.0009	0.0007	0.0008
n	25	25	25	25	25	25	25	25	25	25	25	25	25	25	25	25
Mean					0.0008	0.0008	0.0009	0.0009	0.0009	0.0009	0.0010	0.0010	0.0010	0.0010	0.0009	0.0010
Median					0.0008	0.0008	0.0008	0.0009	0.0009	0.0009	0.0009	0.0009	0.0009	0.0009	0.0009	0.0009
σ					0.0002	0.0002	0.0002	0.0002	0.0002	0.0002	0.0002	0.0002	0.0002	0.0002	0.0003	0.0002
Min.					0.0003	0.0002	0.0004	0.0003	0.0006	0.0005	0.0006	0.0005	0.0006	0.0005	0.0005	0.0006
Max.					0.0013	0.0014	0.0015	0.0015	0.0016	0.0016	0.0016	0.0016	0.0016	0.0016	0.0018	0.0017

DATA SET 3: 85°C; 350 mA

Lamp #	Initial (0 hrs)				Lumen Maintenance (%)					
	LF (lm)	V _F (V)	Calc. CCT	ANSI Target	12600	13104	13608	14112	14616	15120
1	162	2.83	3106	3000	99.75	100.00	99.88	99.63	100.18	99.75
2	155	2.87	3016	3000	100.06	100.06	99.87	99.94	101.10	100.97
3	153	2.82	3084	3000	99.87	99.67	99.48	99.74	100.13	99.67
4	158	2.83	3067	3000	98.67	98.92	98.98	98.73	98.54	98.41
5	150	2.84	3083	3000	100.20	99.93	100.07	99.67	100.87	100.47
6	159	2.86	3035	3000	99.06	98.81	98.81	98.87	98.68	98.49
7	157	2.83	3053	3000	99.17	98.98	98.91	99.11	99.17	98.98
8	153	2.85	3021	3000	99.93	100.07	100.00	100.07	100.39	99.74
9	162	2.85	3036	3000	99.81	100.00	100.25	100.12	100.93	100.93
10	158	2.89	3033	3000	99.87	100.06	100.19	100.19	99.94	99.94
11	157	2.82	3009	3000	100.13	100.00	99.68	99.68	99.30	99.11
12	157	2.82	3058	3000	100.58	100.64	100.77	100.58	101.02	99.87
13	154	2.87	2965	3000	99.55	100.06	100.26	99.55	99.42	99.68
14	155	2.87	3002	3000	100.32	100.00	99.87	100.32	100.52	99.55
15	161	2.84	2993	3000	99.56	99.25	99.25	99.56	99.63	99.13
16	154	2.87	3009	3000	98.38	98.90	99.03	98.44	98.38	98.70
17	149	2.82	3019	3000	98.12	97.52	97.58	97.11	97.18	97.85
18	155	2.81	2950	3000	100.00	100.26	100.06	100.26	100.19	99.55
19	153	2.82	2998	3000	99.34	99.61	100.20	99.21	100.20	99.67
20	157	2.87	2979	3000	99.36	98.85	99.43	99.49	99.81	100.13
21	155	2.87	2996	3000	99.03	99.48	100.00	99.23	99.23	99.48
22	159	2.84	3035	3000	98.12	97.99	97.49	97.49	97.30	96.92
23	158	2.81	3015	3000	98.86	98.99	98.86	98.17	98.73	98.29
24	160	2.84	3056	3000	99.00	98.87	99.06	99.06	99.31	99.62
25	151	2.87	3007	3000	99.67	99.01	99.14	98.88	99.67	98.88
n	25	25	25	25	25	25	25	25	25	25
Mean	156	2.84			99.46	99.44	99.48	99.32	99.59	99.35
Median	157	2.84			99.56	99.61	99.68	99.55	99.67	99.55
σ	3	0.02			0.67	0.74	0.79	0.86	1.05	0.92
Min.	149	2.81			98.12	97.52	97.49	97.11	97.18	96.92
Max.	162	2.89			100.58	100.64	100.77	100.58	101.10	100.97

Lamp #	Initial (0 hrs)				Chromaticity Shift (Δu'v')					
	CCx	CCy	Calc. CCT	ANSI Target	12600	13104	13608	14112	14616	15120
1	0.4346	0.4116	3106	3000	0.0007	0.0005	0.0006	0.0006	0.0006	0.0005
2	0.4395	0.4108	3016	3000	0.0009	0.0009	0.0010	0.0009	0.0009	0.0008
3	0.4361	0.4121	3084	3000	0.0006	0.0005	0.0006	0.0006	0.0006	0.0005
4	0.4378	0.4136	3067	3000	0.0011	0.0010	0.0011	0.0010	0.0011	0.0009
5	0.4357	0.4111	3083	3000	0.0010	0.0007	0.0009	0.0010	0.0010	0.0007
6	0.4390	0.4122	3035	3000	0.0008	0.0007	0.0009	0.0008	0.0008	0.0006
7	0.4378	0.4118	3053	3000	0.0008	0.0007	0.0008	0.0008	0.0009	0.0007
8	0.4376	0.4074	3021	3000	0.0010	0.0008	0.0009	0.0010	0.0009	0.0008
9	0.4381	0.4103	3036	3000	0.0008	0.0008	0.0009	0.0009	0.0008	0.0007
10	0.4377	0.4091	3033	3000	0.0008	0.0010	0.0007	0.0008	0.0007	0.0006
11	0.4437	0.4187	3009	3000	0.0010	0.0010	0.0010	0.0011	0.0011	0.0009
12	0.4384	0.4138	3058	3000	0.0011	0.0012	0.0011	0.0012	0.0010	0.0009
13	0.4460	0.4177	2965	3000	0.0013	0.0014	0.0014	0.0013	0.0011	0.0012
14	0.4420	0.4142	3002	3000	0.0016	0.0015	0.0014	0.0013	0.0011	0.0014
15	0.4455	0.4204	2993	3000	0.0008	0.0009	0.0009	0.0008	0.0007	0.0008
16	0.4417	0.4145	3009	3000	0.0009	0.0009	0.0010	0.0010	0.0007	0.0008
17	0.4422	0.4169	3019	3000	0.0019	0.0018	0.0019	0.0019	0.0017	0.0020
18	0.4481	0.4201	2950	3000	0.0009	0.0008	0.0009	0.0008	0.0008	0.0007
19	0.4445	0.4189	2998	3000	0.0012	0.0011	0.0011	0.0013	0.0010	0.0011
20	0.4453	0.4181	2979	3000	0.0010	0.0009	0.0009	0.0010	0.0009	0.0010
21	0.4429	0.4153	2996	3000	0.0009	0.0008	0.0008	0.0009	0.0007	0.0007
22	0.4417	0.4178	3035	3000	0.0009	0.0007	0.0008	0.0008	0.0008	0.0008
23	0.4437	0.4194	3015	3000	0.0008	0.0007	0.0007	0.0007	0.0007	0.0005
24	0.4411	0.4193	3056	3000	0.0009	0.0008	0.0008	0.0008	0.0007	0.0008
25	0.4410	0.4128	3007	3000	0.0008	0.0008	0.0007	0.0008	0.0007	0.0007
n	25	25	25	25	25	25	25	25	25	25
Mean					0.0010	0.0009	0.0009	0.0010	0.0009	0.0008
Median					0.0009	0.0008	0.0009	0.0009	0.0008	0.0008
σ					0.0003	0.0003	0.0003	0.0003	0.0002	0.0003
Min.					0.0006	0.0005	0.0006	0.0006	0.0006	0.0005
Max.					0.0019	0.0018	0.0019	0.0019	0.0017	0.0020

DATA SET 4: 105°C; 350 mA

Tested LED Package Series	XLamp XP-G3 Standard White LEDs
Tested Drive Current [IF]	350 mA
Testing Initiation Date	November 2, 2015
Case Temperature [Ts]	105°C
Ambient Temperature [TA]	105°C
Failures observed	None

Test Results Summary

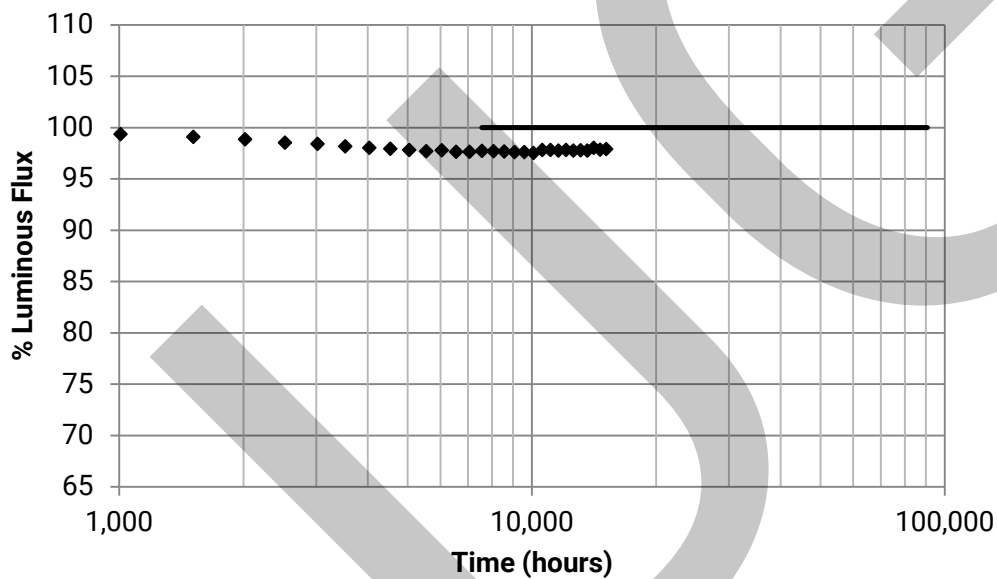
Test Duration (hrs)	Relative Luminous Flux	Relative Color Shift ($\Delta u'v'$)	Relative CRI Shift (ΔRa)	Relative Voltage Shift ($\% \Delta V_f$)	Test Duration (hrs)	Relative Luminous Flux	Relative Color Shift ($\Delta u'v'$)	Relative CRI Shift (ΔRa)	Relative Voltage Shift ($\% \Delta V_f$)
0	100.00%	0.0000	0.0	0.0%	10080	97.53%	0.0006	-0.1	N/R
168	99.71%	0.0004	0.0	N/R	10584	97.81%	0.0006	-0.2	-0.5%
1008	99.37%	0.0006	0.0	N/R	11088	97.83%	0.0008	-0.1	-0.8%
1512	99.11%	0.0006	0.0	N/R	11592	97.76%	0.0009	-0.3	-0.8%
2016	98.86%	0.0006	0.0	N/R	12096	97.82%	0.0008	-0.1	-0.5%
2520	98.54%	0.0005	0.0	N/R	12600	97.75%	0.0009	-0.1	-0.6%
3024	98.42%	0.0006	0.0	N/R	13104	97.80%	0.0009	-0.1	-0.5%
3528	98.19%	0.0005	0.0	N/R	13608	97.75%	0.0009	-0.2	-0.4%
4032	98.03%	0.0006	0.0	N/R	14112	98.03%	0.0008	-0.1	-0.3%
4536	97.93%	0.0005	-0.1	N/R	14616	97.85%	0.0008	-0.1	-0.4%
5040	97.82%	0.0005	-0.1	N/R	15120	97.90%	0.0008	-0.1	-0.6%
5544	97.71%	0.0005	-0.1	N/R					
6048	97.78%	0.0006	-0.1	N/R					
6552	97.65%	0.0006	0.0	N/R					
7056	97.64%	0.0006	-0.1	N/R					
7560	97.72%	0.0005	-0.1	N/R					
8064	97.69%	0.0005	-0.2	N/R					
8568	97.68%	0.0005	-0.2	N/R					
9072	97.62%	0.0006	-0.2	N/R					
9576	97.60%	0.0006	-0.1	N/R					

Note: "N/R" indicates data points that are not reported

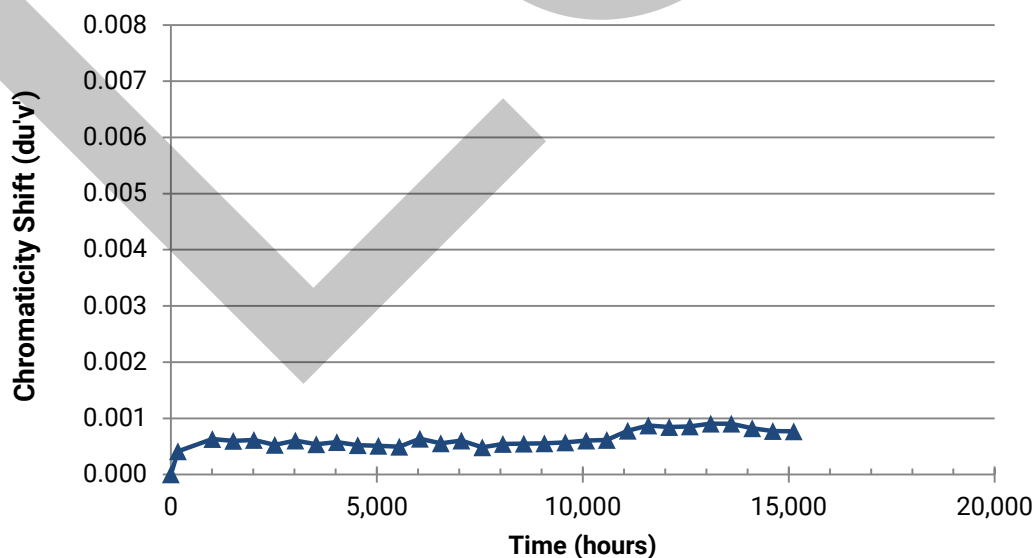
DATA SET 4: 105°C; 350 mA

TM-21 Projection

Test duration	15,120 hours
Test duration used for projection	t=7,560 to t=15,120
α	-3.659E-07
β	9.735E-01
Reported Lifetimes	L90(15k) > 90,700 hours
	L80(15k) > 90,700 hours
	L70(15k) > 90,700 hours



Color Shift Graph



DATA SET 4: 105°C; 350 mA

Lamp #	Initial (0 hrs)				Lumen Maintenance (%)											
	LF (lm)	V _F (V)	Calc. CCT	ANSI Target	168	1008	1512	2016	2520	3024	3528	4032	4536	5040	5544	6048
1	157	2.81	3016	3000	100.06	99.68	99.17	98.92	98.72	98.40	98.34	98.34	98.40	97.96	97.45	97.32
2	156	2.87	2988	3000	99.49	99.81	99.55	99.10	98.84	98.78	98.46	98.01	98.07	98.14	97.88	98.26
3	156	2.86	2995	3000	99.55	99.29	98.84	98.59	98.39	98.20	98.26	98.14	97.81	97.81	97.56	97.49
4	159	2.83	2994	3000	99.81	99.68	99.31	99.12	98.42	98.11	97.85	98.11	98.23	98.17	97.79	98.04
5	153	2.81	3039	3000	99.54	99.48	99.67	99.35	99.02	98.63	98.63	98.37	98.57	97.85	98.11	97.91
6	154	2.82	3038	3000	99.55	98.96	98.57	98.70	98.64	99.09	98.77	98.51	97.99	98.51	98.38	98.51
7	154	2.83	3011	3000	99.68	99.74	99.16	99.03	99.03	98.77	98.57	98.51	98.18	98.25	97.99	98.05
8	156	2.87	3005	3000	99.81	99.36	98.72	98.53	98.27	98.14	98.02	97.82	97.95	97.38	97.70	97.70
9	156	2.87	3018	3000	99.81	99.23	99.04	98.78	98.46	98.85	98.65	98.08	97.76	97.63	97.37	97.69
10	160	2.85	2983	3000	99.81	99.37	99.37	99.19	98.75	98.75	98.44	98.19	98.06	98.19	97.87	97.81
11	158	2.87	3005	3000	99.87	99.62	99.75	99.43	98.74	98.86	98.42	98.04	98.42	98.17	98.23	98.10
12	158	2.87	3042	3000	99.68	99.62	99.18	98.92	98.42	98.99	98.61	98.29	97.85	97.91	98.04	97.97
13	157	2.82	3025	3000	99.43	98.86	98.54	98.22	98.09	97.78	97.71	97.27	97.46	97.01	97.40	97.65
14	157	2.82	3057	3000	99.87	99.43	99.36	99.30	98.86	99.17	98.73	98.35	98.09	97.77	97.27	97.58
15	162	2.84	3068	3000	99.75	99.07	99.32	99.20	99.26	98.76	98.21	98.08	97.83	97.22	97.15	96.97
16	156	2.88	3028	3000	99.87	99.61	99.29	99.04	98.59	98.14	98.14	98.01	97.95	98.14	98.01	98.27
17	153	2.82	3061	3000	99.61	99.41	99.48	98.89	98.30	98.49	98.10	97.97	97.71	98.17	97.77	98.30
18	156	2.84	3027	3000	99.87	99.49	99.10	98.59	98.72	98.08	97.57	97.82	97.57	97.50	97.25	97.31
19	163	2.85	3040	3000	99.82	99.82	99.08	99.02	98.52	98.59	98.16	97.97	98.03	97.97	97.91	97.85
20	161	2.89	3085	3000	99.88	99.25	98.94	98.76	98.88	98.01	97.82	97.64	97.70	97.64	97.45	97.51
21	153	2.84	3103	3000	99.74	99.28	98.95	98.63	98.10	98.04	97.91	97.91	97.78	97.65	97.65	97.84
22	160	2.85	3029	3000	99.50	98.87	98.63	98.00	97.81	97.81	97.81	97.63	97.63	97.63	97.44	97.38
23	157	2.83	3084	3000	99.68	98.98	98.72	98.66	97.90	97.77	97.64	97.70	97.64	97.51	97.58	97.58
24	158	2.82	3024	3000	99.68	99.49	99.30	99.37	98.73	98.35	98.29	98.29	98.23	97.91	98.16	97.97
25	159	2.83	3127	3000	99.44	98.93	98.68	98.24	98.12	97.93	97.74	97.62	97.30	97.37	97.37	97.37
n	25	25	25	25	25	25	25	25	25	25	25	25	25	25	25	25
Mean	157	2.84			99.71	99.37	99.11	98.86	98.54	98.42	98.19	98.03	97.93	97.82	97.71	97.78
Median	157	2.84			99.74	99.41	99.16	98.92	98.59	98.40	98.21	98.04	97.95	97.85	97.70	97.81
σ	3	0.02			0.16	0.30	0.34	0.38	0.37	0.43	0.37	0.31	0.31	0.36	0.34	0.37
Min.	153	2.81			99.43	98.86	98.54	98.00	97.81	97.77	97.57	97.27	97.30	97.01	97.15	96.97
Max.	163	2.89			100.06	99.82	99.75	99.43	99.26	99.17	98.77	98.51	98.57	98.51	98.38	98.51

Lamp #	Initial (0 hrs)				Chromaticity Shift (Δu'v')											
	CCx	CCy	Calc. CCT	ANSI Target	168	1008	1512	2016	2520	3024	3528	4032	4536	5040	5544	6048
1	0.4429	0.4179	3016	3000	0.0006	0.0007	0.0007	0.0005	0.0006	0.0007	0.0008	0.0007	0.0004	0.0004	0.0005	0.0003
2	0.4440	0.4166	2988	3000	0.0006	0.0009	0.0009	0.0010	0.0009	0.0011	0.0008	0.0010	0.0009	0.0010	0.0012	0.0010
3	0.4439	0.4173	2995	3000	0.0003	0.0008	0.0007	0.0008	0.0007	0.0008	0.0009	0.0008	0.0007	0.0008	0.0007	0.0009
4	0.4441	0.4176	2994	3000	0.0007	0.0008	0.0006	0.0007	0.0007	0.0006	0.0006	0.0007	0.0006	0.0006	0.0006	0.0007
5	0.4407	0.4162	3039	3000	0.0004	0.0007	0.0008	0.0007	0.0006	0.0008	0.0006	0.0006	0.0006	0.0008	0.0005	0.0007
6	0.4425	0.4199	3038	3000	0.0005	0.0006	0.0003	0.0004	0.0005	0.0005	0.0006	0.0006	0.0005	0.0004	0.0003	0.0006
7	0.4427	0.4168	3011	3000	0.0006	0.0007	0.0007	0.0007	0.0007	0.0006	0.0005	0.0006	0.0005	0.0006	0.0005	0.0012
8	0.4415	0.4136	3005	3000	0.0006	0.0009	0.0007	0.0008	0.0010	0.0010	0.0007	0.0010	0.0009	0.0010	0.0010	0.0010
9	0.4418	0.4159	3018	3000	0.0005	0.0008	0.0010	0.0010	0.0009	0.0009	0.0010	0.0012	0.0009	0.0009	0.0009	0.0011
10	0.4445	0.4170	2983	3000	0.0007	0.0008	0.0009	0.0009	0.0008	0.0008	0.0009	0.0009	0.0008	0.0008	0.0008	0.0008
11	0.4425	0.4157	3005	3000	0.0007	0.0008	0.0010	0.0009	0.0010	0.0010	0.0007	0.0008	0.0006	0.0009	0.0007	0.0009
12	0.4407	0.4166	3042	3000	0.0007	0.0009	0.0009	0.0009	0.0008	0.0010	0.0010	0.0010	0.0009	0.0010	0.0010	0.0009
13	0.4416	0.4163	3025	3000	0.0004	0.0007	0.0006	0.0006	0.0004	0.0005	0.0004	0.0005	0.0006	0.0006	0.0006	0.0006
14	0.4398	0.4166	3057	3000	0.0006	0.0006	0.0007	0.0007	0.0007	0.0007	0.0007	0.0007	0.0005	0.0006	0.0004	0.0006
15	0.4372	0.4125	3068	3000	0.0003	0.0006	0.0004	0.0007	0.0004	0.0008	0.0005	0.0005	0.0007	0.0004	0.0004	0.0006
16	0.4387	0.4106	3028	3000	0.0001	0.0005	0.0004	0.0005	0.0004	0.0003	0.0004	0.0004	0.0004	0.0002	0.0003	0.0005
17	0.4354	0.4077	3061	3000	0.0002	0.0005	0.0004	0.0005	0.0002	0.0005	0.0003	0.0003	0.0003	0.0001	0.0002	0.0004
18	0.4386	0.4103	3027	3000	0.0003	0.0005	0.0004	0.0005	0.0003	0.0003	0.0002	0.0002	0.0002	0.0001	0.0003	0.0004
19	0.4389	0.4125	3040	3000	0.0003	0.0008	0.0005	0.0005	0.0004	0.0005	0.0005	0.0005	0.0004	0.0005	0.0001	0.0005
20	0.4346	0.4090	3085	3000	0.0002	0.0005	0.0004	0.0004	0.0002	0.0003	0.0002	0.0002	0.0002	0.0001	0.0001	0.0003
21	0.4342	0.4104	3103	3000	0.0001	0.0004	0.0003	0.0004	0.0002	0.0003	0.0002	0.0002	0.0003	0.0002	0.0003	0.0004
22	0.4387	0.4108	3029	3000	0.0002	0.0002	0.0003	0.0001	0.0003	0.0001	0.0002	0.0002	0.0002	0.0002	0.0003	0.0003
23	0.4340	0.4076	3084	3000	0.0001	0.0006	0.0006	0.0006	0.0003	0.0003	0.0004	0.0003	0.0002	0.0002	0.0003	0.0005
24	0.4421	0.4173	3024	3000	0.0004	0.0003	0.0005	0.0003	0.0002	0.0004	0.0003	0.0004	0.0004	0.0004	0.0003	0.0004
25	0.4341	0.4132	3127	3000	0.0002	0.0005	0.0004	0.0004	0.0002	0.0004	0.0002	0.0003	0.0004	0.0001	0.0002	0.0005
n	25	25	25	25	25	25	25	25	25	25	25	25	25	25	25	25
Mean					0.0004	0.0006	0.0006	0.0006	0.0005	0.0006	0.0005	0.0006	0.0005	0.0005	0.0005	0.0006
Median					0.0004	0.0007	0.0006	0.0006	0.0005	0.0006	0.0005	0.0006	0.0005	0.0005	0.0004	0.0006
σ					0.0002	0.0002	0.0002	0.0002	0.0003	0.0003	0.0003	0.0003	0.0002	0.0003	0.0003	0.0003
Min.					0.0001	0.0002	0.0003	0.0001	0.0002	0.0001	0.0002	0.0002	0.0002	0.0001	0.0001	0.0003
Max.					0.0007	0.0009	0.0010	0.0010	0.0010	0.0011	0.0010	0.0012	0.0009	0.0010	0.0012	0.0012

DATA SET 4: 105°C; 350 mA

Lamp #	Initial (0 hrs)				Lumen Maintenance (%)											
	LF (lm)	V _F (V)	Calc. CCT	ANSI Target	6552	7056	7560	8064	8568	9072	9576	10080	10584	11088	11592	12096
1	157	2.81	3016	3000	97.51	97.51	97.32	97.19	96.94	96.87	97.57	97.89	97.70	98.09	97.70	97.96
2	156	2.87	2988	3000	97.69	97.94	97.62	97.88	97.94	97.75	97.43	97.69	98.14	98.33	98.59	98.33
3	156	2.86	2995	3000	97.75	97.68	98.01	97.75	97.88	97.81	97.04	97.23	97.11	96.91	96.66	96.72
4	159	2.83	2994	3000	97.98	97.92	98.17	98.11	98.04	97.67	98.11	98.42	98.23	98.68	98.30	98.42
5	153	2.81	3039	3000	97.98	97.98	97.85	98.24	98.31	98.17	97.91	98.17	98.44	98.76	99.02	98.76
6	154	2.82	3038	3000	98.31	98.12	98.31	98.44	98.44	98.64	97.92	97.53	98.64	98.77	98.90	98.70
7	154	2.83	3011	3000	97.99	97.40	97.40	97.66	97.53	97.60	98.18	98.25	98.38	97.92	98.05	97.60
8	156	2.87	3005	3000	97.12	97.31	97.50	97.57	97.50	97.31	97.44	97.44	97.70	98.27	98.02	98.02
9	156	2.87	3018	3000	97.44	97.25	97.89	97.76	97.82	97.82	98.14	97.63	98.14	98.21	98.21	98.14
10	160	2.85	2983	3000	97.75	97.75	98.06	97.81	98.25	97.93	98.31	97.93	98.00	98.00	97.93	97.93
11	158	2.87	3005	3000	97.85	98.23	98.36	98.29	98.74	98.42	97.91	97.79	98.17	98.74	98.29	98.23
12	158	2.87	3042	3000	97.85	98.23	98.10	97.97	98.10	97.97	98.16	97.47	97.78	98.23	97.66	98.04
13	157	2.82	3025	3000	97.59	97.20	97.40	97.14	97.14	97.01	97.27	97.01	97.20	97.20	97.14	97.46
14	157	2.82	3057	3000	97.46	97.97	97.65	97.71	97.71	98.28	98.03	97.90	97.77	98.22	97.84	97.71
15	162	2.84	3068	3000	97.09	96.91	97.03	97.03	97.15	97.15	97.34	96.97	97.28	97.34	97.22	97.77
16	156	2.88	3028	3000	97.88	97.69	97.69	97.43	98.01	97.43	97.43	97.24	98.07	97.75	98.20	98.27
17	153	2.82	3061	3000	97.90	98.30	98.17	98.23	97.77	97.71	97.77	97.71	97.71	97.77	97.51	97.71
18	156	2.84	3027	3000	97.25	97.31	97.89	97.82	97.31	97.89	97.12	98.21	97.63	97.25	96.93	96.93
19	163	2.85	3040	3000	97.97	97.66	98.22	98.22	98.16	98.16	98.03	98.52	98.83	97.91	97.91	97.85
20	161	2.89	3085	3000	97.64	97.70	97.76	97.39	97.01	97.14	96.95	97.20	97.08	97.01	97.45	97.64
21	153	2.84	3103	3000	97.12	97.51	97.38	97.71	97.25	97.32	97.12	97.12	97.32	97.06	97.19	97.45
22	160	2.85	3029	3000	97.94	97.94	97.81	97.88	98.31	98.38	98.44	97.75	98.56	98.69	98.31	98.56
23	157	2.83	3084	3000	97.64	97.45	97.51	97.07	97.39	97.26	97.39	96.94	97.64	97.26	97.00	97.32
24	158	2.82	3024	3000	97.47	97.09	96.96	97.03	96.84	96.33	96.33	96.27	96.77	96.52	97.09	96.58
25	159	2.83	3127	3000	96.99	96.86	96.99	96.93	96.55	96.36	96.68	96.05	96.86	96.93	96.86	97.30
n	25	25	25	25	25	25	25	25	25	25	25	25	25	25	25	25
Mean	157	2.84			97.65	97.64	97.72	97.69	97.68	97.62	97.60	97.53	97.81	97.83	97.76	97.82
Median	157	2.84			97.69	97.68	97.76	97.75	97.77	97.71	97.57	97.63	97.77	97.92	97.84	97.85
σ	3	0.02			0.34	0.41	0.41	0.44	0.56	0.60	0.54	0.61	0.56	0.68	0.64	0.57
Min.	153	2.81			96.99	96.86	96.96	96.93	96.55	96.33	96.33	96.05	96.77	96.52	96.66	96.58
Max.	163	2.89			98.31	98.30	98.36	98.44	98.74	98.64	98.44	98.52	98.83	98.77	99.02	98.76

Lamp #	Initial (0 hrs)				Chromaticity Shift (Δu'v')											
	CCx	CCy	Calc. CCT	ANSI Target	6552	7056	7560	8064	8568	9072	9576	10080	10584	11088	11592	12096
1	0.4429	0.4179	3016	3000	0.0006	0.0004	0.0003	0.0006	0.0006	0.0008	0.0008	0.0008	0.0008	0.0009	0.0012	0.0011
2	0.4440	0.4166	2988	3000	0.0009	0.0012	0.0009	0.0010	0.0011	0.0010	0.0008	0.0011	0.0013	0.0013	0.0013	0.0012
3	0.4439	0.4173	2995	3000	0.0008	0.0008	0.0006	0.0008	0.0008	0.0008	0.0011	0.0009	0.0003	0.0001	0.0003	0.0006
4	0.4441	0.4176	2994	3000	0.0006	0.0007	0.0006	0.0006	0.0006	0.0008	0.0010	0.0010	0.0008	0.0008	0.0010	0.0009
5	0.4407	0.4162	3039	3000	0.0006	0.0008	0.0005	0.0007	0.0005	0.0006	0.0004	0.0004	0.0007	0.0007	0.0007	0.0008
6	0.4425	0.4199	3038	3000	0.0005	0.0006	0.0004	0.0006	0.0005	0.0006	0.0006	0.0006	0.0005	0.0008	0.0008	0.0007
7	0.4427	0.4168	3011	3000	0.0005	0.0005	0.0004	0.0005	0.0006	0.0005	0.0006	0.0006	0.0005	0.0007	0.0010	0.0009
8	0.4415	0.4136	3005	3000	0.0010	0.0011	0.0008	0.0009	0.0010	0.0008	0.0009	0.0009	0.0011	0.0012	0.0012	0.0011
9	0.4418	0.4159	3018	3000	0.0008	0.0009	0.0009	0.0009	0.0010	0.0011	0.0009	0.0009	0.0009	0.0012	0.0012	0.0011
10	0.4445	0.4170	2983	3000	0.0007	0.0008	0.0008	0.0008	0.0009	0.0008	0.0009	0.0008	0.0011	0.0010	0.0011	0.0009
11	0.4425	0.4157	3005	3000	0.0008	0.0012	0.0010	0.0009	0.0010	0.0009	0.0009	0.0010	0.0011	0.0012	0.0012	0.0013
12	0.4407	0.4166	3042	3000	0.0007	0.0009	0.0008	0.0009	0.0009	0.0009	0.0009	0.0009	0.0007	0.0011	0.0011	0.0009
13	0.4416	0.4163	3025	3000	0.0006	0.0006	0.0003	0.0002	0.0004	0.0004	0.0004	0.0004	0.0008	0.0008	0.0008	0.0009
14	0.4398	0.4166	3057	3000	0.0005	0.0006	0.0004	0.0005	0.0005	0.0004	0.0005	0.0006	0.0006	0.0008	0.0010	0.0008
15	0.4372	0.4125	3068	3000	0.0006	0.0004	0.0004	0.0004	0.0005	0.0004	0.0005	0.0005	0.0002	0.0006	0.0006	0.0008
16	0.4387	0.4106	3028	3000	0.0004	0.0003	0.0003	0.0003	0.0003	0.0003	0.0003	0.0003	0.0004	0.0007	0.0007	0.0008
17	0.4354	0.4077	3061	3000	0.0004	0.0003	0.0003	0.0003	0.0002	0.0002	0.0002	0.0004	0.0004	0.0007	0.0007	0.0007
18	0.4386	0.4103	3027	3000	0.0002	0.0003	0.0002	0.0003	0.0002	0.0002	0.0003	0.0003	0.0004	0.0007	0.0007	0.0008
19	0.4389	0.4125	3040	3000	0.0005	0.0004	0.0005	0.0005	0.0004	0.0005	0.0005	0.0006	0.0005	0.0004	0.0009	0.0006
20	0.4346	0.4090	3085	3000	0.0003	0.0003	0.0002	0.0003	0.0001	0.0002	0.0002	0.0003	0.0005	0.0006	0.0007	0.0007
21	0.4342	0.4104	3103	3000	0.0004	0.0003	0.0003	0.0003	0.0003	0.0004	0.0003	0.0004	0.0002	0.0006	0.0006	0.0006
22	0.4387	0.4108	3029	3000	0.0004	0.0003	0.0003	0.0004	0.0003	0.0003	0.0003	0.0004	0.0004	0.0007	0.0009	0.0009
23	0.4340	0.4076	3084	3000	0.0004	0.0004	0.0004	0.0005	0.0004	0.0004	0.0004	0.0004	0.0004	0.0008	0.0008	0.0009
24	0.4421	0.4173	3024	3000	0.0004	0.0005	0.0003	0.0003	0.0002	0.0003	0.0004	0.0004	0.0007	0.0006	0.0007	0.0008
25	0.4341	0.4132	3127	3000	0.0005	0.0004	0.0004	0.0004	0.0004	0.0003	0.0004	0.0004	0.0003	0.0006	0.0007	0.0008
n	25	25	25	25	25	25	25	25	25	25	25	25	25	25	25	25
Mean					0.0006	0.0006	0.0005	0.0005	0.0005	0.0006	0.0006	0.0006	0.0006	0.0008	0.0009	0.0008
Median					0.0005	0.0005	0.0004	0.0005	0.0005	0.0005	0.0005	0.0006	0.0005	0.0007	0.0008	0.0008
σ					0.0002	0.0003	0.0002	0.0002	0.0003	0.0003	0.0003	0.0002	0.0003	0.0003	0.0002	0.0002
Min.					0.0002	0.0003	0.0002	0.0002	0.0001	0.0002	0.0002	0.0003	0.0002	0.0001	0.0003	0.0006
Max.					0.0010	0.0012	0.0010	0.0010	0.0011	0.0011	0.0011	0.0011	0.0013	0.0013	0.0013	0.0013

DATA SET 4: 105°C; 350 mA

Lamp #	Initial (0 hrs)				Lumen Maintenance (%)					
	LF (lm)	V _F (V)	Calc. CCT	ANSI Target	12600	13104	13608	14112	14616	15120
1	157	2.81	3016	3000	97.51	97.51	97.51	98.02	97.77	97.83
2	156	2.87	2988	3000	97.81	98.33	98.65	98.59	98.59	98.78
3	156	2.86	2995	3000	96.33	96.46	96.08	96.59	96.40	96.46
4	159	2.83	2994	3000	97.85	98.23	98.04	98.11	97.98	97.67
5	153	2.81	3039	3000	98.63	98.96	98.76	99.09	99.09	98.76
6	154	2.82	3038	3000	99.09	99.16	98.83	99.03	98.70	99.16
7	154	2.83	3011	3000	97.73	98.05	97.99	98.25	98.05	98.18
8	156	2.87	3005	3000	98.02	97.89	98.08	98.34	98.14	98.59
9	156	2.87	3018	3000	98.27	98.33	98.33	98.14	97.82	98.27
10	160	2.85	2983	3000	98.00	98.06	97.81	98.00	97.43	97.93
11	158	2.87	3005	3000	98.80	98.36	98.80	98.55	98.17	98.23
12	158	2.87	3042	3000	98.73	98.29	98.04	97.78	97.41	98.10
13	157	2.82	3025	3000	96.82	96.76	96.57	97.27	97.27	97.01
14	157	2.82	3057	3000	97.97	97.65	97.14	98.22	97.84	97.90
15	162	2.84	3068	3000	97.34	97.28	97.59	97.96	98.02	97.90
16	156	2.88	3028	3000	97.82	98.14	98.01	98.65	98.46	98.14
17	153	2.82	3061	3000	97.64	97.12	98.03	98.30	97.84	98.36
18	156	2.84	3027	3000	97.44	97.82	97.50	98.21	97.50	97.70
19	163	2.85	3040	3000	97.66	97.48	97.17	97.60	97.17	97.30
20	161	2.89	3085	3000	97.39	97.89	97.82	98.32	98.45	98.45
21	153	2.84	3103	3000	96.93	97.38	97.58	97.84	98.30	98.10
22	160	2.85	3029	3000	98.44	98.75	98.75	98.56	98.38	98.06
23	157	2.83	3084	3000	97.64	97.32	97.45	98.15	98.02	97.70
24	158	2.82	3024	3000	96.90	96.71	96.52	96.46	96.71	96.33
25	159	2.83	3127	3000	97.11	97.18	96.74	96.74	96.80	96.49
n	25	25	25	25	25	25	25	25	25	25
Mean	157	2.84			97.75	97.80	97.75	98.03	97.85	97.90
Median	157	2.84			97.73	97.89	97.82	98.15	97.98	98.06
σ	3	0.02			0.67	0.69	0.75	0.67	0.65	0.72
Min.	153	2.81			96.33	96.46	96.08	96.46	96.40	96.33
Max.	163	2.89			99.09	99.16	98.83	99.09	99.09	99.16

Lamp #	Initial (0 hrs)				Chromaticity Shift (Δu'v')					
	CCx	CCy	Calc. CCT	ANSI Target	12600	13104	13608	14112	14616	15120
1	0.4429	0.4179	3016	3000	0.0010	0.0009	0.0011	0.0010	0.0010	0.0010
2	0.4440	0.4166	2988	3000	0.0011	0.0013	0.0013	0.0011	0.0011	0.0013
3	0.4439	0.4173	2995	3000	0.0005	0.0005	0.0003	0.0003	0.0003	0.0005
4	0.4441	0.4176	2994	3000	0.0009	0.0010	0.0010	0.0007	0.0009	0.0009
5	0.4407	0.4162	3039	3000	0.0008	0.0008	0.0009	0.0006	0.0007	0.0006
6	0.4425	0.4199	3038	3000	0.0008	0.0008	0.0009	0.0006	0.0007	0.0006
7	0.4427	0.4168	3011	3000	0.0009	0.0010	0.0010	0.0007	0.0009	0.0006
8	0.4415	0.4136	3005	3000	0.0012	0.0013	0.0014	0.0012	0.0012	0.0013
9	0.4418	0.4159	3018	3000	0.0011	0.0012	0.0012	0.0010	0.0012	0.0010
10	0.4445	0.4170	2983	3000	0.0010	0.0012	0.0010	0.0009	0.0010	0.0009
11	0.4425	0.4157	3005	3000	0.0013	0.0012	0.0012	0.0009	0.0009	0.0009
12	0.4407	0.4166	3042	3000	0.0011	0.0009	0.0010	0.0010	0.0010	0.0010
13	0.4416	0.4163	3025	3000	0.0009	0.0009	0.0009	0.0007	0.0009	0.0009
14	0.4398	0.4166	3057	3000	0.0009	0.0010	0.0009	0.0007	0.0008	0.0007
15	0.4372	0.4125	3068	3000	0.0007	0.0008	0.0008	0.0008	0.0005	0.0007
16	0.4387	0.4106	3028	3000	0.0008	0.0008	0.0008	0.0009	0.0007	0.0006
17	0.4354	0.4077	3061	3000	0.0007	0.0007	0.0008	0.0007	0.0007	0.0006
18	0.4386	0.4103	3027	3000	0.0008	0.0008	0.0010	0.0010	0.0007	0.0006
19	0.4389	0.4125	3040	3000	0.0006	0.0008	0.0007	0.0008	0.0005	0.0004
20	0.4346	0.4090	3085	3000	0.0007	0.0007	0.0008	0.0008	0.0005	0.0006
21	0.4342	0.4104	3103	3000	0.0007	0.0007	0.0008	0.0008	0.0006	0.0006
22	0.4387	0.4108	3029	3000	0.0008	0.0009	0.0009	0.0010	0.0007	0.0008
23	0.4340	0.4076	3084	3000	0.0009	0.0009	0.0009	0.0009	0.0007	0.0007
24	0.4421	0.4173	3024	3000	0.0008	0.0009	0.0008	0.0007	0.0007	0.0006
25	0.4341	0.4132	3127	3000	0.0007	0.0007	0.0007	0.0008	0.0006	0.0006
n	25	25	25	25	25	25	25	25	25	25
Mean					0.0009	0.0009	0.0009	0.0008	0.0008	0.0008
Median					0.0008	0.0009	0.0009	0.0008	0.0007	0.0007
σ					0.0002	0.0002	0.0002	0.0002	0.0002	0.0002
Min.					0.0005	0.0005	0.0003	0.0003	0.0003	0.0004
Max.					0.0013	0.0013	0.0014	0.0012	0.0012	0.0013

