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
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Digitally signed by Postolachi Veaceslav
Date: 2025.06.28 15:08:06 EEST
Reason: MoldSign Signature
Location: Moldova
MOLDOVA EUROPEANĂ

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 it 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

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

Testing Laborotory 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

If this Test Report Form is used by non-IECEE members, the IECEE/IEC logo and the reference to the CB Scheme procedure shall be removed.

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.
This report shall not be reproduced, except in full, without the written approval of the Issuing NCB. The authenticity of this Test Report and its contents can be verified by contacting the NCB, responsible for this Test Report.

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

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

Tests performed (name of test and test clause):	**Testing location:**
IEC 60598-2-3:2002, IEC 60598-2-3:2002/AMD1: 2011 used in conjunction with IEC 60598-1:2020 - all clauses	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 IECEE 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:
Ogólne informacje o produkcie i inne uwagi:

Nazwa i adres posiadacza certyfikatu: *Name and address of the license holder:*	**LUG Light Factory Sp z o.o. ul. Gorzowska 11; 65-127 Zielona Góra - Poland**
Nazwa i adres producenta: *Name and address of manufacturer:*	**LUG Light Factory Sp z o.o. ul. Gorzowska 11; 65-127 Zielona Góra - Poland**
Nazwa i adres miejsca produkcji: *Name and address of manufacturing place:*	**LUG Light Factory Sp z o.o. ul. Gorzowska 11; 65-127 Zielona Góra - Poland**
Nazwa wyrobu: *Name of the product:*	**Luminaires for road and street lighting**
Typ (model): *Type (model):*	**URBINO LED S**
Znak handlowy: *Trade mark:*	**LUG**
Dane techniczne: *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°*** … +50°C

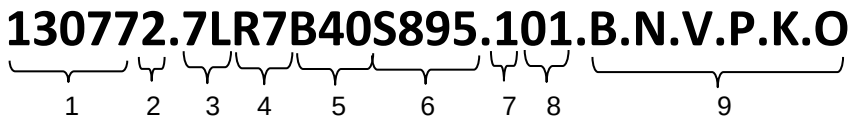
* - For luminaires equipped with:
- Vossloh Schwabe SP/230/10K/i

** - 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):



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

1. 13077	- Code of the series URBINO LED S - XPG3 SERIES *(Kod rodziny)*
13078	Code of the series URBINO LED S - LUXEON SERIES *(Kod rodziny*
2. 2	- Color *(Kolor)*: 2: grey

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

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

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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

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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		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

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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)..... :		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/mm²) ..... :		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:		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

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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)	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 ..... :	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

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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**		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

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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		N/A
3.6 (4.31.1)	SELV or PELV circuits		N/A
	Used SELV/PELV source		N/A
	Voltage ≤ 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 ≤ 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**		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

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Clause	Requirement + Test	Result - Remark	Verdict
	- drag coefficient.....:	1,2	P
	- loaded area (m²).....:	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 Ω..... :	0,02 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		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 (mm²) ..... :		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 ≤ 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		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 (mm²)..... :	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 (mm²)..... :		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 μF not exceed 50 V 1 min after disconnection		N/A
	Portable luminaire with capacitor > 0,1 μF (0.25) not exceed 34 V 1 s after disconnection		N/A
	Other luminaires with capacitor > 0,1 μF (0.25) with plug and track adaptors not exceed 60 V 5 s after disconnection		N/A

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Clause	Requirement + Test	Result - Remark	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

IEC 60598-2-3			
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.

IEC 60598-2-3			
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.

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

ANNEX 1	TABLE: Critical components information					P
Object / part No. *Nr objektu / komponentu*	**Code**	**Manufacturer/ trademark** *Producent / znak towarowy*	**Type / model** *Typ / model*	**Technical data** *Dane techniczne*	**Standard** *Norma*	**Mark(s) of conformity[1)]** *Znak zgodności*
LED Modules *Moduły LED*	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

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

ANNEX 1	TABLE: Critical components information					P
Object / part No. *Nr objektu / komponentu*	**Code**	**Manufacturer/ trademark** *Producent / znak towarowy*	**Type / model** *Typ / model*	**Technical data** *Dane techniczne*	**Standard** *Norma*	**Mark(s) of conformity[1)]** *Znak zgodności*
LED Modules *Moduły LED*	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

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Clause	Requirement + Test	Result - Remark	Verdict

ANNEX 1	TABLE: Critical components information	P

Object / part No. *Nr objektu / komponentu*	Code	Manufacturer/ trademark *Producent / znak towarowy*	Type / model *Typ / model*	Technical data *Dane techniczne*	Standard *Norma*	Mark(s) of conformity[1)] *Znak zgodności*
Control gear *Zasilacz*	A	OSRAM	OT100W/UNV/800C/2D IMLT2/P6	220..240V, 50-60Hz, ta= -40...+55^{0}C, tc max=90^{0}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^{0}C, tc max=85^{0}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^{0}C, tc max=75^{0}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^{0}C, tc max=80^{0}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...+550C, tc max=800C	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...+550C, tc max=850C	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...+550C, tc max=850C	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...+600C, tc max=750C	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...+600C, tc max=800C	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...+550C, tc max=850C	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...+600C, tc max=750C	EN 61347-1 EN 61347-2-13	ENEC
Control gear *Zasilacz*	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 *Zasilacz*	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 *Zasilacz*	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 *Zasilacz*	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 *Zasilacz*	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 *Zasilacz*	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 *Zasilacz*	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 *Zasilacz*	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