DATA SET 5: 120°C; 350 mA

Tested LED Package Series	XLamp XP-G3 Standard White LEDs
Tested Drive Current [IF]	350 mA
Testing Initiation Date	November 2, 2015
Case Temperature [Ts]	120°C
Ambient Temperature [TA]	120°C
Failures observed	None

Test Results Summary

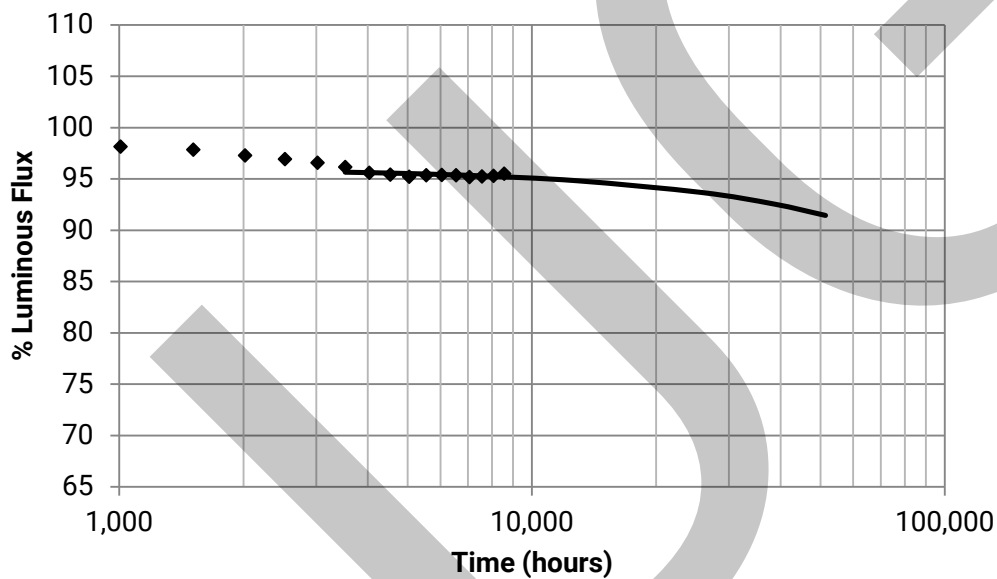
Test Duration (hrs)	Relative Luminous Flux	Relative Color Shift ($\Delta u'v'$)	Relative CRI Shift (ΔRa)	Relative Voltage Shift ($\% \Delta V_f$)	Test Duration (hrs)	Relative Luminous Flux	Relative Color Shift ($\Delta u'v'$)	Relative CRI Shift (ΔRa)	Relative Voltage Shift ($\% \Delta V_f$)
0	100.00%	0.0000	0.0	0.0%					
168	99.11%	0.0005	-0.1	N/R					
1008	98.14%	0.0005	-0.1	N/R					
1512	97.85%	0.0006	-0.1	N/R					
2016	97.28%	0.0005	-0.1	N/R					
2520	96.94%	0.0006	-0.1	N/R					
3024	96.58%	0.0006	-0.2	N/R					
3528	96.17%	0.0006	-0.2	N/R					
4032	95.59%	0.0005	-0.2	N/R					
4536	95.41%	0.0005	-0.2	N/R					
5040	95.21%	0.0005	-0.2	N/R					
5544	95.37%	0.0007	-0.3	N/R					
6048	95.40%	0.0007	-0.2	N/R					
6552	95.35%	0.0009	-0.3	-0.3%					
7056	95.18%	0.0008	-0.3	-0.2%					
7560	95.23%	0.0009	-0.4	-0.3%					
8064	95.31%	0.0010	-0.4	-0.2%					
8568	95.52%	0.0011	-0.4	-0.3%					

Note: "N/R" indicates data points that are not reported

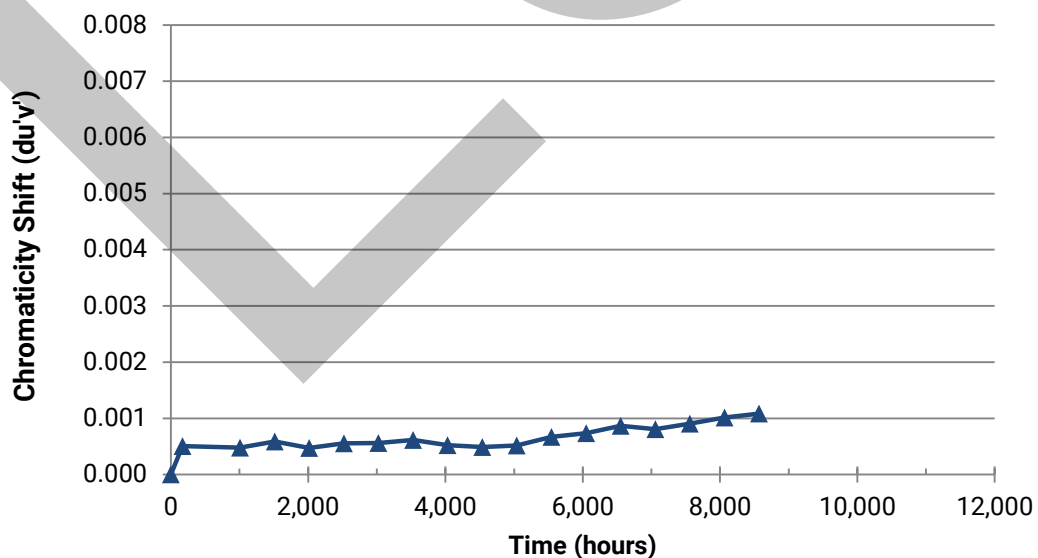
DATA SET 5: 120°C; 350 mA

TM-21 Projection

Test duration	8,568 hours
Test duration used for projection	t=3,528 to t=8,568
α	9.406E-07
β	9.597E-01
Reported Lifetimes	L90(9k) > 51,400 hours
	L80(9k) > 51,400 hours
	L70(9k) > 51,400 hours



Color Shift Graph



DATA SET 5: 120°C; 350 mA

Lamp #	Initial (0 hrs)				Lumen Maintenance (%)											
	LF (lm)	V _F (V)	Calc. CCT	ANSI Target	168	1008	1512	2016	2520	3024	3528	4032	4536	5040	5544	6048
1	156	2.81	3025	3000	99.36	98.27	98.52	97.88	97.50	97.18	96.02	95.76	95.57	95.06	95.06	95.06
2	158	2.81	3044	3000	98.92	98.60	98.29	97.65	96.89	97.08	96.76	96.13	96.13	96.00	96.19	96.19
3	155	2.87	3019	3000	100.19	98.52	98.26	97.04	96.78	96.40	96.72	95.50	95.56	94.72	96.01	96.33
4	160	2.85	3063	3000	99.13	97.94	98.19	97.25	96.19	98.06	97.38	97.00	96.63	96.32	96.38	96.19
5	159	2.84	3008	3000	98.24	98.31	98.12	97.18	96.42	95.73	95.54	95.17	95.17	94.92	94.73	94.16
6	158	2.83	3027	3000	97.79	97.03	96.78	96.34	96.08	95.89	94.69	94.25	94.57	94.38	94.19	95.07
7	153	2.82	3041	3000	99.61	98.36	98.23	96.99	98.10	97.51	97.64	96.20	96.34	96.01	96.66	96.20
8	154	2.82	3021	3000	99.16	98.05	97.34	97.47	97.47	96.75	96.69	95.97	95.58	95.06	95.32	95.19
9	150	2.82	2999	3000	98.67	98.07	98.07	97.40	97.34	96.87	96.67	95.81	95.61	95.34	95.41	94.94
10	148	2.82	2985	3000	98.45	98.04	98.38	98.11	97.16	96.69	95.68	95.14	95.34	95.54	95.61	95.88
11	156	2.87	2994	3000	99.23	98.52	97.43	96.85	97.05	96.15	96.15	95.19	94.99	94.48	95.25	94.35
12	157	2.87	3047	3000	98.73	97.96	97.64	97.45	96.94	95.79	95.98	95.60	94.96	94.65	95.28	94.96
13	159	2.85	3052	3000	99.37	98.31	98.24	97.99	97.87	97.11	97.18	95.92	96.30	95.29	96.24	95.73
14	160	2.85	3055	3000	98.63	98.57	97.88	97.94	97.69	96.76	97.07	96.07	96.26	95.63	96.19	96.57
15	148	2.87	2994	3000	99.59	98.65	98.18	97.23	97.43	96.83	96.42	95.61	95.07	95.48	95.61	95.54
16	155	2.88	3063	3000	98.77	98.06	97.94	97.10	96.52	96.39	95.35	94.97	94.97	95.29	94.97	94.90
17	156	2.87	3006	3000	99.68	98.65	98.20	97.37	97.50	97.17	96.72	95.57	95.83	95.44	95.70	96.21
18	157	2.88	3052	3000	99.74	98.34	98.15	97.57	97.06	96.17	96.23	95.08	94.76	94.82	95.08	95.46
19	155	2.82	3028	3000	99.74	99.22	98.84	98.84	98.26	97.80	97.29	96.77	95.74	95.28	96.06	95.87
20	158	2.82	3062	3000	99.18	98.80	98.86	98.16	98.04	97.91	97.21	96.39	95.94	96.20	96.26	96.20
21	161	2.83	3094	3000	99.13	97.39	96.46	96.46	95.59	95.03	94.22	94.53	94.47	94.16	94.10	93.91
22	156	2.88	3070	3000	99.74	97.76	97.63	96.55	95.71	95.91	95.39	95.33	94.37	95.20	94.31	94.75
23	153	2.83	3100	3000	99.35	97.20	96.48	95.96	95.76	95.57	95.11	95.37	95.05	94.85	94.52	95.18
24	159	2.83	3106	3000	98.18	96.73	96.60	96.04	95.60	95.91	94.91	94.59	94.40	94.84	94.15	94.59
25	153	2.84	3126	3000	99.28	98.04	97.52	97.13	96.61	95.95	95.30	95.82	95.63	95.30	94.91	95.69
n	25	25	25	25	25	25	25	25	25	25	25	25	25	25	25	25
Mean	156	2.84			99.11	98.14	97.85	97.28	96.94	96.58	96.17	95.59	95.41	95.21	95.37	95.40
Median	156	2.84			99.18	98.27	98.12	97.25	97.05	96.69	96.23	95.60	95.56	95.28	95.32	95.46
σ	4	0.02			0.57	0.57	0.68	0.69	0.80	0.78	0.93	0.66	0.65	0.55	0.76	0.74
Min.	148	2.81			97.79	96.73	96.46	95.96	95.59	95.03	94.22	94.25	94.37	94.16	94.10	93.91
Max.	161	2.88			100.19	99.22	98.86	98.84	98.26	98.06	97.64	97.00	96.63	96.32	96.66	96.57

Lamp #	Initial (0 hrs)				Chromaticity Shift (Δu'v')											
	CCx	CCy	Calc. CCT	ANSI Target	168	1008	1512	2016	2520	3024	3528	4032	4536	5040	5544	6048
1	0.4422	0.4176	3025	3000	0.0004	0.0002	0.0005	0.0004	0.0006	0.0006	0.0007	0.0005	0.0004	0.0004	0.0007	0.0010
2	0.4404	0.4162	3044	3000	0.0007	0.0006	0.0009	0.0007	0.0008	0.0008	0.0009	0.0008	0.0007	0.0008	0.0008	0.0009
3	0.4417	0.4158	3019	3000	0.0008	0.0006	0.0006	0.0006	0.0007	0.0008	0.0010	0.0008	0.0007	0.0006	0.0010	0.0012
4	0.4359	0.4091	3063	3000	0.0001	0.0001	0.0002	0.0002	0.0002	0.0004	0.0004	0.0004	0.0004	0.0004	0.0005	0.0008
5	0.4437	0.4185	3008	3000	0.0005	0.0003	0.0007	0.0004	0.0005	0.0006	0.0006	0.0003	0.0003	0.0005	0.0006	0.0007
6	0.4400	0.4132	3027	3000	0.0003	0.0003	0.0003	0.0003	0.0003	0.0003	0.0003	0.0003	0.0004	0.0005	0.0005	0.0005
7	0.4410	0.4171	3041	3000	0.0007	0.0006	0.0009	0.0002	0.0006	0.0007	0.0008	0.0005	0.0005	0.0005	0.0007	0.0008
8	0.4428	0.4184	3021	3000	0.0004	0.0004	0.0006	0.0004	0.0005	0.0006	0.0006	0.0004	0.0004	0.0005	0.0006	0.0006
9	0.4447	0.4195	2999	3000	0.0006	0.0004	0.0006	0.0005	0.0005	0.0005	0.0005	0.0005	0.0004	0.0005	0.0006	0.0006
10	0.4454	0.4191	2985	3000	0.0006	0.0005	0.0006	0.0004	0.0005	0.0006	0.0006	0.0005	0.0004	0.0007	0.0007	0.0008
11	0.4422	0.4136	2994	3000	0.0005	0.0005	0.0004	0.0005	0.0007	0.0008	0.0009	0.0007	0.0007	0.0008	0.0010	0.0011
12	0.4399	0.4156	3047	3000	0.0004	0.0005	0.0006	0.0003	0.0007	0.0006	0.0006	0.0004	0.0004	0.0005	0.0007	0.0006
13	0.4409	0.4184	3052	3000	0.0006	0.0006	0.0005	0.0006	0.0007	0.0006	0.0006	0.0005	0.0005	0.0004	0.0006	0.0009
14	0.4400	0.4168	3055	3000	0.0004	0.0006	0.0007	0.0006	0.0007	0.0006	0.0007	0.0006	0.0005	0.0005	0.0007	0.0008
15	0.4422	0.4136	2994	3000	0.0009	0.0010	0.0012	0.0009	0.0011	0.0009	0.0011	0.0009	0.0009	0.0009	0.0012	0.0013
16	0.4379	0.4134	3063	3000	0.0007	0.0005	0.0006	0.0006	0.0006	0.0007	0.0008	0.0007	0.0007	0.0006	0.0008	0.0007
17	0.4414	0.4135	3006	3000	0.0008	0.0009	0.0011	0.0010	0.0011	0.0011	0.0011	0.0010	0.0009	0.0010	0.0011	0.0013
18	0.4379	0.4120	3052	3000	0.0009	0.0008	0.0008	0.0006	0.0009	0.0008	0.0009	0.0009	0.0006	0.0006	0.0008	0.0008
19	0.4408	0.4151	3028	3000	0.0009	0.0008	0.0011	0.0006	0.0006	0.0007	0.0008	0.0007	0.0005	0.0004	0.0007	0.0007
20	0.4391	0.4158	3062	3000	0.0007	0.0007	0.0008	0.0006	0.0006	0.0007	0.0008	0.0006	0.0005	0.0006	0.0009	0.0009
21	0.4346	0.4101	3094	3000	0.0003	0.0001	0.0002	0.0003	0.0002	0.0001	0.0001	0.0002	0.0002	0.0001	0.0003	0.0002
22	0.4359	0.4099	3070	3000	0.0002	0.0004	0.0003	0.0005	0.0006	0.0003	0.0004	0.0003	0.0004	0.0004	0.0004	0.0004
23	0.4325	0.4063	3100	3000	0.0003	0.0003	0.0004	0.0004	0.0003	0.0001	0.0001	0.0002	0.0003	0.0003	0.0004	0.0002
24	0.4350	0.4125	3106	3000	0.0001	0.0001	0.0001	0.0001	0.0001	0.0003	0.0002	0.0003	0.0002	0.0002	0.0004	0.0003
25	0.4325	0.4095	3126	3000	0.0002	0.0002	0.0001	0.0003	0.0001	0.0001	0.0001	0.0002	0.0002	0.0002	0.0002	0.0003
n	25	25	25	25	25	25	25	25	25	25	25	25	25	25	25	25
Mean					0.0005	0.0005	0.0006	0.0005	0.0006	0.0006	0.0006	0.0005	0.0005	0.0005	0.0007	0.0007
Median					0.0005	0.0005	0.0006	0.0005	0.0006	0.0006	0.0006	0.0005	0.0004	0.0005	0.0007	0.0008
σ					0.0003	0.0002	0.0003	0.0002	0.0003	0.0002	0.0003	0.0002	0.0002	0.0002	0.0002	0.0003
Min.					0.0001	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001	0.0002	0.0002	0.0001	0.0002	0.0002
Max.					0.0009	0.0010	0.0012	0.0010	0.0011	0.0011	0.0011	0.0010	0.0009	0.0010	0.0012	0.0013

DATA SET 5: 120°C; 350 mA

Lamp #	Initial (0 hrs)				Lumen Maintenance (%)				
	LF (lm)	V _F (V)	Calc. CCT	ANSI Target	6552	7056	7560	8064	8568
1	156	2.81	3025	3000	95.38	95.12	95.12	95.31	95.25
2	158	2.81	3044	3000	96.51	96.13	96.00	95.68	95.81
3	155	2.87	3019	3000	95.62	95.62	95.37	95.75	96.01
4	160	2.85	3063	3000	96.88	96.50	96.88	97.07	96.88
5	159	2.84	3008	3000	94.22	94.35	94.35	94.16	94.66
6	158	2.83	3027	3000	94.57	94.06	94.69	94.31	94.69
7	153	2.82	3041	3000	96.34	96.53	96.27	96.73	96.92
8	154	2.82	3021	3000	95.45	95.52	95.58	95.78	96.10
9	150	2.82	2999	3000	95.07	94.34	95.21	94.74	95.07
10	148	2.82	2985	3000	95.95	95.14	95.88	95.41	96.08
11	156	2.87	2994	3000	94.54	94.61	94.67	95.06	95.38
12	157	2.87	3047	3000	94.96	94.90	94.58	94.96	95.35
13	159	2.85	3052	3000	96.05	96.24	96.24	96.74	96.11
14	160	2.85	3055	3000	96.38	96.19	95.70	96.32	96.63
15	148	2.87	2994	3000	95.41	95.27	94.94	94.80	95.34
16	155	2.88	3063	3000	95.55	94.58	94.84	94.97	95.10
17	156	2.87	3006	3000	95.83	95.89	96.21	96.34	96.53
18	157	2.88	3052	3000	94.82	94.44	94.70	95.08	95.34
19	155	2.82	3028	3000	95.67	95.87	95.93	95.28	95.99
20	158	2.82	3062	3000	96.20	95.75	95.75	95.75	95.75
21	161	2.83	3094	3000	93.73	93.98	93.73	94.16	94.22
22	156	2.88	3070	3000	94.63	94.43	94.50	94.50	94.37
23	153	2.83	3100	3000	94.39	94.52	94.39	94.85	94.98
24	159	2.83	3106	3000	94.34	94.09	94.09	94.15	94.03
25	153	2.84	3126	3000	95.23	95.43	95.17	94.91	95.30
n	25	25	25	25	25	25	25	25	25
Mean	156	2.84			95.35	95.18	95.23	95.31	95.52
Median	156	2.84			95.41	95.14	95.17	95.08	95.35
σ	4	0.02			0.81	0.81	0.79	0.84	0.80
Min.	148	2.81			93.73	93.98	93.73	94.15	94.03
Max.	161	2.88			96.88	96.53	96.88	97.07	96.92

Lamp #	Initial (0 hrs)				Chromaticity Shift (Δu'v')				
	CCx	CCy	Calc. CCT	ANSI Target	6552	7056	7560	8064	8568
1	0.4422	0.4176	3025	3000	0.0009	0.0007	0.0009	0.0011	0.0013
2	0.4404	0.4162	3044	3000	0.0011	0.0010	0.0015	0.0017	0.0020
3	0.4417	0.4158	3019	3000	0.0012	0.0012	0.0012	0.0013	0.0013
4	0.4359	0.4091	3063	3000	0.0006	0.0003	0.0005	0.0006	0.0006
5	0.4437	0.4185	3008	3000	0.0008	0.0007	0.0008	0.0010	0.0010
6	0.4400	0.4132	3027	3000	0.0010	0.0010	0.0011	0.0012	0.0013
7	0.4410	0.4171	3041	3000	0.0010	0.0010	0.0010	0.0011	0.0011
8	0.4428	0.4184	3021	3000	0.0009	0.0010	0.0010	0.0011	0.0011
9	0.4447	0.4195	2999	3000	0.0009	0.0008	0.0009	0.0011	0.0012
10	0.4454	0.4191	2985	3000	0.0012	0.0011	0.0012	0.0013	0.0015
11	0.4422	0.4136	2994	3000	0.0011	0.0011	0.0011	0.0012	0.0013
12	0.4399	0.4156	3047	3000	0.0009	0.0010	0.0010	0.0011	0.0012
13	0.4409	0.4184	3052	3000	0.0008	0.0008	0.0008	0.0009	0.0010
14	0.4400	0.4168	3055	3000	0.0010	0.0009	0.0009	0.0011	0.0012
15	0.4422	0.4136	2994	3000	0.0015	0.0015	0.0016	0.0018	0.0017
16	0.4379	0.4134	3063	3000	0.0006	0.0006	0.0007	0.0008	0.0010
17	0.4414	0.4135	3006	3000	0.0013	0.0012	0.0014	0.0014	0.0014
18	0.4379	0.4120	3052	3000	0.0011	0.0010	0.0011	0.0011	0.0012
19	0.4408	0.4151	3028	3000	0.0011	0.0010	0.0011	0.0011	0.0012
20	0.4391	0.4158	3062	3000	0.0011	0.0011	0.0011	0.0012	0.0015
21	0.4346	0.4101	3094	3000	0.0002	0.0002	0.0003	0.0004	0.0004
22	0.4359	0.4099	3070	3000	0.0004	0.0002	0.0004	0.0005	0.0005
23	0.4325	0.4063	3100	3000	0.0003	0.0002	0.0003	0.0005	0.0005
24	0.4350	0.4125	3106	3000	0.0005	0.0003	0.0003	0.0004	0.0004
25	0.4325	0.4095	3126	3000	0.0004	0.0003	0.0003	0.0004	0.0005
n	25	25	25	25	25	25	25	25	25
Mean					0.0009	0.0008	0.0009	0.0010	0.0011
Median					0.0009	0.0010	0.0010	0.0011	0.0012
σ					0.0003	0.0004	0.0004	0.0004	0.0004
Min.					0.0002	0.0002	0.0003	0.0004	0.0004
Max.					0.0015	0.0015	0.0016	0.0018	0.0020

DATA SET 6: 85°C; 700 mA

Tested LED Package Series	XLamp XP-G3 Standard White LEDs
Tested Drive Current [IF]	700 mA
Testing Initiation Date	November 2, 2015
Case Temperature [Ts]	85°C
Ambient Temperature [TA]	85°C
Failures observed	None

Test Results Summary

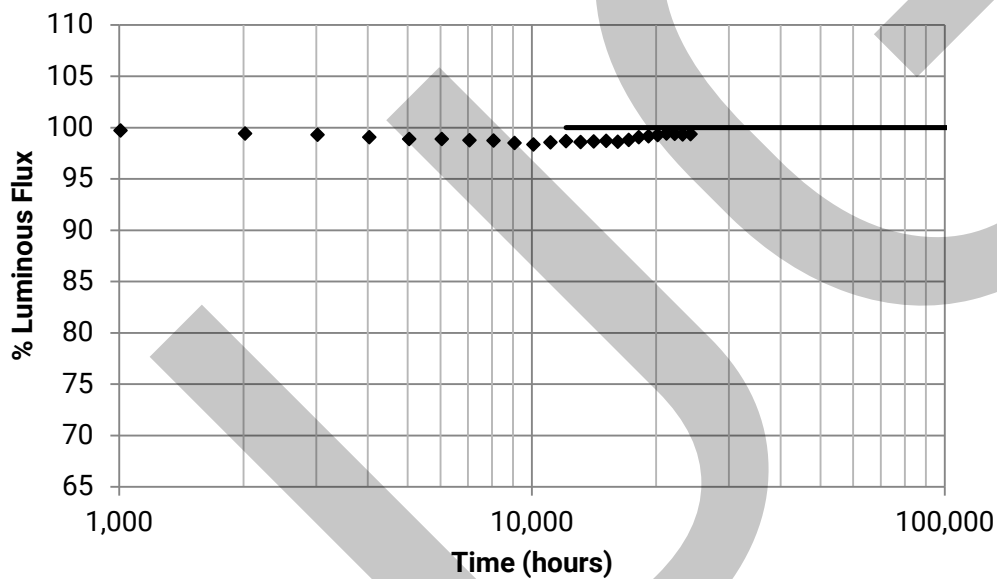
Test Duration (hrs)	Relative Luminous Flux	Relative Color Shift ($\Delta u'v'$)	Relative CRI Shift (ΔRa)	Relative Voltage Shift ($\% \Delta V_f$)	Test Duration (hrs)	Relative Luminous Flux	Relative Color Shift ($\Delta u'v'$)	Relative CRI Shift (ΔRa)	Relative Voltage Shift ($\% \Delta V_f$)
0	100.00%	0.0000	0.0	0.0%	20160	99.28%	0.0012	-0.3	-2.5%
1008	99.73%	0.0009	-0.1	N/R	21168	99.43%	0.0013	-0.3	-2.7%
2016	99.43%	0.0008	-0.1	N/R	22176	99.40%	0.0012	-0.3	-2.4%
3024	99.31%	0.0009	-0.1	N/R	23184	99.34%	0.0011	-0.3	-2.5%
4032	99.07%	0.0009	-0.2	N/R	24192	99.37%	0.0011	-0.2	-2.5%
5040	98.90%	0.0008	-0.2	N/R					
6048	98.88%	0.0009	-0.2	N/R					
7056	98.77%	0.0009	-0.2	N/R					
8064	98.73%	0.0009	-0.2	N/R					
9072	98.51%	0.0009	-0.2	N/R					
10080	98.36%	0.0009	-0.2	N/R					
11088	98.56%	0.0009	-0.2	-1.9%					
12096	98.68%	0.0009	-0.2	-1.3%					
13104	98.59%	0.0010	-0.2	-1.8%					
14112	98.64%	0.0010	-0.2	-1.7%					
15120	98.72%	0.0010	-0.3	-2.2%					
16128	98.62%	0.0011	-0.2	-1.7%					
17136	98.80%	0.0012	-0.2	-1.6%					
18144	99.07%	0.0012	-0.3	-1.8%					
19152	99.17%	0.0012	-0.3	-2.4%					

Note: "N/R" indicates data points that are not reported

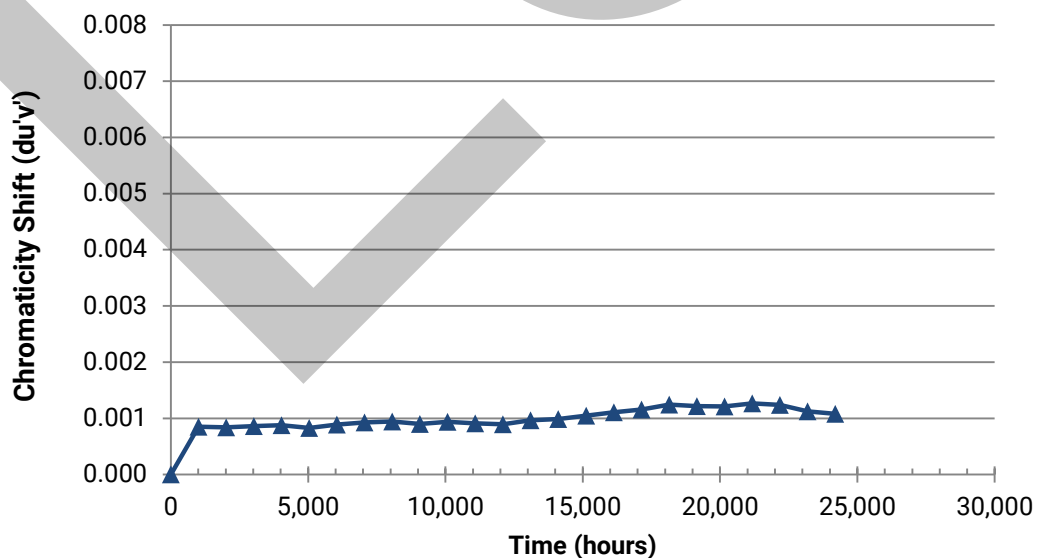
DATA SET 6: 85°C; 700 mA

TM-21 Projection

Test duration	24,192 hours
Test duration used for projection	t=12,096 to t=24,192
α	$-8.121E-07$
β	$9.756E-01$
Reported Lifetimes	L90(24k) > 145,000 hours
	L80(24k) > 145,000 hours
	L70(24k) > 145,000 hours



Color Shift Graph



DATA SET 6: 85°C; 700 mA

Lamp #	Initial (0 hrs)				Lumen Maintenance (%)											
	LF (lm)	V _F (V)	Calc. CCT	ANSI Target	1008	2016	3024	4032	5040	6048	7056	8064	9072	10080	11088	12096
1	300	2.95	3142	3000	99.80	99.57	99.20	99.03	98.43	98.23	98.07	98.00	97.73	98.07	97.83	98.00
2	291	3.00	3073	3000	99.83	99.00	99.07	98.90	98.87	98.76	98.73	98.46	98.28	97.67	98.01	98.66
3	286	2.94	3117	3000	99.62	99.41	99.13	98.60	98.50	98.57	98.18	98.32	98.29	97.80	98.04	98.36
4	294	2.95	3133	3000	100.00	99.01	98.94	98.54	98.40	98.30	98.26	98.37	97.68	97.99	97.55	97.89
5	281	2.96	3082	3000	100.11	99.50	99.47	99.11	98.72	98.93	98.72	98.65	98.50	98.72	98.47	99.11
6	297	2.97	3067	3000	99.66	99.39	99.49	98.58	98.85	98.32	98.92	98.35	98.69	98.69	98.25	98.75
7	291	2.95	3064	3000	99.42	99.14	99.14	98.69	98.52	98.56	97.94	97.70	97.35	97.11	96.97	97.83
8	287	2.97	3070	3000	99.83	99.34	99.62	99.58	99.30	99.13	99.23	99.37	98.95	99.37	99.27	99.69
9	302	2.97	3088	3000	99.90	99.54	99.17	98.51	98.25	98.25	97.78	97.55	97.85	97.09	97.62	97.48
10	295	3.03	3068	3000	99.46	99.46	99.29	99.32	98.88	98.88	98.92	98.85	97.46	98.24	98.61	98.88
11	292	2.93	3022	3000	99.66	99.45	99.56	99.08	99.21	98.97	99.01	98.80	98.73	98.80	99.32	98.77
12	289	3.04	3033	3000	99.65	99.31	99.24	99.00	99.03	99.00	98.89	98.89	99.20	98.69	98.89	98.72
13	290	3.02	3052	3000	99.86	99.55	99.41	99.62	99.24	99.14	98.86	99.10	99.55	98.45	99.14	99.72
14	295	2.98	3042	3000	99.36	99.80	99.39	99.19	99.19	99.22	98.68	98.65	98.65	98.54	99.12	99.05
15	298	2.97	3054	3000	99.46	99.46	98.89	99.40	98.82	98.86	98.93	98.99	98.19	98.15	98.32	99.19
16	281	2.94	3080	3000	99.82	99.64	99.75	99.75	99.47	99.11	99.36	99.14	99.79	99.07	99.75	99.32
17	279	2.93	3026	3000	99.78	99.39	99.57	99.64	99.39	99.50	99.68	99.89	100.00	99.82	100.04	99.68
18	289	3.02	2992	3000	99.86	99.10	99.45	99.27	99.24	99.06	98.82	99.13	98.51	98.93	98.41	98.89
19	296	2.94	3031	3000	99.53	99.29	99.22	98.75	98.48	98.68	98.55	98.61	98.44	98.17	98.34	97.77
20	291	2.93	3052	3000	99.90	99.35	99.00	98.63	98.80	98.49	98.80	98.28	97.63	97.90	99.14	99.00
21	282	3.02	3049	3000	100.00	99.82	99.15	99.15	98.87	99.01	98.72	98.94	98.48	98.16	98.65	97.94
22	289	2.94	3084	3000	99.45	99.62	99.55	99.52	99.34	99.55	99.10	99.03	98.72	98.48	99.17	98.93
23	289	3.03	3040	3000	99.76	99.48	99.27	99.07	98.86	99.17	99.07	98.89	98.48	98.03	98.00	98.31
24	293	3.02	3071	3000	99.73	99.32	99.42	98.91	99.04	99.25	99.08	99.38	98.50	98.22	98.43	98.32
25	275	2.95	3056	3000	99.75	99.75	99.31	98.80	98.80	99.05	99.02	98.94	99.02	98.73	98.58	98.73
n	25	25	25	25	25	25	25	25	25	25	25	25	25	25	25	25
Mean	290	2.97			99.73	99.43	99.31	99.07	98.90	98.88	98.77	98.73	98.51	98.36	98.56	98.68
Median	291	2.97			99.76	99.45	99.29	99.07	98.87	98.87	98.86	98.85	98.50	98.24	98.47	98.75
σ	7	0.04			0.20	0.22	0.22	0.38	0.34	0.37	0.44	0.53	0.68	0.62	0.71	0.62
Min.	275	2.93			99.36	99.00	98.89	98.51	98.25	98.23	97.78	97.55	97.35	97.09	96.97	97.48
Max.	302	3.04			100.11	99.82	99.75	99.75	99.47	99.55	99.68	99.89	100.00	99.82	100.04	99.72

Lamp #	Initial (0 hrs)				Chromaticity Shift (Δu'v')											
	CCx	CCy	Calc. CCT	ANSI Target	1008	2016	3024	4032	5040	6048	7056	8064	9072	10080	11088	12096
1	0.4315	0.4094	3142	3000	0.0006	0.0006	0.0006	0.0006	0.0006	0.0004	0.0008	0.0006	0.0008	0.0007	0.0006	0.0007
2	0.4352	0.4088	3073	3000	0.0007	0.0008	0.0006	0.0008	0.0007	0.0007	0.0007	0.0008	0.0007	0.0008	0.0008	0.0008
3	0.4299	0.4026	3117	3000	0.0003	0.0004	0.0003	0.0001	0.0002	0.0002	0.0002	0.0002	0.0003	0.0003	0.0004	0.0004
4	0.4323	0.4100	3133	3000	0.0006	0.0008	0.0007	0.0010	0.0009	0.0008	0.0009	0.0009	0.0008	0.0009	0.0009	0.0009
5	0.4366	0.4129	3082	3000	0.0006	0.0008	0.0009	0.0010	0.0009	0.0009	0.0009	0.0008	0.0009	0.0009	0.0007	0.0009
6	0.4350	0.4076	3067	3000	0.0003	0.0007	0.0006	0.0007	0.0006	0.0006	0.0006	0.0007	0.0007	0.0007	0.0007	0.0008
7	0.4350	0.4072	3064	3000	0.0006	0.0008	0.0007	0.0008	0.0008	0.0008	0.0008	0.0007	0.0007	0.0008	0.0007	0.0007
8	0.4351	0.4082	3070	3000	0.0006	0.0008	0.0007	0.0008	0.0008	0.0005	0.0007	0.0008	0.0008	0.0008	0.0007	0.0007
9	0.4350	0.4102	3088	3000	0.0009	0.0006	0.0006	0.0008	0.0006	0.0006	0.0005	0.0006	0.0008	0.0008	0.0008	0.0008
10	0.4357	0.4093	3068	3000	0.0008	0.0008	0.0004	0.0008	0.0007	0.0008	0.0006	0.0008	0.0007	0.0009	0.0008	0.0009
11	0.4424	0.4176	3022	3000	0.0008	0.0006	0.0010	0.0008	0.0005	0.0008	0.0007	0.0007	0.0007	0.0007	0.0006	0.0004
12	0.4407	0.4155	3033	3000	0.0012	0.0012	0.0011	0.0011	0.0012	0.0011	0.0012	0.0011	0.0012	0.0012	0.0011	0.0013
13	0.4382	0.4126	3052	3000	0.0014	0.0014	0.0015	0.0014	0.0014	0.0015	0.0015	0.0017	0.0016	0.0015	0.0017	0.0016
14	0.4411	0.4175	3042	3000	0.0008	0.0008	0.0008	0.0008	0.0007	0.0009	0.0010	0.0009	0.0010	0.0010	0.0009	0.0009
15	0.4398	0.4162	3054	3000	0.0008	0.0007	0.0007	0.0006	0.0007	0.0008	0.0009	0.0008	0.0006	0.0008	0.0007	0.0007
16	0.4370	0.4136	3080	3000	0.0010	0.0009	0.0009	0.0009	0.0011	0.0011	0.0011	0.0010	0.0011	0.0010	0.0012	0.0010
17	0.4413	0.4159	3026	3000	0.0010	0.0011	0.0010	0.0010	0.0008	0.0010	0.0012	0.0013	0.0011	0.0013	0.0011	0.0012
18	0.4433	0.4157	2992	3000	0.0011	0.0013	0.0014	0.0014	0.0013	0.0014	0.0015	0.0014	0.0014	0.0015	0.0014	0.0014
19	0.4418	0.4175	3031	3000	0.0009	0.0009	0.0008	0.0008	0.0008	0.0009	0.0008	0.0009	0.0008	0.0008	0.0009	0.0007
20	0.4395	0.4154	3052	3000	0.0009	0.0006	0.0009	0.0009	0.0008	0.0009	0.0010	0.0011	0.0008	0.0007	0.0009	0.0009
21	0.4383	0.4124	3049	3000	0.0013	0.0009	0.0011	0.0010	0.0009	0.0011	0.0010	0.0010	0.0010	0.0012	0.0010	0.0007
22	0.4362	0.4124	3084	3000	0.0013	0.0011	0.0012	0.0010	0.0010	0.0012	0.0012	0.0013	0.0008	0.0012	0.0011	0.0011
23	0.4396	0.4141	3040	3000	0.0012	0.0012	0.0013	0.0012	0.0014	0.0014	0.0014	0.0014	0.0015	0.0012	0.0013	0.0013
24	0.4360	0.4103	3071	3000	0.0010	0.0011	0.0011	0.0010	0.0007	0.0011	0.0012	0.0012	0.0010	0.0011	0.0010	0.0011
25	0.4401	0.4172	3056	3000	0.0007	0.0005	0.0007	0.0006	0.0007	0.0008	0.0008	0.0007	0.0008	0.0008	0.0008	0.0006
n	25	25	25	25	25	25	25	25	25	25	25	25	25	25	25	25
Mean					0.0009	0.0008	0.0009	0.0009	0.0008	0.0009	0.0009	0.0009	0.0009	0.0009	0.0009	0.0009
Median					0.0008	0.0008	0.0008	0.0008	0.0008	0.0009	0.0009	0.0009	0.0008	0.0009	0.0009	0.0009
σ					0.0003	0.0003	0.0003	0.0003	0.0003	0.0003	0.0003	0.0003	0.0003	0.0003	0.0003	0.0003
Min.					0.0003	0.0004	0.0003	0.0001	0.0002	0.0002	0.0002	0.0002	0.0003	0.0003	0.0004	0.0004
Max.					0.0014	0.0014	0.0015	0.0014	0.0014	0.0015	0.0015	0.0017	0.0016	0.0015	0.0017	0.0016