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Clause	Requirement + Test	Result - Remark	Verdict

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Object / part No. *Nr objektu / komponentu*	**Code**	**Manufacturer/ trademark** *Producent / znak towarowy*	**Type / model** *Typ / model*	**Technical data** *Dane techniczne*	**Standard** *Norma*	**Mark(s) of conformity[1)]** *Znak zgodności*
Control gear *Zasilacz*	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 *Zasilacz*	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 *Zasilacz*	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 *Zasilacz*	A	OSRAM	OT 75/UNV/1A0 2DIM P7	120..277V, 50-60Hz, ta= -40...+55^{0}C, tc max=85^{0}C	EN 61347-1 EN 61347-2-13	ENEC
Control gear *Zasilacz*	A	OSRAM	OT 100/UNV/1A0 2DIM P7	120..277V, 50-60Hz, ta= -40...+55^{0}C, tc max=85^{0}C	EN 61347-1 EN 61347-2-13	ENEC
Control gear *Zasilacz*	A	OSRAM	OT 100/ 220-240/1A4 2DIM P7	220..240V, 50-60Hz, ta= -40...+55^{0}C, tc max=85^{0}C	EN 61347-1 EN 61347-2-13	ENEC
Control gear *Zasilacz*	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 *Zasilacz*	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 *Zasilacz*	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 *Zasilacz*	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 *Zasilacz*	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 *Zasilacz*	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 *Zasilacz*	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 *Zasilacz*	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 *Zasilacz*	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 *Zasilacz*	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 *Zasilacz*	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 *Zasilacz*	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. *Nr objektu / komponentu*	**Code**	**Manufacturer/ trademark** *Producent / znak towarowy*	**Type / model** *Typ / model*	**Technical data** *Dane techniczne*	**Standard** *Norma*	**Mark(s) of conformity[1)]** *Znak zgodności*
Control gear *Zasilacz*	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 *Zasilacz*	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 *Zasilacz*	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 *Zasilacz*	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 *Zasilacz*	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 *Zasilacz*	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 *Zasilacz*	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 *Zasilacz*	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 *Zasilacz*	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 *Zasilacz*	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 *Zasilacz*	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 *Zasilacz*	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 *Zasilacz*	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 *Zasilacz*	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 *Zasilacz*	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 *Zasilacz*	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 *Zasilacz*	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 *Zasilacz*	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

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Clause	Requirement + Test	Result - Remark	Verdict

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Object / part No. *Nr objektu / komponentu*	**Code**	**Manufacturer/ trademark** *Producent / znak towarowy*	**Type / model** *Typ / model*	**Technical data** *Dane techniczne*	**Standard** *Norma*	**Mark(s) of conformity[1)]** *Znak zgodności*
Control gear *Zasilacz*	A	Inventronics	EBS-025S045BT2	176..305V, 50-60Hz, ta= -40...+750C, tc max=900C	EN 61347-1 EN 61347-2-13	ENEC
Control gear *Zasilacz*	A	Inventronics	EBS-025S070BT2	176..305V, 50-60Hz, ta= -40...+750C, tc max=900C	EN 61347-1 EN 61347-2-13	ENEC
Control gear *Zasilacz*	A	Inventronics	EBS-025S105BT2	171..275V, 50-60Hz, ta= -40...+750C, tc max=900C	EN 61347-1 EN 61347-2-13	ENEC
Control gear *Zasilacz*	A	Inventronics	EBS-040S045BT2	176..305V, 50-60Hz, ta= -40...+750C, tc max=900C	EN 61347-1 EN 61347-2-13	ENEC
Control gear *Zasilacz*	A	Inventronics	EBS-040S070BT2	176..305V, 50-60Hz, ta= -40...+750C, tc max=900C	EN 61347-1 EN 61347-2-13	ENEC
Control gear *Zasilacz*	A	Inventronics	EBS-040S105BT2	176..305V, 50-60Hz, ta= -40...+750C, tc max=900C	EN 61347-1 EN 61347-2-13	ENEC
Control gear *Zasilacz*	A	Inventronics	EBS-080S070BT2	176..305V, 50-60Hz, ta= -40...+750C, tc max=900C	EN 61347-1 EN 61347-2-13	ENEC
Control gear *Zasilacz*	A	Inventronics	EBS-080S105BT2	176..305V, 50-60Hz, ta= -40...+750C, tc max=900C	EN 61347-1 EN 61347-2-13	ENEC
Control gear *Zasilacz*	A	Inventronics	EBS-080S150BT2	176..305V, 50-60Hz, ta= -40...+750C, tc max=900C	EN 61347-1 EN 61347-2-13	ENEC
Control gear *Zasilacz*	A	Inventronics	EBS-120S070BT2	176..305V, 50-60Hz, ta= -40...+750C, tc max=900C	EN 61347-1 EN 61347-2-13	ENEC
Control gear *Zasilacz*	A	Inventronics	EBS-120S105BT2	176..305V, 50-60Hz, ta= -40...+750C, tc max=900C	EN 61347-1 EN 61347-2-13	ENEC
Control gear *Zasilacz*	A	Inventronics	EBS-120S150BT2	176..305V, 50-60Hz, ta= -40...+750C, tc max=900C	EN 61347-1 EN 61347-2-13	ENEC
Control gear *Zasilacz*	A	Inventronics	EUM-075S	90..305V, 50-60Hz, ta= -40...+80^{0}C, tc max=90^{0}C	EN 61347-1 EN 61347-2-13	ENEC
Control gear *Zasilacz*	A	Inventronics	EUM – 100S	100..277V, 50-60Hz, ta= -40...+75^{0}C, tc max=90^{0}C	EN 61347-1 EN 61347-2-13	ENEC
Control gear *Zasilacz*	A	Philips	Xitanium 40W 0.7A Prog+ GL-J sXt	220..240V, 50-60Hz, ta= -40...+55^{0}C, tc max=80^{0}C	EN 61347-1 EN 61347-2-13	ENEC
Control gear *Zasilacz*	A	Philips	Xitanium 75W 0.35-0.70A GL Prog+ sXt	220..240V, 50-60Hz, ta= -40...+55^{0}C, tc max=80^{0}C	EN 61347-1 EN 61347-2-13	ENEC
Control gear *Zasilacz*	A	Philips	Xitanium 75W 0.1-1.05A Prog GL F sXt	220..240V, 50-60Hz, ta= -40...+55^{0}C, tc max=80^{0}C	EN 61347-1 EN 61347-2-13	ENEC
Control gear *Zasilacz*	A	Philips	Xitanium 100W 0.7A Prog+ GL-Z sXt	220..240V, 50-60Hz, ta= -40...+55^{0}C, tc max=80^{0}C	EN 61347-1 EN 61347-2-13	ENEC