DATA SET 6: 85°C; 700 mA

Lamp #	Initial (0 hrs)				Lumen Maintenance (%)											
	LF (lm)	V _F (V)	Calc. CCT	ANSI Target	13104	14112	15120	16128	17136	18144	19152	20160	21168	22176	23184	24192
1	300	2.95	3142	3000	97.57	98.03	97.30	96.90	97.17	97.43	97.80	98.33	98.07	98.63	98.53	98.83
2	291	3.00	3073	3000	98.18	98.59	98.87	99.21	99.35	99.73	99.69	100.17	100.24	100.07	100.03	99.73
3	286	2.94	3117	3000	98.04	98.08	98.01	97.06	97.83	97.94	98.32	98.46	98.46	98.78	98.88	98.64
4	294	2.95	3133	3000	97.75	98.13	97.79	97.96	98.30	98.64	98.94	99.15	99.32	99.39	99.11	98.94
5	281	2.96	3082	3000	98.40	98.86	99.22	98.75	99.29	99.68	99.79	99.86	100.00	100.04	99.89	100.18
6	297	2.97	3067	3000	97.94	98.62	98.11	97.47	97.78	98.11	98.48	98.89	99.06	99.12	98.92	99.02
7	291	2.95	3064	3000	97.08	97.70	97.39	97.76	97.87	98.04	98.28	98.45	98.76	98.90	98.59	98.66
8	287	2.97	3070	3000	99.34	99.69	99.93	99.69	100.24	99.51	99.20	99.83	100.03	99.83	99.69	99.90
9	302	2.97	3088	3000	97.28	97.72	97.62	97.02	97.55	97.65	97.85	97.81	97.78	97.85	97.98	97.95
10	295	3.03	3068	3000	98.34	98.48	99.49	99.19	99.66	99.66	100.17	100.47	100.71	100.74	100.78	100.95
11	292	2.93	3022	3000	98.80	98.39	99.28	99.04	99.04	99.62	99.11	100.17	99.83	100.03	100.51	100.31
12	289	3.04	3033	3000	98.79	98.58	98.79	98.82	98.41	99.03	99.10	99.10	99.38	99.38	99.45	99.41
13	290	3.02	3052	3000	99.86	99.41	99.31	99.07	99.41	99.27	99.83	99.72	99.93	99.93	99.79	99.76
14	295	2.98	3042	3000	99.29	99.15	99.42	99.53	99.73	100.14	100.41	100.20	100.61	100.51	100.10	100.51
15	298	2.97	3054	3000	99.43	98.86	98.69	98.19	98.45	98.39	98.76	98.79	98.96	98.99	99.16	99.09
16	281	2.94	3080	3000	99.61	99.71	99.43	99.43	99.61	99.47	99.43	99.61	100.07	99.86	99.39	99.22
17	279	2.93	3026	3000	100.11	99.96	99.71	99.21	99.32	99.18	99.75	99.57	99.61	99.18	99.28	99.32
18	289	3.02	2992	3000	98.96	98.93	99.48	99.48	99.65	99.41	100.28	100.10	99.97	99.72	99.69	99.79
19	296	2.94	3031	3000	97.90	98.01	98.07	98.68	99.12	99.80	99.66	99.36	99.76	99.97	99.73	99.70
20	291	2.93	3052	3000	99.31	98.94	98.73	98.80	98.56	99.52	99.79	99.55	99.31	99.07	99.04	98.97
21	282	3.02	3049	3000	97.80	98.23	98.65	98.72	99.04	99.61	99.15	98.87	99.36	98.94	98.83	99.04
22	289	2.94	3084	3000	98.69	98.82	99.00	98.79	98.10	99.34	98.65	99.17	99.45	99.27	99.14	99.41
23	289	3.03	3040	3000	98.65	98.38	98.79	98.34	98.93	98.76	98.58	98.44	98.86	98.76	98.41	98.17
24	293	3.02	3071	3000	98.80	98.43	98.26	98.74	98.70	98.84	98.32	98.46	98.46	98.50	98.60	98.74
25	275	2.95	3056	3000	98.73	98.25	98.69	99.67	98.87	99.93	99.85	99.49	99.82	99.53	99.89	99.89
n	25	25	25	25	25	25	25	25	25	25	25	25	25	25	25	25
Mean	290	2.97			98.59	98.64	98.72	98.62	98.80	99.07	99.17	99.28	99.43	99.40	99.34	99.37
Median	291	2.97			98.69	98.58	98.79	98.79	98.93	99.34	99.15	99.36	99.45	99.38	99.28	99.32
σ	7	0.04			0.80	0.60	0.74	0.83	0.78	0.76	0.75	0.71	0.75	0.67	0.68	0.72
Min.	275	2.93			97.08	97.70	97.30	96.90	97.17	97.43	97.80	97.81	97.78	97.85	97.98	97.95
Max.	302	3.04			100.11	99.96	99.93	99.69	100.24	100.14	100.41	100.47	100.71	100.74	100.78	100.95

Lamp #	Initial (0 hrs)				Chromaticity Shift ($\Delta u'v'$)											
	CCx	CCy	Calc. CCT	ANSI Target	13104	14112	15120	16128	17136	18144	19152	20160	21168	22176	23184	24192
1	0.4315	0.4094	3142	3000	0.0006	0.0007	0.0007	0.0010	0.0008	0.0010	0.0008	0.0010	0.0010	0.0010	0.0009	0.0010
2	0.4352	0.4088	3073	3000	0.0007	0.0007	0.0009	0.0010	0.0009	0.0010	0.0009	0.0011	0.0010	0.0008	0.0006	0.0007
3	0.4299	0.4026	3117	3000	0.0005	0.0005	0.0004	0.0003	0.0006	0.0009	0.0009	0.0009	0.0009	0.0009	0.0009	0.0009
4	0.4323	0.4100	3133	3000	0.0008	0.0009	0.0010	0.0009	0.0010	0.0011	0.0010	0.0011	0.0011	0.0012	0.0009	0.0009
5	0.4366	0.4129	3082	3000	0.0008	0.0009	0.0009	0.0008	0.0009	0.0011	0.0010	0.0011	0.0011	0.0011	0.0007	0.0008
6	0.4350	0.4076	3067	3000	0.0008	0.0008	0.0007	0.0009	0.0009	0.0009	0.0009	0.0010	0.0011	0.0012	0.0010	0.0011
7	0.4350	0.4072	3064	3000	0.0006	0.0007	0.0007	0.0009	0.0009	0.0009	0.0009	0.0009	0.0009	0.0008	0.0005	0.0007
8	0.4351	0.4082	3070	3000	0.0008	0.0008	0.0008	0.0007	0.0009	0.0010	0.0010	0.0011	0.0011	0.0008	0.0007	0.0008
9	0.4350	0.4102	3088	3000	0.0008	0.0008	0.0009	0.0009	0.0011	0.0012	0.0011	0.0010	0.0011	0.0011	0.0007	0.0008
10	0.4357	0.4093	3068	3000	0.0008	0.0009	0.0010	0.0012	0.0010	0.0011	0.0009	0.0011	0.0012	0.0012	0.0010	0.0011
11	0.4424	0.4176	3022	3000	0.0007	0.0008	0.0007	0.0009	0.0009	0.0011	0.0010	0.0012	0.0012	0.0012	0.0011	0.0011
12	0.4407	0.4155	3033	3000	0.0013	0.0013	0.0013	0.0012	0.0015	0.0015	0.0015	0.0016	0.0016	0.0015	0.0015	0.0016
13	0.4382	0.4126	3052	3000	0.0017	0.0015	0.0018	0.0019	0.0019	0.0018	0.0020	0.0019	0.0020	0.0017	0.0017	0.0016
14	0.4411	0.4175	3042	3000	0.0010	0.0009	0.0011	0.0012	0.0012	0.0012	0.0012	0.0013	0.0014	0.0013	0.0013	0.0013
15	0.4398	0.4162	3054	3000	0.0008	0.0006	0.0009	0.0009	0.0009	0.0009	0.0009	0.0008	0.0010	0.0009	0.0007	0.0006
16	0.4370	0.4136	3080	3000	0.0011	0.0012	0.0012	0.0012	0.0014	0.0015	0.0014	0.0015	0.0016	0.0015	0.0015	0.0016
17	0.4413	0.4159	3026	3000	0.0013	0.0013	0.0014	0.0014	0.0015	0.0014	0.0015	0.0015	0.0015	0.0014	0.0013	0.0011
18	0.4433	0.4157	2992	3000	0.0016	0.0015	0.0016	0.0017	0.0017	0.0018	0.0017	0.0019	0.0019	0.0017	0.0018	0.0018
19	0.4418	0.4175	3031	3000	0.0009	0.0009	0.0008	0.0011	0.0011	0.0011	0.0011	0.0004	0.0005	0.0011	0.0012	0.0007
20	0.4395	0.4154	3052	3000	0.0010	0.0011	0.0012	0.0012	0.0011	0.0011	0.0012	0.0012	0.0012	0.0013	0.0012	0.0012
21	0.4383	0.4124	3049	3000	0.0011	0.0012	0.0012	0.0012	0.0014	0.0014	0.0014	0.0015	0.0016	0.0015	0.0016	0.0014
22	0.4362	0.4124	3084	3000	0.0013	0.0013	0.0015	0.0014	0.0014	0.0016	0.0016	0.0016	0.0016	0.0015	0.0014	0.0012
23	0.4396	0.4141	3040	3000	0.0013	0.0014	0.0015	0.0014	0.0016	0.0017	0.0016	0.0009	0.0010	0.0017	0.0017	0.0012
24	0.4360	0.4103	3071	3000	0.0011	0.0012	0.0013	0.0014	0.0013	0.0014	0.0014	0.0014	0.0014	0.0014	0.0008	0.0007
25	0.4401	0.4172	3056	3000	0.0009	0.0008	0.0009	0.0011	0.0011	0.0013	0.0013	0.0015	0.0015	0.0014	0.0014	0.0012
n	25	25	25	25	25	25	25	25	25	25	25	25	25	25	25	25
Mean					0.0010	0.0010	0.0010	0.0011	0.0012	0.0012	0.0012	0.0012	0.0013	0.0012	0.0011	0.0011
Median					0.0009	0.0009	0.0010	0.0011	0.0011	0.0011	0.0011	0.0011	0.0012	0.0012	0.0011	0.0011
σ					0.0003	0.0003	0.0004	0.0003	0.0003	0.0003	0.0003	0.0003	0.0003	0.0003	0.0004	0.0003
Min.					0.0005	0.0005	0.0004	0.0003	0.0006	0.0009	0.0008	0.0004	0.0005	0.0008	0.0005	0.0006
Max.					0.0017	0.0015	0.0018	0.0019	0.0019	0.0018	0.0020	0.0019	0.0020	0.0017	0.0018	0.0018

DATA SET 16: 85°C; 700 mA (2700K)

Tested LED Package Series	XLamp XP-G3 Standard White LEDs
Tested Drive Current [I_F]	700 mA
Testing Initiation Date	March 27, 2019
Case Temperature [T_s]	85°C
Ambient Temperature [T_A]	85°C
Failures observed	None

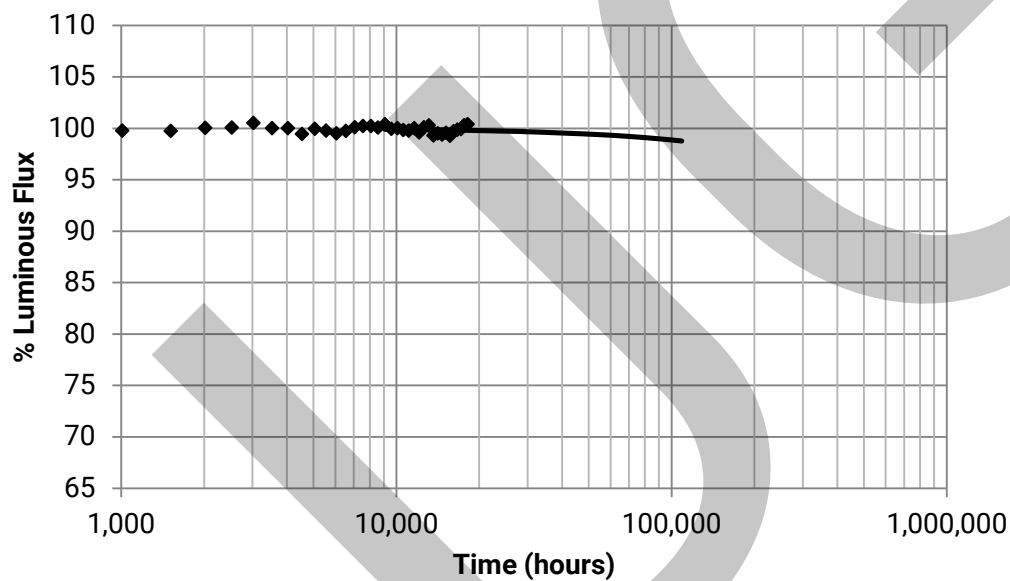
Test Results Summary

Test Duration (hrs)	Relative Luminous Flux	Relative Color Shift ($\Delta u'v'$)	Relative CRI Shift (ΔRa)	Relative Voltage Shift ($\% \Delta V_F$)	Test Duration (hrs)	Relative Luminous Flux	Relative Color Shift ($\Delta u'v'$)	Relative CRI Shift (ΔRa)	Relative Voltage Shift ($\% \Delta V_F$)
0	100.00%	0.0000	0.0	0.0%	10080	100.01%	0.0005	-0.1	0.2%
168	100.48%	0.0004	-0.1	-0.1%	10584	99.83%	0.0006	-0.2	0.1%
1008	99.79%	0.0006	-0.2	0.0%	11088	99.78%	0.0005	-0.1	0.2%
1512	99.74%	0.0006	-0.1	0.1%	11592	100.01%	0.0004	-0.1	0.2%
2016	100.04%	0.0006	-0.2	0.1%	12096	99.61%	0.0004	-0.1	0.2%
2520	100.07%	0.0006	-0.1	0.1%	12600	100.12%	0.0005	-0.1	0.2%
3024	100.53%	0.0006	-0.2	0.1%	13104	100.30%	0.0005	-0.1	0.2%
3528	100.03%	0.0005	-0.1	0.1%	13608	99.32%	0.0005	-0.1	0.2%
4032	100.03%	0.0005	-0.1	0.1%	14112	99.50%	0.0005	-0.1	0.2%
4536	99.47%	0.0005	-0.1	0.1%	14616	99.40%	0.0003	0.0	0.2%
5040	99.97%	0.0005	-0.1	0.1%	15120	99.56%	0.0003	-0.1	0.2%
5544	99.77%	0.0005	-0.1	0.1%	15624	99.28%	0.0005	-0.1	0.2%
6048	99.50%	0.0005	-0.1	0.1%	16128	99.72%	0.0002	0.0	0.2%
6552	99.76%	0.0006	-0.1	0.1%	16632	99.86%	0.0003	0.0	0.2%
7056	100.10%	0.0006	-0.2	0.1%	17136	99.94%	0.0002	0.1	0.2%
7560	100.23%	0.0007	-0.1	0.2%	17640	100.31%	0.0002	0.0	0.2%
8064	100.22%	0.0006	-0.2	0.1%	18144	100.39%	0.0003	0.0	0.2%
8568	100.07%	0.0006	-0.1	0.1%					
9072	100.40%	0.0005	-0.1	0.1%					
9576	99.97%	0.0005	-0.2	0.1%					

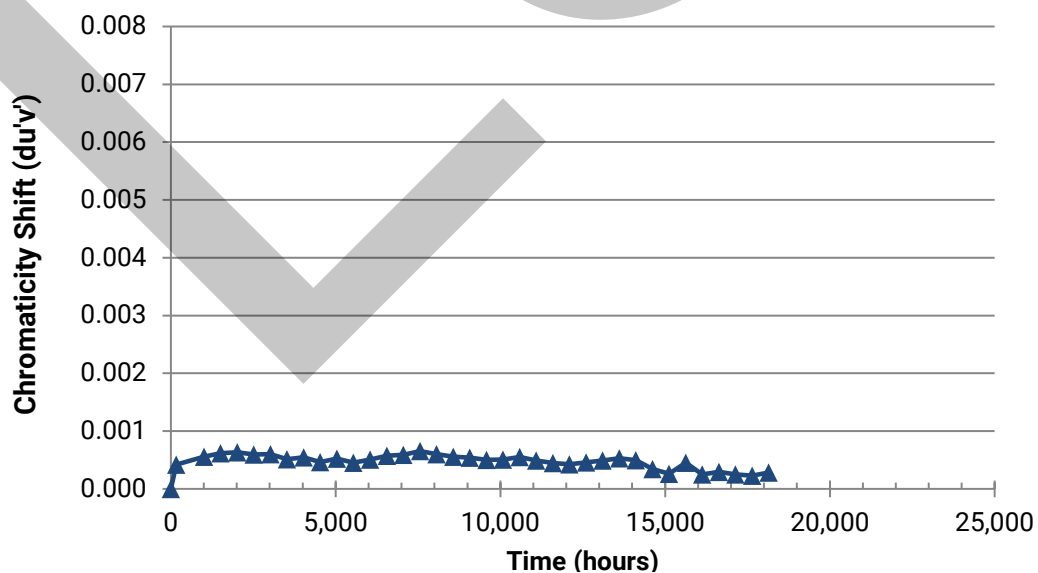
DATA SET 16: 85°C; 700 mA (2700K)

TM-21 Projection

Test duration	18,144 hours
Test duration used for projection	t=9,072 to t=18,144
α	1.152E-07
β	1.000E+00
Reported Lifetimes	L90(18k) > 109,000 hrs
	L80(18k) > 109,000 hrs
	L70(18k) > 109,000 hrs



Color Shift Graph



DATA SET 16: 85°C; 700 mA (2700K)

Lamp #	Initial (0 hrs)				Lumen Maintenance (%)											
	LF (lm)	V _F (V)	Calc. CCT	ANSI Target	168	1008	1512	2016	2520	3024	3528	4032	4536	5040	5544	6048
1	342	2.92	2662	2700	100.53	100.00	99.82	100.00	99.97	100.55	100.00	100.12	99.33	100.32	99.65	99.59
2	353	2.88	2697	2700	100.85	100.06	100.11	100.48	100.48	100.74	100.51	100.37	99.94	100.34	100.25	100.00
3	345	2.88	2693	2700	100.55	99.48	99.83	99.91	99.94	100.61	100.12	100.03	99.56	100.17	99.97	99.74
4	346	2.90	2694	2700	99.91	99.54	99.51	99.77	99.80	100.32	99.60	99.71	99.42	99.86	99.97	99.36
5	342	2.86	2622	2700	100.55	99.97	99.68	99.97	99.94	100.55	100.06	99.82	99.62	99.85	99.97	99.59
6	346	2.88	2684	2700	100.12	99.71	99.65	100.06	100.14	100.55	99.57	100.09	99.57	100.32	100.12	99.77
7	352	2.89	2727	2700	100.51	99.89	99.86	100.23	100.26	100.60	99.52	100.28	99.49	100.14	99.72	99.63
8	348	2.89	2744	2700	100.20	98.97	99.40	99.86	99.71	100.14	99.63	99.51	98.94	99.31	99.11	98.85
9	353	2.88	2703	2700	100.34	99.97	99.55	100.09	100.11	100.74	99.94	100.17	99.77	99.86	99.77	99.40
10	351	2.88	2717	2700	100.43	99.69	99.46	100.03	99.89	100.40	99.83	99.80	99.09	99.17	99.09	98.86
11	353	2.87	2683	2700	100.65	99.72	99.69	100.28	100.17	100.62	100.40	100.03	100.03	99.77	99.94	99.40
12	352	2.87	2692	2700	100.43	99.77	99.57	99.26	99.91	100.28	99.86	99.83	98.92	99.89	99.18	99.40
13	350	2.90	2699	2700	100.54	99.37	99.66	99.80	99.66	100.26	100.00	99.97	99.40	99.60	99.37	99.14
14	345	2.91	2688	2700	100.75	99.88	99.88	100.03	100.15	100.44	100.23	100.20	99.45	100.38	100.41	99.94
15	348	2.89	2736	2700	100.81	99.48	99.45	99.77	99.68	100.17	99.80	99.51	99.19	99.45	99.45	98.99
16	347	2.91	2681	2700	100.20	100.52	100.37	100.81	100.75	101.27	100.81	100.66	99.77	100.75	100.69	100.06
17	352	2.90	2703	2700	100.54	99.80	99.66	99.91	99.89	100.20	99.89	99.91	98.84	100.00	99.80	99.49
18	351	2.90	2749	2700	101.17	100.37	100.20	100.31	100.37	100.88	100.28	100.26	99.32	100.20	99.29	99.60
19	354	2.88	2695	2700	100.20	99.92	99.69	100.28	100.37	100.65	100.20	100.20	99.66	100.11	99.94	99.80
20	355	2.89	2682	2700	100.39	99.61	99.69	100.00	100.20	100.70	100.25	100.11	100.03	99.89	99.66	99.35
n	20	20	20	20	20	20	20	20	20	20	20	20	20	20	20	20
Mean	349	2.89	2698		100.48	99.79	99.74	100.04	100.07	100.53	100.03	100.03	99.47	99.97	99.77	99.50
Median	350	2.89	2695		100.52	99.79	99.69	100.02	100.04	100.55	100.00	100.06	99.47	99.95	99.79	99.54
σ	4	0.02	29		0.29	0.34	0.25	0.32	0.29	0.27	0.33	0.28	0.35	0.39	0.43	0.35
Min.	342	2.86	2622		99.91	98.97	99.40	99.26	99.66	100.14	99.52	99.51	98.84	99.17	99.09	98.85
Max.	355	2.92	2749		101.17	100.52	100.37	100.81	100.75	101.27	100.81	100.66	100.03	100.75	100.69	100.06

Lamp #	Initial (0 hrs)				Chromaticity Shift (Δu'v')											
	CCx	CCy	Calc. CCT	ANSI Target	168	1008	1512	2016	2520	3024	3528	4032	4536	5040	5544	6048
1	0.4587	0.4044	2662	2700	0.0003	0.0005	0.0004	0.0004	0.0003	0.0004	0.0003	0.0004	0.0004	0.0006	0.0004	0.0005
2	0.4554	0.4027	2697	2700	0.0004	0.0006	0.0006	0.0006	0.0006	0.0006	0.0004	0.0004	0.0005	0.0005	0.0004	0.0004
3	0.4524	0.3970	2693	2700	0.0005	0.0006	0.0007	0.0007	0.0006	0.0007	0.0006	0.0006	0.0005	0.0006	0.0006	0.0006
4	0.4519	0.3963	2694	2700	0.0004	0.0007	0.0007	0.0007	0.0007	0.0006	0.0005	0.0006	0.0005	0.0006	0.0006	0.0005
5	0.4612	0.4039	2622	2700	0.0004	0.0005	0.0004	0.0005	0.0004	0.0004	0.0004	0.0003	0.0003	0.0004	0.0003	0.0004
6	0.4561	0.4024	2684	2700	0.0004	0.0006	0.0007	0.0007	0.0007	0.0007	0.0006	0.0007	0.0006	0.0008	0.0007	0.0008
7	0.4481	0.3933	2727	2700	0.0006	0.0008	0.0009	0.0009	0.0009	0.0008	0.0006	0.0009	0.0007	0.0007	0.0006	0.0007
8	0.4477	0.3944	2744	2700	0.0004	0.0005	0.0007	0.0007	0.0008	0.0007	0.0006	0.0006	0.0005	0.0006	0.0004	0.0005
9	0.4559	0.4043	2703	2700	0.0004	0.0005	0.0005	0.0005	0.0005	0.0006	0.0005	0.0004	0.0005	0.0004	0.0004	0.0004
10	0.4539	0.4024	2717	2700	0.0003	0.0003	0.0003	0.0004	0.0003	0.0004	0.0002	0.0002	0.0001	0.0001	0.0001	0.0001
11	0.4511	0.3936	2683	2700	0.0005	0.0005	0.0006	0.0007	0.0007	0.0006	0.0006	0.0006	0.0006	0.0003	0.0003	0.0004
12	0.4531	0.3981	2692	2700	0.0005	0.0007	0.0007	0.0007	0.0007	0.0007	0.0007	0.0007	0.0005	0.0007	0.0005	0.0007
13	0.4512	0.3956	2699	2700	0.0003	0.0003	0.0006	0.0006	0.0005	0.0005	0.0005	0.0005	0.0004	0.0004	0.0003	0.0004
14	0.4529	0.3973	2688	2700	0.0004	0.0006	0.0006	0.0006	0.0005	0.0005	0.0006	0.0006	0.0004	0.0006	0.0006	0.0006
15	0.4476	0.3934	2736	2700	0.0005	0.0004	0.0006	0.0006	0.0006	0.0006	0.0005	0.0006	0.0005	0.0005	0.0004	0.0005
16	0.4527	0.3962	2681	2700	0.0003	0.0007	0.0006	0.0007	0.0006	0.0007	0.0006	0.0006	0.0005	0.0006	0.0007	0.0006
17	0.4519	0.3973	2703	2700	0.0004	0.0006	0.0007	0.0007	0.0006	0.0006	0.0005	0.0006	0.0004	0.0007	0.0006	0.0007
18	0.4469	0.3936	2749	2700	0.0005	0.0007	0.0008	0.0008	0.0007	0.0008	0.0006	0.0007	0.0005	0.0006	0.0004	0.0006
19	0.4559	0.4034	2695	2700	0.0003	0.0005	0.0005	0.0006	0.0006	0.0005	0.0004	0.0005	0.0004	0.0004	0.0004	0.0004
20	0.4533	0.3973	2682	2700	0.0004	0.0006	0.0007	0.0007	0.0008	0.0007	0.0006	0.0007	0.0008	0.0006	0.0004	0.0005
n	20	20	20	20	20	20	20	20	20	20	20	20	20	20	20	20
Mean	0.4529	0.3983	2698		0.0004	0.0006	0.0006	0.0006	0.0006	0.0006	0.0005	0.0005	0.0005	0.0005	0.0005	0.0005
Median	0.4528	0.3973	2695		0.0004	0.0006	0.0006	0.0007	0.0006	0.0006	0.0005	0.0006	0.0005	0.0006	0.0004	0.0005
σ	0.0037	0.0041	29		0.0001	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001	0.0002	0.0001	0.0002	0.0001	0.0002
Min.	0.4469	0.3933	2622		0.0003	0.0003	0.0003	0.0004	0.0003	0.0004	0.0002	0.0002	0.0001	0.0001	0.0001	0.0001
Max.	0.4612	0.4044	2749		0.0006	0.0008	0.0009	0.0009	0.0009	0.0008	0.0007	0.0009	0.0008	0.0008	0.0007	0.0008

DATA SET 16: 85°C; 700 mA (2700K)

Lamp #	Initial (0 hrs)				Lumen Maintenance (%)											
	LF (lm)	V _F (V)	Calc. CCT	ANSI Target	6552	7056	7560	8064	8568	9072	9576	10080	10584	11088	11592	12096
1	342	2.92	2662	2700	99.80	100.20	100.50	100.35	100.29	101.02	100.61	100.64	100.26	100.12	100.32	100.03
2	353	2.88	2697	2700	100.25	100.82	101.16	100.88	100.76	101.44	101.10	101.22	100.93	100.85	101.10	100.48
3	345	2.88	2693	2700	100.00	100.38	100.61	100.46	100.64	100.84	100.67	100.73	100.46	100.32	100.35	100.17
4	346	2.90	2694	2700	99.51	99.77	100.17	100.12	100.09	100.40	99.71	99.91	99.80	99.62	99.91	99.51
5	342	2.86	2622	2700	99.71	99.97	100.03	100.12	99.74	100.09	99.47	99.53	99.45	99.45	99.68	99.50
6	346	2.88	2684	2700	100.03	100.32	100.49	100.26	100.12	100.58	100.20	100.23	100.26	100.12	100.29	99.86
7	352	2.89	2727	2700	99.86	100.14	100.28	100.14	100.37	100.63	100.17	99.97	99.97	99.94	99.94	99.40
8	348	2.89	2744	2700	98.82	99.08	99.05	99.31	98.68	98.97	98.59	98.42	98.31	98.42	98.68	98.25
9	353	2.88	2703	2700	99.77	100.09	100.48	100.37	100.45	100.60	100.48	100.45	100.17	100.31	100.54	99.60
10	351	2.88	2717	2700	99.29	99.14	99.37	99.63	99.20	99.83	98.92	99.20	99.00	98.83	99.12	98.97
11	353	2.87	2683	2700	99.72	99.94	99.97	99.91	99.89	100.51	100.06	99.86	99.49	98.61	99.80	99.43
12	352	2.87	2692	2700	99.63	100.06	100.11	100.43	100.26	100.57	100.03	100.31	99.89	100.06	100.09	99.80
13	350	2.90	2699	2700	99.49	99.69	99.49	99.69	99.46	99.37	99.51	99.46	99.37	99.31	99.74	99.23
14	345	2.91	2688	2700	100.03	100.55	100.73	100.64	100.46	100.67	100.35	100.32	100.15	100.15	100.38	99.94
15	348	2.89	2736	2700	99.37	99.57	99.54	99.60	99.05	99.05	98.39	98.71	98.56	98.99	99.65	99.22
16	347	2.91	2681	2700	100.37	100.89	100.72	101.21	100.92	101.24	101.04	100.92	100.81	100.66	100.61	100.40
17	352	2.90	2703	2700	99.69	100.20	100.37	100.00	99.60	100.06	99.46	99.46	99.38	99.66	99.66	99.18
18	351	2.90	2749	2700	99.83	100.26	100.48	100.37	100.43	100.83	100.51	100.43	100.20	100.14	100.40	99.77
19	354	2.88	2695	2700	100.08	100.59	100.99	100.76	100.85	101.13	100.73	100.73	100.45	100.54	100.73	100.34
20	355	2.89	2682	2700	99.94	100.31	100.14	100.20	100.06	100.08	99.30	99.61	99.69	99.41	99.15	99.07
n	20	20	20	20	20	20	20	20	20	20	20	20	20	20	20	20
Mean	349	2.89	2698		99.76	100.10	100.23	100.22	100.07	100.40	99.97	100.01	99.83	99.78	100.01	99.61
Median	350	2.89	2695		99.79	100.17	100.33	100.23	100.19	100.58	100.12	100.10	99.93	100.00	100.02	99.56
σ	4	0.02	29		0.35	0.48	0.55	0.46	0.62	0.68	0.78	0.73	0.69	0.69	0.59	0.55
Min.	342	2.86	2622		98.82	99.08	99.05	99.31	98.68	98.97	98.39	98.42	98.31	98.42	98.68	98.25
Max.	355	2.92	2749		100.37	100.89	101.16	101.21	100.92	101.44	101.10	101.22	100.93	100.85	101.10	100.48

Lamp #	Initial (0 hrs)				Chromaticity Shift (Δu'v')											
	CCx	CCy	Calc. CCT	ANSI Target	6552	7056	7560	8064	8568	9072	9576	10080	10584	11088	11592	12096
1	0.4587	0.4044	2662	2700	0.0006	0.0006	0.0007	0.0005	0.0005	0.0007	0.0006	0.0005	0.0005	0.0004	0.0003	0.0003
2	0.4554	0.4027	2697	2700	0.0005	0.0006	0.0007	0.0006	0.0006	0.0006	0.0005	0.0005	0.0006	0.0004	0.0004	0.0003
3	0.4524	0.3970	2693	2700	0.0007	0.0007	0.0008	0.0006	0.0007	0.0007	0.0008	0.0008	0.0007	0.0006	0.0005	0.0005
4	0.4519	0.3963	2694	2700	0.0006	0.0006	0.0006	0.0006	0.0007	0.0006	0.0005	0.0005	0.0006	0.0005	0.0005	0.0004
5	0.4612	0.4039	2622	2700	0.0004	0.0004	0.0005	0.0005	0.0003	0.0003	0.0003	0.0003	0.0004	0.0003	0.0004	0.0005
6	0.4561	0.4024	2684	2700	0.0008	0.0009	0.0008	0.0008	0.0007	0.0008	0.0007	0.0006	0.0007	0.0006	0.0005	0.0005
7	0.4481	0.3933	2727	2700	0.0008	0.0008	0.0008	0.0007	0.0009	0.0009	0.0008	0.0008	0.0009	0.0009	0.0007	0.0007
8	0.4477	0.3944	2744	2700	0.0005	0.0005	0.0006	0.0006	0.0004	0.0003	0.0003	0.0003	0.0004	0.0003	0.0002	0.0002
9	0.4559	0.4043	2703	2700	0.0004	0.0004	0.0006	0.0005	0.0005	0.0004	0.0005	0.0003	0.0004	0.0003	0.0003	0.0003
10	0.4539	0.4024	2717	2700	0.0002	0.0001	0.0002	0.0003	0.0001	0.0002	0.0002	0.0003	0.0003	0.0004	0.0005	0.0006
11	0.4511	0.3936	2683	2700	0.0005	0.0004	0.0006	0.0005	0.0004	0.0004	0.0004	0.0005	0.0005	0.0003	0.0004	0.0003
12	0.4531	0.3981	2692	2700	0.0008	0.0008	0.0008	0.0008	0.0007	0.0007	0.0006	0.0007	0.0006	0.0007	0.0005	0.0005
13	0.4512	0.3956	2699	2700	0.0005	0.0005	0.0003	0.0004	0.0002	0.0003	0.0004	0.0003	0.0004	0.0004	0.0004	0.0003
14	0.4529	0.3973	2688	2700	0.0006	0.0007	0.0008	0.0007	0.0006	0.0006	0.0005	0.0005	0.0006	0.0004	0.0004	0.0004
15	0.4476	0.3934	2736	2700	0.0005	0.0006	0.0007	0.0006	0.0004	0.0003	0.0003	0.0003	0.0003	0.0004	0.0004	0.0004
16	0.4527	0.3962	2681	2700	0.0007	0.0007	0.0007	0.0007	0.0007	0.0006	0.0006	0.0006	0.0007	0.0005	0.0003	0.0003
17	0.4519	0.3973	2703	2700	0.0007	0.0007	0.0008	0.0007	0.0006	0.0007	0.0005	0.0005	0.0005	0.0006	0.0005	0.0004
18	0.4469	0.3936	2749	2700	0.0007	0.0007	0.0008	0.0008	0.0008	0.0008	0.0007	0.0009	0.0009	0.0007	0.0007	0.0007
19	0.4559	0.4034	2695	2700	0.0005	0.0006	0.0006	0.0005	0.0006	0.0005	0.0005	0.0004	0.0004	0.0004	0.0003	0.0005
20	0.4533	0.3973	2682	2700	0.0007	0.0007	0.0008	0.0007	0.0006	0.0005	0.0005	0.0006	0.0007	0.0006	0.0004	0.0005
n	20	20	20	20	20	20	20	20	20	20	20	20	20	20	20	20
Mean	0.4529	0.3983	2698		0.0006	0.0006	0.0007	0.0006	0.0006	0.0005	0.0005	0.0005	0.0006	0.0005	0.0004	0.0004
Median	0.4528	0.3973	2695		0.0006	0.0006	0.0007	0.0006	0.0006	0.0006	0.0005	0.0005	0.0005	0.0004	0.0004	0.0004
σ	0.0037	0.0041	29		0.0001	0.0002	0.0002	0.0001	0.0002	0.0002	0.0002	0.0002	0.0002	0.0002	0.0001	0.0001
Min.	0.4469	0.3933	2622		0.0002	0.0001	0.0002	0.0003	0.0001	0.0002	0.0002	0.0003	0.0003	0.0003	0.0002	0.0002
Max.	0.4612	0.4044	2749		0.0008	0.0009	0.0008	0.0008	0.0009	0.0009	0.0008	0.0009	0.0009	0.0009	0.0007	0.0007

DATA SET 16: 85°C; 700 mA (2700K)

Lamp #	Initial (0 hrs)				Lumen Maintenance (%)											
	LF (lm)	V _F (V)	Calc. CCT	ANSI Target	12600	13104	13608	14112	14616	15120	15624	16128	16632	17136	17640	18144
1	342	2.92	2662	2700	100.67	101.08	99.71	99.80	99.74	99.88	99.65	100.00	100.47	100.64	100.61	100.99
2	353	2.88	2697	2700	101.16	101.33	100.45	100.42	100.42	100.40	100.06	100.51	100.88	101.05	101.02	101.19
3	345	2.88	2693	2700	100.58	100.99	99.88	99.85	99.80	99.88	99.68	100.12	100.44	100.67	100.58	100.87
4	346	2.90	2694	2700	99.86	100.20	99.34	99.31	99.28	99.28	99.05	99.60	100.20	99.83	101.33	100.49
5	342	2.86	2622	2700	99.68	99.42	98.80	99.30	99.04	99.33	99.09	99.59	99.24	99.39	101.90	100.09
6	346	2.88	2684	2700	100.35	100.69	99.51	99.62	99.68	99.77	99.45	99.91	100.17	100.20	100.43	100.64
7	352	2.89	2727	2700	99.91	100.43	99.29	99.26	99.23	99.43	99.18	99.60	99.83	99.80	100.77	100.45
8	348	2.89	2744	2700	98.76	98.56	97.59	98.28	97.64	98.10	97.87	98.51	98.13	97.76	99.80	98.82
9	353	2.88	2703	2700	100.62	100.48	100.09	99.83	99.89	99.94	99.69	100.28	100.62	100.57	101.30	101.05
10	351	2.88	2717	2700	99.37	99.71	98.20	99.00	99.09	99.09	98.83	99.49	99.00	99.20	99.14	99.80
11	353	2.87	2683	2700	99.97	100.06	98.67	99.12	99.35	99.43	99.21	99.77	98.75	99.72	99.60	100.14
12	352	2.87	2692	2700	100.20	100.62	99.52	99.74	99.60	99.80	99.57	99.89	100.48	100.54	100.48	100.65
13	350	2.90	2699	2700	99.66	99.77	98.80	99.03	98.97	99.09	98.77	99.37	99.29	99.26	99.23	99.89
14	345	2.91	2688	2700	100.17	100.55	99.68	99.68	99.48	99.80	99.39	99.85	100.38	100.38	100.44	100.58
15	348	2.89	2736	2700	99.57	99.05	98.48	99.28	99.05	99.34	98.96	98.79	98.68	99.05	98.91	99.28
16	347	2.91	2681	2700	100.95	101.33	100.26	99.91	99.77	100.03	99.74	100.14	100.46	100.63	100.61	100.89
17	352	2.90	2703	2700	99.80	100.20	99.18	99.32	99.09	99.35	98.95	99.46	99.86	99.57	99.49	100.09
18	351	2.90	2749	2700	100.57	100.54	99.74	99.57	99.49	99.37	99.20	99.52	99.43	99.72	99.60	100.11
19	354	2.88	2695	2700	100.71	101.04	100.11	100.28	100.25	100.25	99.89	100.37	100.93	100.87	100.93	101.33
20	355	2.89	2682	2700	99.80	99.97	99.15	99.32	99.21	99.58	99.32	99.72	99.92	100.03	100.08	100.51
n	20	20	20	20	20	20	20	20	20	20	20	20	20	20	20	20
Mean	349	2.89	2698		100.12	100.30	99.32	99.50	99.40	99.56	99.28	99.72	99.86	99.94	100.31	100.39
Median	350	2.89	2695		100.07	100.46	99.43	99.45	99.42	99.51	99.27	99.75	100.05	99.93	100.46	100.50
σ	4	0.02	29		0.59	0.74	0.73	0.48	0.58	0.50	0.49	0.49	0.79	0.79	0.81	0.63
Min.	342	2.86	2622		98.76	98.56	97.59	98.28	97.64	98.10	97.87	98.51	98.13	97.76	98.91	98.82
Max.	355	2.92	2749		101.16	101.33	100.45	100.42	100.42	100.40	100.06	100.51	100.93	101.05	101.90	101.33

Lamp #	Initial (0 hrs)				Chromaticity Shift (Δu'v')											
	CCx	CCy	Calc. CCT	ANSI Target	12600	13104	13608	14112	14616	15120	15624	16128	16632	17136	17640	18144
1	0.4587	0.4044	2662	2700	0.0004	0.0005	0.0005	0.0004	0.0003	0.0003	0.0003	0.0002	0.0003	0.0003	0.0001	0.0001
2	0.4554	0.4027	2697	2700	0.0005	0.0005	0.0006	0.0005	0.0004	0.0004	0.0005	0.0003	0.0004	0.0003	0.0004	0.0004
3	0.4524	0.3970	2693	2700	0.0004	0.0005	0.0005	0.0005	0.0003	0.0002	0.0004	0.0002	0.0002	0.0001	0.0001	0.0002
4	0.4519	0.3963	2694	2700	0.0005	0.0005	0.0006	0.0006	0.0003	0.0003	0.0004	0.0001	0.0002	0.0003	0.0003	0.0003
5	0.4612	0.4039	2622	2700	0.0005	0.0009	0.0008	0.0007	0.0005	0.0005	0.0004	0.0003	0.0007	0.0004	0.0005	0.0006
6	0.4561	0.4024	2684	2700	0.0005	0.0005	0.0004	0.0005	0.0004	0.0000	0.0004	0.0002	0.0002	0.0001	0.0003	0.0001
7	0.4481	0.3933	2727	2700	0.0006	0.0005	0.0004	0.0005	0.0005	0.0004	0.0006	0.0004	0.0002	0.0003	0.0003	0.0005
8	0.4477	0.3944	2744	2700	0.0003	0.0004	0.0006	0.0003	0.0002	0.0003	0.0006	0.0003	0.0002	0.0003	0.0004	0.0003
9	0.4559	0.4043	2703	2700	0.0004	0.0004	0.0005	0.0005	0.0003	0.0004	0.0005	0.0003	0.0005	0.0003	0.0001	0.0004
10	0.4539	0.4024	2717	2700	0.0008	0.0007	0.0010	0.0007	0.0005	0.0007	0.0006	0.0005	0.0008	0.0006	0.0005	0.0005
11	0.4511	0.3936	2683	2700	0.0004	0.0004	0.0006	0.0005	0.0002	0.0002	0.0005	0.0003	0.0003	0.0001	0.0000	0.0002
12	0.4531	0.3981	2692	2700	0.0004	0.0005	0.0004	0.0005	0.0004	0.0001	0.0005	0.0003	0.0002	0.0002	0.0001	0.0002
13	0.4512	0.3956	2699	2700	0.0004	0.0005	0.0006	0.0005	0.0002	0.0002	0.0005	0.0001	0.0002	0.0002	0.0002	0.0003
14	0.4529	0.3973	2688	2700	0.0004	0.0004	0.0004	0.0005	0.0002	0.0002	0.0005	0.0001	0.0002	0.0001	0.0001	0.0003
15	0.4476	0.3934	2736	2700	0.0004	0.0007	0.0005	0.0005	0.0003	0.0001	0.0004	0.0003	0.0002	0.0002	0.0001	0.0002
16	0.4527	0.3962	2681	2700	0.0004	0.0003	0.0004	0.0004	0.0003	0.0002	0.0005	0.0003	0.0004	0.0002	0.0001	0.0001
17	0.4519	0.3973	2703	2700	0.0004	0.0005	0.0004	0.0005	0.0003	0.0001	0.0005	0.0002	0.0001	0.0002	0.0001	0.0002
18	0.4469	0.3936	2749	2700	0.0006	0.0005	0.0005	0.0006	0.0006	0.0002	0.0006	0.0004	0.0001	0.0002	0.0002	0.0003
19	0.4559	0.4034	2695	2700	0.0006	0.0005	0.0006	0.0006	0.0004	0.0005	0.0005	0.0003	0.0005	0.0003	0.0004	0.0004
20	0.4533	0.3973	2682	2700	0.0005	0.0004	0.0005	0.0005	0.0004	0.0001	0.0003	0.0002	0.0001	0.0002	0.0002	0.0002
n	20	20	20	20	20	20	20	20	20	20	20	20	20	20	20	20
Mean	0.4529	0.3983	2698		0.0005	0.0005	0.0005	0.0005	0.0003	0.0003	0.0005	0.0002	0.0003	0.0002	0.0002	0.0003
Median	0.4528	0.3973	2695		0.0004	0.0005	0.0005	0.0005	0.0003	0.0002	0.0005	0.0003	0.0002	0.0002	0.0002	0.0003
σ	0.0037	0.0041	29		0.0001	0.0001	0.0002	0.0001	0.0001	0.0002	0.0001	0.0001	0.0002	0.0001	0.0002	0.0001
Min.	0.4469	0.3933	2622		0.0003	0.0003	0.0004	0.0003	0.0002	0.0000	0.0003	0.0001	0.0001	0.0001	0.0000	0.0001
Max.	0.4612	0.4044	2749		0.0008	0.0009	0.0010	0.0007	0.0006	0.0007	0.0006	0.0005	0.0008	0.0006	0.0005	0.0006

DATA SET 7: 105°C; 700 mA

Tested LED Package Series	XLamp XP-G3 Standard White LEDs
Tested Drive Current [I_F]	700 mA
Testing Initiation Date	November 2, 2015
Case Temperature [T_s]	105°C
Ambient Temperature [T_A]	105°C
Failures observed	None

Test Results Summary

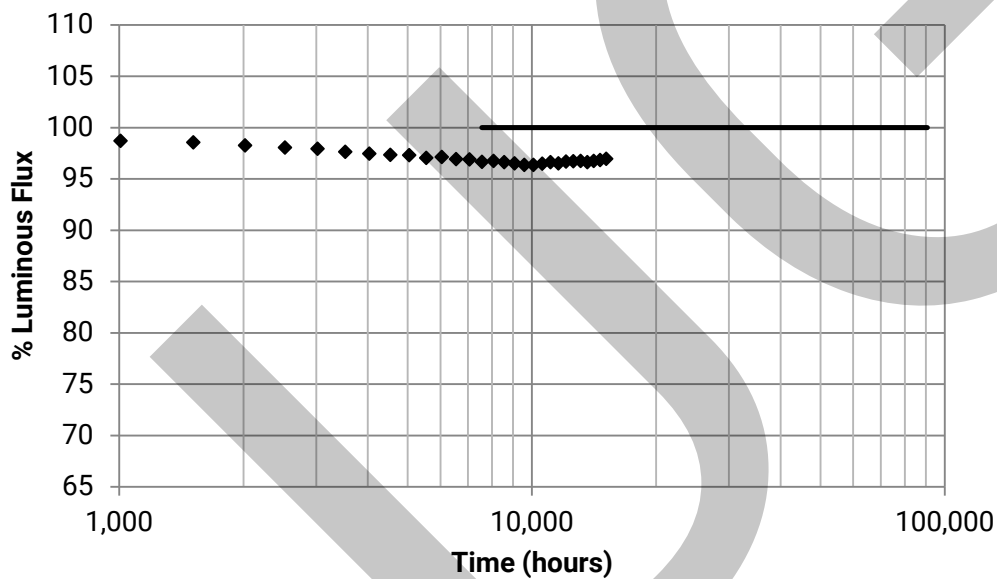
Test Duration (hrs)	Relative Luminous Flux	Relative Color Shift ($\Delta u'v'$)	Relative CRI Shift (ΔRa)	Relative Voltage Shift ($\% \Delta V_F$)	Test Duration (hrs)	Relative Luminous Flux	Relative Color Shift ($\Delta u'v'$)	Relative CRI Shift (ΔRa)	Relative Voltage Shift ($\% \Delta V_F$)
0	100.00%	0.0000	0.0	0.0%	10080	96.36%	0.0009	-0.2	N/R
168	99.26%	0.0005	-0.1	N/R	10584	96.50%	0.0009	-0.2	-1.1%
1008	98.71%	0.0007	-0.2	N/R	11088	96.64%	0.0009	-0.2	-1.0%
1512	98.56%	0.0008	-0.1	N/R	11592	96.51%	0.0010	-0.3	-0.5%
2016	98.27%	0.0008	-0.2	N/R	12096	96.68%	0.0010	-0.3	-0.5%
2520	98.05%	0.0007	-0.1	N/R	12600	96.71%	0.0010	-0.3	-0.7%
3024	97.94%	0.0007	-0.2	N/R	13104	96.75%	0.0011	-0.3	-0.7%
3528	97.65%	0.0007	-0.1	N/R	13608	96.65%	0.0012	-0.3	-0.6%
4032	97.47%	0.0008	-0.2	N/R	14112	96.75%	0.0012	-0.3	-0.8%
4536	97.36%	0.0007	-0.2	N/R	14616	96.83%	0.0013	-0.3	-0.5%
5040	97.32%	0.0006	-0.2	N/R	15120	96.95%	0.0013	-0.4	-0.8%
5544	97.05%	0.0006	-0.2	N/R					
6048	97.14%	0.0006	-0.2	N/R					
6552	96.94%	0.0007	-0.2	N/R					
7056	96.91%	0.0007	-0.2	N/R					
7560	96.67%	0.0006	-0.2	N/R					
8064	96.74%	0.0007	-0.2	N/R					
8568	96.63%	0.0007	-0.2	N/R					
9072	96.52%	0.0007	-0.3	N/R					
9576	96.38%	0.0008	-0.3	N/R					

Note: "N/R" indicates data points that are not reported

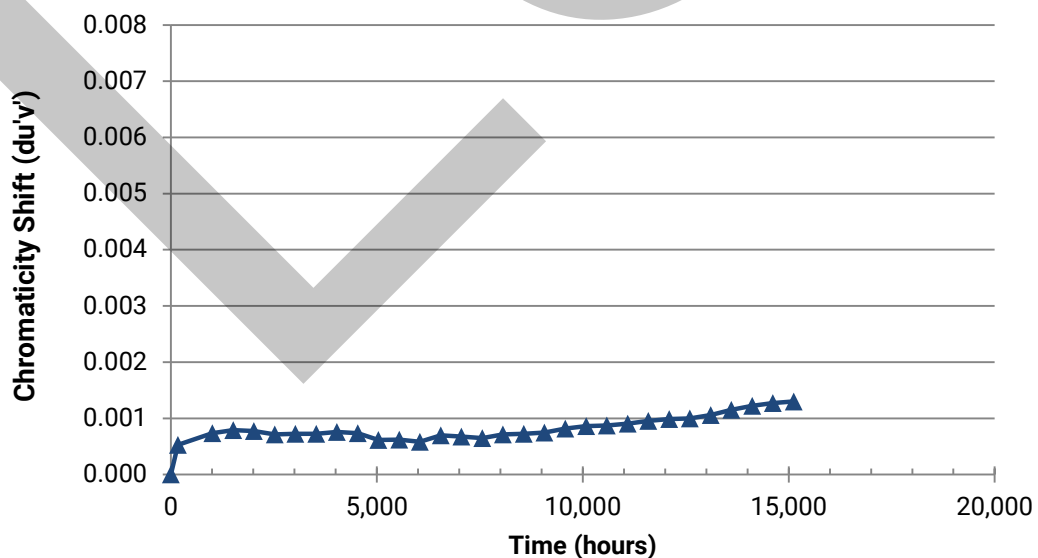
DATA SET 7: 105°C; 700 mA

TM-21 Projection

Test duration	15,120 hours
Test duration used for projection	t=7,560 to t=15,120
α	-3.806E-07
β	9.623E-01
Reported Lifetimes	L90(15k) > 90,700 hours
	L80(15k) > 90,700 hours
	L70(15k) > 90,700 hours



Color Shift Graph



DATA SET 7: 105°C; 700 mA

Lamp #	Initial (0 hrs)				Lumen Maintenance (%)											
	LF (lm)	V _F (V)	Calc. CCT	ANSI Target	168	1008	1512	2016	2520	3024	3528	4032	4536	5040	5544	6048
1	295	2.92	3082	3000	99.56	98.92	98.78	98.41	98.34	98.48	98.07	97.83	97.93	98.00	97.53	96.68
2	295	3.02	3019	3000	99.36	98.88	97.83	97.73	97.45	97.69	96.84	97.11	97.08	96.78	96.78	97.35
3	295	2.96	3007	3000	98.98	98.88	98.54	98.41	98.07	97.22	96.64	97.08	97.19	96.78	96.78	96.68
4	286	2.93	3057	3000	99.51	99.06	98.85	98.64	98.15	98.25	97.94	97.80	97.31	97.27	97.41	97.34
5	276	2.95	3068	3000	99.49	98.55	98.91	98.44	97.86	97.76	97.18	96.92	97.39	97.07	96.74	96.89
6	285	3.02	3029	3000	99.44	98.25	98.18	97.86	97.27	97.72	97.16	97.44	97.05	96.74	96.35	96.46
7	297	2.98	3060	3000	99.43	98.99	98.69	98.21	98.55	98.62	98.48	98.45	98.21	97.74	97.78	97.91
8	285	3.02	3087	3000	98.77	98.07	97.72	97.41	97.34	96.92	96.74	96.74	96.60	96.88	96.28	95.97
9	291	3.02	3031	3000	99.38	98.62	98.32	97.83	97.77	98.14	97.87	97.22	96.91	96.97	96.53	97.01
10	292	2.95	3044	3000	99.49	99.35	99.15	98.63	97.91	98.02	97.88	97.44	97.30	97.47	97.26	96.89
11	297	2.95	3106	3000	99.23	98.55	98.62	98.48	98.18	97.68	97.54	97.47	97.41	97.14	96.84	96.77
12	288	3.00	3027	3000	98.68	98.44	97.88	97.53	97.36	97.67	97.64	97.36	97.36	97.84	97.50	97.39
13	282	2.93	3059	3000	99.04	98.76	98.79	99.08	98.97	98.69	98.51	98.05	97.51	96.98	96.66	96.70
14	293	2.95	3114	3000	99.28	98.43	98.05	97.64	97.57	97.40	97.03	96.79	96.55	96.89	96.55	97.06
15	280	2.97	3138	3000	99.32	99.18	98.96	99.00	98.79	98.14	98.07	98.00	97.93	97.71	97.89	97.89
16	297	2.97	3093	3000	99.43	98.79	98.82	98.49	97.95	97.95	98.12	97.75	97.34	97.71	97.21	97.58
17	290	2.94	3099	3000	98.83	98.55	98.24	97.76	97.73	97.35	96.90	96.49	96.52	96.59	96.28	96.59
18	287	2.97	3079	3000	99.55	99.34	99.02	98.74	98.39	98.50	98.57	98.33	98.33	98.33	97.91	97.91
19	302	2.97	3088	3000	99.20	99.04	99.01	98.61	98.18	98.01	97.45	97.85	97.42	97.51	97.25	97.71
20	296	3.03	3061	3000	99.19	98.65	98.99	98.34	98.21	97.90	98.24	97.60	97.60	97.60	97.70	97.77
21	294	2.92	3096	3000	99.12	98.23	97.82	97.55	97.65	97.38	97.24	96.73	97.14	97.45	96.67	96.43
22	293	3.02	3045	3000	98.87	98.19	98.26	97.85	97.81	97.95	97.27	97.13	97.13	96.89	96.55	96.96
23	296	2.98	3096	3000	99.53	98.38	98.71	98.31	97.90	97.77	97.23	97.09	97.16	97.36	96.65	96.92
24	283	2.93	3026	3000	99.61	99.01	98.80	98.90	98.94	98.66	98.66	98.20	98.30	97.91	97.77	98.06
25	276	2.95	3046	3000	99.24	98.66	99.13	98.95	98.81	98.66	98.01	97.90	97.39	97.39	97.43	97.61
n	25	25	25	25	25	25	25	25	25	25	25	25	25	25	25	25
Mean	290	2.97			99.26	98.71	98.56	98.27	98.05	97.94	97.65	97.47	97.36	97.32	97.05	97.14
Median	292	2.97			99.32	98.66	98.71	98.41	97.95	97.95	97.64	97.44	97.34	97.36	96.84	97.01
σ	7	0.04			0.27	0.35	0.45	0.50	0.50	0.49	0.61	0.54	0.49	0.46	0.54	0.56
Min.	276	2.92			98.68	98.07	97.72	97.41	97.27	96.92	96.64	96.49	96.52	96.59	96.28	95.97
Max.	302	3.03			99.61	99.35	99.15	99.08	98.97	98.69	98.66	98.45	98.33	98.33	97.91	98.06

Lamp #	Initial (0 hrs)				Chromaticity Shift (Δu'v')											
	CCx	CCy	Calc. CCT	ANSI Target	168	1008	1512	2016	2520	3024	3528	4032	4536	5040	5544	6048
1	0.4370	0.4138	3082	3000	0.0006	0.0006	0.0007	0.0007	0.0006	0.0006	0.0005	0.0004	0.0006	0.0005	0.0008	0.0002
2	0.4423	0.4171	3019	3000	0.0004	0.0006	0.0008	0.0009	0.0010	0.0011	0.0009	0.0011	0.0010	0.0008	0.0009	0.0008
3	0.4430	0.4170	3007	3000	0.0006	0.0007	0.0008	0.0007	0.0009	0.0008	0.0008	0.0008	0.0008	0.0008	0.0008	0.0007
4	0.4401	0.4173	3057	3000	0.0007	0.0008	0.0009	0.0009	0.0010	0.0010	0.0009	0.0011	0.0010	0.0010	0.0008	0.0007
5	0.4372	0.4125	3068	3000	0.0007	0.0008	0.0010	0.0009	0.0010	0.0012	0.0012	0.0009	0.0011	0.0009	0.0010	0.0010
6	0.4397	0.4128	3029	3000	0.0009	0.0010	0.0010	0.0010	0.0010	0.0012	0.0010	0.0011	0.0011	0.0010	0.0009	0.0008
7	0.4387	0.4147	3060	3000	0.0008	0.0009	0.0010	0.0009	0.0008	0.0009	0.0008	0.0009	0.0008	0.0007	0.0008	0.0008
8	0.4354	0.4110	3087	3000	0.0007	0.0007	0.0009	0.0008	0.0009	0.0008	0.0009	0.0010	0.0010	0.0009	0.0007	0.0007
9	0.4405	0.4148	3031	3000	0.0006	0.0009	0.0010	0.0010	0.0008	0.0010	0.0009	0.0009	0.0008	0.0009	0.0007	0.0007
10	0.4399	0.4152	3044	3000	0.0006	0.0006	0.0010	0.0009	0.0008	0.0009	0.0009	0.0009	0.0008	0.0008	0.0008	0.0009
11	0.4361	0.4150	3106	3000	0.0005	0.0006	0.0006	0.0005	0.0004	0.0002	0.0004	0.0005	0.0005	0.0002	0.0004	0.0003
12	0.4382	0.4094	3027	3000	0.0006	0.0006	0.0006	0.0006	0.0006	0.0004	0.0005	0.0006	0.0006	0.0004	0.0006	0.0006
13	0.4352	0.4071	3059	3000	0.0003	0.0006	0.0006	0.0006	0.0005	0.0003	0.0004	0.0005	0.0005	0.0003	0.0003	0.0002
14	0.4342	0.4118	3114	3000	0.0005	0.0007	0.0007	0.0008	0.0006	0.0005	0.0007	0.0006	0.0006	0.0005	0.0006	0.0005
15	0.4308	0.4073	3138	3000	0.0005	0.0009	0.0009	0.0006	0.0006	0.0006	0.0006	0.0007	0.0007	0.0003	0.0004	0.0002
16	0.4340	0.4087	3093	3000	0.0003	0.0009	0.0008	0.0009	0.0007	0.0007	0.0007	0.0008	0.0007	0.0006	0.0007	0.0006
17	0.4320	0.4050	3099	3000	0.0004	0.0007	0.0007	0.0008	0.0006	0.0009	0.0007	0.0005	0.0005	0.0004	0.0004	0.0004
18	0.4358	0.4108	3079	3000	0.0006	0.0008	0.0007	0.0008	0.0006	0.0005	0.0006	0.0007	0.0007	0.0005	0.0005	0.0005
19	0.4347	0.4096	3088	3000	0.0004	0.0007	0.0007	0.0007	0.0006	0.0005	0.0005	0.0007	0.0006	0.0004	0.0005	0.0006
20	0.4352	0.4073	3061	3000	0.0006	0.0007	0.0006	0.0006	0.0006	0.0005	0.0005	0.0005	0.0004	0.0003	0.0003	0.0003
21	0.4360	0.4135	3096	3000	0.0001	0.0006	0.0007	0.0007	0.0006	0.0007	0.0006	0.0007	0.0005	0.0004	0.0004	0.0005
22	0.4380	0.4113	3045	3000	0.0004	0.0008	0.0007	0.0009	0.0010	0.0009	0.0008	0.0009	0.0009	0.0007	0.0004	0.0006
23	0.4369	0.4154	3096	3000	0.0006	0.0009	0.0009	0.0008	0.0008	0.0009	0.0008	0.0009	0.0009	0.0008	0.0006	0.0008
24	0.4420	0.4173	3026	3000	0.0005	0.0008	0.0008	0.0008	0.0007	0.0008	0.0008	0.0008	0.0008	0.0007	0.0006	0.0005
25	0.4407	0.4171	3046	3000	0.0007	0.0008	0.0009	0.0007	0.0006	0.0008	0.0008	0.0007	0.0008	0.0007	0.0007	0.0008
n	25	25	25	25	25	25	25	25	25	25	25	25	25	25	25	25
Mean					0.0005	0.0007	0.0008	0.0008	0.0007	0.0007	0.0007	0.0008	0.0007	0.0006	0.0006	0.0006
Median					0.0006	0.0007	0.0008	0.0008	0.0007	0.0008	0.0008	0.0008	0.0008	0.0007	0.0006	0.0006
σ					0.0002	0.0001	0.0001	0.0001	0.0002	0.0003	0.0002	0.0002	0.0002	0.0002	0.0002	0.0002
Min.					0.0001	0.0006	0.0006	0.0005	0.0004	0.0002	0.0004	0.0004	0.0004	0.0002	0.0003	0.0002
Max.					0.0009	0.0010	0.0010	0.0010	0.0010	0.0012	0.0012	0.0011	0.0011	0.0010	0.0010	0.0010

DATA SET 7: 105°C; 700 mA

Lamp #	Initial (0 hrs)				Lumen Maintenance (%)											
	LF (lm)	V _F (V)	Calc. CCT	ANSI Target	6552	7056	7560	8064	8568	9072	9576	10080	10584	11088	11592	12096
1	295	2.92	3082	3000	96.99	96.44	96.48	96.41	96.65	96.17	96.44	96.54	96.14	95.90	95.73	95.83
2	295	3.02	3019	3000	97.05	97.32	96.44	97.11	96.61	96.37	96.61	95.89	95.82	95.82	95.62	95.69
3	295	2.96	3007	3000	97.19	96.54	96.13	96.44	95.93	95.29	94.88	95.76	95.35	95.15	95.08	95.18
4	286	2.93	3057	3000	97.38	97.52	97.27	97.66	97.03	97.76	97.76	97.13	96.85	97.97	98.04	98.22
5	276	2.95	3068	3000	96.63	96.09	96.31	96.16	96.60	96.13	96.05	96.38	96.92	96.09	95.62	96.42
6	285	3.02	3029	3000	96.98	97.19	96.39	96.91	96.39	96.60	96.53	96.00	96.28	96.67	96.56	96.63
7	297	2.98	3060	3000	97.78	97.91	97.74	97.91	97.74	97.88	98.05	97.51	97.27	98.01	98.15	98.18
8	285	3.02	3087	3000	96.95	96.57	95.58	96.00	95.62	95.58	95.69	95.27	95.58	95.13	95.44	95.69
9	291	3.02	3031	3000	97.52	97.22	96.97	97.04	96.84	97.22	96.97	96.18	96.46	97.18	96.70	97.15
10	292	2.95	3044	3000	96.58	96.41	96.37	96.51	96.96	96.24	96.34	96.51	96.79	96.27	96.34	96.44
11	297	2.95	3106	3000	96.30	95.96	95.89	96.36	96.63	96.03	95.66	95.62	96.50	96.77	96.40	96.46
12	288	3.00	3027	3000	97.08	96.84	96.80	97.22	96.28	96.42	96.52	96.11	96.56	96.77	96.49	96.94
13	282	2.93	3059	3000	96.24	96.56	95.92	95.92	95.56	95.56	95.67	95.95	96.38	97.09	96.66	96.77
14	293	2.95	3114	3000	96.55	96.21	96.55	96.75	97.10	96.14	96.34	95.63	95.76	95.66	95.32	95.18
15	280	2.97	3138	3000	97.07	97.28	96.71	97.28	97.07	96.32	95.96	96.57	96.93	97.18	96.89	96.78
16	297	2.97	3093	3000	97.14	97.21	97.34	96.84	96.91	97.07	96.94	97.28	97.65	97.65	97.68	97.95
17	290	2.94	3099	3000	96.07	96.45	96.63	95.97	95.90	96.38	96.35	96.14	96.56	97.00	96.80	97.00
18	287	2.97	3079	3000	97.56	97.94	97.42	98.01	98.05	98.12	97.49	98.01	98.33	98.22	97.98	98.12
19	302	2.97	3088	3000	97.05	97.12	97.51	96.52	97.02	97.38	97.22	97.18	97.45	97.65	97.48	97.88
20	296	3.03	3061	3000	96.85	97.53	97.16	97.23	97.06	96.96	96.41	96.75	96.82	96.92	96.62	96.96
21	294	2.92	3096	3000	96.80	96.56	96.43	95.92	96.05	95.78	95.17	95.54	95.68	95.65	95.75	95.68
22	293	3.02	3045	3000	96.04	96.48	95.70	95.70	95.49	95.94	95.87	95.70	95.53	95.66	95.83	96.04
23	296	2.98	3096	3000	96.75	96.55	96.28	95.77	95.57	95.23	94.96	95.77	95.60	95.84	95.91	96.04
24	283	2.93	3026	3000	97.56	97.81	97.91	97.95	97.63	97.99	97.81	97.31	97.24	98.20	98.06	98.20
25	276	2.95	3046	3000	97.32	97.03	96.74	96.92	97.03	96.38	95.73	96.38	96.02	95.44	95.66	95.69
n	25	25	25	25	25	25	25	25	25	25	25	25	25	25	25	25
Mean	290	2.97			96.94	96.91	96.67	96.74	96.63	96.52	96.38	96.36	96.50	96.64	96.51	96.68
Median	292	2.97			96.99	96.84	96.55	96.75	96.65	96.37	96.35	96.18	96.50	96.77	96.49	96.63
σ	7	0.04			0.47	0.57	0.62	0.70	0.70	0.83	0.86	0.71	0.75	0.97	0.94	0.97
Min.	276	2.92			96.04	95.96	95.58	95.70	95.49	95.23	94.88	95.27	95.35	95.13	95.08	95.18
Max.	302	3.03			97.78	97.94	97.91	98.01	98.05	98.12	98.05	98.01	98.33	98.22	98.15	98.22

Lamp #	Initial (0 hrs)				Chromaticity Shift ($\Delta u'v'$)											
	CCx	CCy	Calc. CCT	ANSI Target	6552	7056	7560	8064	8568	9072	9576	10080	10584	11088	11592	12096
1	0.4370	0.4138	3082	3000	0.0006	0.0006	0.0006	0.0007	0.0007	0.0007	0.0007	0.0009	0.0008	0.0008	0.0009	0.0008
2	0.4423	0.4171	3019	3000	0.0011	0.0011	0.0010	0.0011	0.0010	0.0010	0.0011	0.0011	0.0011	0.0012	0.0013	0.0012
3	0.4430	0.4170	3007	3000	0.0007	0.0007	0.0006	0.0007	0.0006	0.0008	0.0008	0.0009	0.0009	0.0009	0.0010	0.0010
4	0.4401	0.4173	3057	3000	0.0010	0.0011	0.0011	0.0012	0.0012	0.0010	0.0011	0.0012	0.0011	0.0013	0.0013	0.0013
5	0.4372	0.4125	3068	3000	0.0011	0.0011	0.0010	0.0011	0.0012	0.0012	0.0012	0.0012	0.0012	0.0013	0.0013	0.0013
6	0.4397	0.4128	3029	3000	0.0011	0.0012	0.0011	0.0012	0.0013	0.0012	0.0013	0.0013	0.0013	0.0015	0.0015	0.0015
7	0.4387	0.4147	3060	3000	0.0008	0.0008	0.0009	0.0010	0.0010	0.0010	0.0010	0.0010	0.0011	0.0011	0.0011	0.0011
8	0.4354	0.4110	3087	3000	0.0011	0.0011	0.0010	0.0010	0.0012	0.0011	0.0012	0.0011	0.0011	0.0013	0.0012	0.0013
9	0.4405	0.4148	3031	3000	0.0011	0.0010	0.0010	0.0011	0.0011	0.0011	0.0011	0.0011	0.0012	0.0012	0.0012	0.0013
10	0.4399	0.4152	3044	3000	0.0008	0.0008	0.0008	0.0011	0.0009	0.0010	0.0010	0.0011	0.0011	0.0011	0.0012	0.0011
11	0.4361	0.4150	3106	3000	0.0002	0.0002	0.0003	0.0004	0.0005	0.0004	0.0005	0.0004	0.0005	0.0006	0.0006	0.0006
12	0.4382	0.4094	3027	3000	0.0005	0.0005	0.0004	0.0006	0.0005	0.0005	0.0004	0.0004	0.0004	0.0004	0.0004	0.0006
13	0.4352	0.4071	3059	3000	0.0002	0.0003	0.0004	0.0004	0.0005	0.0005	0.0005	0.0005	0.0007	0.0006	0.0007	0.0008
14	0.4342	0.4118	3114	3000	0.0005	0.0003	0.0003	0.0005	0.0006	0.0006	0.0008	0.0010	0.0012	0.0010	0.0009	0.0010
15	0.4308	0.4073	3138	3000	0.0003	0.0002	0.0005	0.0004	0.0005	0.0007	0.0005	0.0007	0.0006	0.0006	0.0007	0.0008
16	0.4340	0.4087	3093	3000	0.0007	0.0006	0.0007	0.0004	0.0004	0.0003	0.0007	0.0006	0.0006	0.0007	0.0008	0.0008
17	0.4320	0.4050	3099	3000	0.0003	0.0004	0.0004	0.0002	0.0003	0.0003	0.0006	0.0007	0.0006	0.0007	0.0008	0.0009
18	0.4358	0.4108	3079	3000	0.0005	0.0005	0.0004	0.0004	0.0005	0.0007	0.0008	0.0008	0.0008	0.0009	0.0009	0.0010
19	0.4347	0.4096	3088	3000	0.0006	0.0004	0.0006	0.0004	0.0004	0.0005	0.0008	0.0007	0.0008	0.0008	0.0009	0.0010
20	0.4352	0.4073	3061	3000	0.0004	0.0003	0.0002	0.0002	0.0002	0.0003	0.0005	0.0005	0.0006	0.0006	0.0008	0.0008
21	0.4360	0.4135	3096	3000	0.0005	0.0006	0.0006	0.0006	0.0007	0.0007	0.0007	0.0008	0.0009	0.0008	0.0009	0.0009
22	0.4380	0.4113	3045	3000	0.0009	0.0009	0.0005	0.0008	0.0008	0.0008	0.0009	0.0010	0.0009	0.0009	0.0010	0.0009
23	0.4369	0.4154	3096	3000	0.0008	0.0009	0.0007	0.0009	0.0006	0.0008	0.0008	0.0009	0.0009	0.0009	0.0011	0.0010
24	0.4420	0.4173	3026	3000	0.0009	0.0009	0.0007	0.0009	0.0009	0.0009	0.0009	0.0009	0.0009	0.0010	0.0010	0.0011
25	0.4407	0.4171	3046	3000	0.0008	0.0005	0.0004	0.0006	0.0007	0.0006	0.0005	0.0007	0.0008	0.0006	0.0008	0.0007
n	25	25	25	25	25	25	25	25	25	25	25	25	25	25	25	25
Mean					0.0007	0.0007	0.0006	0.0007	0.0007	0.0007	0.0008	0.0009	0.0009	0.0009	0.0010	0.0010
Median					0.0007	0.0006	0.0006	0.0007	0.0007	0.0007	0.0008	0.0009	0.0009	0.0009	0.0009	0.0010
σ					0.0003	0.0003	0.0003	0.0003	0.0003	0.0003	0.0003	0.0003	0.0002	0.0003	0.0003	0.0002
Min.					0.0002	0.0002	0.0002	0.0002	0.0002	0.0003	0.0004	0.0004	0.0004	0.0004	0.0004	0.0006
Max.					0.0011	0.0012	0.0011	0.0012	0.0013	0.0012	0.0013	0.0013	0.0013	0.0015	0.0015	0.0015

DATA SET 7: 105°C; 700 mA

Lamp #	Initial (0 hrs)				Lumen Maintenance (%)					
	LF (lm)	V _F (V)	Calc. CCT	ANSI Target	12600	13104	13608	14112	14616	15120
1	295	2.92	3082	3000	95.39	95.80	95.90	95.73	96.31	96.68
2	295	3.02	3019	3000	96.03	95.82	96.54	96.57	96.67	96.88
3	295	2.96	3007	3000	95.49	95.18	95.42	95.12	95.29	95.29
4	286	2.93	3057	3000	98.39	98.36	97.97	98.01	97.97	98.36
5	276	2.95	3068	3000	95.73	96.23	95.80	96.16	96.16	95.94
6	285	3.02	3029	3000	96.81	96.70	96.49	96.56	96.39	96.95
7	297	2.98	3060	3000	98.45	98.42	98.01	98.32	98.05	98.38
8	285	3.02	3087	3000	95.30	95.93	95.20	95.30	95.86	95.86
9	291	3.02	3031	3000	97.28	97.22	96.97	97.18	96.60	97.18
10	292	2.95	3044	3000	96.37	96.72	96.34	95.79	96.31	96.20
11	297	2.95	3106	3000	96.77	96.84	96.90	97.14	97.17	96.80
12	288	3.00	3027	3000	96.87	96.73	96.56	96.97	95.90	96.70
13	282	2.93	3059	3000	96.84	96.41	97.05	97.09	97.44	96.73
14	293	2.95	3114	3000	95.49	95.25	94.94	95.18	95.08	95.59
15	280	2.97	3138	3000	96.86	96.43	96.75	97.25	97.46	97.82
16	297	2.97	3093	3000	98.22	97.95	97.68	98.32	98.39	98.05
17	290	2.94	3099	3000	96.94	97.45	97.28	97.66	97.69	97.56
18	287	2.97	3079	3000	97.98	97.98	97.98	97.94	97.84	97.49
19	302	2.97	3088	3000	98.11	98.08	98.08	98.18	98.24	98.28
20	296	3.03	3061	3000	97.29	97.02	96.79	96.92	97.63	97.43
21	294	2.92	3096	3000	95.58	96.19	95.75	96.56	96.36	97.14
22	293	3.02	3045	3000	96.14	96.11	96.24	96.17	96.55	96.58
23	296	2.98	3096	3000	95.67	96.18	96.11	95.84	96.08	96.48
24	283	2.93	3026	3000	98.27	98.23	98.52	98.34	98.62	98.44
25	276	2.95	3046	3000	95.37	95.47	95.08	94.42	94.61	95.00
n	25	25	25	25	25	25	25	25	25	25
Mean	290	2.97			96.71	96.75	96.65	96.75	96.83	96.95
Median	292	2.97			96.81	96.70	96.56	96.92	96.60	96.88
σ	7	0.04			1.07	0.99	1.01	1.12	1.08	0.97
Min.	276	2.92			95.30	95.18	94.94	94.42	94.61	95.00
Max.	302	3.03			98.45	98.42	98.52	98.34	98.62	98.44

Lamp #	Initial (0 hrs)				Chromaticity Shift (Δu'v')					
	CCx	CCy	Calc. CCT	ANSI Target	12600	13104	13608	14112	14616	15120
1	0.4370	0.4138	3082	3000	0.0009	0.0010	0.0012	0.0013	0.0013	0.0014
2	0.4423	0.4171	3019	3000	0.0012	0.0012	0.0014	0.0014	0.0016	0.0016
3	0.4430	0.4170	3007	3000	0.0010	0.0012	0.0012	0.0014	0.0016	0.0017
4	0.4401	0.4173	3057	3000	0.0013	0.0015	0.0016	0.0016	0.0018	0.0017
5	0.4372	0.4125	3068	3000	0.0012	0.0016	0.0017	0.0020	0.0019	0.0019
6	0.4397	0.4128	3029	3000	0.0014	0.0015	0.0017	0.0018	0.0019	0.0019
7	0.4387	0.4147	3060	3000	0.0011	0.0013	0.0012	0.0015	0.0014	0.0015
8	0.4354	0.4110	3087	3000	0.0013	0.0014	0.0015	0.0018	0.0018	0.0019
9	0.4405	0.4148	3031	3000	0.0012	0.0013	0.0014	0.0016	0.0017	0.0016
10	0.4399	0.4152	3044	3000	0.0011	0.0012	0.0014	0.0016	0.0010	0.0011
11	0.4361	0.4150	3106	3000	0.0007	0.0007	0.0008	0.0008	0.0010	0.0009
12	0.4382	0.4094	3027	3000	0.0006	0.0007	0.0007	0.0008	0.0007	0.0008
13	0.4352	0.4071	3059	3000	0.0008	0.0008	0.0009	0.0009	0.0010	0.0010
14	0.4342	0.4118	3114	3000	0.0012	0.0009	0.0011	0.0010	0.0012	0.0015
15	0.4308	0.4073	3138	3000	0.0009	0.0009	0.0009	0.0010	0.0010	0.0010
16	0.4340	0.4087	3093	3000	0.0009	0.0009	0.0010	0.0010	0.0010	0.0010
17	0.4320	0.4050	3099	3000	0.0009	0.0009	0.0010	0.0009	0.0010	0.0007
18	0.4358	0.4108	3079	3000	0.0011	0.0010	0.0011	0.0011	0.0012	0.0012
19	0.4347	0.4096	3088	3000	0.0010	0.0009	0.0011	0.0011	0.0011	0.0011
20	0.4352	0.4073	3061	3000	0.0008	0.0008	0.0009	0.0008	0.0009	0.0014
21	0.4360	0.4135	3096	3000	0.0008	0.0010	0.0009	0.0011	0.0010	0.0011
22	0.4380	0.4113	3045	3000	0.0010	0.0010	0.0010	0.0012	0.0011	0.0012
23	0.4369	0.4154	3096	3000	0.0010	0.0011	0.0011	0.0012	0.0011	0.0012
24	0.4420	0.4173	3026	3000	0.0010	0.0010	0.0011	0.0012	0.0012	0.0011
25	0.4407	0.4171	3046	3000	0.0007	0.0008	0.0008	0.0006	0.0012	0.0011
n	25	25	25	25	25	25	25	25	25	25
Mean					0.0010	0.0011	0.0012	0.0012	0.0013	0.0013
Median					0.0010	0.0010	0.0011	0.0012	0.0012	0.0012
σ					0.0002	0.0003	0.0003	0.0004	0.0003	0.0004
Min.					0.0006	0.0007	0.0007	0.0006	0.0007	0.0007
Max.					0.0014	0.0016	0.0017	0.0020	0.0019	0.0019

DATA SET 8: 120°C; 700 mA

Tested LED Package Series	XLamp XP-G3 Standard White LEDs This LM-80 report is applicable to the following order codes: XPGDWS-xx-xxxx-xxxxx XPGDWT-x1-xxxx-xxxxx XPGDWT-x3-xxxx-xxxxx
Tested Drive Current [IF]	700 mA
Testing Initiation Date	November 2, 2015
Case Temperature [Ts]	120°C
Ambient Temperature [TA]	120°C
Failures observed	None