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Clause	Requirement + Test	Result - Remark	Verdict

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Control gear *Zasilacz*	A	Philips	Xi BP 12W 0.1-0.5A S 230V C100	220..240V, 50-60Hz, ta= -40...+55^{0}C, tc max=80^{0}C	EN 61347-1 EN 61347-2-13	ENEC
Control gear *Zasilacz*	A	Philips	Xi BP 22W 0.2-0.7A S 230V C123	220..240V, 50-60Hz, ta= -40...+55^{0}C, tc max=85^{0}C	EN 61347-1 EN 61347-2-13	ENEC
Control gear *Zasilacz*	A	Philips	Xi BP 40W 0.2-0.7A S 230V C123	220..240V, 50-60Hz, ta= -40...+55^{0}C, tc max=85^{0}C	EN 61347-1 EN 61347-2-13	ENEC
Control gear *Zasilacz*	A	Philips	Xi BP 40W 0.3-1.0A S 230V C123	220..240V, 50-60Hz, ta= -40...+55^{0}C, tc max=80^{0}C	EN 61347-1 EN 61347-2-13	ENEC
Control gear *Zasilacz*	A	Philips	Xi BP 75W 0.2-0.7A S 230V C133 sXt	220..240V, 50-60Hz, ta= -40...+55^{0}C, tc max=80^{0}C	EN 61347-1 EN 61347-2-13	ENEC
Control gear *Zasilacz*	A	Philips	Xi BP 75W 0.3-1.0A S 230V C133 sXt	220..240V, 50-60Hz, ta= -40...+55^{0}C, tc max=85^{0}C	EN 61347-1 EN 61347-2-13	ENEC
Control gear *Zasilacz*	A	Philips	Xi BP 110W 0.2-0.7A S 230V C133 sXt	220..240V, 50-60Hz, ta= -40...+55^{0}C, tc max=85^{0}C	EN 61347-1 EN 61347-2-13	ENEC
Control gear *Zasilacz*	A	Philips	Xi BP 110W 0.3-1.0A S 230V C133 sXt	220..240V, 50-60Hz, ta= -40...+55^{0}C, tc max=80^{0}C	EN 61347-1 EN 61347-2-13	ENEC
Control gear *Zasilacz*	A	Philips	Xi LP 22W 0.2-0.7A S1 230V C123 sXt	220..240V, 50-60Hz, ta= -40...+55^{0}C, tc max=85^{0}C	EN 61347-1 EN 61347-2-13	ENEC
Control gear *Zasilacz*	A	Philips	Xi LP 22W 0.3-1.0A S1 230V C123 sXt	220..240V, 50-60Hz, ta= -40...+55^{0}C, tc max=85^{0}C	EN 61347-1 EN 61347-2-13	ENEC
Control gear *Zasilacz*	A	Philips	Xi LP 40W 0.2-0.7A S1 230V C123 sXt	220..240V, 50-60Hz, ta= -40...+55^{0}C, tc max=85^{0}C	EN 61347-1 EN 61347-2-13	ENEC
Control gear *Zasilacz*	A	Philips	Xi LP 40W 0.3-1.0A S1 230V C123 sXt	220..240V, 50-60Hz, ta= -40...+55^{0}C, tc max=85^{0}C	EN 61347-1 EN 61347-2-13	ENEC
Control gear *Zasilacz*	A	Philips	Xi LP 75W 0.2-0.7A S1 230V C133 sXt	220..240V, 50-60Hz, ta= -40...+55^{0}C, tc max=80^{0}C	EN 61347-1 EN 61347-2-13	ENEC
Control gear *Zasilacz*	A	Philips	Xi LP 75W 0.3-1.0A S1 230V C133 sXt	220..240V, 50-60Hz, ta= -40...+55^{0}C, tc max=80^{0}C	EN 61347-1 EN 61347-2-13	ENEC
Control gear *Zasilacz*	A	Philips	Xi LP 75W 0.5-1.5A S1 230V C133 sXt	220..240V, 50-60Hz, ta= -40...+55^{0}C, tc max=80^{0}C	EN 61347-1 EN 61347-2-13	ENEC
Control gear *Zasilacz*	A	Philips	Xi LP 110W 0.2-0.7A S1 230V C133 sXt	220..240V, 50-60Hz, ta= -40...+55^{0}C, tc max=90^{0}C	EN 61347-1 EN 61347-2-13	ENEC
Control gear *Zasilacz*	A	Philips	Xi LP 110W 0.3-1.0A S1 230V C133 sXt	220..240V, 50-60Hz, ta= -40...+55^{0}C, tc max=90^{0}C	EN 61347-1 EN 61347-2-13	ENEC
Control gear *Zasilacz*	A	Philips	Xi LP 22W 0.2-0.7A S1 230V S175 sXt	220..240V, 50-60Hz, ta= -40...+55^{0}C, tc max=80^{0}C	EN 61347-1 EN 61347-2-13	ENEC

IEC 60598-2-3			
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ANNEX 1	TABLE: Critical components information	P

Object / part No. *Nr objektu / komponentu*	Code	Manufacturer/ trademark *Producent / znak towarowy*	Type / model *Typ / model*	Technical data *Dane techniczne*	Standard *Norma*	Mark(s) of conformity[1)] *Znak zgodności*
Control gear *Zasilacz*	A	Philips	Xi LP 22W 0.3-1.0A S1 230V S175 sXt	220..240V, 50-60Hz, ta= -40...+55^{0}C, tc max=80^{0}C	EN 61347-1 EN 61347-2-13	ENEC
Control gear *Zasilacz*	A	Philips	Xi LP 40W 0.2 -0.7A S1 230V S175 sXt	220..240V, 50-60Hz, ta= -40...+55^{0}C, tc max=80^{0}C	EN 61347-1 EN 61347-2-13	ENEC
Control gear *Zasilacz*	A	Philips	Xi LP 40W 0.2-0.7A SL 230V S175 sXt	220..240V, 50-60Hz, ta= -40...+55^{0}C, tc max=80^{0}C	EN 61347-1 EN 61347-2-13	ENEC
Control gear *Zasilacz*	A	Philips	Xi LP 40W 0.3-1.0A S1 230V S175 sXt	220..240V, 50-60Hz, ta= -40...+55^{0}C, tc max=80^{0}C	EN 61347-1 EN 61347-2-13	ENEC
Control gear *Zasilacz*	A	Philips	Xi LP 40W 0.3-1.0A SL 230V S175 sXt	220..240V, 50-60Hz, ta= -40...+55^{0}C, tc max=80^{0}C	EN 61347-1 EN 61347-2-13	ENEC
Control gear *Zasilacz*	A	Philips	Xi LP 40W 0.2-0.7A SN 230V S175 sXt	220..240V, 50-60Hz, ta= -40...+55^{0}C, tc max=80^{0}C	EN 61347-1 EN 61347-2-13	ENEC
Control gear *Zasilacz*	A	Philips	Xi LP 75W 0.2-0.7A S1 230V S240 sXt	220..240V, 50-60Hz, ta= -40...+55^{0}C, tc max=90^{0}C	EN 61347-1 EN 61347-2-13	ENEC
Control gear *Zasilacz*	A	Philips	Xi LP 75W 0.2-0.7A SL 230V S240 sXt	220..240V, 50-60Hz, ta= -40...+55^{0}C, tc max=85^{0}C	EN 61347-1 EN 61347-2-13	ENEC
Control gear *Zasilacz*	A	Philips	Xi LP 75W 0.3-1.0A S1 230V S240 sXt	220..240V, 50-60Hz, ta= -40...+55^{0}C, tc max=90^{0}C	EN 61347-1 EN 61347-2-13	ENEC
Control gear *Zasilacz*	A	Philips	Xi LP 75W 0.3-1.0A SL 230V S240 sXt	220..240V, 50-60Hz, ta= -40...+55^{0}C, tc max=85^{0}C	EN 61347-1 EN 61347-2-13	ENEC
Control gear *Zasilacz*	A	Philips	Xi LP 75W 0.2-0.7A SN 230V S240 sXt	220..240V, 50-60Hz, ta= -40...+55^{0}C, tc max=85^{0}C	EN 61347-1 EN 61347-2-13	ENEC
Control gear *Zasilacz*	A	Philips	Xi LP 75W 0.5-1.5A S1 230V S240 sXt	220..240V, 50-60Hz, ta= -40...+55^{0}C, tc max=85^{0}C	EN 61347-1 EN 61347-2-13	ENEC
Control gear *Zasilacz*	A	Philips	Xi FP 22W 0.2-0.7A SNLDAE 230V C123 sXt	220..240V, 50-60Hz, ta= -40...+55^{0}C, tc max=85^{0}C	EN 61347-1 EN 61347-2-13	ENEC
Control gear *Zasilacz*	A	Philips	Xi FP 22W 0.3-1.0A SNLDAE 230V C123 sXt	220..240V, 50-60Hz, ta= -40...+55^{0}C, tc max=85^{0}C	EN 61347-1 EN 61347-2-13	ENEC
Control gear *Zasilacz*	A	Philips	Xi FP 40W 0.2-0.7A SNLDAE 230V C123 sXt	220..240V, 50-60Hz, ta= -40...+55^{0}C, tc max=85^{0}C	EN 61347-1 EN 61347-2-13	ENEC
Control gear *Zasilacz*	A	Philips	Xi FP 40W 0.3-1.0A SNLDAE 230V C123 sXt	220..240V, 50-60Hz, ta= -40...+55^{0}C, tc max=85^{0}C	EN 61347-1 EN 61347-2-13	ENEC
Control gear *Zasilacz*	A	Philips	Xi FP 70W 0.3-1.0A NLD C150 230V sXt	220..240V, 50-60Hz, ta= -30...+60^{0}C, tc max=90^{0}C	EN 61347-1 EN 61347-2-13	ENEC
Control gear *Zasilacz*	A	Philips	Xi FP 75W 0.2-0.7A SNLDAE 230V C133 sXt	220..240V, 50-60Hz, ta= -40...+55^{0}C, tc max=80^{0}C	EN 61347-1 EN 61347-2-13	ENEC
Control gear *Zasilacz*	A	Philips	Xi FP 75W 0.3-1.0A SNLDAE 230V C133 sXt	220..240V, 50-60Hz, ta= -40...+55^{0}C, tc max=80^{0}C	EN 61347-1 EN 61347-2-13	ENEC