Test Results Summary

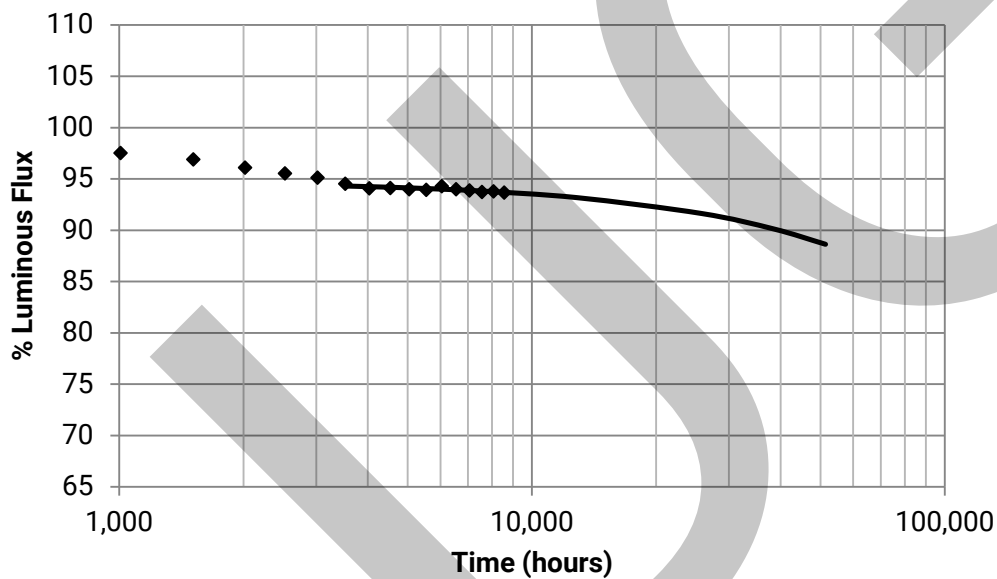
Test Duration (hrs)	Relative Luminous Flux	Relative Color Shift ($\Delta u'v'$)	Relative CRI Shift (ΔRa)	Relative Voltage Shift ($\% \Delta V_f$)	Test Duration (hrs)	Relative Luminous Flux	Relative Color Shift ($\Delta u'v'$)	Relative CRI Shift (ΔRa)	Relative Voltage Shift ($\% \Delta V_f$)
0	100.00%	0.0000	0.0	0.0%					
168	98.62%	0.0005	-0.2	N/R					
1008	97.52%	0.0004	-0.2	N/R					
1512	96.89%	0.0005	-0.2	N/R					
2016	96.11%	0.0005	-0.2	N/R					
2520	95.54%	0.0005	-0.2	N/R					
3024	95.11%	0.0005	-0.2	N/R					
3528	94.53%	0.0005	-0.2	N/R					
4032	94.08%	0.0005	-0.3	N/R					
4536	94.10%	0.0005	-0.3	N/R					
5040	94.00%	0.0006	-0.3	N/R					
5544	93.94%	0.0007	-0.3	N/R					
6048	94.30%	0.0008	-0.4	N/R					
6552	94.00%	0.0008	-0.4	0.5%					
7056	93.89%	0.0010	-0.4	0.7%					
7560	93.72%	0.0011	-0.5	0.5%					
8064	93.79%	0.0012	-0.4	0.2%					
8568	93.67%	0.0013	-0.5	0.0%					

Note: "N/R" indicates data points that are not reported

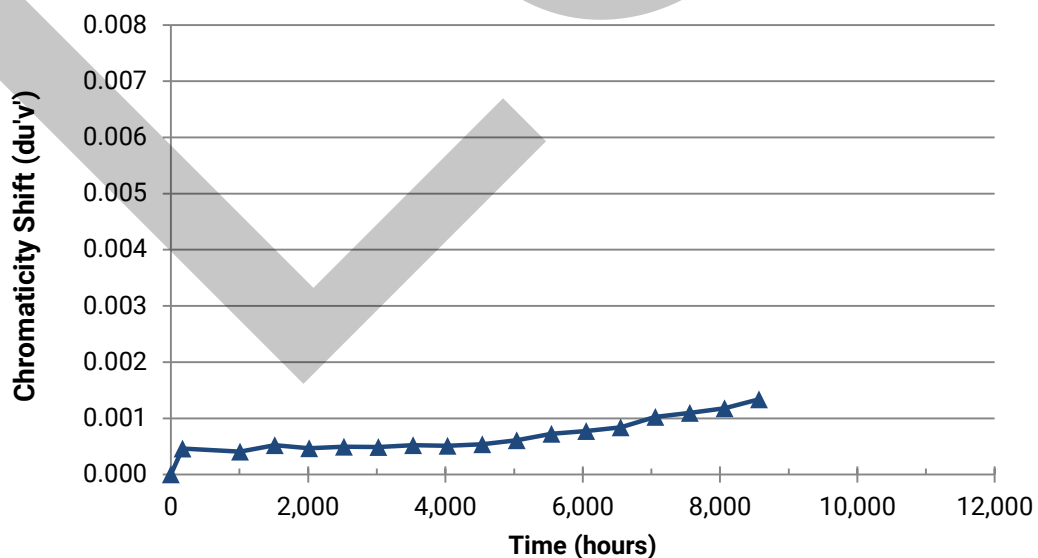
DATA SET 8: 120°C; 700 mA

TM-21 Projection

Test duration	8,568 hours
Test duration used for projection	t=3,528 to t=8,568
α	1.297E-06
β	9.474E-01
Reported Lifetimes	L90(9k) = 39,600 hours
	L80(9k) > 51,400 hours
	L70(9k) > 51,400 hours



Color Shift Graph



DATA SET 8: 120°C; 700 mA

Lamp #	Initial (0 hrs)				Lumen Maintenance (%)											
	LF (lm)	V _F (V)	Calc. CCT	ANSI Target	168	1008	1512	2016	2520	3024	3528	4032	4536	5040	5544	6048
1	276	2.94	3036	3000	98.77	97.46	96.85	95.80	94.68	94.89	94.20	93.73	93.84	93.48	93.52	93.59
2	281	2.93	3064	3000	98.25	97.61	97.26	95.94	95.01	94.73	94.44	93.62	93.91	93.51	93.09	93.69
3	290	3.02	3012	3000	99.07	96.41	95.99	94.89	95.13	94.44	94.09	93.51	94.23	93.64	93.58	94.23
4	290	3.02	3036	3000	99.55	97.41	97.10	95.66	95.69	95.00	94.35	93.45	93.76	93.31	93.66	94.35
5	276	2.97	3098	3000	98.08	98.19	97.57	96.99	95.98	95.14	94.31	93.91	94.16	94.42	94.74	94.35
6	275	2.97	3040	3000	98.26	97.27	96.66	96.22	95.57	95.57	94.91	94.91	94.37	94.84	95.09	95.09
7	277	2.96	3068	3000	97.40	96.36	95.85	94.70	94.30	94.41	93.40	92.85	93.32	93.65	93.36	93.83
8	286	2.96	3096	3000	98.36	97.90	97.17	96.75	96.65	95.46	94.93	94.58	93.82	94.13	94.55	94.93
9	285	2.97	3053	3000	99.44	97.89	97.15	96.98	96.94	95.43	95.43	94.48	95.11	94.62	94.59	95.18
10	286	2.94	3021	3000	99.02	98.11	97.48	96.85	96.61	95.66	95.70	94.58	95.28	94.68	94.33	94.82
11	281	3.01	3051	3000	98.58	97.76	96.94	95.73	95.13	94.95	94.45	94.02	94.38	94.02	94.09	94.66
12	279	3.01	3006	3000	98.57	97.13	96.52	95.31	94.05	93.55	92.94	92.80	92.48	92.73	92.73	92.40
13	296	2.98	3085	3000	99.43	98.04	97.97	97.30	96.99	96.45	95.91	95.20	94.83	95.37	95.27	95.23
14	297	2.98	3035	3000	98.89	97.85	97.92	96.47	96.81	96.00	96.03	95.19	95.80	95.06	95.12	95.80
15	293	2.98	3050	3000	98.98	98.02	96.72	96.41	95.90	94.98	95.32	94.09	94.23	93.78	93.85	94.33
16	295	3.04	3045	3000	99.80	98.40	97.69	96.95	96.84	96.30	94.77	94.84	93.89	93.86	93.41	93.89
17	287	3.02	3058	3000	100.03	97.91	97.18	95.68	95.44	94.74	94.60	93.59	94.08	93.59	94.22	94.74
18	278	2.94	3035	3000	98.52	98.20	97.80	96.43	95.32	94.95	93.62	93.69	93.77	93.30	93.84	93.95
19	280	2.93	3028	3000	98.96	98.03	97.17	95.78	94.81	94.35	93.96	93.56	93.63	93.60	93.67	93.63
20	297	2.95	3134	3000	97.65	97.48	96.20	95.90	95.22	95.73	94.58	94.18	94.05	94.18	93.81	94.18
21	285	2.95	3160	3000	97.13	95.86	95.30	95.69	94.32	94.32	94.22	94.39	94.01	93.69	93.62	93.80
22	299	2.97	3086	3000	98.63	97.35	96.55	96.48	95.65	95.31	94.01	93.77	93.67	93.84	93.10	93.80
23	297	2.98	3046	3000	98.15	97.84	96.97	96.67	95.42	95.86	95.12	94.98	94.61	94.98	94.24	94.81
24	288	2.96	3148	3000	97.08	95.80	95.52	95.24	94.51	93.92	93.05	93.47	92.53	92.67	92.08	93.15
25	295	2.95	3090	3000	98.81	97.69	96.81	96.00	95.46	95.49	94.85	94.51	94.74	95.05	95.05	95.18
n	25	25	25	25	25	25	25	25	25	25	25	25	25	25	25	25
Mean	287	2.97			98.62	97.52	96.89	96.11	95.54	95.11	94.53	94.08	94.10	94.00	93.94	94.30
Median	286	2.97			98.63	97.76	96.97	96.00	95.44	95.00	94.45	94.02	94.05	93.84	93.84	94.33
σ	8	0.03			0.77	0.71	0.71	0.69	0.88	0.72	0.81	0.67	0.74	0.72	0.79	0.76
Min.	275	2.93			97.08	95.80	95.30	94.70	94.05	93.55	92.94	92.80	92.48	92.67	92.08	92.40
Max.	299	3.04			100.03	98.40	97.97	97.30	96.99	96.45	96.03	95.20	95.80	95.37	95.27	95.80

Lamp #	Initial (0 hrs)				Chromaticity Shift (Δu'v')											
	CCx	CCy	Calc. CCT	ANSI Target	168	1008	1512	2016	2520	3024	3528	4032	4536	5040	5544	6048
1	0.4398	0.4140	3036	3000	0.0004	0.0004	0.0006	0.0004	0.0003	0.0004	0.0007	0.0005	0.0004	0.0006	0.0008	0.0012
2	0.4384	0.4146	3064	3000	0.0005	0.0005	0.0005	0.0003	0.0004	0.0003	0.0003	0.0004	0.0004	0.0005	0.0006	0.0007
3	0.4403	0.4120	3012	3000	0.0006	0.0002	0.0006	0.0005	0.0005	0.0006	0.0007	0.0007	0.0008	0.0008	0.0009	0.0009
4	0.4389	0.4121	3036	3000	0.0007	0.0008	0.0007	0.0005	0.0008	0.0006	0.0007	0.0007	0.0006	0.0007	0.0008	0.0010
5	0.4356	0.4128	3098	3000	0.0006	0.0004	0.0006	0.0008	0.0005	0.0004	0.0004	0.0003	0.0005	0.0006	0.0008	0.0007
6	0.4412	0.4175	3040	3000	0.0004	0.0002	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0006	0.0007	0.0009
7	0.4391	0.4166	3068	3000	0.0005	0.0001	0.0002	0.0002	0.0004	0.0004	0.0004	0.0004	0.0005	0.0005	0.0006	0.0007
8	0.4366	0.4148	3096	3000	0.0003	0.0006	0.0005	0.0006	0.0005	0.0004	0.0005	0.0004	0.0003	0.0005	0.0006	0.0007
9	0.4392	0.4148	3053	3000	0.0005	0.0001	0.0005	0.0003	0.0005	0.0004	0.0004	0.0004	0.0004	0.0005	0.0008	0.0009
10	0.4427	0.4182	3021	3000	0.0004	0.0005	0.0007	0.0004	0.0006	0.0006	0.0007	0.0005	0.0007	0.0007	0.0008	0.0008
11	0.4368	0.4095	3051	3000	0.0005	0.0003	0.0006	0.0003	0.0004	0.0005	0.0006	0.0005	0.0006	0.0007	0.0009	0.0008
12	0.4401	0.4108	3006	3000	0.0008	0.0004	0.0006	0.0004	0.0005	0.0004	0.0005	0.0005	0.0005	0.0006	0.0008	0.0008
13	0.4382	0.4168	3085	3000	0.0003	0.0004	0.0004	0.0006	0.0006	0.0005	0.0006	0.0008	0.0006	0.0008	0.0009	0.0009
14	0.4415	0.4174	3035	3000	0.0005	0.0004	0.0006	0.0005	0.0006	0.0006	0.0006	0.0006	0.0006	0.0005	0.0007	0.0007
15	0.4401	0.4164	3050	3000	0.0007	0.0006	0.0007	0.0004	0.0006	0.0006	0.0008	0.0006	0.0006	0.0006	0.0008	0.0008
16	0.4387	0.4128	3045	3000	0.0007	0.0007	0.0008	0.0011	0.0008	0.0010	0.0006	0.0007	0.0006	0.0009	0.0007	0.0009
17	0.4378	0.4125	3058	3000	0.0009	0.0007	0.0009	0.0009	0.0009	0.0009	0.0011	0.0010	0.0011	0.0011	0.0011	0.0009
18	0.4414	0.4172	3035	3000	0.0002	0.0004	0.0006	0.0004	0.0003	0.0003	0.0002	0.0003	0.0002	0.0004	0.0005	0.0006
19	0.4421	0.4178	3028	3000	0.0007	0.0005	0.0005	0.0005	0.0004	0.0006	0.0005	0.0006	0.0006	0.0006	0.0006	0.0007
20	0.4340	0.4139	3134	3000	0.0003	0.0006	0.0004	0.0004	0.0003	0.0003	0.0003	0.0004	0.0004	0.0005	0.0006	0.0005
21	0.4286	0.4050	3160	3000	0.0002	0.0002	0.0004	0.0004	0.0003	0.0003	0.0003	0.0005	0.0005	0.0004	0.0006	0.0006
22	0.4347	0.4093	3086	3000	0.0003	0.0002	0.0003	0.0004	0.0005	0.0005	0.0007	0.0006	0.0007	0.0007	0.0007	0.0007
23	0.4376	0.4106	3046	3000	0.0003	0.0005	0.0005	0.0005	0.0006	0.0006	0.0006	0.0006	0.0007	0.0007	0.0008	0.0007
24	0.4308	0.4085	3148	3000	0.0003	0.0002	0.0004	0.0003	0.0003	0.0002	0.0002	0.0003	0.0005	0.0003	0.0005	0.0005
25	0.4337	0.4076	3090	3000	0.0002	0.0002	0.0003	0.0002	0.0003	0.0003	0.0003	0.0003	0.0003	0.0004	0.0005	0.0005
n	25	25	25	25	25	25	25	25	25	25	25	25	25	25	25	25
Mean					0.0005	0.0004	0.0005	0.0005	0.0005	0.0005	0.0005	0.0005	0.0005	0.0006	0.0007	0.0008
Median					0.0005	0.0004	0.0005	0.0004	0.0005	0.0004	0.0005	0.0005	0.0005	0.0006	0.0007	0.0007
σ					0.0002	0.0002	0.0002	0.0002	0.0002	0.0002	0.0002	0.0002	0.0002	0.0002	0.0001	0.0002
Min.					0.0002	0.0001	0.0002	0.0002	0.0003	0.0002	0.0002	0.0002	0.0002	0.0003	0.0005	0.0005
Max.					0.0009	0.0008	0.0009	0.0011	0.0009	0.0010	0.0011	0.0010	0.0011	0.0011	0.0011	0.0012

DATA SET 8: 120°C; 700 mA

Lamp #	Initial (0 hrs)				Lumen Maintenance (%)				
	LF (lm)	V _F (V)	Calc. CCT	ANSI Target	6552	7056	7560	8064	8568
1	276	2.94	3036	3000	93.52	93.48	94.20	93.52	94.17
2	281	2.93	3064	3000	93.76	93.01	93.76	93.23	93.23
3	290	3.02	3012	3000	93.61	93.61	93.13	93.78	93.16
4	290	3.02	3036	3000	93.42	93.55	93.00	93.21	92.66
5	276	2.97	3098	3000	94.78	94.42	94.74	94.71	94.71
6	275	2.97	3040	3000	94.91	94.73	94.00	94.73	94.80
7	277	2.96	3068	3000	94.01	93.65	93.40	93.14	92.85
8	286	2.96	3096	3000	94.93	94.44	94.16	93.61	94.27
9	285	2.97	3053	3000	94.73	94.48	94.06	94.80	94.55
10	286	2.94	3021	3000	93.67	93.84	93.35	93.56	93.74
11	281	3.01	3051	3000	93.56	93.67	93.67	93.95	92.99
12	279	3.01	3006	3000	92.33	91.62	92.08	91.94	91.69
13	296	2.98	3085	3000	94.93	95.03	95.00	94.93	95.13
14	297	2.98	3035	3000	94.72	95.16	94.15	95.02	95.26
15	293	2.98	3050	3000	93.88	94.16	93.44	93.99	94.16
16	295	3.04	3045	3000	94.33	94.30	94.09	94.03	94.47
17	287	3.02	3058	3000	94.32	94.01	93.73	93.48	92.86
18	278	2.94	3035	3000	94.09	93.95	93.77	93.87	93.12
19	280	2.93	3028	3000	94.17	93.31	93.63	93.20	93.38
20	297	2.95	3134	3000	93.84	93.95	93.51	93.71	93.31
21	285	2.95	3160	3000	93.41	93.55	93.48	93.69	93.66
22	299	2.97	3086	3000	93.27	92.80	92.46	92.83	92.50
23	297	2.98	3046	3000	94.61	94.78	94.51	94.38	94.00
24	288	2.96	3148	3000	92.36	92.49	92.46	92.49	92.25
25	295	2.95	3090	3000	94.91	95.18	95.12	95.02	94.71
n	25	25	25	25	25	25	25	25	25
Mean	287	2.97			94.00	93.89	93.72	93.79	93.67
Median	286	2.97			94.01	93.95	93.73	93.71	93.66
σ	8	0.03			0.74	0.85	0.75	0.80	0.95
Min.	275	2.93			92.33	91.62	92.08	91.94	91.69
Max.	299	3.04			94.93	95.18	95.12	95.02	95.26

Lamp #	Initial (0 hrs)				Chromaticity Shift (Δu'v')				
	CCx	CCy	Calc. CCT	ANSI Target	6552	7056	7560	8064	8568
1	0.4398	0.4140	3036	3000	0.0008	0.0011	0.0011	0.0013	0.0014
2	0.4384	0.4146	3064	3000	0.0006	0.0011	0.0012	0.0012	0.0014
3	0.4403	0.4120	3012	3000	0.0009	0.0011	0.0011	0.0013	0.0015
4	0.4389	0.4121	3036	3000	0.0007	0.0010	0.0010	0.0011	0.0014
5	0.4356	0.4128	3098	3000	0.0012	0.0013	0.0013	0.0016	0.0019
6	0.4412	0.4175	3040	3000	0.0005	0.0011	0.0011	0.0007	0.0009
7	0.4391	0.4166	3068	3000	0.0009	0.0012	0.0011	0.0012	0.0012
8	0.4366	0.4148	3096	3000	0.0010	0.0012	0.0010	0.0011	0.0017
9	0.4392	0.4148	3053	3000	0.0010	0.0010	0.0011	0.0012	0.0013
10	0.4427	0.4182	3021	3000	0.0009	0.0010	0.0012	0.0012	0.0016
11	0.4368	0.4095	3051	3000	0.0010	0.0010	0.0011	0.0012	0.0011
12	0.4401	0.4108	3006	3000	0.0010	0.0010	0.0012	0.0012	0.0014
13	0.4382	0.4168	3085	3000	0.0011	0.0011	0.0012	0.0013	0.0012
14	0.4415	0.4174	3035	3000	0.0007	0.0010	0.0011	0.0011	0.0014
15	0.4401	0.4164	3050	3000	0.0010	0.0012	0.0013	0.0014	0.0017
16	0.4387	0.4128	3045	3000	0.0010	0.0014	0.0013	0.0012	0.0015
17	0.4378	0.4125	3058	3000	0.0013	0.0014	0.0015	0.0019	0.0019
18	0.4414	0.4172	3035	3000	0.0009	0.0011	0.0012	0.0012	0.0014
19	0.4421	0.4178	3028	3000	0.0007	0.0010	0.0010	0.0011	0.0016
20	0.4340	0.4139	3134	3000	0.0007	0.0007	0.0010	0.0011	0.0011
21	0.4286	0.4050	3160	3000	0.0007	0.0009	0.0008	0.0010	0.0009
22	0.4347	0.4093	3086	3000	0.0008	0.0008	0.0010	0.0010	0.0010
23	0.4376	0.4106	3046	3000	0.0008	0.0009	0.0011	0.0011	0.0011
24	0.4308	0.4085	3148	3000	0.0005	0.0007	0.0007	0.0010	0.0009
25	0.4337	0.4076	3090	3000	0.0006	0.0006	0.0008	0.0010	0.0010
n	25	25	25	25	25	25	25	25	25
Mean					0.0008	0.0010	0.0011	0.0012	0.0013
Median					0.0009	0.0010	0.0011	0.0012	0.0014
σ					0.0002	0.0002	0.0002	0.0002	0.0003
Min.					0.0005	0.0006	0.0007	0.0007	0.0009
Max.					0.0013	0.0014	0.0015	0.0019	0.0019

DATA SET 9: 85°C; 1050 mA

Tested LED Package Series	XLamp XP-G3 Standard White LEDs
Tested Drive Current [I_F]	1050 mA
Testing Initiation Date	November 2, 2015
Case Temperature [T_s]	85°C
Ambient Temperature [T_A]	85°C
Failures observed	None

Test Results Summary

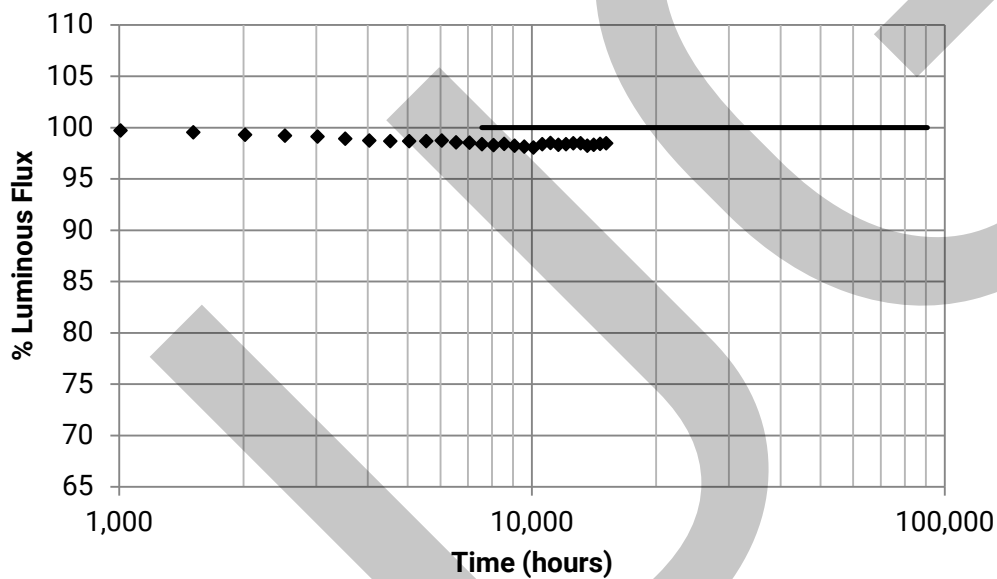
Test Duration (hrs)	Relative Luminous Flux	Relative Color Shift ($\Delta u'v'$)	Relative CRI Shift (ΔRa)	Relative Voltage Shift ($\% \Delta V_F$)	Test Duration (hrs)	Relative Luminous Flux	Relative Color Shift ($\Delta u'v'$)	Relative CRI Shift (ΔRa)	Relative Voltage Shift ($\% \Delta V_F$)
0	100.00%	0.0000	0.0	0.0%	10080	98.06%	0.0009	-0.2	N/R
168	99.99%	0.0004	-0.1	N/R	10584	98.40%	0.0008	-0.2	-2.4%
1008	99.72%	0.0007	-0.1	N/R	11088	98.50%	0.0009	-0.2	-2.5%
1512	99.54%	0.0007	-0.2	N/R	11592	98.33%	0.0009	-0.2	-2.9%
2016	99.32%	0.0007	-0.2	N/R	12096	98.40%	0.0009	-0.2	-2.4%
2520	99.23%	0.0007	-0.2	N/R	12600	98.47%	0.0009	-0.2	-2.9%
3024	99.13%	0.0008	-0.2	N/R	13104	98.46%	0.0009	-0.2	-2.7%
3528	98.93%	0.0008	-0.2	N/R	13608	98.25%	0.0009	-0.2	-2.1%
4032	98.74%	0.0008	-0.2	N/R	14112	98.33%	0.0009	-0.2	-2.2%
4536	98.68%	0.0008	-0.2	N/R	14616	98.43%	0.0009	-0.2	-2.5%
5040	98.69%	0.0007	-0.2	N/R	15120	98.47%	0.0009	-0.2	-2.4%
5544	98.69%	0.0007	-0.2	N/R					
6048	98.73%	0.0008	-0.2	N/R					
6552	98.57%	0.0008	-0.2	N/R					
7056	98.52%	0.0008	-0.2	N/R					
7560	98.38%	0.0008	-0.2	N/R					
8064	98.29%	0.0009	-0.2	N/R					
8568	98.42%	0.0009	-0.2	N/R					
9072	98.23%	0.0009	-0.2	N/R					
9576	98.16%	0.0009	-0.2	N/R					

Note: "N/R" indicates data points that are not reported

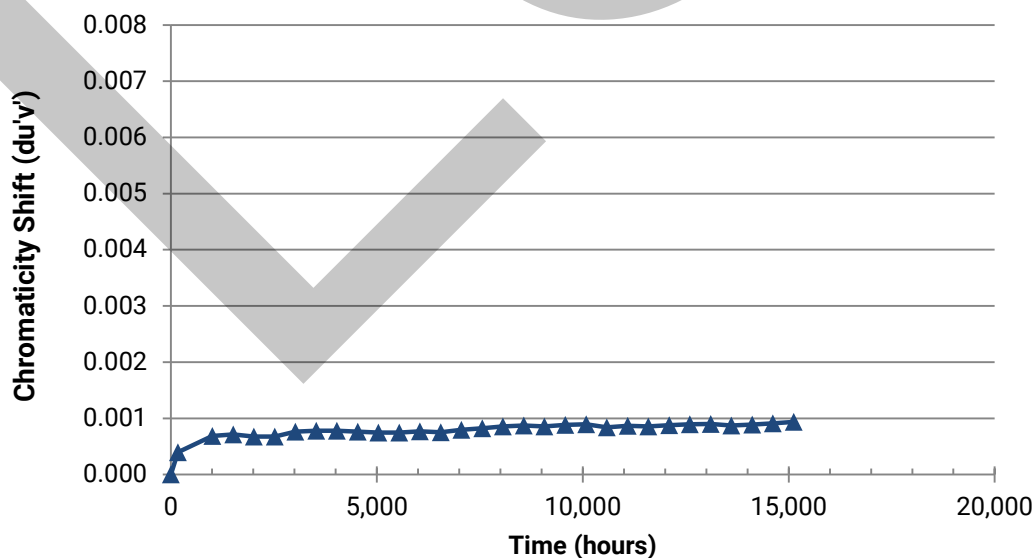
DATA SET 9: 85°C; 1050 mA

TM-21 Projection

Test duration	15,120 hours
Test duration used for projection	t=7,560 to t=15,120
α	$-1.882E-07$
β	$9.814E-01$
Reported Lifetimes	L90(15k) > 90,700 hours
	L80(15k) > 90,700 hours
	L70(15k) > 90,700 hours



Color Shift Graph



DATA SET 9: 85°C; 1050 mA

Lamp #	Initial (0 hrs)				Lumen Maintenance (%)											
	LF (lm)	V _F (V)	Calc. CCT	ANSI Target	168	1008	1512	2016	2520	3024	3528	4032	4536	5040	5544	6048
1	422	3.04	3197	3000	99.95	99.64	99.72	99.53	99.19	99.41	98.91	98.55	98.18	98.44	98.20	98.46
2	406	3.10	3079	3000	100.15	99.75	99.80	99.41	99.46	99.38	98.72	98.79	98.33	98.65	98.47	98.40
3	403	3.03	3146	3000	100.02	99.63	99.40	99.45	99.43	99.08	98.93	98.73	98.46	98.39	98.46	98.49
4	413	3.04	3154	3000	99.81	99.69	99.27	98.98	99.06	98.81	98.33	98.35	98.23	98.33	98.21	98.26
5	395	3.06	3149	3000	99.87	99.65	99.72	99.39	99.14	98.86	99.24	98.99	98.91	98.76	98.91	98.94
6	419	3.05	3102	3000	100.24	100.02	99.62	99.33	99.16	99.19	98.73	98.38	98.16	98.59	98.35	98.61
7	412	3.05	3080	3000	99.78	99.66	99.44	99.08	99.08	99.05	98.71	98.52	98.50	98.47	98.69	98.50
8	407	3.08	3101	3000	100.07	99.71	99.73	99.31	99.29	99.63	99.41	99.17	99.29	99.29	99.26	99.17
9	427	3.08	3114	3000	100.16	99.84	99.32	99.16	98.87	98.66	98.55	98.24	98.36	98.24	98.29	98.27
10	413	3.13	3053	3000	99.78	99.66	99.81	99.47	99.13	99.42	99.10	98.89	98.52	98.43	98.28	98.55
11	416	3.06	3114	3000	100.10	99.95	99.74	99.66	99.54	99.59	99.57	99.26	98.99	98.97	99.18	99.04
12	417	3.03	3039	3000	99.95	99.38	99.42	99.09	99.50	99.26	99.11	98.94	98.73	98.82	98.99	99.04
13	417	3.17	3098	3000	99.90	99.86	99.90	99.09	99.18	98.80	98.44	98.15	98.27	98.32	98.56	98.85
14	410	3.13	3039	3000	99.88	99.68	99.51	99.20	99.20	99.02	98.98	98.71	98.66	98.85	98.68	99.00
15	416	3.14	3043	3000	100.05	99.88	99.61	99.06	99.13	98.82	98.84	98.60	98.75	98.84	99.04	99.18
16	415	3.07	3096	3000	100.00	99.30	99.25	99.30	99.08	98.89	99.25	98.96	98.79	98.82	98.53	98.65
17	409	3.16	3075	3000	99.90	99.85	99.83	99.46	99.56	99.46	99.17	99.27	99.36	99.29	99.31	99.24
18	410	3.15	3065	3000	100.19	99.63	99.29	99.29	99.05	98.98	98.88	98.85	98.93	98.85	98.90	99.05
19	399	3.12	3157	3000	99.95	99.62	99.22	99.35	98.95	99.27	99.22	98.87	99.25	98.87	99.10	99.35
20	391	3.05	3047	3000	99.67	99.59	99.44	99.16	99.11	98.72	98.49	98.36	98.49	98.31	98.11	98.11
21	403	3.05	3087	3000	99.83	99.98	99.35	99.30	99.50	99.28	99.13	98.91	99.11	99.06	98.96	99.01
22	405	3.03	3080	3000	100.25	99.83	99.88	99.53	99.16	99.60	99.21	99.18	99.11	99.11	98.76	98.52
23	409	3.14	3018	3000	100.22	99.71	99.56	99.56	99.32	99.00	98.88	98.83	98.80	98.88	99.17	98.85
24	416	3.01	3083	3000	99.95	99.59	99.23	99.33	99.16	99.09	98.77	98.22	98.05	97.93	98.12	97.98
25	413	3.04	3088	3000	100.15	99.85	99.54	99.61	99.47	98.96	98.69	98.69	98.89	98.69	98.69	98.65
n	25	25	25	25	25	25	25	25	25	25	25	25	25	25	25	25
Mean	411	3.08			99.99	99.72	99.54	99.32	99.23	99.13	98.93	98.74	98.68	98.69	98.69	98.73
Median	412	3.06			99.95	99.69	99.54	99.33	99.16	99.08	98.91	98.79	98.73	98.76	98.69	98.65
σ	8	0.05			0.16	0.17	0.22	0.19	0.19	0.29	0.31	0.33	0.38	0.34	0.38	0.37
Min.	391	3.01			99.67	99.30	99.22	98.98	98.87	98.66	98.33	98.15	98.05	97.93	98.11	97.98
Max.	427	3.17			100.25	100.02	99.90	99.66	99.56	99.63	99.57	99.27	99.36	99.29	99.31	99.35

Lamp #	Initial (0 hrs)				Chromaticity Shift (Δu'v')											
	CCx	CCy	Calc. CCT	ANSI Target	168	1008	1512	2016	2520	3024	3528	4032	4536	5040	5544	6048
1	0.4270	0.4061	3197	3000	0.0002	0.0004	0.0004	0.0004	0.0004	0.0006	0.0006	0.0007	0.0007	0.0007	0.0005	0.0006
2	0.4329	0.4045	3079	3000	0.0002	0.0005	0.0006	0.0006	0.0005	0.0006	0.0006	0.0007	0.0007	0.0006	0.0006	0.0006
3	0.4289	0.4040	3146	3000	0.0003	0.0003	0.0004	0.0002	0.0005	0.0005	0.0003	0.0003	0.0003	0.0003	0.0000	0.0002
4	0.4295	0.4064	3154	3000	0.0002	0.0004	0.0004	0.0005	0.0005	0.0006	0.0007	0.0007	0.0006	0.0005	0.0005	0.0006
5	0.4312	0.4096	3149	3000	0.0001	0.0004	0.0004	0.0003	0.0003	0.0005	0.0006	0.0007	0.0007	0.0008	0.0007	0.0006
6	0.4341	0.4100	3102	3000	0.0003	0.0005	0.0006	0.0006	0.0005	0.0006	0.0007	0.0006	0.0006	0.0006	0.0006	0.0007
7	0.4340	0.4071	3080	3000	0.0002	0.0002	0.0002	0.0004	0.0002	0.0003	0.0003	0.0004	0.0003	0.0003	0.0002	0.0003
8	0.4317	0.4046	3101	3000	0.0003	0.0003	0.0005	0.0005	0.0006	0.0005	0.0007	0.0006	0.0007	0.0007	0.0006	0.0007
9	0.4317	0.4062	3114	3000	0.0002	0.0007	0.0005	0.0004	0.0003	0.0005	0.0005	0.0007	0.0007	0.0007	0.0007	0.0006
10	0.4337	0.4031	3053	3000	0.0001	0.0004	0.0005	0.0005	0.0005	0.0005	0.0004	0.0005	0.0005	0.0004	0.0004	0.0005
11	0.4345	0.4124	3114	3000	0.0006	0.0009	0.0009	0.0009	0.0008	0.0008	0.0009	0.0008	0.0009	0.0009	0.0009	0.0010
12	0.4425	0.4201	3039	3000	0.0004	0.0009	0.0009	0.0007	0.0008	0.0009	0.0009	0.0010	0.0009	0.0008	0.0008	0.0010
13	0.4358	0.4133	3098	3000	0.0006	0.0009	0.0009	0.0009	0.0009	0.0009	0.0009	0.0009	0.0010	0.0010	0.0010	0.0010
14	0.4401	0.4150	3039	3000	0.0007	0.0009	0.0010	0.0009	0.0010	0.0011	0.0011	0.0011	0.0011	0.0011	0.0012	0.0011
15	0.4413	0.4180	3043	3000	0.0005	0.0010	0.0010	0.0009	0.0008	0.0010	0.0010	0.0010	0.0010	0.0010	0.0010	0.0009
16	0.4350	0.4112	3096	3000	0.0004	0.0006	0.0009	0.0008	0.0008	0.0007	0.0008	0.0007	0.0007	0.0007	0.0008	0.0007
17	0.4363	0.4114	3075	3000	0.0006	0.0010	0.0011	0.0009	0.0010	0.0012	0.0012	0.0012	0.0011	0.0011	0.0012	0.0012
18	0.4382	0.4142	3065	3000	0.0007	0.0010	0.0010	0.0010	0.0010	0.0010	0.0011	0.0011	0.0010	0.0010	0.0010	0.0010
19	0.4313	0.4108	3157	3000	0.0003	0.0007	0.0008	0.0007	0.0006	0.0008	0.0008	0.0008	0.0007	0.0007	0.0008	0.0008
20	0.4392	0.4141	3047	3000	0.0005	0.0007	0.0006	0.0006	0.0007	0.0008	0.0008	0.0008	0.0007	0.0007	0.0007	0.0007
21	0.4362	0.4127	3087	3000	0.0004	0.0010	0.0009	0.0009	0.0009	0.0009	0.0010	0.0009	0.0009	0.0008	0.0009	0.0009
22	0.4387	0.4172	3080	3000	0.0006	0.0008	0.0009	0.0008	0.0007	0.0009	0.0009	0.0009	0.0009	0.0008	0.0009	0.0009
23	0.4417	0.4156	3018	3000	0.0006	0.0009	0.0010	0.0009	0.0009	0.0011	0.0011	0.0010	0.0010	0.0011	0.0011	0.0010
24	0.4387	0.4177	3083	3000	0.0005	0.0007	0.0008	0.0007	0.0009	0.0008	0.0008	0.0007	0.0007	0.0007	0.0007	0.0008
25	0.4373	0.4152	3088	3000	0.0004	0.0009	0.0008	0.0010	0.0009	0.0009	0.0009	0.0008	0.0008	0.0009	0.0009	0.0009
n	25	25	25	25	25	25	25	25	25	25	25	25	25	25	25	25
Mean					0.0004	0.0007	0.0007	0.0007	0.0007	0.0008	0.0008	0.0008	0.0008	0.0007	0.0007	0.0008
Median					0.0004	0.0007	0.0008	0.0007	0.0007	0.0008	0.0008	0.0008	0.0007	0.0007	0.0008	0.0008
σ					0.0002	0.0003	0.0003	0.0002	0.0002	0.0002	0.0002	0.0002	0.0002	0.0002	0.0003	0.0002
Min.					0.0001	0.0002	0.0002	0.0002	0.0002	0.0003	0.0003	0.0003	0.0003	0.0003	0.0000	0.0002
Max.					0.0007	0.0010	0.0011	0.0010	0.0010	0.0012	0.0012	0.0012	0.0011	0.0011	0.0012	0.0012

DATA SET 9: 85°C; 1050 mA

Lamp #	Initial (0 hrs)				Lumen Maintenance (%)					
	LF (lm)	V _F (V)	Calc. CCT	ANSI Target	12600	13104	13608	14112	14616	15120
1	422	3.04	3197	3000	98.22	98.55	98.29	98.25	98.10	98.36
2	406	3.10	3079	3000	98.13	98.62	98.13	97.88	98.55	98.52
3	403	3.03	3146	3000	97.37	98.01	97.37	97.54	97.77	97.77
4	413	3.04	3154	3000	97.04	97.24	97.14	96.78	97.17	97.38
5	395	3.06	3149	3000	98.08	98.38	97.92	97.95	97.95	98.05
6	419	3.05	3102	3000	97.95	98.02	98.35	98.14	97.87	98.30
7	412	3.05	3080	3000	97.14	97.48	97.11	96.90	96.97	97.48
8	407	3.08	3101	3000	98.63	99.12	98.80	99.31	99.31	99.29
9	427	3.08	3114	3000	98.22	98.87	98.50	98.10	98.15	98.24
10	413	3.13	3053	3000	98.91	98.74	97.87	98.36	98.26	98.57
11	416	3.06	3114	3000	99.47	99.11	99.30	99.64	99.64	99.69
12	417	3.03	3039	3000	98.54	98.49	98.34	98.78	98.63	98.61
13	417	3.17	3098	3000	99.26	99.11	98.92	98.97	98.97	98.99
14	410	3.13	3039	3000	98.88	98.76	98.56	98.59	98.78	98.46
15	416	3.14	3043	3000	99.18	98.72	98.41	98.94	99.30	99.06
16	415	3.07	3096	3000	98.77	98.58	98.41	99.18	99.04	99.01
17	409	3.16	3075	3000	99.27	98.95	98.90	98.80	98.75	98.90
18	410	3.15	3065	3000	97.83	98.12	97.76	97.88	98.29	98.05
19	399	3.12	3157	3000	98.32	98.07	97.84	97.79	98.02	97.97
20	391	3.05	3047	3000	98.52	97.88	98.01	98.52	98.42	98.67
21	403	3.05	3087	3000	99.11	98.98	98.58	98.16	98.26	98.19
22	405	3.03	3080	3000	98.91	98.67	98.86	98.81	99.14	98.84
23	409	3.14	3018	3000	99.12	99.05	98.63	98.83	98.75	98.75
24	416	3.01	3083	3000	98.58	97.83	98.34	98.34	98.70	98.63
25	413	3.04	3088	3000	98.21	98.11	97.80	97.73	98.02	98.09
n	25	25	25	25	25	25	25	25	25	25
Mean	411	3.08			98.47	98.46	98.25	98.33	98.43	98.47
Median	412	3.06			98.54	98.58	98.34	98.34	98.42	98.52
σ	8	0.05			0.66	0.52	0.55	0.69	0.64	0.55
Min.	391	3.01			97.04	97.24	97.11	96.78	96.97	97.38
Max.	427	3.17			99.47	99.12	99.30	99.64	99.64	99.69