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Clause	Requirement + Test	Result - Remark	Verdict

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Control gear *Zasilacz*	A	Philips	Xi FP 75W 0.5-1.5A SNLDAE 230V C133 sXt	220..240V, 50-60Hz, ta= -40...+55^{0}C, tc max=80^{0}C	EN 61347-1 EN 61347-2-13	ENEC
Control gear *Zasilacz*	A	Philips	Xi FP 100W 0.2-0.7A SNLDAE 230V C165 sXt	220..240V, 50-60Hz, ta= -40...+55^{0}C, tc max=85^{0}C	EN 61347-1 EN 61347-2-13	ENEC
Control gear *Zasilacz*	A	Philips	Xi FP 110W 0.2-0.7A SNLDAE 230V C133 sXt	220..240V, 50-60Hz, ta= -40...+55^{0}C, tc max=85^{0}C	EN 61347-1 EN 61347-2-13	ENEC
Control gear *Zasilacz*	A	Philips	Xi FP 110W 0.3-1.0A NLD C150 230V sXt	220..240V, 50-60Hz, ta= -30...+60^{0}C, tc max=90^{0}C	EN 61347-1 EN 61347-2-13	ENEC
Control gear *Zasilacz*	A	Philips	Xi FP 110W 0.3-1.0A SNLDAE 230V C133 sXt	220..240V, 50-60Hz, ta= -40...+55^{0}C, tc max=85^{0}C	EN 61347-1 EN 61347-2-13	ENEC
Control gear *Zasilacz*	A	Philips	Xi FP 22W 0.2-0.7A SNLDAE 230V S175 sXt	220..240V, 50-60Hz, ta= -40...+55^{0}C, tc max=85^{0}C	EN 61347-1 EN 61347-2-13	ENEC
Control gear *Zasilacz*	A	Philips	Xi FP 22W 0.3-1.0A SNLDAE 230V S175 sXt	220..240V, 50-60Hz, ta= -40...+55^{0}C, tc max=85^{0}C	EN 61347-1 EN 61347-2-13	ENEC
Control gear *Zasilacz*	A	Philips	Xi FP 40W 0.2-7.0A SNLDAE 230V S175 sXt	220..240V, 50-60Hz, ta= -40...+55^{0}C, tc max=85^{0}C	EN 61347-1 EN 61347-2-13	ENEC
Control gear *Zasilacz*	A	Philips	Xi FP 40W 0.3-1.0A SNLDAE 230V S175 sXt	220..240V, 50-60Hz, ta= -40...+55^{0}C, tc max=90^{0}C	EN 61347-1 EN 61347-2-13	ENEC
Control gear *Zasilacz*	A	Philips	Xi FP 75W 0.2-0.7A SNLDAE 230V S240 sXt	220..240V, 50-60Hz, ta= -40...+55^{0}C, tc max=85^{0}C	EN 61347-1 EN 61347-2-13	ENEC
Control gear *Zasilacz*	A	Philips	Xi FP 75W 0.3-1.0A SNLDAE 230V S240 sXt	220..240V, 50-60Hz, ta= -40...+55^{0}C, tc max=85^{0}C	EN 61347-1 EN 61347-2-13	ENEC
Control gear *Zasilacz*	A	Philips	Xi SR 12W 0.2-0.7A SNEMP 230V C133 sXt	220..240V, 50-60Hz, ta= -40...+55^{0}C, tc max=85^{0}C	EN 61347-1 EN 61347-2-13	ENEC
Control gear *Zasilacz*	A	Philips	Xi SR 22W 0.2-0.7A SNEMP 230V C133 sXt	220..240V, 50-60Hz, ta= -40...+55^{0}C, tc max=85^{0}C	EN 61347-1 EN 61347-2-13	ENEC
Control gear *Zasilacz*	A	Philips	Xi SR 40W 0.2-0.7A SNEMP 230V C133 sXt	220..240V, 50-60Hz, ta= -40...+55^{0}C, tc max=85^{0}C	EN 61347-1 EN 61347-2-13	ENEC
Control gear *Zasilacz*	A	Philips	Xi SR 75W 0.2-0.7A SNEMP 230V C150 sXt	220..240V, 50-60Hz, ta= -40...+55^{0}C, tc max=90^{0}C	EN 61347-1 EN 61347-2-13	ENEC
Control gear *Zasilacz*	A	Philips	Xi SR 75W 2 0.3-1.0A SNEMPF C170 sXt	220..240V, 50-60Hz, ta= -40...+55^{0}C, tc max=90^{0}C	EN 61347-1 EN 61347-2-13	ENEC
Control gear *Zasilacz*	A	Philips	Xi SR 75W 0.2-0.7A SNEMP 230V S240 sXt	220..240V, 50-60Hz, ta= -40...+55^{0}C, tc max=90^{0}C	EN 61347-1 EN 61347-2-13	ENEC
Control gear *Zasilacz*	A	Philips	Xi SR 75W 0.3-1.0A SNEMP 230V S240 sXt	220..240V, 50-60Hz, ta= -40...+55^{0}C, tc max=90^{0}C	EN 61347-1 EN 61347-2-13	ENEC