Lamp #	Initial (0 hrs)				Chromaticity Shift (Δu'v')					
	CCx	CCy	Calc. CCT	ANSI Target	12600	13104	13608	14112	14616	15120
1	0.4270	0.4061	3197	3000	0.0006	0.0006	0.0007	0.0006	0.0007	0.0007
2	0.4329	0.4045	3079	3000	0.0006	0.0008	0.0007	0.0007	0.0009	0.0008
3	0.4289	0.4040	3146	3000	0.0005	0.0005	0.0005	0.0005	0.0001	0.0006
4	0.4295	0.4064	3154	3000	0.0005	0.0006	0.0006	0.0006	0.0007	0.0007
5	0.4312	0.4096	3149	3000	0.0006	0.0006	0.0006	0.0006	0.0005	0.0007
6	0.4341	0.4100	3102	3000	0.0007	0.0008	0.0008	0.0009	0.0008	0.0009
7	0.4340	0.4071	3080	3000	0.0006	0.0005	0.0006	0.0006	0.0007	0.0007
8	0.4317	0.4046	3101	3000	0.0008	0.0007	0.0008	0.0009	0.0009	0.0009
9	0.4317	0.4062	3114	3000	0.0006	0.0008	0.0009	0.0008	0.0010	0.0008
10	0.4337	0.4031	3053	3000	0.0008	0.0007	0.0008	0.0007	0.0007	0.0007
11	0.4345	0.4124	3114	3000	0.0011	0.0011	0.0010	0.0010	0.0011	0.0010
12	0.4425	0.4201	3039	3000	0.0011	0.0010	0.0007	0.0010	0.0013	0.0012
13	0.4358	0.4133	3098	3000	0.0011	0.0009	0.0011	0.0010	0.0010	0.0012
14	0.4401	0.4150	3039	3000	0.0013	0.0012	0.0012	0.0012	0.0012	0.0013
15	0.4413	0.4180	3043	3000	0.0011	0.0011	0.0011	0.0010	0.0012	0.0012
16	0.4350	0.4112	3096	3000	0.0009	0.0009	0.0008	0.0009	0.0008	0.0010
17	0.4363	0.4114	3075	3000	0.0014	0.0014	0.0014	0.0014	0.0015	0.0014
18	0.4382	0.4142	3065	3000	0.0012	0.0012	0.0011	0.0013	0.0013	0.0013
19	0.4313	0.4108	3157	3000	0.0008	0.0009	0.0007	0.0007	0.0006	0.0006
20	0.4392	0.4141	3047	3000	0.0009	0.0008	0.0007	0.0009	0.0008	0.0008
21	0.4362	0.4127	3087	3000	0.0012	0.0013	0.0013	0.0011	0.0010	0.0010
22	0.4387	0.4172	3080	3000	0.0010	0.0010	0.0009	0.0010	0.0010	0.0011
23	0.4417	0.4156	3018	3000	0.0013	0.0012	0.0012	0.0012	0.0014	0.0013
24	0.4387	0.4177	3083	3000	0.0009	0.0008	0.0008	0.0010	0.0007	0.0008
25	0.4373	0.4152	3088	3000	0.0010	0.0011	0.0009	0.0010	0.0011	0.0010
n	25	25	25	25	25	25	25	25	25	25
Mean					0.0009	0.0009	0.0009	0.0009	0.0009	0.0009
Median					0.0009	0.0009	0.0008	0.0009	0.0009	0.0009
σ					0.0003	0.0003	0.0002	0.0002	0.0003	0.0002
Min.					0.0005	0.0005	0.0005	0.0005	0.0001	0.0006
Max.					0.0014	0.0014	0.0014	0.0014	0.0015	0.0014

DATA SET 15: 105°C; 1050 mA

Tested LED Package Series	XLamp XP-G3 Standard White LEDs
Tested Drive Current [I_F]	1050 mA
Testing Initiation Date	October 16, 2015
Case Temperature [T_s]	105°C
Ambient Temperature [T_A]	105°C
Failures observed	None

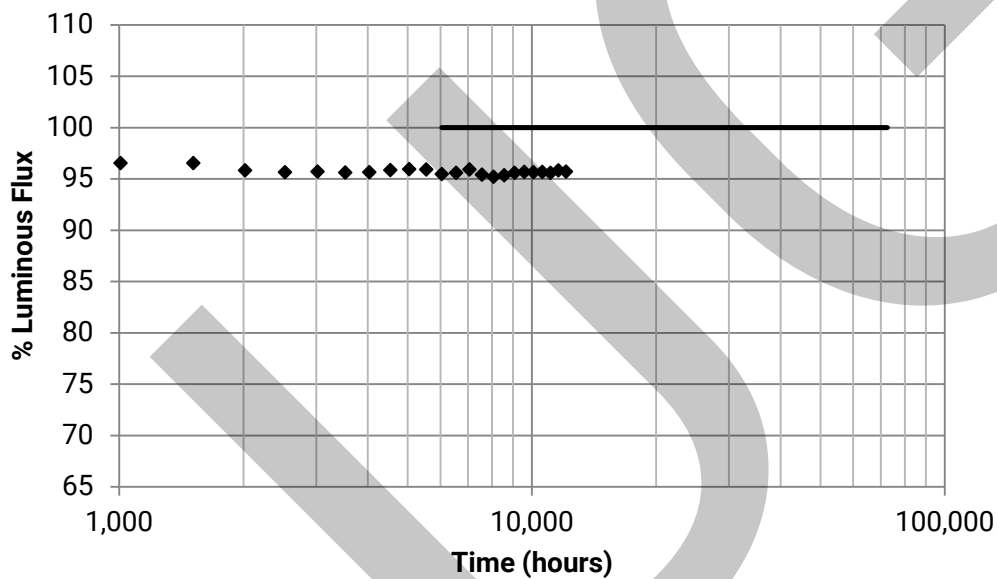
Test Results Summary

Test Duration (hrs)	Relative Luminous Flux	Relative Color Shift ($\Delta u'v'$)	Relative CRI Shift (ΔRa)	Relative Voltage Shift ($\% \Delta V_F$)	Test Duration (hrs)	Relative Luminous Flux	Relative Color Shift ($\Delta u'v'$)	Relative CRI Shift (ΔRa)	Relative Voltage Shift ($\% \Delta V_F$)
0	100.00%	0.0000	0.0	0.0%	10080	95.66%	0.0012	-0.2	0.2%
168	98.63%	0.0006	-0.2	0.0%	10584	95.70%	0.0013	-0.2	-0.2%
1008	96.56%	0.0006	-0.1	0.1%	11088	95.61%	0.0012	-0.2	0.2%
1512	96.54%	0.0006	-0.1	0.2%	11592	95.84%	0.0013	-0.2	0.1%
2016	95.84%	0.0006	-0.1	0.3%	12096	95.73%	0.0013	-0.3	-0.3%
2520	95.67%	0.0007	-0.1	0.3%					
3024	95.73%	0.0007	-0.2	0.3%					
3528	95.62%	0.0008	-0.2	0.2%					
4032	95.66%	0.0008	-0.2	0.2%					
4536	95.87%	0.0008	-0.2	0.1%					
5040	95.96%	0.0008	-0.2	0.2%					
5544	95.93%	0.0008	-0.2	0.1%					
6048	95.49%	0.0008	-0.2	0.2%					
6552	95.60%	0.0008	-0.2	-0.1%					
7056	95.92%	0.0008	-0.2	-0.6%					
7560	95.43%	0.0009	-0.2	0.0%					
8064	95.20%	0.0009	-0.2	-0.3%					
8568	95.37%	0.0009	-0.2	0.0%					
9072	95.59%	0.0010	-0.2	0.0%					
9576	95.68%	0.0010	-0.2	-0.1%					

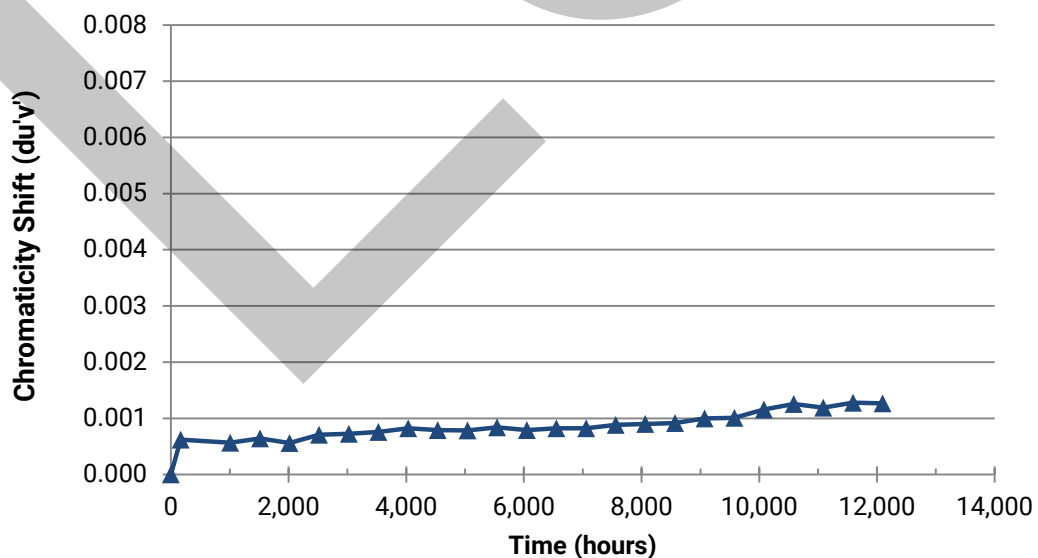
DATA SET 15: 105°C; 1050 mA

TM-21 Projection

Test duration	12,096 hours
Test duration used for projection	t=6,048 to t=12,096
α	-3.926E-07
β	9.526E-01
Reported Lifetimes	L90(12k) > 72,600 hours
	L80(12k) > 72,600 hours
	L70(12k) > 72,600 hours



Color Shift Graph



DATA SET 15: 105°C; 1050 mA

Lamp #	Initial (0 hrs)				Lumen Maintenance (%)											
	LF (lm)	V _F (V)	Calc. CCT	ANSI Target	6552	7056	7560	8064	8568	9072	9576	10080	10584	11088	11592	12096
1	429	3.09	3153	3000	95.57	95.67	95.09	94.81	94.60	95.48	95.48	95.25	95.46	94.85	95.55	96.16
2	419	3.06	3133	3000	96.54	97.64	97.06	96.56	96.61	97.09	97.23	97.33	97.25	97.57	97.92	97.23
3	416	3.07	3107	3000	95.23	95.02	94.61	94.42	93.98	94.20	94.32	94.18	94.08	93.86	93.96	94.13
4	412	3.09	3081	3000	96.53	97.40	97.02	96.65	96.53	97.11	97.26	97.55	97.26	97.62	98.01	97.19
5	407	3.09	3121	3000	94.74	93.85	93.98	94.12	93.46	93.71	94.12	93.56	93.80	93.36	93.80	93.71
6	406	3.06	3073	3000	96.06	97.00	96.68	96.41	95.99	96.55	96.90	97.17	96.87	97.12	97.78	96.95
7	411	3.06	3099	3000	95.74	96.84	96.57	95.91	95.96	96.64	96.64	97.06	96.86	97.15	97.69	96.84
8	398	3.07	3062	3000	94.60	94.05	93.67	94.30	93.37	93.39	93.90	93.67	93.97	93.49	93.80	94.35
9	410	3.07	3095	3000	97.49	98.51	98.08	97.47	98.29	98.03	98.59	98.81	98.71	98.98	99.42	98.64
10	418	3.06	3104	3000	96.06	96.01	95.63	96.20	95.79	96.15	95.84	95.86	96.01	95.89	96.13	96.22
11	416	3.07	3031	3000	93.60	93.72	93.29	93.31	93.58	93.65	93.84	93.96	94.73	94.13	94.42	94.40
12	410	3.04	3067	3000	96.78	97.66	96.83	95.70	96.66	96.70	96.48	96.48	96.56	96.56	96.92	96.75
13	408	3.05	3103	3000	94.16	94.55	93.67	94.06	94.16	94.36	94.23	93.82	94.11	94.09	93.96	93.94
14	409	3.07	3085	3000	96.67	97.28	96.36	95.79	96.55	96.48	96.58	96.80	96.45	96.80	96.58	96.80
15	403	3.07	3114	3000	94.54	94.91	94.51	94.34	94.17	94.24	94.12	94.02	93.92	94.27	94.17	94.39
16	410	3.06	3058	3000	97.73	98.00	97.51	96.97	97.78	97.56	97.29	97.49	97.46	97.61	97.51	97.88
17	413	3.05	3105	3000	97.21	97.41	96.70	96.15	96.92	97.14	97.67	97.84	97.58	97.70	97.60	98.09
18	405	3.06	3132	3000	94.94	94.77	94.42	94.89	95.02	95.19	94.74	94.65	94.77	94.40	94.94	94.97
19	410	3.10	3062	3000	97.24	97.48	96.68	96.80	97.41	97.51	97.92	97.95	97.95	98.17	97.95	98.05
20	419	3.08	3078	3000	95.52	96.28	95.47	95.52	95.13	95.71	95.64	95.42	95.47	95.30	95.71	95.47
21	432	3.07	2994	3000	93.56	93.80	93.26	92.82	92.66	93.26	92.64	93.06	93.29	92.80	93.26	92.99
22	426	3.07	3044	3000	95.82	96.26	96.36	95.44	96.69	96.73	97.13	96.76	96.66	96.59	97.16	96.73
23	424	3.08	3012	3000	94.53	94.22	93.87	93.23	93.85	94.03	93.66	93.87	93.61	92.97	92.36	92.76
24	419	3.08	3002	3000	94.51	95.04	94.42	94.56	94.56	94.78	95.28	94.49	94.80	94.68	95.04	94.68
25	412	3.08	3043	3000	94.59	94.63	94.05	93.64	94.42	94.10	94.51	94.54	94.80	94.22	94.46	93.86
n	25	25	25	25	25	25	25	25	25	25	25	25	25	25	25	25
Mean	414	3.07			95.60	95.92	95.43	95.20	95.37	95.59	95.68	95.66	95.70	95.61	95.84	95.73
Median	412	3.07			95.57	96.01	95.47	95.44	95.13	95.71	95.64	95.42	95.47	95.30	95.71	96.16
σ	8	0.01			1.21	1.52	1.47	1.30	1.54	1.51	1.61	1.71	1.57	1.84	1.89	1.73
Min.	398	3.04			93.56	93.72	93.26	92.82	92.66	93.26	92.64	93.06	93.29	92.80	92.36	92.76
Max.	432	3.10			97.73	98.51	98.08	97.47	98.29	98.03	98.59	98.81	98.71	98.98	99.42	98.64

Lamp #	Initial (0 hrs)				Chromaticity Shift (Δu'v')											
	CCx	CCy	Calc. CCT	ANSI Target	6552	7056	7560	8064	8568	9072	9576	10080	10584	11088	11592	12096
1	0.4315	0.4108	3153	3000	0.0008	0.0010	0.0009	0.0009	0.0008	0.0010	0.0010	0.0011	0.0012	0.0010	0.0011	0.0011
2	0.4337	0.4131	3133	3000	0.0012	0.0012	0.0012	0.0012	0.0011	0.0013	0.0012	0.0015	0.0015	0.0014	0.0015	0.0014
3	0.4342	0.4109	3107	3000	0.0008	0.0009	0.0010	0.0009	0.0009	0.0012	0.0011	0.0013	0.0013	0.0013	0.0014	0.0014
4	0.4363	0.4122	3081	3000	0.0011	0.0012	0.0012	0.0012	0.0011	0.0014	0.0013	0.0016	0.0016	0.0016	0.0016	0.0016
5	0.4328	0.4096	3121	3000	0.0007	0.0006	0.0009	0.0009	0.0009	0.0011	0.0011	0.0011	0.0014	0.0013	0.0014	0.0014
6	0.4340	0.4062	3073	3000	0.0012	0.0011	0.0012	0.0011	0.0011	0.0012	0.0013	0.0015	0.0016	0.0015	0.0016	0.0016
7	0.4319	0.4048	3099	3000	0.0009	0.0010	0.0009	0.0009	0.0009	0.0011	0.0011	0.0013	0.0014	0.0012	0.0014	0.0013
8	0.4336	0.4040	3062	3000	0.0006	0.0005	0.0007	0.0007	0.0008	0.0009	0.0008	0.0010	0.0012	0.0011	0.0012	0.0012
9	0.4319	0.4043	3095	3000	0.0012	0.0012	0.0011	0.0011	0.0012	0.0013	0.0013	0.0015	0.0016	0.0015	0.0015	0.0014
10	0.4306	0.4026	3104	3000	0.0008	0.0008	0.0009	0.0009	0.0010	0.0010	0.0011	0.0013	0.0013	0.0012	0.0014	0.0013
11	0.4407	0.4152	3031	3000	0.0006	0.0006	0.0007	0.0007	0.0008	0.0007	0.0007	0.0007	0.0009	0.0008	0.0009	0.0009
12	0.4395	0.4173	3067	3000	0.0009	0.0009	0.0009	0.0007	0.0007	0.0007	0.0008	0.0010	0.0011	0.0011	0.0011	0.0011
13	0.4348	0.4117	3103	3000	0.0006	0.0005	0.0008	0.0007	0.0006	0.0008	0.0008	0.0009	0.0011	0.0009	0.0011	0.0010
14	0.4368	0.4138	3085	3000	0.0006	0.0007	0.0007	0.0008	0.0008	0.0005	0.0008	0.0010	0.0010	0.0011	0.0011	0.0010
15	0.4350	0.4136	3114	3000	0.0006	0.0006	0.0005	0.0006	0.0006	0.0006	0.0007	0.0007	0.0009	0.0009	0.0010	0.0011
16	0.4410	0.4193	3058	3000	0.0010	0.0009	0.0012	0.0011	0.0011	0.0012	0.0011	0.0013	0.0014	0.0013	0.0015	0.0015
17	0.4364	0.4155	3105	3000	0.0010	0.0008	0.0010	0.0009	0.0009	0.0009	0.0010	0.0012	0.0012	0.0013	0.0013	0.0013
18	0.4331	0.4116	3132	3000	0.0005	0.0005	0.0006	0.0007	0.0007	0.0006	0.0007	0.0009	0.0009	0.0010	0.0009	0.0010
19	0.4375	0.4124	3062	3000	0.0012	0.0011	0.0012	0.0013	0.0014	0.0014	0.0013	0.0015	0.0015	0.0015	0.0016	0.0015
20	0.4383	0.4161	3078	3000	0.0006	0.0007	0.0007	0.0007	0.0005	0.0008	0.0007	0.0008	0.0009	0.0009	0.0009	0.0010
21	0.4422	0.4136	2994	3000	0.0007	0.0007	0.0007	0.0008	0.0008	0.0008	0.0007	0.0010	0.0011	0.0011	0.0011	0.0012
22	0.4370	0.4090	3044	3000	0.0009	0.0011	0.0010	0.0010	0.0011	0.0012	0.0012	0.0015	0.0014	0.0014	0.0014	0.0015
23	0.4390	0.4093	3012	3000	0.0005	0.0005	0.0007	0.0012	0.0010	0.0012	0.0011	0.0012	0.0012	0.0012	0.0012	0.0012
24	0.4407	0.4116	3002	3000	0.0007	0.0008	0.0008	0.0010	0.0010	0.0010	0.0010	0.0008	0.0013	0.0008	0.0014	0.0014
25	0.4370	0.4089	3043	3000	0.0008	0.0007	0.0009	0.0010	0.0011	0.0010	0.0012	0.0014	0.0015	0.0014	0.0015	0.0016
n	25	25	25	25	25	25	25	25	25	25	25	25	25	25	25	25
Mean					0.0008	0.0008	0.0009	0.0009	0.0009	0.0010	0.0010	0.0012	0.0013	0.0012	0.0013	0.0013
Median					0.0008	0.0008	0.0009	0.0009	0.0009	0.0010	0.0011	0.0012	0.0013	0.0012	0.0014	0.0013
σ					0.0002	0.0002	0.0002	0.0002	0.0002	0.0003	0.0002	0.0003	0.0002	0.0002	0.0002	0.0002
Min.					0.0005	0.0005	0.0005	0.0006	0.0005	0.0005	0.0007	0.0007	0.0009	0.0008	0.0009	0.0009
Max.					0.0012	0.0012	0.0012	0.0013	0.0014	0.0014	0.0013	0.0016	0.0016	0.0016	0.0016	0.0016

DATA SET 11: 85°C; 1500 mA

Tested LED Package Series	XLamp XP-G3 Standard White LEDs
Tested Drive Current [I_F]	1500 mA
Testing Initiation Date	November 2, 2015
Case Temperature [T_s]	85°C
Ambient Temperature [T_A]	85°C
Failures observed	None

Test Results Summary

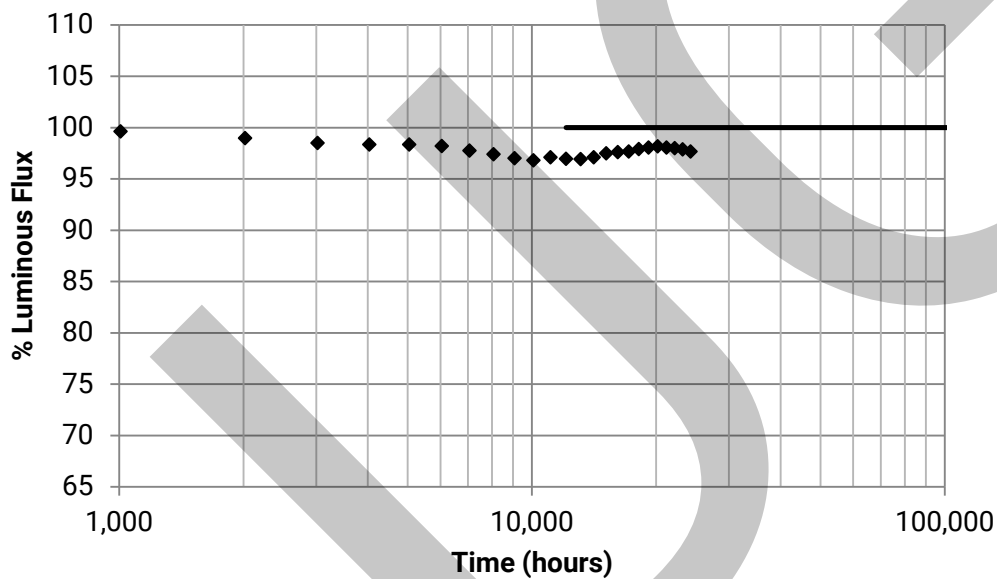
Test Duration (hrs)	Relative Luminous Flux	Relative Color Shift ($\Delta u'v'$)	Relative CRI Shift (ΔRa)	Relative Voltage Shift ($\% \Delta V_F$)	Test Duration (hrs)	Relative Luminous Flux	Relative Color Shift ($\Delta u'v'$)	Relative CRI Shift (ΔRa)	Relative Voltage Shift ($\% \Delta V_F$)
0	100.00%	0.0000	0.0	0.0%	20160	98.18%	0.0012	-0.4	-5.3%
1008	99.63%	0.0007	-0.1	N/R	21168	98.06%	0.0013	-0.4	-4.9%
2016	98.99%	0.0008	-0.2	N/R	22176	98.00%	0.0012	-0.4	-5.3%
3024	98.50%	0.0007	-0.1	N/R	23184	97.87%	0.0012	-0.4	-5.0%
4032	98.36%	0.0007	-0.2	N/R	24192	97.67%	0.0012	-0.4	-5.3%
5040	98.36%	0.0007	-0.2	N/R					
6048	98.20%	0.0008	-0.2	N/R					
7056	97.77%	0.0008	-0.1	N/R					
8064	97.42%	0.0009	-0.2	N/R					
9072	97.02%	0.0009	-0.2	N/R					
10080	96.80%	0.0009	-0.2	N/R					
11088	97.12%	0.0009	-0.2	-3.2%					
12096	96.95%	0.0009	-0.2	-3.0%					
13104	96.94%	0.0009	-0.2	-3.5%					
14112	97.12%	0.0009	-0.2	-3.9%					
15120	97.50%	0.0010	-0.3	-3.8%					
16128	97.62%	0.0011	-0.3	-3.9%					
17136	97.67%	0.0011	-0.3	-4.2%					
18144	97.90%	0.0012	-0.4	-4.5%					
19152	98.06%	0.0012	-0.4	-4.9%					

Note: "N/R" indicates data points that are not reported

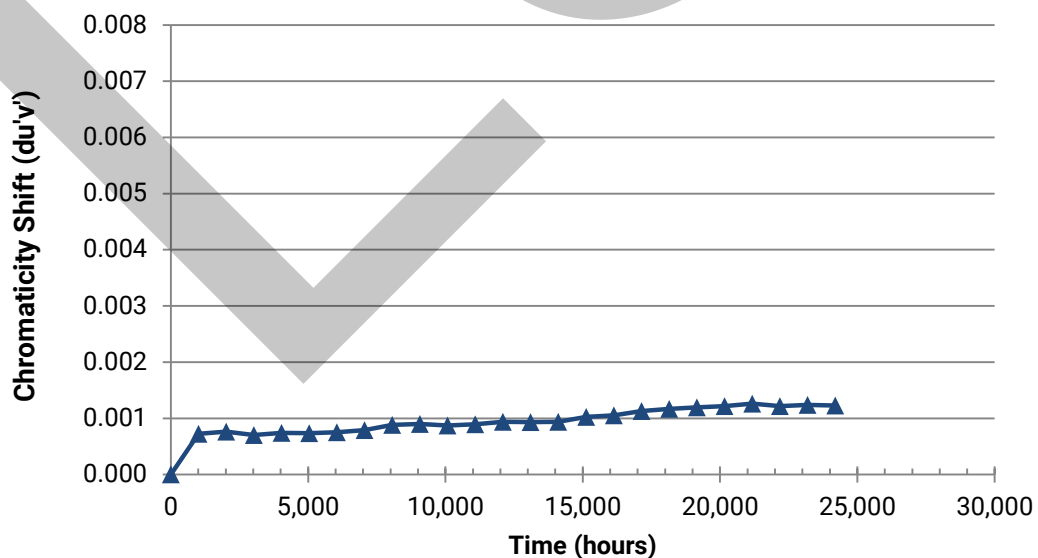
DATA SET 11: 85°C; 1500 mA

TM-21 Projection

Test duration	24,192 hours
Test duration used for projection	t=12,096 to t=24,192
α	-8.766E-07
β	9.612E-01
Reported Lifetimes	L90(24k) > 145,000 hours
	L80(24k) > 145,000 hours
	L70(24k) > 145,000 hours



Color Shift Graph



DATA SET 14: 105°C; 1500 mA

Tested LED Package Series	XLamp XP-G3 Standard White LEDs
Tested Drive Current [I_F]	1500 mA
Testing Initiation Date	December 09, 2015
Case Temperature [T_s]	105°C
Ambient Temperature [T_A]	105°C
Failures observed	None

Test Results Summary

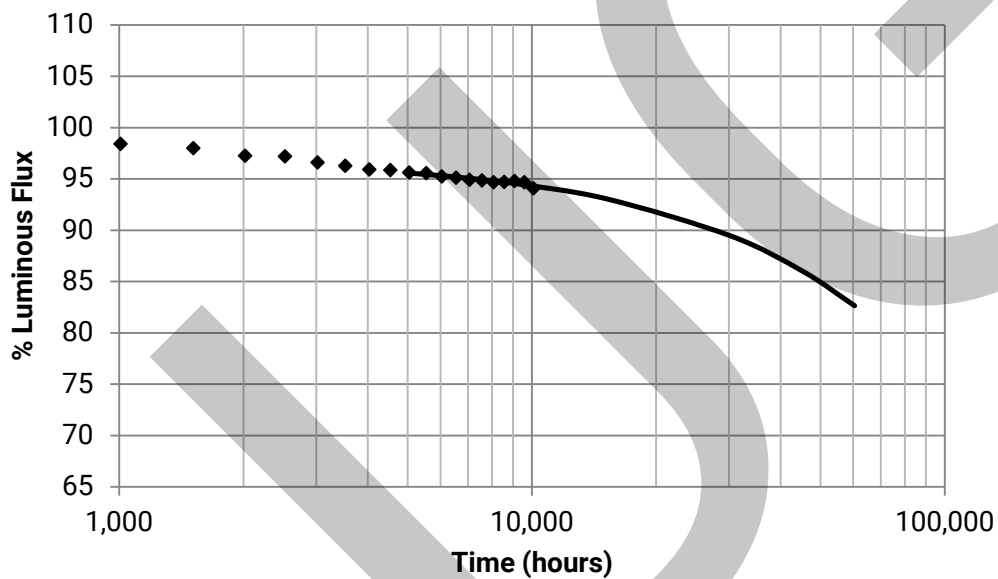
Test Duration (hrs)	Relative Luminous Flux	Relative Color Shift ($\Delta u'v'$)	Relative CRI Shift (ΔRa)	Relative Voltage Shift ($\% \Delta V_F$)	Test Duration (hrs)	Relative Luminous Flux	Relative Color Shift ($\Delta u'v'$)	Relative CRI Shift (ΔRa)	Relative Voltage Shift ($\% \Delta V_F$)
0	100.00%	0.0000	0.0	0.0%	10080	94.07%	0.0010	-0.3	N/R
168	99.73%	0.0005	-0.1	N/R					
1008	98.42%	0.0008	-0.2	N/R					
1512	97.99%	0.0008	-0.2	N/R					
2016	97.25%	0.0007	-0.2	N/R					
2520	97.21%	0.0007	-0.1	N/R					
3024	96.60%	0.0007	-0.2	N/R					
3528	96.29%	0.0007	-0.1	N/R					
4032	95.92%	0.0007	-0.2	N/R					
4536	95.87%	0.0007	-0.2	N/R					
5040	95.62%	0.0007	-0.2	N/R					
5544	95.58%	0.0007	-0.2	N/R					
6048	95.25%	0.0007	-0.2	N/R					
6552	95.12%	0.0007	-0.2	N/R					
7056	94.91%	0.0009	-0.2	N/R					
7560	94.85%	0.0008	-0.2	N/R					
8064	94.69%	0.0009	-0.2	N/R					
8568	94.72%	0.0009	-0.2	N/R					
9072	94.79%	0.0010	-0.3	N/R					
9576	94.67%	0.0009	-0.3	N/R					

Note: "N/R" indicates data points that are not reported

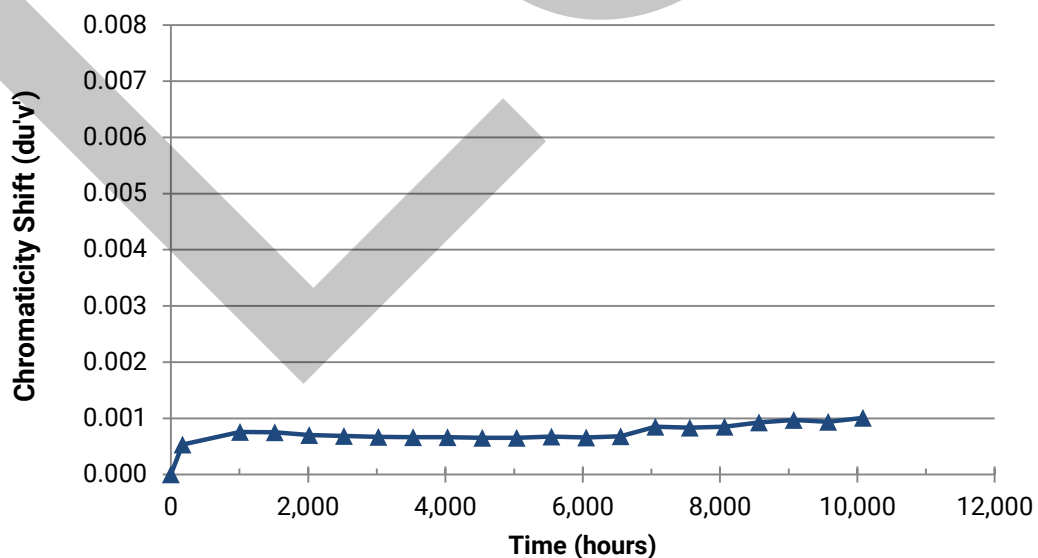
DATA SET 14: 105°C; 1500 mA

TM-21 Projection

Test duration	10,080 hours
Test duration used for projection	t=5,040 to t=10,080
α	2.620E-06
β	9.683E-01
Reported Lifetimes	L90(10k) = 27,900 hours
	L80(10k) > 60,500 hours
	L70(10k) > 60,500 hours



Color Shift Graph



DATA SET 14: 105°C; 1500 mA

Lamp #	Initial (0 hrs)				Lumen Maintenance (%)											
	LF (lm)	V _F (V)	Calc. CCT	ANSI Target	168	1008	1512	2016	2520	3024	3528	4032	4536	5040	5544	6048
1	565	3.13	3131	3000	100.30	99.24	98.87	97.82	98.07	98.05	97.66	97.42	97.40	97.19	97.03	96.81
2	536	3.19	3102	3000	100.28	100.26	99.05	98.82	99.05	97.54	97.44	97.89	97.41	97.65	97.39	97.14
3	525	3.16	3089	3000	100.50	99.41	99.56	98.76	99.03	98.63	97.98	97.79	97.43	97.10	97.52	96.15
4	565	3.23	3152	3000	99.70	98.90	98.14	98.03	98.03	97.11	96.44	96.60	96.44	96.62	96.64	95.89
5	566	3.13	3071	3000	99.35	98.20	97.39	97.26	96.60	97.28	96.04	95.97	96.24	95.79	95.59	95.99
6	546	3.10	3170	3000	100.13	98.44	98.99	97.88	98.28	97.29	96.48	96.32	95.66	95.26	95.77	95.55
7	549	3.16	3130	3000	100.82	98.89	98.42	97.92	97.61	97.67	96.92	96.94	97.07	96.74	96.10	96.56
8	554	3.14	3166	3000	99.91	98.14	97.56	96.59	96.35	96.26	96.37	95.54	96.07	95.18	95.99	95.74
9	539	3.25	3106	3000	100.65	98.68	98.18	97.48	98.03	96.68	96.20	96.42	96.44	96.14	96.51	95.29
10	552	3.11	3132	3000	100.49	98.70	98.88	98.35	98.26	96.94	96.25	95.36	95.71	95.73	94.73	95.22
11	559	3.17	3104	3000	100.14	98.43	98.34	97.92	98.46	98.03	97.10	96.87	96.73	96.98	96.58	95.38
12	548	3.23	3023	3000	100.40	98.01	98.12	97.30	97.85	97.59	97.14	97.01	96.97	96.35	95.84	94.53
13	528	3.11	3098	3000	100.70	98.41	99.17	97.33	97.46	96.27	97.08	95.42	96.04	96.12	96.35	95.44
14	535	3.18	3070	3000	100.13	99.35	99.14	97.85	98.17	97.53	96.84	95.77	96.50	95.87	96.76	96.09
15	558	3.17	3105	3000	99.37	98.51	97.17	96.34	97.12	96.52	95.31	95.36	94.84	95.09	94.98	94.48
16	539	3.10	3153	3000	98.18	96.61	96.07	95.33	95.72	94.99	95.31	94.75	94.45	94.53	94.53	93.82
17	538	3.11	3089	3000	100.22	99.87	98.27	98.64	97.47	97.19	96.99	96.54	95.42	94.77	94.68	95.68
18	552	3.20	3057	3000	98.46	97.84	96.74	95.94	94.82	94.60	94.73	94.46	95.11	94.26	94.24	94.15
19	552	3.14	3126	3000	98.23	97.36	97.25	96.33	96.94	95.91	96.00	95.00	95.69	95.60	95.76	95.38
20	563	3.17	3051	3000	99.24	97.30	96.70	95.77	96.01	94.67	95.12	94.50	94.85	94.32	94.04	94.12
21	532	3.09	3091	3000	98.74	97.16	97.16	95.97	95.26	95.35	95.54	94.81	95.00	94.71	95.00	95.05
22	555	3.25	3081	3000	99.86	98.70	97.51	96.56	96.67	96.22	95.55	95.51	94.70	95.04	94.52	94.02
23	537	3.09	3093	3000	98.99	98.32	97.95	98.19	97.09	96.11	95.79	95.79	95.88	94.88	93.93	94.75
24	547	3.15	3137	3000	99.30	97.71	97.26	96.12	95.61	95.30	94.99	94.66	93.56	93.89	93.89	93.49
25	546	3.23	3066	3000	99.27	98.02	97.87	96.68	96.39	95.27	96.04	95.27	95.03	94.78	95.07	94.65
n	25	25	25	25	25	25	25	25	25	25	25	25	25	25	25	25
Mean	547	3.16			99.73	98.42	97.99	97.25	97.21	96.60	96.29	95.92	95.87	95.62	95.58	95.25
Median	548	3.16			99.91	98.43	98.12	97.33	97.46	96.68	96.25	95.77	95.88	95.60	95.76	95.38
σ	11	0.05			0.78	0.85	0.90	1.02	1.16	1.12	0.87	1.02	1.02	1.03	1.10	0.95
Min.	525	3.09			98.18	96.61	96.07	95.33	94.82	94.60	94.73	94.46	93.56	93.89	93.89	93.49
Max.	565	3.25			100.82	100.26	99.56	98.82	99.05	98.63	97.98	97.89	97.43	97.65	97.52	97.14