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Control gear *Zasilacz*	A	Philips	Xi SR 110W 0.2-0.7A SNEMP 230V C150 sXt	220..240V, 50-60Hz, ta= -40...+55^{0}C, tc max=90^{0}C	EN 61347-1 EN 61347-2-13	ENEC
Control gear *Zasilacz*	A	Philips	Xitanium 100W 2.1-4.2A AOC 230V I220	220..240V, 50-60Hz, ta= -40...+55^{0}C, tc max=80^{0}C	EN 61347-1 EN 61347-2-13	ENEC
Control gear *Zasilacz*	A	Philips	Xi LP 100W 0.3-1.05A S1 230V I175	220..240V, 50-60Hz, ta= -40...+55^{0}C, tc max=80^{0}C	EN 61347-1 EN 61347-2-13	ENEC
Control gear *Zasilacz*	A	Philips	Xitanium Dim 35W 0.7A 1-10V TWE I175	220..240V, 50-60Hz, ta= -40...+55^{0}C, tc max=80^{0}C	EN 61347-1 EN 61347-2-13	ENEC
Control gear *Zasilacz*	A	Philips	Xitanium Dim 100W 0.7A 1-10V TWE I220	220..240V, 50-60Hz, ta= -40...+55^{0}C, tc max=80^{0}C	EN 61347-1 EN 61347-2-13	ENEC
Control gear *Zasilacz*	A	Philips	Xitanium 75W 0.7A TWE I175	220..240V, 50-60Hz, ta= -40...+55^{0}C, tc max=80^{0}C	EN 61347-1 EN 61347-2-13	ENEC
Control gear *Zasilacz*	A	Philips	Xitanium 75W 1.05A 1-10V 230V C165 sXt	220..240V, 50-60Hz, ta= -40...+55^{0}C, tc max=85^{0}C	EN 61347-1 EN 61347-2-13	ENEC
Control gear *Zasilacz*	A	Philips	Xitanium 75W 0.70A 1-10V 230V C165 sXt	220..240V, 50-60Hz, ta= -40...+55^{0}C, tc max=85^{0}C	EN 61347-1 EN 61347-2-13	ENEC
Control gear *Zasilacz*	A	Philips	Xitanium Dim 75W 0.70A 1-10V 230V I220	220..240V, 50-60Hz, ta= -40...+55^{0}C, tc max=80^{0}C	EN 61347-1 EN 61347-2-13	ENEC
Control gear *Zasilacz*	A	Philips	Xitanium 75W 1-10V 230V C165	220..240V, 50-60Hz, ta= -40...+55^{0}C, tc max=80^{0}C	EN 61347-1 EN 61347-2-13	ENEC
Control gear *Zasilacz*	A	Tridonic	LCA 120W 300-1050mA	220..240V, 50-60Hz, ta= -30...+550C, tc max=850C	EN 61347-1 EN 61347-2-13	ENEC
Control gear *Zasilacz*	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 *Zasilacz*	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 *Zasilacz*	A	Tridonic	LCO 14/100-500/38 NF C ADV3	220..240V, 50-60Hz, ta= -40...+70^{0}C, tc max=90^{0}C	EN 61347-1 EN 61347-2-13	ENEC
Control gear *Zasilacz*	A	Tridonic	LCO 24/200-1050/39 NF C ADV3	220..240V, 50-60Hz, ta= -40...+70^{0}C, tc max=85^{0}C	EN 61347-1 EN 61347-2-13	ENEC
Control gear *Zasilacz*	A	Tridonic	LCO 40/200-1050/64 NF C ADV3	220..240V, 50-60Hz, ta= -40...+70^{0}C, tc max=90^{0}C	EN 61347-1 EN 61347-2-13	ENEC
Control gear *Zasilacz*	A	Tridonic	LCO 60/200-1050/100 NF C ADV3	220..240V, 50-60Hz, ta= -40...+70^{0}C, tc max=90^{0}C	EN 61347-1 EN 61347-2-13	ENEC
Control gear *Zasilacz*	A	Tridonic	LCO 90/200-1050/165 NF C ADV3	220..240V, 50-60Hz, ta= -40...+70^{0}C, tc max=100^{0}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. *Nr objektu / komponentu*	**Code**	**Manufacturer/ trademark** *Producent / znak towarowy*	**Type / model** *Typ / model*	**Technical data** *Dane techniczne*	**Standard** *Norma*	**Mark(s) of conformity[1)]** *Znak zgodności*
Control gear *Zasilacz*	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 *Zasilacz*	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 *Zasilacz*	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 *Zasilacz*	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 *Zasilacz*	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 *Zasilacz*	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 *Zasilacz*	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 *Zasilacz*	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 *Zasilacz*	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 *Zasilacz*	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 *Zasilacz*	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 *Zasilacz*	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 *Zasilacz*	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 *Zasilacz*	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 *Zasilacz*	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 *Zasilacz*	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 *Zasilacz*	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 *Zasilacz*	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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Control gear *Zasilacz*	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 *Zasilacz*	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 *Zasilacz*	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 *Zasilacz*	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 *Zasilacz*	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 *Zasilacz*	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 *Zasilacz*	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 *Zasilacz*	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 *Zasilacz*	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 *Zasilacz*	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 *Zasilacz*	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 *Zasilacz*	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 *Zasilacz*	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 *Zasilacz*	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 *Zasilacz*	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 *Zasilacz*	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 *Zasilacz*	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 *Zasilacz*	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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Object / part No. *Nr objektu / komponentu*	**Code**	**Manufacturer/ trademark** *Producent / znak towarowy*	**Type / model** *Typ / model*	**Technical data** *Dane techniczne*	**Standard** *Norma*	**Mark(s) of conformity[1)]** *Znak zgodności*
Control gear *Zasilacz*	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 *Zasilacz*	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 *Zasilacz*	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 *Zasilacz*	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 *Zasilacz*	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 *Zasilacz*	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 *Zasilacz*	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 *Zasilacz*	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 *Zasilacz*	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 *Zasilacz*	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 *Zasilacz*	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 *Zasilacz*	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 *Zasilacz*	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 *Zasilacz*	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 *Zasilacz*	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 *Zasilacz*	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 *Zasilacz*	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 *Zasilacz*	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