Lamp #	Initial (0 hrs)				Chromaticity Shift (Δu'v')											
	CCx	CCy	Calc. CCT	ANSI Target	168	1008	1512	2016	2520	3024	3528	4032	4536	5040	5544	6048
1	0.4318	0.4086	3131	3000	0.0003	0.0006	0.0006	0.0005	0.0006	0.0007	0.0006	0.0006	0.0006	0.0005	0.0004	0.0005
2	0.4370	0.4164	3102	3000	0.0007	0.0009	0.0008	0.0008	0.0008	0.0007	0.0008	0.0009	0.0008	0.0008	0.0009	0.0008
3	0.4365	0.4137	3089	3000	0.0011	0.0012	0.0013	0.0012	0.0012	0.0012	0.0015	0.0016	0.0014	0.0015	0.0015	0.0014
4	0.4274	0.4013	3152	3000	0.0003	0.0006	0.0004	0.0006	0.0004	0.0003	0.0001	0.0004	0.0003	0.0004	0.0004	0.0004
5	0.4352	0.4086	3071	3000	0.0002	0.0006	0.0005	0.0007	0.0006	0.0005	0.0004	0.0005	0.0005	0.0005	0.0005	0.0005
6	0.4266	0.4018	3170	3000	0.0002	0.0005	0.0004	0.0005	0.0004	0.0005	0.0003	0.0002	0.0003	0.0001	0.0003	0.0003
7	0.4298	0.4040	3130	3000	0.0002	0.0005	0.0004	0.0005	0.0004	0.0007	0.0005	0.0004	0.0003	0.0004	0.0006	0.0005
8	0.4290	0.4067	3166	3000	0.0003	0.0005	0.0007	0.0008	0.0007	0.0007	0.0006	0.0006	0.0006	0.0007	0.0007	0.0006
9	0.4331	0.4083	3106	3000	0.0007	0.0011	0.0009	0.0010	0.0009	0.0008	0.0009	0.0010	0.0011	0.0013	0.0010	0.0010
10	0.4313	0.4076	3132	3000	0.0002	0.0008	0.0006	0.0006	0.0005	0.0007	0.0005	0.0003	0.0003	0.0003	0.0002	0.0007
11	0.4357	0.4138	3104	3000	0.0006	0.0008	0.0009	0.0008	0.0008	0.0009	0.0009	0.0009	0.0009	0.0008	0.0009	0.0007
12	0.4402	0.4132	3023	3000	0.0009	0.0010	0.0011	0.0011	0.0012	0.0013	0.0013	0.0012	0.0014	0.0012	0.0012	0.0011
13	0.4371	0.4161	3098	3000	0.0007	0.0009	0.0009	0.0007	0.0006	0.0006	0.0007	0.0005	0.0005	0.0005	0.0005	0.0005
14	0.4382	0.4149	3070	3000	0.0010	0.0009	0.0011	0.0009	0.0009	0.0008	0.0009	0.0007	0.0007	0.0008	0.0009	0.0009
15	0.4351	0.4126	3105	3000	0.0005	0.0007	0.0007	0.0004	0.0006	0.0006	0.0004	0.0004	0.0005	0.0005	0.0006	0.0004
16	0.4323	0.4125	3153	3000	0.0007	0.0006	0.0008	0.0006	0.0008	0.0006	0.0007	0.0005	0.0004	0.0005	0.0005	0.0005
17	0.4376	0.4161	3089	3000	0.0005	0.0008	0.0007	0.0006	0.0006	0.0004	0.0004	0.0004	0.0005	0.0004	0.0005	0.0005
18	0.4353	0.4070	3057	3000	0.0003	0.0005	0.0004	0.0004	0.0003	0.0004	0.0005	0.0004	0.0006	0.0006	0.0005	0.0005
19	0.4329	0.4105	3126	3000	0.0004	0.0008	0.0008	0.0007	0.0008	0.0007	0.0008	0.0008	0.0007	0.0008	0.0008	0.0007
20	0.4357	0.4071	3051	3000	0.0005	0.0005	0.0004	0.0003	0.0005	0.0004	0.0005	0.0004	0.0006	0.0006	0.0006	0.0006
21	0.4371	0.4152	3091	3000	0.0007	0.0010	0.0009	0.0007	0.0006	0.0005	0.0008	0.0007	0.0008	0.0005	0.0006	0.0005
22	0.4350	0.4094	3081	3000	0.0005	0.0009	0.0010	0.0009	0.0009	0.0008	0.0005	0.0008	0.0008	0.0007	0.0007	0.0008
23	0.4376	0.4166	3093	3000	0.0004	0.0007	0.0008	0.0007	0.0007	0.0006	0.0006	0.0006	0.0007	0.0005	0.0005	0.0006
24	0.4322	0.4103	3137	3000	0.0010	0.0009	0.0011	0.0008	0.0005	0.0005	0.0006	0.0004	0.0003	0.0005	0.0007	0.0006
25	0.4351	0.4077	3066	3000	0.0006	0.0009	0.0008	0.0009	0.0010	0.0009	0.0010	0.0013	0.0010	0.0009	0.0010	0.0010
n	25	25	25	25	25	25	25	25	25	25	25	25	25	25	25	25
Mean					0.0005	0.0008	0.0008	0.0007	0.0007	0.0007	0.0007	0.0007	0.0007	0.0007	0.0007	0.0007
Median					0.0005	0.0008	0.0008	0.0007	0.0006	0.0007	0.0006	0.0006	0.0006	0.0005	0.0006	0.0006
σ					0.0003	0.0002	0.0003	0.0002	0.0002	0.0002	0.0003	0.0003	0.0003	0.0003	0.0003	0.0002
Min.					0.0002	0.0005	0.0004	0.0003	0.0003	0.0003	0.0001	0.0002	0.0003	0.0001	0.0002	0.0003
Max.					0.0011	0.0012	0.0013	0.0012	0.0012	0.0013	0.0015	0.0016	0.0014	0.0015	0.0015	0.0014

DATA SET 14: 105°C; 1500 mA

Lamp #	Initial (0 hrs)				Lumen Maintenance (%)							
	LF (lm)	V _F (V)	Calc. CCT	ANSI Target	6552	7056	7560	8064	8568	9072	9576	10080
1	565	3.13	3131	3000	96.96	96.90	96.50	96.58	96.23	96.90	96.05	95.88
2	536	3.19	3102	3000	96.57	97.20	96.34	96.77	96.68	97.28	96.94	95.76
3	525	3.16	3089	3000	96.70	96.11	96.23	95.92	96.48	96.23	95.45	95.43
4	565	3.23	3152	3000	96.33	96.00	95.91	95.77	96.05	95.64	96.12	95.87
5	556	3.13	3071	3000	95.90	95.84	95.30	95.41	95.45	95.86	94.82	94.46
6	546	3.10	3170	3000	96.34	95.46	96.08	95.37	95.42	95.75	95.81	94.78
7	549	3.16	3130	3000	96.50	95.94	95.96	95.72	95.61	95.47	95.87	95.45
8	554	3.14	3166	3000	95.90	95.67	95.04	95.47	95.49	95.63	94.87	94.33
9	539	3.25	3106	3000	95.53	94.88	94.82	94.06	94.88	94.73	93.75	94.15
10	552	3.11	3132	3000	95.49	94.79	95.27	94.53	94.48	95.09	95.40	94.66
11	559	3.17	3104	3000	94.97	94.86	94.45	94.85	95.22	94.92	94.29	94.63
12	548	3.23	3023	3000	94.93	94.80	94.25	94.12	94.78	94.62	93.80	93.83
13	528	3.11	3098	3000	94.53	94.22	95.15	94.41	94.79	94.04	95.40	94.74
14	535	3.18	3070	3000	95.47	96.07	95.17	95.12	95.17	95.72	95.10	93.45
15	558	3.17	3105	3000	93.85	94.73	94.21	94.32	94.52	94.82	94.48	93.62
16	539	3.10	3153	3000	93.88	93.53	94.27	94.66	93.36	93.77	93.77	92.65
17	538	3.11	3089	3000	95.70	95.54	94.35	94.31	93.92	94.03	95.16	93.15
18	552	3.20	3057	3000	94.13	94.26	93.69	93.68	93.62	94.15	93.30	93.10
19	552	3.14	3126	3000	94.90	94.12	94.71	94.26	94.01	93.57	94.03	93.77
20	563	3.17	3051	3000	93.95	93.04	93.61	92.93	94.02	93.75	93.29	93.29
21	532	3.09	3091	3000	94.19	93.85	94.45	93.81	93.64	93.02	93.60	93.32
22	555	3.25	3081	3000	93.78	94.02	93.55	93.64	93.96	94.69	94.09	93.04
23	537	3.09	3093	3000	93.74	93.67	93.82	94.34	93.78	94.24	93.93	93.20
24	547	3.15	3137	3000	93.69	93.45	93.76	94.13	93.25	93.01	93.43	92.19
25	546	3.23	3066	3000	93.97	93.71	94.36	93.05	93.26	92.94	93.97	93.05
n	25	25	25	25	25	25	25	25	25	25	25	25
Mean	547	3.16			95.12	94.91	94.85	94.69	94.72	94.79	94.67	94.07
Median	548	3.16			94.97	94.80	94.71	94.41	94.78	94.73	94.48	93.83
σ	11	0.05			1.09	1.13	0.91	1.00	1.03	1.17	1.02	1.06
Min.	525	3.09			93.69	93.04	93.55	92.93	93.25	92.94	93.29	92.19
Max.	565	3.25			96.96	97.20	96.50	96.77	96.68	97.28	96.94	95.88

Lamp #	Initial (0 hrs)				Chromaticity Shift (Δu'v')							
	CCx	CCy	Calc. CCT	ANSI Target	6552	7056	7560	8064	8568	9072	9576	10080
1	0.4318	0.4086	3131	3000	0.0006	0.0008	0.0009	0.0009	0.0009	0.0009	0.0009	0.0010
2	0.4370	0.4164	3102	3000	0.0008	0.0009	0.0010	0.0010	0.0012	0.0013	0.0013	0.0013
3	0.4365	0.4137	3089	3000	0.0015	0.0017	0.0014	0.0015	0.0015	0.0014	0.0013	0.0014
4	0.4274	0.4013	3152	3000	0.0004	0.0006	0.0007	0.0006	0.0007	0.0007	0.0007	0.0009
5	0.4352	0.4086	3071	3000	0.0006	0.0007	0.0007	0.0007	0.0007	0.0007	0.0007	0.0007
6	0.4266	0.4018	3170	3000	0.0004	0.0006	0.0007	0.0006	0.0007	0.0007	0.0008	0.0008
7	0.4298	0.4040	3130	3000	0.0005	0.0007	0.0009	0.0008	0.0008	0.0008	0.0008	0.0008
8	0.4290	0.4067	3166	3000	0.0008	0.0008	0.0007	0.0008	0.0007	0.0008	0.0008	0.0007
9	0.4331	0.4083	3106	3000	0.0009	0.0010	0.0010	0.0009	0.0010	0.0011	0.0009	0.0010
10	0.4313	0.4076	3132	3000	0.0005	0.0006	0.0007	0.0006	0.0006	0.0008	0.0008	0.0007
11	0.4357	0.4138	3104	3000	0.0008	0.0009	0.0008	0.0009	0.0010	0.0010	0.0010	0.0011
12	0.4402	0.4132	3023	3000	0.0012	0.0014	0.0011	0.0012	0.0013	0.0013	0.0012	0.0014
13	0.4371	0.4161	3098	3000	0.0005	0.0008	0.0007	0.0009	0.0009	0.0009	0.0008	0.0009
14	0.4382	0.4149	3070	3000	0.0007	0.0010	0.0009	0.0009	0.0010	0.0011	0.0011	0.0011
15	0.4351	0.4126	3105	3000	0.0006	0.0007	0.0008	0.0008	0.0009	0.0009	0.0010	0.0011
16	0.4323	0.4125	3153	3000	0.0005	0.0007	0.0007	0.0008	0.0008	0.0010	0.0009	0.0011
17	0.4376	0.4161	3089	3000	0.0004	0.0006	0.0006	0.0006	0.0008	0.0007	0.0010	0.0010
18	0.4353	0.4070	3057	3000	0.0005	0.0008	0.0009	0.0009	0.0010	0.0011	0.0010	0.0009
19	0.4329	0.4105	3126	3000	0.0007	0.0010	0.0008	0.0010	0.0009	0.0010	0.0009	0.0010
20	0.4357	0.4071	3051	3000	0.0006	0.0009	0.0009	0.0009	0.0011	0.0011	0.0010	0.0010
21	0.4371	0.4152	3091	3000	0.0007	0.0006	0.0006	0.0007	0.0006	0.0006	0.0003	0.0006
22	0.4350	0.4094	3081	3000	0.0008	0.0009	0.0009	0.0009	0.0012	0.0012	0.0012	0.0012
23	0.4376	0.4166	3093	3000	0.0004	0.0007	0.0008	0.0007	0.0009	0.0010	0.0010	0.0011
24	0.4322	0.4103	3137	3000	0.0007	0.0011	0.0008	0.0009	0.0010	0.0011	0.0011	0.0014
25	0.4351	0.4077	3066	3000	0.0011	0.0012	0.0011	0.0011	0.0012	0.0012	0.0014	0.0013
n	25	25	25	25	25	25	25	25	25	25	25	25
Mean					0.0007	0.0009	0.0008	0.0009	0.0009	0.0010	0.0009	0.0010
Median					0.0006	0.0008	0.0008	0.0009	0.0009	0.0010	0.0010	0.0010
σ					0.0003	0.0003	0.0002	0.0002	0.0002	0.0002	0.0002	0.0002
Min.					0.0004	0.0006	0.0006	0.0006	0.0006	0.0006	0.0003	0.0006
Max.					0.0015	0.0017	0.0014	0.0015	0.0015	0.0014	0.0014	0.0014

DATA SET 12: 120°C; 1500 mA

Tested LED Package Series	XLamp XP-G3 Standard White LEDs
Tested Drive Current [I _F]	1500 mA
Testing Initiation Date	November 2, 2015
Case Temperature [T _s]	120°C
Ambient Temperature [T _A]	120°C
Failures observed	None

Test Results Summary

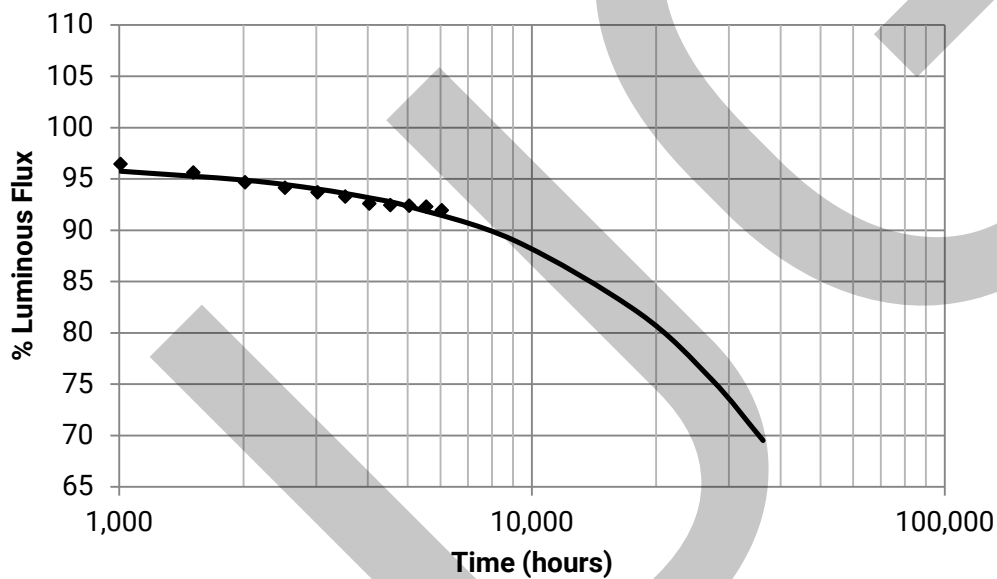
[illegible]

Note: "N/R" indicates data points that are not reported

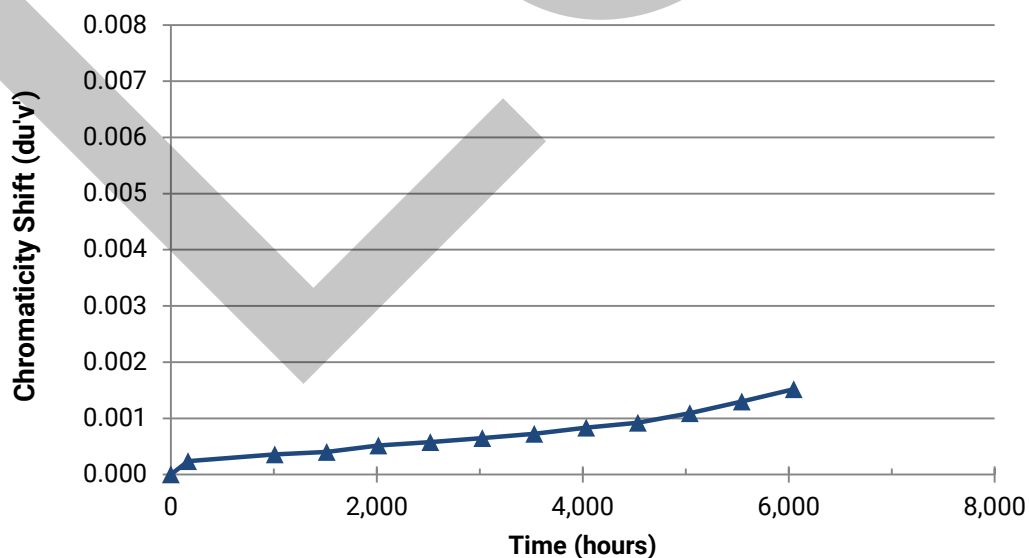
DATA SET 12: 120°C; 1500 mA

TM-21 Projection

Test duration	6,048 hours
Test duration used for projection	t=1,008 to t=6,048
α	9.077E-06
β	9.663E-01
Reported Lifetimes	L90(6k) = 7,830 hours
	L80(6k) = 20,800 hours
	L70(6k) = 35,500 hours



Color Shift Graph



DATA SET 12: 120°C; 1500 mA

Lamp #	Initial (0 hrs)				Lumen Maintenance (%)											
	LF (lm)	V _F (V)	Calc. CCT	ANSI Target	168	1008	1512	2016	2520	3024	3528	4032	4536	5040	5544	6048
1	525.0	3.10	3122	3000	98.27	96.51	95.79	94.59	93.07	93.05	92.34	91.81	91.71	92.21	92.44	92.00
2	526.9	3.13	3149	3000	98.90	97.46	96.72	94.91	94.53	94.33	94.23	93.38	93.22	93.68	92.83	92.33
3	554.5	3.25	3138	3000	98.92	97.24	95.80	93.90	94.01	92.68	92.46	91.38	91.65	92.12	92.41	91.54
4	549.2	3.26	3118	3000	98.58	96.36	95.68	94.81	93.85	93.15	93.21	91.93	92.23	91.62	91.41	91.64
5	531.7	3.13	3053	3000	97.99	96.78	96.16	94.92	93.96	93.85	92.80	92.55	92.44	92.65	92.74	91.71
6	538.1	3.16	3112	3000	98.35	97.21	96.56	96.52	95.56	95.09	93.70	93.70	93.70	93.87	94.16	94.15
7	548.6	3.16	3077	3000	98.82	96.28	95.84	94.95	95.24	94.15	94.68	93.75	94.00	92.85	93.00	92.11
8	556.1	3.15	3112	3000	97.79	95.97	95.72	94.19	93.24	92.23	92.41	91.31	91.98	91.58	91.44	91.98
9	547.9	3.23	3095	3000	98.10	96.08	94.98	93.54	93.30	92.13	92.95	91.86	91.44	91.42	91.86	90.62
10	549.6	3.26	3075	3000	98.93	96.80	96.32	94.38	94.03	92.92	92.89	92.01	91.89	91.05	91.56	91.72
11	527.8	3.11	3079	3000	97.97	97.27	95.43	94.37	93.99	94.01	93.29	92.72	92.90	93.10	93.58	93.03
12	530.0	3.12	3101	3000	97.21	95.72	95.55	94.57	94.19	94.13	93.19	92.38	92.83	92.83	92.72	92.04
13	562.1	3.12	3184	3000	96.25	95.53	94.72	94.24	93.81	93.06	92.28	91.69	91.73	91.69	91.41	90.54
14	544.5	3.12	3181	3000	97.01	95.21	94.93	94.03	93.31	92.76	92.64	91.75	91.50	91.42	91.07	90.67
15	557.7	3.15	3110	3000	97.63	96.95	96.09	95.36	95.36	95.55	94.58	93.89	93.17	93.11	92.47	92.76
16	562.3	3.15	3116	3000	97.74	97.05	95.47	94.70	94.61	95.13	94.04	93.83	92.83	92.85	92.03	91.39
17	560.1	3.16	3088	3000	98.52	97.07	96.43	95.27	94.97	95.16	93.98	93.16	92.64	92.66	92.32	92.47
18	533.4	3.14	3107	3000	96.14	95.29	94.15	94.26	92.91	92.31	91.56	91.53	90.64	91.04	90.64	89.91
19	553.8	3.12	3173	3000	97.13	96.17	94.80	94.28	94.01	94.51	94.01	93.52	93.26	93.12	92.96	93.12
20	571.6	3.18	3152	3000	98.30	96.20	95.66	95.61	94.56	94.09	94.07	93.58	92.98	93.16	93.00	92.97
n	20	20	20	20	20	20	20	20	20	20	20	20	20	20	20	20
Mean	546.5	3.16			97.93	96.46	95.64	94.67	94.13	93.71	93.27	92.59	92.44	92.40	92.30	91.94
Median	548.9	3.15			98.05	96.44	95.70	94.58	94.01	93.93	93.20	92.47	92.54	92.66	92.43	91.99
σ	13.8	0.05			0.83	0.69	0.67	0.67	0.76	1.06	0.86	0.93	0.86	0.86	0.88	1.02
Min.	525.0	3.10			96.14	95.21	94.15	93.54	92.91	92.13	91.56	91.31	90.64	91.04	90.64	89.91
Max.	571.6	3.26			98.93	97.46	96.72	96.52	95.56	95.55	94.68	93.89	94.00	93.87	94.16	94.15

Lamp #	Initial (0 hrs)				Chromaticity Shift (Δu'v')											
	CCx	CCy	Calc. CCT	ANSI Target	168	1008	1512	2016	2520	3024	3528	4032	4536	5040	5544	6048
1	0.4346	0.4137	3122	3000	0.0002	0.0004	0.0002	0.0005	0.0005	0.0005	0.0005	0.0007	0.0008	0.0009	0.0012	0.0016
2	0.4319	0.4111	3149	3000	0.0001	0.0002	0.0001	0.0003	0.0005	0.0006	0.0008	0.0008	0.0009	0.0011	0.0014	0.0016
3	0.4304	0.4064	3138	3000	0.0002	0.0002	0.0003	0.0004	0.0006	0.0007	0.0008	0.0008	0.0009	0.0013	0.0014	0.0018
4	0.4325	0.4085	3118	3000	0.0003	0.0003	0.0001	0.0004	0.0006	0.0010	0.0010	0.0010	0.0011	0.0013	0.0017	0.0018
5	0.4378	0.4118	3053	3000	0.0001	0.0002	0.0002	0.0006	0.0006	0.0008	0.0006	0.0008	0.0009	0.0012	0.0016	0.0019
6	0.4350	0.4133	3112	3000	0.0003	0.0005	0.0005	0.0006	0.0005	0.0008	0.0008	0.0009	0.0010	0.0013	0.0016	0.0022
7	0.4371	0.4134	3077	3000	0.0001	0.0005	0.0007	0.0008	0.0007	0.0009	0.0010	0.0012	0.0012	0.0012	0.0016	0.0021
8	0.4343	0.4118	3112	3000	0.0000	0.0003	0.0004	0.0006	0.0006	0.0007	0.0007	0.0009	0.0009	0.0011	0.0012	0.0015
9	0.4340	0.4089	3095	3000	0.0003	0.0003	0.0006	0.0005	0.0006	0.0007	0.0009	0.0011	0.0010	0.0013	0.0014	0.0021
10	0.4372	0.4134	3075	3000	0.0005	0.0004	0.0008	0.0009	0.0008	0.0009	0.0010	0.0011	0.0012	0.0012	0.0015	0.0014
11	0.4381	0.4158	3079	3000	0.0003	0.0002	0.0003	0.0004	0.0004	0.0006	0.0006	0.0008	0.0009	0.0012	0.0014	0.0016
12	0.4369	0.4161	3101	3000	0.0004	0.0005	0.0003	0.0005	0.0005	0.0005	0.0007	0.0006	0.0008	0.0008	0.0011	0.0011
13	0.4291	0.4092	3184	3000	0.0002	0.0003	0.0004	0.0004	0.0005	0.0005	0.0005	0.0007	0.0007	0.0007	0.0008	0.0009
14	0.4284	0.4072	3181	3000	0.0001	0.0003	0.0004	0.0002	0.0005	0.0005	0.0006	0.0008	0.0008	0.0009	0.0010	0.0011
15	0.4309	0.4040	3110	3000	0.0003	0.0006	0.0005	0.0006	0.0007	0.0007	0.0009	0.0009	0.0009	0.0010	0.0010	0.0011
16	0.4311	0.4052	3116	3000	0.0004	0.0005	0.0006	0.0007	0.0007	0.0007	0.0007	0.0009	0.0010	0.0010	0.0010	0.0012
17	0.4333	0.4065	3088	3000	0.0003	0.0004	0.0005	0.0006	0.0008	0.0006	0.0006	0.0008	0.0009	0.0011	0.0012	0.0012
18	0.4354	0.4135	3107	3000	0.0002	0.0003	0.0004	0.0004	0.0004	0.0003	0.0005	0.0006	0.0010	0.0011	0.0014	0.0016
19	0.4259	0.4005	3173	3000	0.0003	0.0004	0.0004	0.0004	0.0004	0.0004	0.0006	0.0007	0.0007	0.0012	0.0011	0.0012
20	0.4286	0.4041	3152	3000	0.0001	0.0003	0.0005	0.0007	0.0008	0.0007	0.0008	0.0009	0.0010	0.0010	0.0013	0.0015
n	20	20	20	20	20	20	20	20	20	20	20	20	20	20	20	20
Mean					0.0002	0.0004	0.0004	0.0005	0.0006	0.0006	0.0007	0.0008	0.0009	0.0011	0.0013	0.0015
Median					0.0003	0.0003	0.0004	0.0005	0.0006	0.0007	0.0007	0.0008	0.0009	0.0011	0.0013	0.0016
σ					0.0001	0.0001	0.0002	0.0002	0.0001	0.0002	0.0002	0.0002	0.0001	0.0002	0.0002	0.0004
Min.					0.0000	0.0002	0.0001	0.0002	0.0004	0.0003	0.0005	0.0006	0.0007	0.0007	0.0008	0.0009
Max.					0.0005	0.0006	0.0008	0.0009	0.0008	0.0010	0.0010	0.0012	0.0012	0.0013	0.0017	0.0022

DATA SET 13: 85°C; 2000 mA

Tested LED Package Series	XLamp XP-G3 Standard White LEDs
Tested Drive Current [I _F]	2000 mA
Testing Initiation Date	February 10, 2016
Case Temperature [T _s]	85°C
Ambient Temperature [T _A]	85°C
Failures observed	None

Test Results Summary

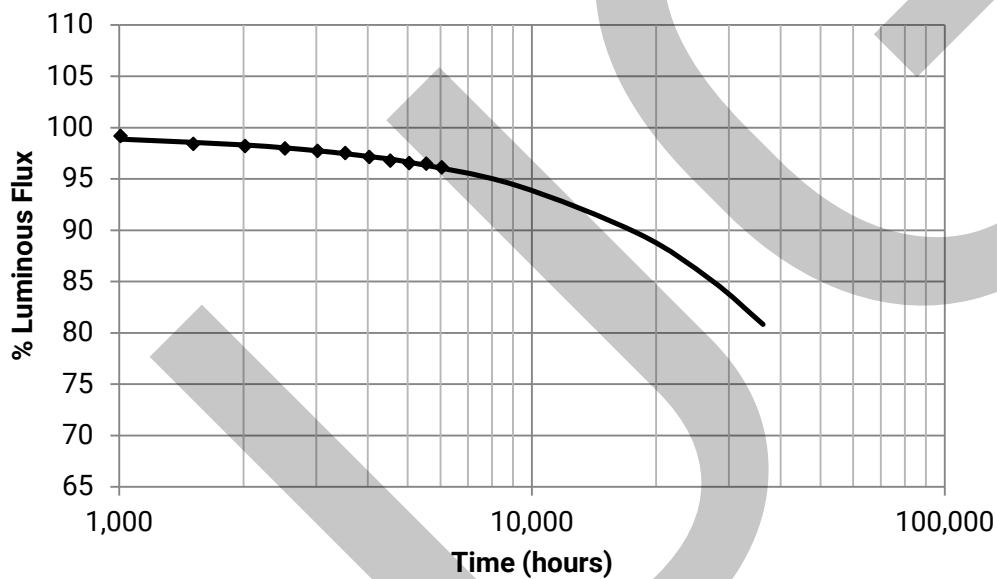
Test Duration (hrs)	Relative Luminous Flux	Relative Color Shift ($\Delta u'v'$)	Relative CRI Shift (ΔRa)	Relative Voltage Shift ($\% \Delta V_p$)
0	100.00%	0.0000	0.0	0.0%
168	99.49%	0.0004	-0.1	N/R
1008	99.18%	0.0007	-0.1	N/R
1512	98.41%	0.0007	-0.1	N/R
2016	98.22%	0.0007	-0.1	N/R
2520	97.96%	0.0007	-0.1	N/R
3024	97.72%	0.0007	-0.1	N/R
3528	97.53%	0.0007	-0.1	N/R
4032	97.14%	0.0008	-0.1	N/R
4536	96.78%	0.0007	-0.1	N/R
5040	96.55%	0.0008	-0.1	N/R
5544	96.48%	0.0007	-0.1	N/R
6048	96.14%	0.0008	-0.2	N/R

Note: "N/R" indicates data points that are not reported

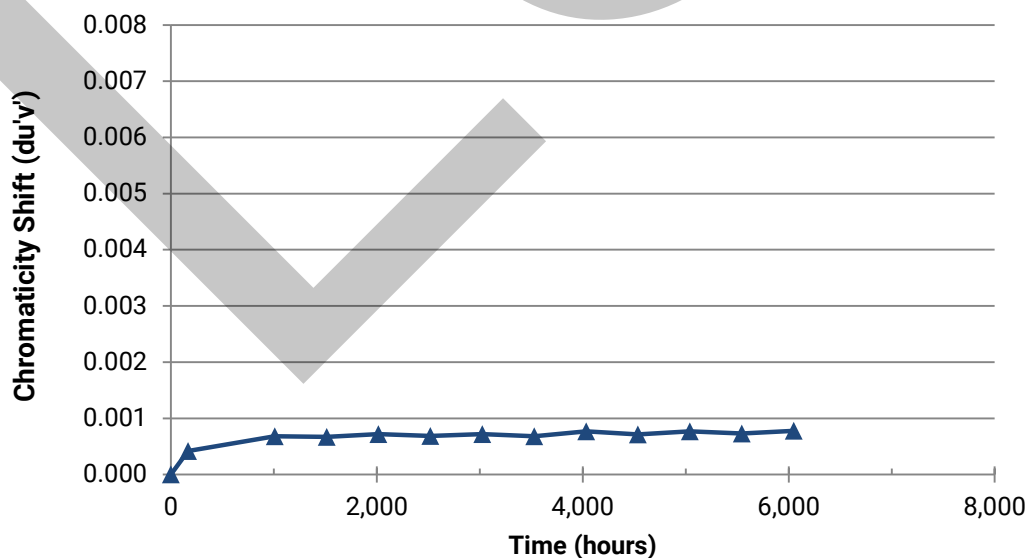
DATA SET 13: 85°C; 2000 mA

TM-21 Projection

Test duration	6,048 hours
Test duration used for projection	t=1,008 to t=6,048
α	5.713E-06
β	9.944E-01
Reported Lifetimes	L90(6k) = 17,500 hours
	L80(6k) > 36,300 hours
	L70(6k) > 36,300 hours



Color Shift Graph



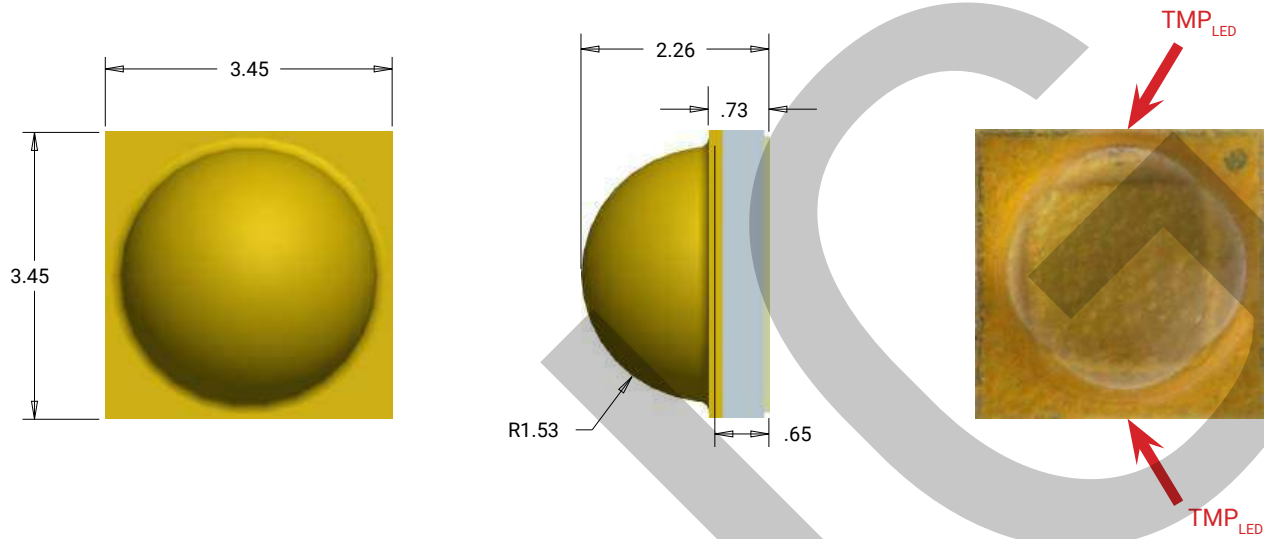
DATA SET 13: 85°C; 2000 mA

Lamp #	Initial (0 hrs)				Lumen Maintenance (%)											
	LF (lm)	V _F (V)	Calc. CCT	ANSI Target	168	1008	1512	2016	2520	3024	3528	4032	4536	5040	5544	6048
1	653.7	3.18	3127	3000	99.72	99.20	98.50	98.09	97.48	97.34	97.05	96.11	96.08	96.47	96.07	95.90
2	668.1	3.20	3171	3000	100.07	98.95	97.86	97.96	97.64	97.92	96.63	96.83	96.45	96.87	96.38	96.48
3	645.7	3.19	3149	3000	100.45	99.30	98.34	98.92	97.80	97.89	97.60	97.66	96.96	97.43	97.54	96.93
4	672.6	3.24	3189	3000	100.04	99.79	98.65	98.86	98.50	97.99	97.61	97.92	97.96	98.31	97.84	98.02
5	674.9	3.27	3186	3000	100.04	99.47	98.40	98.99	98.70	97.96	98.04	97.75	97.70	97.87	97.73	97.57
6	636.6	3.22	3168	3000	99.75	98.48	97.83	98.18	97.75	98.01	97.42	97.28	96.73	97.03	97.28	96.70
7	662.5	3.22	3172	3000	99.32	98.49	97.45	97.68	97.22	97.42	96.68	96.45	96.18	96.33	96.14	96.05
8	687.0	3.31	3172	3000	99.74	99.34	98.59	98.75	98.79	98.40	98.53	97.39	97.45	97.86	98.21	97.70
9	648.8	3.14	3148	3000	98.81	99.34	99.01	98.64	98.23	98.84	98.55	98.40	97.72	97.29	97.84	97.41
10	639.5	3.15	3152	3000	99.14	99.70	99.45	98.80	98.47	99.01	98.26	98.33	97.98	97.28	97.83	97.44
11	646.0	3.15	3112	3000	99.38	99.92	99.29	98.70	98.39	98.81	98.62	98.51	98.22	97.09	96.89	96.63
12	643.1	3.16	3108	3000	99.19	100.12	99.04	98.45	98.07	98.46	98.09	97.84	97.71	96.67	97.14	96.92
13	642.8	3.16	3110	3000	98.99	99.53	98.44	98.09	97.60	98.26	97.93	97.64	97.32	96.66	97.23	96.39
14	637.5	3.16	3080	3000	99.44	99.78	98.81	97.85	97.69	98.15	98.09	97.90	97.49	96.64	96.25	96.31
15	620.4	3.10	3159	3000	99.53	99.15	99.26	98.45	98.66	97.99	97.86	97.45	97.08	97.28	96.23	95.71
16	627.5	3.20	3103	3000	99.98	98.90	99.43	98.37	98.74	97.71	97.55	97.05	96.67	96.37	95.81	95.52
17	647.6	3.31	3102	3000	99.44	99.03	98.32	98.21	97.96	97.30	97.16	97.07	96.66	96.12	95.74	95.68
18	657.8	3.31	3144	3000	99.45	99.26	97.83	98.05	97.81	97.48	97.26	97.20	96.66	95.99	96.76	96.20
19	625.5	3.11	3153	3000	99.81	99.18	98.75	98.03	98.86	97.78	98.55	97.20	96.72	96.75	96.58	95.78
20	660.9	3.32	3139	3000	99.20	98.79	97.70	97.94	97.55	96.85	96.99	95.79	95.58	94.73	95.37	95.08
21	626.4	3.22	3128	3000	99.55	98.79	98.58	97.69	97.41	97.09	97.35	96.98	95.61	96.22	95.07	94.72
22	650.7	3.33	3141	3000	99.25	99.02	97.85	98.06	97.66	96.39	96.00	95.54	95.31	94.59	95.14	94.50
23	621.7	3.11	3104	3000	99.89	98.75	98.02	97.49	97.28	96.40	97.47	95.99	95.54	95.64	94.63	94.29
24	654.8	3.33	3137	3000	98.58	98.34	97.19	97.63	97.48	96.67	96.61	95.95	95.53	95.20	94.64	94.27
25	648.7	3.32	3145	3000	98.50	98.81	97.60	97.63	97.27	96.93	96.47	96.25	96.02	95.08	95.75	95.25
n	25	25	25	25	25	25	25	25	25	25	25	25	25	25	25	25
Mean	648.0	3.22			99.49	99.18	98.41	98.22	97.96	97.72	97.53	97.14	96.78	96.55	96.48	96.14
Median	647.6	3.20			99.45	99.18	98.44	98.09	97.80	97.89	97.55	97.20	96.72	96.66	96.38	96.20
σ	17.1	0.08			0.48	0.47	0.64	0.45	0.53	0.73	0.72	0.85	0.88	0.96	1.06	1.08
Min.	620.4	3.10			98.50	98.34	97.19	97.49	97.22	96.39	96.00	95.54	95.31	94.59	94.63	94.27
Max.	687.0	3.33			100.45	100.12	99.45	98.99	98.86	99.01	98.62	98.51	98.22	98.31	98.21	98.02

Lamp #	Initial (0 hrs)				Chromaticity Shift (Δu'v')											
	CCx	CCy	Calc. CCT	ANSI Target	168	1008	1512	2016	2520	3024	3528	4032	4536	5040	5544	6048
1	0.4276	0.3987	3127	3000	0.0003	0.0007	0.0003	0.0005	0.0004	0.0007	0.0005	0.0007	0.0005	0.0004	0.0004	0.0003
2	0.4318	0.4137	3171	3000	0.0005	0.0009	0.0009	0.0009	0.0009	0.0009	0.0007	0.0009	0.0009	0.0008	0.0007	0.0008
3	0.4305	0.4080	3149	3000	0.0003	0.0008	0.0006	0.0008	0.0006	0.0007	0.0007	0.0010	0.0008	0.0007	0.0007	0.0007
4	0.4272	0.4055	3189	3000	0.0004	0.0009	0.0008	0.0007	0.0007	0.0008	0.0006	0.0007	0.0007	0.0007	0.0006	0.0006
5	0.4270	0.4047	3186	3000	0.0003	0.0009	0.0008	0.0008	0.0006	0.0008	0.0007	0.0007	0.0006	0.0006	0.0006	0.0006
6	0.4291	0.4072	3168	3000	0.0002	0.0008	0.0005	0.0007	0.0006	0.0006	0.0006	0.0006	0.0006	0.0005	0.0005	0.0005
7	0.4264	0.4016	3172	3000	0.0005	0.0009	0.0008	0.0008	0.0007	0.0006	0.0007	0.0008	0.0008	0.0006	0.0007	0.0006
8	0.4264	0.4016	3172	3000	0.0004	0.0008	0.0006	0.0006	0.0006	0.0007	0.0006	0.0006	0.0006	0.0006	0.0006	0.0007
9	0.4336	0.4148	3148	3000	0.0004	0.0004	0.0005	0.0006	0.0006	0.0006	0.0006	0.0007	0.0006	0.0007	0.0007	0.0008
10	0.4314	0.4104	3152	3000	0.0005	0.0007	0.0009	0.0010	0.0009	0.0010	0.0009	0.0010	0.0010	0.0011	0.0011	0.0011
11	0.4357	0.4149	3112	3000	0.0004	0.0006	0.0006	0.0007	0.0007	0.0007	0.0007	0.0007	0.0008	0.0007	0.0007	0.0009
12	0.4349	0.4126	3108	3000	0.0005	0.0007	0.0007	0.0008	0.0007	0.0008	0.0007	0.0008	0.0007	0.0009	0.0007	0.0009
13	0.4357	0.4146	3110	3000	0.0003	0.0005	0.0006	0.0006	0.0006	0.0006	0.0006	0.0006	0.0006	0.0007	0.0007	0.0007
14	0.4388	0.4175	3080	3000	0.0006	0.0006	0.0007	0.0007	0.0007	0.0007	0.0007	0.0008	0.0007	0.0008	0.0006	0.0009
15	0.4322	0.4131	3159	3000	0.0004	0.0006	0.0006	0.0007	0.0008	0.0008	0.0007	0.0008	0.0007	0.0008	0.0008	0.0009
16	0.4373	0.4172	3103	3000	0.0004	0.0005	0.0006	0.0005	0.0006	0.0006	0.0005	0.0005	0.0005	0.0006	0.0005	0.0007
17	0.4352	0.4124	3102	3000	0.0006	0.0007	0.0008	0.0007	0.0007	0.0008	0.0008	0.0009	0.0008	0.0010	0.0009	0.0010
18	0.4303	0.4069	3144	3000	0.0005	0.0008	0.0007	0.0008	0.0008	0.0008	0.0009	0.0010	0.0009	0.0010	0.0011	0.0008
19	0.4319	0.4116	3153	3000	0.0005	0.0005	0.0005	0.0004	0.0006	0.0005	0.0004	0.0006	0.0004	0.0005	0.0005	0.0006
20	0.4305	0.4067	3139	3000	0.0004	0.0004	0.0006	0.0006	0.0006	0.0006	0.0006	0.0007	0.0007	0.0007	0.0008	0.0007
21	0.4338	0.4127	3128	3000	0.0004	0.0005	0.0006	0.0007	0.0005	0.0005	0.0005	0.0006	0.0005	0.0006	0.0006	0.0007
22	0.4320	0.4103	3141	3000	0.0006	0.0008	0.0009	0.0011	0.0011	0.0011	0.0011	0.0011	0.0011	0.0012	0.0012	0.0011
23	0.4353	0.4129	3104	3000	0.0004	0.0006	0.0005	0.0006	0.0005	0.0006	0.0006	0.0006	0.0005	0.0007	0.0006	0.0009
24	0.4313	0.4083	3137	3000	0.0005	0.0007	0.0007	0.0010	0.0010	0.0009	0.0010	0.0010	0.0010	0.0011	0.0010	0.0011
25	0.4300	0.4063	3145	3000	0.0004	0.0007	0.0008	0.0009	0.0008	0.0009	0.0009	0.0009	0.0009	0.0010	0.0010	0.0008
n	25	25	25	25	25	25	25	25	25	25	25	25	25	25	25	25
Mean					0.0004	0.0007	0.0007	0.0007	0.0007	0.0007	0.0007	0.0008	0.0007	0.0008	0.0007	0.0008
Median					0.0004	0.0007	0.0006	0.0007	0.0007	0.0007	0.0007	0.0007	0.0007	0.0007	0.0007	0.0008
σ					0.0001	0.0002	0.0001	0.0002	0.0002	0.0001	0.0002	0.0002	0.0002	0.0002	0.0002	0.0002
Min.					0.0002	0.0004	0.0003	0.0004	0.0004	0.0005	0.0004	0.0005	0.0004	0.0004	0.0004	0.0003
Max.					0.0006	0.0009	0.0009	0.0011	0.0011	0.0011	0.0011	0.0011	0.0011	0.0012	0.0012	0.0011

MECHANICAL DIMENSIONS & TEMPERATURE MEASUREMENT POINT

Dimensions are in mm. All measurements are ± 0.13 mm unless otherwise indicated.