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Object / part No. *Nr objektu / komponentu*	**Code**	**Manufacturer/ trademark** *Producent / znak towarowy*	**Type / model** *Typ / model*	**Technical data** *Dane techniczne*	**Standard** *Norma*	**Mark(s) of conformity[1)]** *Znak zgodności*
Control gear *Zasilacz*	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 *Zasilacz*	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 *Zasilacz*	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 *Zasilacz*	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 *Zasilacz*	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 *Zasilacz*	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 *Zasilacz*	A	uPowerTek	APD-040	176..264V, 50-60Hz, ta= -40...+900C, tc max=900C	EN 61347-1 EN 61347-2-13	ENEC
Control gear *Zasilacz*	A	uPowerTek	APD-075	176..264V, 50-60Hz, ta= -40...+900C, tc max=900C	EN 61347-1 EN 61347-2-13	ENEC
Control gear *Zasilacz*	A	uPowerTek	APD-110	176..264V, 50-60Hz, ta= -40...+900C, tc max=900C	EN 61347-1 EN 61347-2-13	ENEC
Control gear *Zasilacz*	A	uPowerTek	BLD-060	176..264V, 50-60Hz, ta= -40...+900C, tc max=900C	EN 61347-1 EN 61347-2-13	ENEC
Control gear *Zasilacz*	A	uPowerTek	BLD-075	176..264V, 50-60Hz, ta= -40...+900C, tc max=900C	EN 61347-1 EN 61347-2-13	ENEC
Control gear *Zasilacz*	A	uPowerTek	BLD-096	176..264V, 50-60Hz, ta= -40...+900C, tc max=900C	EN 61347-1 EN 61347-2-13	ENEC
Control gear *Zasilacz*	A	uPowerTek	BLD-120	176..264V, 50-60Hz, ta= -40...+900C, tc max=900C	EN 61347-1 EN 61347-2-13	ENEC
Control gear *Zasilacz*	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 *Zasilacz*	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 *Zasilacz*	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 *Zasilacz*	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 *Zasilacz*	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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Clause	Requirement + Test	Result - Remark	Verdict