The LED temperature measurement point (TMP_{LED}) should be measured on the PCB surface, as close to the LED's thermal pad as possible (shown in the picture above). Either one of the two shown TMP_{LED} locations may be used and are equivalent to each other.



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We

LUG Light Factory Ltd.
Gorzowska 11
65-127 Zielona Góra, Poland

declare under our sole responsibility that the product

Name	TRAFFIK LED
Group	Infrastructural lighting
Factory number	Attachment

is in conformity with the provisions of the following acts:

Directive 2014/30/EU of the European Parliament and of the Council of 26 February 2014 on the harmonisation of the laws of the Member States relating to electromagnetic compatibility

Directive 2014/35/EU of the European Parliament and of the Council of 26 February 2014 on the harmonisation of the laws of the Member States relating to the making available on the market of electrical equipment designed for use within certain voltage limits

Directive 2011/65/EU of the European Parliament and of the Council of 8 June 2011 on the restriction of the use of certain hazardous substances in electrical and electronic equipment

Directive 2009/125/EC of the European Parliament and of the Council of 21 October 2009 establishing a framework for the setting of ecodesign requirements for energy-related products

Commission regulation (EU) 2019/2020 of 1 October 2019 laying down ecodesign requirements for light sources and separate control gears pursuant to Directive 2009/125/EC of the European Parliament and of the Council and repealing Commission Regulations (EC) No 244/2009, (EC) No 245/2009 and (EU) No 1194/2012

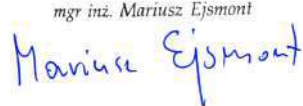
and the following harmonized standards:

PN-EN IEC 60598-1:2021-07
PN-EN IEC 55015:2019-11
PN-EN IEC 55015:2019-11/A11:2020-07
PN-EN 61547:2009
PN-EN IEC 61547:2023-10
PN-EN IEC 61000-3-2:2019-04
PN-EN IEC 61000-3-2:2019-04/A1:2021-08

PN-EN 61000-3-3:2013-10
PN-EN 61000-3-3:2013-10/A1:2019-10
PN-EN 62493:2015-11
PN-EN IEC 63000:2019-01
PN-EN 62471:2010
PN-EN 60598-2-3:2006/A1:2012
PN-EN 60598-2-3:2006/A1:2012


LUG Light Factory Sp. z o.o.
Kierownik Laboratorium/Laboratory Manager
mgr inż. Marcin Biakos

Issued by

DYREKTOR
DS. TECHNICZNYCH
mgr inż. Mariusz Ejsmont


Authorized person signature



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ATTACHMENT

Factory number

130292.5L121.080	130292.5L122.080	130292.5L121.090	130292.5L122.090
130292.5L121.130	130292.5L122.130	130292.5L121.120	130292.5L122.120
130292.5L121.140	130292.5L122.140	130292.5L121.110	130292.5L122.110
130292.5L121.060	130292.5L122.060	130292.5L121.100	130292.5L122.100
130292.5L051.030	130292.5L052.030	130292.5L051.010	130292.5L052.010
130292.5L051.020	130292.5L052.020	130292.5L051.040	130292.5L052.040
130292.5L051.050	130292.5L052.050	130292.5L011.030	130292.5L012.030
130292.5L011.010	130292.5L012.010	130292.5L011.020	130292.5L012.020
130292.5L011.040	130292.5L012.040	130292.5L011.050	130292.5L012.050
130292.5L131.070	130292.5L132.070	130292.5L131.080	130292.5L132.080
130292.5L131.090	130292.5L132.090	130292.5L131.120	130292.5L132.120
130292.5L131.130	130292.5L132.130	130292.5L131.100	130292.5L132.100
130292.5L131.110	130292.5L132.110	130292.5L131.060	130292.5L132.060
130292.5L131.140	130292.5L132.140	130292.5L091.070	130292.5L092.070
130292.5L091.080	130292.5L092.080	130292.5L091.090	130292.5L092.090
130292.5L091.120	130292.5L092.120	130292.5L091.130	130292.5L092.130
130292.5L091.100	130292.5L092.100	130292.5L091.110	130292.5L092.110
130292.5L091.060	130292.5L092.060	130292.5L091.140	130292.5L092.140
130292.5L061.030	130292.5L062.030	130292.5L061.010	130292.5L062.010
130292.5L061.020	130292.5L062.020	130292.5L061.040	130292.5L062.040
130292.5L061.050	130292.5L062.050	130292.5L021.030	130292.5L022.030
130292.5L021.040	130292.5L022.040	130292.5L021.020	130292.5L022.020
130292.5L021.050	130292.5L022.050	130292.5L021.010	130292.5L022.010
130292.5L141.070	130292.5L142.070	130292.5L141.080	130292.5L142.080
130292.5L141.090	130292.5L142.090	130292.5L141.120	130292.5L142.120
130292.5L141.060	130292.5L142.060	130292.5L141.130	130292.5L142.130
130292.5L141.140	130292.5L142.140	130292.5L141.100	130292.5L142.100
130292.5L141.110	130292.5L142.110	130292.5L101.070	130292.5L102.070
130292.5L101.080	130292.5L102.080	130292.5L101.090	130292.5L102.090
130292.5L101.120	130292.5L102.120	130292.5L101.130	130292.5L102.130
130292.5L101.140	130292.5L102.140	130292.5L101.100	130292.5L102.100
130292.5L101.110	130292.5L102.110	130292.5L101.060	130292.5L102.060
130292.5L071.030	130292.5L072.030	130292.5L071.020	130292.5L072.020
130292.5L071.040	130292.5L072.040	130292.5L071.050	130292.5L072.050
130292.5L031.030	130292.5L071.010	130292.5L072.010	130292.5L032.030
130292.5L031.020	130292.5L032.020	130292.5L031.040	130292.5L032.040
130292.5L031.050	130292.5L032.050	130292.5L031.010	130292.5L032.010
130292.5L151.080	130292.5L152.080	130292.5L151.090	130292.5L152.090
130292.5L151.120	130292.5L152.120	130292.5L151.130	130292.5L152.130
130292.5L151.070	130292.5L152.070	130292.5L151.060	130292.5L152.060
130292.5L151.140	130292.5L152.140	130292.5L151.100	130292.5L152.100
130292.5L151.110	130292.5L152.110	130292.5L111.070	130292.5L112.070
130292.5L111.080	130292.5L112.080	130292.5L111.090	130292.5L112.090
130292.5L111.120	130292.5L112.120	130292.5L111.130	130292.5L112.130
130292.5L111.060	130292.5L112.060	130292.5L111.140	130292.5L112.140
130292.5L111.100	130292.5L112.100	130292.5L111.110	130292.5L112.110
130292.5L081.030	130292.5L082.030	130292.5L081.050	130292.5L082.050
130292.5L081.020	130292.5L082.020	130292.5L081.040	130292.5L082.040
130292.5L081.010	130292.5L082.010	130292.5L041.030	130292.5L042.030



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130292.5L041.020	130292.5L042.020	130292.5L041.040	130292.5L042.040
130292.5L041.050	130292.5L042.050	130292.5L041.010	130292.5L042.010
130292.5L161.070	130292.5L162.070	130292.5L161.080	130292.5L162.080
130292.5L161.090	130292.5L162.090	130292.5L161.130	130292.5L162.130
130292.5L161.120	130292.5L162.120	130292.5L161.140	130292.5L162.140
130292.5L161.110	130292.5L162.110	130292.5L161.060	130292.5L162.060
130292.5L161.100	130292.5L162.100	130292.5L121.070	130292.5L122.070
130292.3L121.080	130292.3L122.080	130292.3L121.090	130292.3L122.090
130292.3L121.130	130292.3L122.130	130292.3L121.120	130292.3L122.120
130292.3L121.140	130292.3L122.140	130292.3L121.110	130292.3L122.110
130292.3L121.060	130292.3L122.060	130292.3L121.100	130292.3L122.100
130292.3L051.030	130292.3L052.030	130292.3L051.010	130292.3L052.010
130292.3L051.020	130292.3L052.020	130292.3L051.040	130292.3L052.040
130292.3L051.050	130292.3L052.050	130292.3L011.030	130292.3L012.030
130292.3L011.010	130292.3L012.010	130292.3L011.020	130292.3L012.020
130292.3L011.040	130292.3L012.040	130292.3L011.050	130292.3L012.050
130292.3L131.070	130292.3L132.070	130292.3L131.080	130292.3L132.080
130292.3L131.090	130292.3L132.090	130292.3L131.120	130292.3L132.120
130292.3L131.130	130292.3L132.130	130292.3L131.100	130292.3L132.100
130292.3L131.110	130292.3L132.110	130292.3L131.060	130292.3L132.060
130292.3L131.140	130292.3L132.140	130292.3L091.070	130292.3L092.070
130292.3L091.080	130292.3L092.080	130292.3L091.090	130292.3L092.090
130292.3L091.120	130292.3L092.120	130292.3L091.130	130292.3L092.130
130292.3L091.100	130292.3L092.100	130292.3L091.110	130292.3L092.110
130292.3L091.060	130292.3L092.060	130292.3L091.140	130292.3L092.140
130292.3L061.030	130292.3L062.030	130292.3L061.010	130292.3L062.010
130292.3L061.020	130292.3L062.020	130292.3L061.040	130292.3L062.040
130292.3L061.050	130292.3L062.050	130292.3L021.030	130292.3L022.030
130292.3L021.040	130292.3L022.040	130292.3L021.020	130292.3L022.020
130292.3L021.050	130292.3L022.050	130292.3L021.010	130292.3L022.010
130292.3L141.070	130292.3L142.070	130292.3L141.080	130292.3L142.080
130292.3L141.090	130292.3L142.090	130292.3L141.120	130292.3L142.120
130292.3L141.060	130292.3L142.060	130292.3L141.130	130292.3L142.130
130292.3L141.140	130292.3L142.140	130292.3L141.100	130292.3L142.100
130292.3L141.110	130292.3L142.110	130292.3L101.070	130292.3L102.070
130292.3L101.080	130292.3L102.080	130292.3L101.090	130292.3L102.090
130292.3L101.120	130292.3L102.120	130292.3L101.130	130292.3L102.130
130292.3L101.140	130292.3L102.140	130292.3L101.100	130292.3L102.100
130292.3L101.110	130292.3L102.110	130292.3L101.060	130292.3L102.060
130292.3L071.030	130292.3L072.030	130292.3L071.020	130292.3L072.020
130292.3L071.040	130292.3L072.040	130292.3L071.050	130292.3L072.050
130292.3L031.030	130292.3L071.010	130292.3L072.010	130292.3L032.030
130292.3L031.020	130292.3L032.020	130292.3L031.040	130292.3L032.040
130292.3L031.050	130292.3L032.050	130292.3L031.010	130292.3L032.010
130292.3L151.080	130292.3L152.080	130292.3L151.090	130292.3L152.090
130292.3L151.120	130292.3L152.120	130292.3L151.130	130292.3L152.130
130292.3L151.070	130292.3L152.070	130292.3L151.060	130292.3L152.060
130292.3L151.140	130292.3L152.140	130292.3L151.100	130292.3L152.100
130292.3L151.110	130292.3L152.110	130292.3L111.070	130292.3L112.070
130292.3L111.080	130292.3L112.080	130292.3L111.090	130292.3L112.090
130292.3L111.120	130292.3L112.120	130292.3L111.130	130292.3L112.130
130292.3L111.060	130292.3L112.060	130292.3L111.140	130292.3L112.140
130292.3L111.100	130292.3L112.100	130292.3L111.110	130292.3L112.110



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130292.3L081.030	130292.3L082.030	130292.3L081.050	130292.3L082.050
130292.3L081.020	130292.3L082.020	130292.3L081.040	130292.3L082.040
130292.3L081.010	130292.3L082.010	130292.3L041.030	130292.3L042.030
130292.3L041.020	130292.3L042.020	130292.3L041.040	130292.3L042.040
130292.3L041.050	130292.3L042.050	130292.3L041.010	130292.3L042.010
130292.3L161.070	130292.3L162.070	130292.3L161.080	130292.3L162.080
130292.3L161.090	130292.3L162.090	130292.3L161.130	130292.3L162.130
130292.3L161.120	130292.3L162.120	130292.3L161.140	130292.3L162.140
130292.3L161.110	130292.3L162.110	130292.3L161.060	130292.3L162.060
130292.3L161.100	130292.3L162.100	130292.3L121.070	130292.3L122.070

Accessory factory numbers

150172.01021	150170.01022	150170.01023	150170.01024
150170.01025			

This declaration applies to all serial numbers produced under the given factory symbol.



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We

LUG Light Factory Ltd.
Gorzowska 11
65-127 Zielona Góra, Poland

declare under our sole responsibility that the product

Name	URBINO LED S
Group	Infrastructural lighting
Factory number	Attachment

is in conformity with the provisions of the following acts:

Directive 2014/30/EU of the European Parliament and of the Council of 26 February 2014 on the harmonisation of the laws of the Member States relating to electromagnetic compatibility

Directive 2014/35/EU of the European Parliament and of the Council of 26 February 2014 on the harmonisation of the laws of the Member States relating to the making available on the market of electrical equipment designed for use within certain voltage limits

Directive 2011/65/EU of the European Parliament and of the Council of 8 June 2011 on the restriction of the use of certain hazardous substances in electrical and electronic equipment

Directive 2009/125/EC of the European Parliament and of the Council of 21 October 2009 establishing a framework for the setting of ecodesign requirements for energy-related products

Commission regulation (EU) 2019/2020 of 1 October 2019 laying down ecodesign requirements for light sources and separate control gears pursuant to Directive 2009/125/EC of the European Parliament and of the Council and repealing Commission Regulations (EC) No 244/2009, (EC) No 245/2009 and (EU) No 1194/2012

and the following harmonized standards:

PN-EN IEC 60598-1:2021-07
PN-EN IEC 60598-1:2021-07/A11:2022-12
PN-EN IEC 55015:2019-11
PN-EN IEC 55015:2019-11/A11:2020-07
PN-EN 61547:2009
PN-EN IEC 61547:2023-10
PN-EN IEC 61000-3-2:2019-04
PN-EN IEC 61000-3-2:2019-04/A1:2021-08
PN-EN 61000-3-3:2013-10
PN-EN 61000-3-3:2013-10/A1:2019-10
PN-EN 62493:2010

PN-EN 62493:2015-11
PN-EN 62493:2015-11/A1:2023-03
PN-EN IEC 63000:2019-01
PN-EN 62471:2010
PN-EN 60598-2-3:2006
PN-EN 60598-2-3:2006/A1:2012
PN-EN 62722-1:2016-07
PN-EN 62722-2-1:2016-07
PN-EN 62717:2017-11
PN-EN 62717:2017-11/A2:2019-07

LUG Light Factory Sp. z o.o.
Kierownik Laboratorium/Laboratory Manager
mgr inż. Marcin Białas

Issued by

DYREKTOR
DS. TECHNICZNYCH

mgr inż. Mariusz Ejsmont

Authorized person signature



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ATTACHMENT

Factory number

130772.5L051.090	130772.5L052.090	130772.5L131.090	130772.5L132.090
130772.5L051.080	130772.5L052.080	130772.5L051.020	130772.5L052.020
130772.5L051.050	130772.5L052.050	130772.5L051.060	130772.5L052.060
130772.5L051.070	130772.5L052.070	130772.5L051.010	130772.5L052.010
130772.5L131.100	130772.5L132.100	130772.5L051.210	130772.5L052.210
130772.5L051.030	130772.5L052.030	130772.5L051.040	130772.5L052.040
130772.5L131.080	130772.5L132.080	130772.5L061.090	130772.5L062.090
130772.5L051.190	130772.5L052.190	130772.5L131.020	130772.5L132.020
130772.5L131.200	130772.5L052.200	130772.5L132.200	130772.5L051.200
130772.5L131.210	130772.5L132.210	130772.5L131.050	130772.5L132.050
130772.5L131.060	130772.5L132.060	130772.5L131.070	130772.5L132.070
130772.5L131.010	130772.5L132.010	130772.5L131.190	130772.5L132.190
130772.5L131.030	130772.5L132.030	130772.5L131.040	130772.5L132.040
130772.5L141.090	130772.5L142.090	130772.5L061.080	130772.5L062.080
130772.5L061.020	130772.5L062.020	130772.5L061.050	130772.5L062.050
130772.5L061.060	130772.5L062.060	130772.5L061.070	130772.5L062.070
130772.5L071.090	130772.5L072.090	130772.5L081.090	130772.5L082.090
130772.5L061.010	130772.5L062.010	130772.5L141.100	130772.5L142.100
130772.5L061.210	130772.5L062.210	130772.5L061.030	130772.5L062.030
130772.5L061.040	130772.5L062.040	130772.5L141.080	130772.5L142.080
130772.5L141.020	130772.5L142.020	130772.5L141.200	130772.5L142.200
130772.5L062.200	130772.5L061.200	130772.5L141.210	130772.5L142.210
130772.5L141.050	130772.5L142.050	130772.5L141.060	130772.5L142.060
130772.5L141.070	130772.5L142.070	130772.5L151.090	130772.5L152.090
130772.5L161.090	130772.5L162.090	130772.5L141.010	130772.5L142.010
130772.5L061.190	130772.5L062.190	130772.5L141.040	130772.5L142.040
130772.5L071.080	130772.5L072.080	130772.5L081.080	130772.5L082.080
130772.5L141.190	130772.5L142.190	130772.5L141.030	130772.5L142.030
130772.5L071.020	130772.5L072.020	130772.5L071.050	130772.5L072.050
130772.5L071.060	130772.5L072.060	130772.5L071.070	130772.5L072.070
130772.5L081.020	130772.5L082.020	130772.5L081.050	130772.5L082.050
130772.5L081.060	130772.5L082.060	130772.5L081.070	130772.5L082.070
130772.5L071.010	130772.5L072.010	130772.5L071.040	130772.5L072.040
130772.5L081.010	130772.5L082.010	130772.5L081.040	130772.5L082.040
130772.5L151.100	130772.5L152.100	130772.5L071.200	130772.5L072.200
130772.5L071.210	130772.5L072.210	130772.5L071.030	130772.5L072.030
130772.5L151.080	130772.5L152.080	130772.5L161.100	130772.5L162.100
130772.5L081.200	130772.5L082.200	130772.5L081.210	130772.5L082.210
130772.5L081.030	130772.5L082.030	130772.5L161.080	130772.5L162.080
130772.5L071.190	130772.5L072.190	130772.5L151.020	130772.5L152.020
130772.5L151.200	130772.5L152.200	130772.5L151.210	130772.5L152.210
130772.5L151.050	130772.5L152.050	130772.5L151.060	130772.5L152.060
130772.5L151.070	130772.5L152.070	130772.5L081.190	130772.5L082.190
130772.5L161.020	130772.5L162.020	130772.5L161.200	130772.5L162.200
130772.5L161.210	130772.5L162.210	130772.5L161.050	130772.5L162.050
130772.5L161.060	130772.5L162.060	130772.5L161.070	130772.5L162.070
130772.5L151.010	130772.5L152.010	130772.5L151.190	130772.5L152.190
130772.5L151.030	130772.5L152.030	130772.5L151.040	130772.5L152.040
130772.5L161.010	130772.5L162.010	130772.5L161.190	130772.5L162.190
130772.5L161.030	130772.5L162.030	130772.5L161.040	130772.5L162.040
130772.5L091.090	130772.5L092.090	130772.5L091.080	130772.5L092.080



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130772.5L091.050	130772.5L092.050	130772.5L091.060	130772.5L092.060
130772.5L091.070	130772.5L092.070	130772.5L091.020	130772.5L092.020
130772.5L091.010	130772.5L092.010	130772.5L091.040	130772.5L092.040
130772.5L091.210	130772.5L092.210	130772.5L091.030	130772.5L092.030
130772.5L101.090	130772.5L102.090	130772.5L091.200	130772.5L092.200
130772.5L091.190	130772.5L092.190	130772.5L171.090	130772.5L172.090
130772.5L011.080	130772.5L012.080	130772.5L011.090	130772.5L012.090
130772.5L101.080	130772.5L102.080	130772.5L101.050	130772.5L102.050
130772.5L101.060	130772.5L102.060	130772.5L101.070	130772.5L102.070
130772.5L101.020	130772.5L102.020	130772.5L111.090	130772.5L112.090
130772.5L121.090	130772.5L122.090	130772.5L171.100	130772.5L172.100
130772.5L171.080	130772.5L172.080	130772.5L101.010	130772.5L102.010
130772.5L101.040	130772.5L102.040	130772.5L101.030	130772.5L102.030
130772.5L171.020	130772.5L172.020	130772.5L171.210	130772.5L172.210
130772.5L171.050	130772.5L172.050	130772.5L171.060	130772.5L172.060
130772.5L171.070	130772.5L172.070	130772.5L101.210	130772.5L102.210
130772.5L171.200	130772.5L172.200	130772.5L101.200	130772.5L102.200
130772.5L171.010	130772.5L172.010	130772.5L171.040	130772.5L172.040
130772.5L171.190	130772.5L172.190	130772.5L171.030	130772.5L172.030
130772.5L101.190	130772.5L102.190	130772.5L181.090	130772.5L182.090
130772.5L111.080	130772.5L112.080	130772.5L121.080	130772.5L122.080
130772.5L011.010	130772.5L012.010	130772.5L011.190	130772.5L012.190
130772.5L011.020	130772.5L012.020	130772.5L011.200	130772.5L012.200
130772.5L011.210	130772.5L012.210	130772.5L011.030	130772.5L012.030
130772.5L011.040	130772.5L012.040	130772.5L011.050	130772.5L012.050
130772.5L011.060	130772.5L012.060	130772.5L011.070	130772.5L012.070
130772.5L021.090	130772.5L022.090	130772.5L111.070	130772.5L112.070
130772.5L121.070	130772.5L122.070	130772.5L111.050	130772.5L112.050
130772.5L111.060	130772.5L112.060	130772.5L121.050	130772.5L122.050
130772.5L121.060	130772.5L122.060	130772.5L111.020	130772.5L112.020
130772.5L121.020	130772.5L122.020	130772.5L111.010	130772.5L112.010
130772.5L111.040	130772.5L112.040	130772.5L121.010	130772.5L122.010
130772.5L121.040	130772.5L122.040	130772.5L111.030	130772.5L112.030
130772.5L121.030	130772.5L122.030	130772.5L111.210	130772.5L112.210
130772.5L121.210	130772.5L122.210	130772.5L181.100	130772.5L182.100
130772.5L181.080	130772.5L182.080	130772.5L111.200	130772.5L112.200
130772.5L121.200	130772.5L122.200	130772.5L181.020	130772.5L182.020
130772.5L181.210	130772.5L182.210	130772.5L181.050	130772.5L182.050
130772.5L181.060	130772.5L182.060	130772.5L111.190	130772.5L112.190
130772.5L191.090	130772.5L192.090	130772.5L121.190	130772.5L122.190
130772.5L201.090	130772.5L202.090	130772.5L021.010	130772.5L022.010
130772.5L021.190	130772.5L022.190	130772.5L021.020	130772.5L022.020
130772.5L021.200	130772.5L022.200	130772.5L021.210	130772.5L022.210
130772.5L021.030	130772.5L022.030	130772.5L021.040	130772.5L022.040
130772.5L021.050	130772.5L022.050	130772.5L021.060	130772.5L022.060
130772.5L021.070	130772.5L022.070	130772.5L021.080	130772.5L022.080
130772.5L031.090	130772.5L032.090	130772.5L041.090	130772.5L042.090
130772.5L181.200	130772.5L182.200	130772.5L181.070	130772.5L182.070
130772.5L181.040	130772.5L182.040	130772.5L181.010	130772.5L182.010
130772.5L181.190	130772.5L182.190	130772.5L181.030	130772.5L182.030
130772.5L191.100	130772.5L192.100	130772.5L191.080	130772.5L192.080
130772.5L201.100	130772.5L202.100	130772.5L201.080	130772.5L202.080
130772.5L031.010	130772.5L032.010	130772.5L031.020	130772.5L032.020
130772.5L031.210	130772.5L032.210	130772.5L031.030	130772.5L032.030
130772.5L031.040	130772.5L032.040	130772.5L031.050	130772.5L032.050



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130772.5L031.060	130772.5L032.060	130772.5L031.070	130772.5L032.070
130772.5L031.080	130772.5L032.080	130772.5L041.010	130772.5L042.010
130772.5L041.020	130772.5L042.020	130772.5L041.210	130772.5L042.210
130772.5L041.030	130772.5L042.030	130772.5L041.040	130772.5L042.040
130772.5L041.050	130772.5L042.050	130772.5L041.060	130772.5L042.060
130772.5L041.070	130772.5L042.070	130772.5L041.080	130772.5L042.080
130772.5L191.020	130772.5L192.020	130772.5L191.210	130772.5L192.210
130772.5L191.050	130772.5L192.050	130772.5L191.060	130772.5L192.060
130772.5L191.070	130772.5L192.070	130772.5L201.020	130772.5L202.020
130772.5L201.210	130772.5L202.210	130772.5L201.050	130772.5L202.050
130772.5L201.060	130772.5L202.060	130772.5L201.070	130772.5L202.070
130772.5L191.200	130772.5L192.200	130772.5L201.200	130772.5L202.200
130772.5L191.010	130772.5L192.010	130772.5L191.040	130772.5L192.040
130772.5L201.010	130772.5L202.010	130772.5L201.040	130772.5L202.040
130772.5L191.030	130772.5L192.030	130772.5L201.030	130772.5L202.030
130772.5L191.190	130772.5L192.190	130772.5L201.190	130772.5L202.190
130772.5L031.190	130772.5L032.190	130772.5L031.200	130772.5L032.200
130772.5L041.190	130772.5L042.190	130772.5L041.200	130772.5L042.200
130772.5L211.090	130772.5L212.090	130772.5L211.100	130772.5L212.100
130772.5L211.080	130772.5L212.080	130772.5L211.020	130772.5L212.020
130772.5L211.210	130772.5L212.210	130772.5L211.050	130772.5L212.050
130772.5L211.060	130772.5L212.060	130772.5L211.070	130772.5L212.070
130772.5L211.200	130772.5L212.200	130772.5L211.010	130772.5L212.010
130772.5L211.040	130772.5L212.040	130772.5L211.030	130772.5L212.030
130772.5L221.090	130772.5L222.090	130772.5L211.190	130772.5L212.190
130772.5L221.100	130772.5L222.100	130772.5L221.080	130772.5L222.080
130772.5L231.090	130772.5L232.090	130772.5L241.090	130772.5L242.090
130772.5L221.020	130772.5L222.020	130772.5L221.210	130772.5L222.210
130772.5L221.050	130772.5L222.050	130772.5L221.060	130772.5L222.060
130772.5L221.070	130772.5L222.070	130772.5L221.200	130772.5L222.200
130772.5L221.010	130772.5L222.010	130772.5L221.040	130772.5L222.040
130772.5L221.190	130772.5L222.190	130772.5L221.030	130772.5L222.030
130772.5L231.100	130772.5L232.100	130772.5L241.100	130772.5L242.100
130772.5L231.080	130772.5L232.080	130772.5L241.080	130772.5L242.080
130772.5L231.020	130772.5L232.020	130772.5L231.210	130772.5L232.210
130772.5L231.050	130772.5L232.050	130772.5L231.060	130772.5L232.060
130772.5L231.070	130772.5L232.070	130772.5L241.020	130772.5L242.020
130772.5L241.210	130772.5L242.210	130772.5L241.050	130772.5L242.050
130772.5L241.060	130772.5L242.060	130772.5L241.070	130772.5L242.070
130772.5L231.200	130772.5L232.200	130772.5L241.200	130772.5L242.200
130772.5L231.040	130772.5L232.040	130772.5L241.040	130772.5L242.040
130772.5L231.010	130772.5L232.010	130772.5L241.010	130772.5L242.010
130772.5L231.190	130772.5L232.190	130772.5L231.030	130772.5L232.030
130772.5L241.190	130772.5L242.190	130772.5L241.030	130772.5L242.030
130782.5L231.140	130782.5L232.140	130782.5L241.140	130782.5L242.140
130782.5L231.130	130782.5L232.130	130782.5L241.130	130782.5L242.130
130782.5L231.110	130782.5L232.110	130782.5L241.110	130782.5L242.110
130782.5L231.160	130782.5L232.160	130782.5L241.160	130782.5L242.160
130782.5L231.170	130782.5L232.170	130782.5L241.170	130782.5L242.170
130782.5L231.180	130782.5L232.180	130782.5L241.180	130782.5L242.180
130782.5L051.120	130782.5L052.120	130782.5L051.150	130782.5L052.150
130782.5L131.120	130782.5L132.120	130782.5L131.150	130782.5L132.150
130782.5L051.220	130782.5L052.220	130782.5L131.140	130782.5L132.140
130782.5L052.140	130782.5L051.140	130782.5L051.110	130782.5L052.110
130782.5L051.130	130782.5L052.130	130782.5L051.160	130782.5L052.160



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130782.5L061.120	130782.5L062.120	130782.5L061.150	130782.5L062.150
130782.5L131.110	130782.5L132.110	130782.5L131.130	130782.5L132.130
130782.5L131.160	130782.5L132.160	130782.5L051.170	130782.5L052.170
130782.5L051.180	130782.5L052.180	130782.5L141.120	130782.5L142.120
130782.5L141.150	130782.5L142.150	130782.5L131.170	130782.5L132.170
130782.5L131.180	130782.5L132.180	130782.5L061.140	130782.5L062.140
130782.5L061.220	130782.5L062.220	130782.5L061.110	130782.5L062.110
130782.5L061.130	130782.5L062.130	130782.5L141.140	130782.5L142.140
130782.5L071.120	130782.5L072.120	130782.5L071.150	130782.5L072.150
130782.5L071.220	130782.5L072.220	130782.5L081.120	130782.5L082.120
130782.5L081.150	130782.5L082.150	130782.5L141.110	130782.5L142.110
130782.5L141.130	130782.5L142.130	130782.5L061.160	130782.5L062.160
130782.5L151.150	130782.5L152.150	130782.5L161.150	130782.5L162.150
130782.5L141.160	130782.5L142.160	130782.5L061.170	130782.5L062.170
130782.5L061.180	130782.5L062.180	130782.5L151.120	130782.5L152.120
130782.5L071.140	130782.5L072.140	130782.5L161.120	130782.5L162.120
130782.5L081.140	130782.5L082.140	130782.5L081.220	130782.5L082.220
130782.5L141.170	130782.5L142.170	130782.5L141.180	130782.5L142.180
130782.5L151.140	130782.5L152.140	130782.5L161.140	130782.5L162.140
130782.5L071.110	130782.5L072.110	130782.5L071.130	130782.5L072.130
130782.5L081.110	130782.5L082.110	130782.5L081.130	130782.5L082.130
130782.5L151.110	130782.5L152.110	130782.5L151.130	130782.5L152.130
130782.5L071.160	130782.5L072.160	130782.5L161.110	130782.5L162.110
130782.5L161.130	130782.5L162.130	130782.5L081.160	130782.5L082.160
130782.5L151.160	130782.5L152.160	130782.5L071.170	130782.5L072.170
130782.5L071.180	130782.5L072.180	130782.5L161.160	130782.5L162.160
130782.5L081.170	130782.5L082.170	130782.5L081.180	130782.5L082.180
130782.5L151.170	130782.5L152.170	130782.5L151.180	130782.5L152.180
130782.5L161.170	130782.5L162.170	130782.5L161.180	130782.5L162.180
130782.5L131.220	130782.5L132.220	130782.5L141.220	130782.5L142.220
130782.5L151.220	130782.5L152.220	130782.5L161.220	130782.5L162.220
130782.5L091.150	130782.5L092.150	130782.5L091.120	130782.5L092.120
130782.5L171.150	130782.5L172.150	130782.5L171.120	130782.5L172.120
130782.5L091.220	130782.5L092.220	130782.5L091.140	130782.5L092.140
130782.5L171.220	130782.5L172.220	130782.5L171.140	130782.5L172.140
130782.5L101.150	130782.5L102.150	130782.5L091.110	130782.5L092.110
130782.5L091.130	130782.5L092.130	130782.5L101.120	130782.5L102.120
130782.5L091.160	130782.5L092.160	130782.5L171.110	130782.5L172.110
130782.5L171.130	130782.5L172.130	130782.5L181.150	130782.5L182.150
130782.5L091.170	130782.5L092.170	130782.5L181.120	130782.5L182.120
130782.5L171.160	130782.5L172.160	130782.5L091.180	130782.5L092.180
130782.5L101.140	130782.5L102.140	130782.5L101.220	130782.5L102.220
130782.5L181.220	130782.5L182.220	130782.5L171.170	130782.5L172.170
130782.5L171.180	130782.5L172.180	130782.5L011.110	130782.5L012.110
130782.5L011.120	130782.5L012.120	130782.5L011.130	130782.5L012.130
130782.5L011.140	130782.5L012.140	130782.5L011.150	130782.5L012.150
130782.5L011.220	130782.5L012.220	130782.5L021.150	130782.5L022.150
130782.5L101.110	130782.5L102.110	130782.5L181.140	130782.5L182.140
130782.5L101.130	130782.5L102.130	130782.5L111.150	130782.5L112.150
130782.5L121.150	130782.5L122.150	130782.5L101.160	130782.5L102.160
130782.5L111.120	130782.5L112.120	130782.5L111.220	130782.5L112.220
130782.5L192.220	130782.5L191.220	130782.5L121.120	130782.5L122.120
130782.5L181.110	130782.5L182.110	130782.5L181.130	130782.5L182.130
130782.5L191.150	130782.5L192.150	130782.5L201.150	130782.5L202.150
130782.5L101.170	130782.5L102.170	130782.5L181.160	130782.5L182.160



EU DECLARATION OF CONFORMITY

LG/2022/04/131



130782.5L101.180	130782.5L102.180	130782.5L191.120	130782.5L192.120
130782.5L201.120	130782.5L202.120	130782.5L111.140	130782.5L112.140
130782.5L121.140	130782.5L122.140	130782.5L121.220	130782.5L122.220
130782.5L202.220	130782.5L201.220	130782.5L181.170	130782.5L182.170
130782.5L181.180	130782.5L182.180	130782.5L191.140	130782.5L192.140
130782.5L201.140	130782.5L202.140	130782.5L111.110	130782.5L112.110
130782.5L121.110	130782.5L122.110	130782.5L011.160	130782.5L012.160
130782.5L011.170	130782.5L012.170	130782.5L011.180	130782.5L012.180
130782.5L021.110	130782.5L022.110	130782.5L021.120	130782.5L022.120
130782.5L021.130	130782.5L022.130	130782.5L021.140	130782.5L022.140
130782.5L021.220	130782.5L022.220	130782.5L031.120	130782.5L032.120
130782.5L031.150	130782.5L032.150	130782.5L031.220	130782.5L032.220
130782.5L041.120	130782.5L042.120	130782.5L041.150	130782.5L042.150
130782.5L111.130	130782.5L112.130	130782.5L121.130	130782.5L122.130
130782.5L111.160	130782.5L112.160	130782.5L121.160	130782.5L122.160
130782.5L191.110	130782.5L192.110	130782.5L191.130	130782.5L192.130
130782.5L201.110	130782.5L202.110	130782.5L201.130	130782.5L202.130
130782.5L191.160	130782.5L192.160	130782.5L111.170	130782.5L112.170
130782.5L111.180	130782.5L112.180	130782.5L201.160	130782.5L202.160
130782.5L121.170	130782.5L122.170	130782.5L121.180	130782.5L122.180
130782.5L191.170	130782.5L192.170	130782.5L191.180	130782.5L192.180
130782.5L201.170	130782.5L202.170	130782.5L201.180	130782.5L202.180
130782.5L021.160	130782.5L022.160	130782.5L021.170	130782.5L022.170
130782.5L021.180	130782.5L022.180	130782.5L031.110	130782.5L032.110
130782.5L031.130	130782.5L032.130	130782.5L031.140	130782.5L032.140
130782.5L041.110	130782.5L042.110	130782.5L041.130	130782.5L042.130
130782.5L041.140	130782.5L042.140	130782.5L041.220	130782.5L042.220
130782.5L031.160	130782.5L032.160	130782.5L031.170	130782.5L032.170
130782.5L031.180	130782.5L032.180	130782.5L041.160	130782.5L042.160
130782.5L041.170	130782.5L042.170	130782.5L041.180	130782.5L042.180
130782.5L211.150	130782.5L212.150	130782.5L211.120	130782.5L212.120
130782.5L211.220	130782.5L212.220	130782.5L211.140	130782.5L212.140
130782.5L211.130	130782.5L212.130	130782.5L221.150	130782.5L222.150
130782.5L211.110	130782.5L212.110	130782.5L221.120	130782.5L222.120
130782.5L211.160	130782.5L212.160	130782.5L221.220	130782.5L222.220
130782.5L211.170	130782.5L212.170	130782.5L211.180	130782.5L212.180
130782.5L221.140	130782.5L222.140	130782.5L221.130	130782.5L222.130
130782.5L231.220	130782.5L232.220	130782.5L221.110	130782.5L222.110
130782.5L231.150	130782.5L232.150	130782.5L241.150	130782.5L242.150
130782.5L221.160	130782.5L222.160	130782.5L231.120	130782.5L232.120
130782.5L241.120	130782.5L242.120	130782.5L241.220	130782.5L242.220
130782.5L221.170	130782.5L222.170	130782.5L221.180	130782.5L222.180

This declaration applies to all serial numbers produced under the given factory symbol.