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Object / part No. *Nr objektu / komponentu*	**Code**	**Manufacturer/ trademark** *Producent / znak towarowy*	**Type / model** *Typ / model*	**Technical data** *Dane techniczne*	**Standard** *Norma*	**Mark(s) of conformity[1)]** *Znak zgodności*
Control gear *Zasilacz*	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 *Zasilacz*	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 *Zasilacz*	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 *Zasilacz*	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 *Zasilacz*	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 *Zasilacz*	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 *Zasilacz*	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 *Zasilacz*	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 *Zasilacz*	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 *Zasilacz*	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 *Zasilacz*	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 *Zasilacz*	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 *Zasilacz*	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 *Zasilacz*	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 *Zasilacz*	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 *Zasilacz*	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 *Zasilacz*	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 *Zasilacz*	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 *Zasilacz*	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. *Nr objektu / komponentu*	**Code**	**Manufacturer/ trademark** *Producent / znak towarowy*	**Type / model** *Typ / model*	**Technical data** *Dane techniczne*	**Standard** *Norma*	**Mark(s) of conformity[1)]** *Znak zgodności*
Control gear *Zasilacz*	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 *Zasilacz*	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 *Zasilacz*	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 *Zasilacz*	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 *Zasilacz*	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 *Zasilacz*	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 *Zasilacz*	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 *Zasilacz*	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 *Zasilacz*	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 *Zasilacz*	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 *Zasilacz*	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 *Zasilacz*	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 *Zasilacz*	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 *Zasilacz*	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 *Zasilacz*	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 *Przewody*	B	Mrowiec	H05V-U	500 V; 0,5 mm^2	EN 50525	BBJ
Internal wires *Przewody wewnętrzne*	B	Mrowiec	H05V-K	500 V; 1 mm^2	EN 50525	BBJ
Supply cord *Przewód zasilający*	B	TF Kable	H07RN-F	450/750 V;	EN 50525	BBJ
Internal wires *Przewody wewnętrzne*	A	E.M.C. Colosio	RD10-B	300/500 V; 0,5 mm^2	EN 50525	IMQ, <HAR>

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Silicon Fiberglass Insulating Sleeving *Oplot izolacyjny z włókna szklanego*	B	Isolcavi	GVES 1500	min. 1500 Volt, Temp -60…+250°C	IEC 60684-3-400	UL
Connector *Złącze*	B	Jiang Men Krealux Electrical	P02-M	17,5A; 450 V	EN 60988-1 EN 60998-2-2	VDE
Connector *Złącze*	A	Openwise	925	16A; 450 V	EN 60988-1 EN 60998-2-2	ENEC
Connector *Złącze*	A	Openwise	928	32A; 450 V	EN 60988-1 EN 60998-2-2	ENEC
Connector *Złącze*	A	Greenway Electronics Co Ltd	M684	16A; 450 V	EN 61984, EN 60988-1, EN 60998-2-1, EN 62444	ENEC
Terminal block *Listwa zaciskowa*	B	Stucchi	651/652	16A; 400 V	EN-61984	IMQ
Terminal block *Listwa zaciskowa*	B	Stucchi	661/662	6A; 400 V	EN-61984	IMQ
Connector *Złącze*	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 *Złącze*	B	BJB	48.281	16A; 400 V	EN 60998-2-2	VDE
Connector *Złącze*	B	BJB	46.412	16A; 450 V	EN 60998-2-2	VDE
Connector *Złącze*	B	BJB	46.413	16A; 450 V	EN 60998-2-2	VDE
Connector *Złącze*	B	BJB	46.414	16A; 450 V	EN 60998-2-2	VDE
Connector *Złącze*	B	BJB	46.415	16A; 450 V	EN 60998-2-2	VDE
Connector *Złącze*	B	BJB	46.455	16A; 450 V	EN 60998-2-2	VDE
Connector *Złącze*	B	WAGO	224-101	24A; 400 V	EN 60998-2-2	VDE
Connector *Złącze*	B	WAGO	224-112	24A; 400 V	EN 60998-2-2	VDE
Connector *Złącze*	B	TE Connectivity	2834049 2834048 2834055 2834054	9A; 600 V	EN 61984	TUV

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Terminal block *Listwa zaciskowa*	B	Wieland	GST 18I4S	20A; 400 V	EN 61535	VDE
Terminal block *Listwa zaciskowa*	B	Wieland	GST 15I2	16A; 250 V	EN 61535	VDE
Terminal block *Listwa zaciskowa*	B	Wieland	96.051.4153.6	20A; 250 V	EN 61535	VDE, UL
Terminal block *Listwa zaciskowa*	B	Wieland	96.031.4053.1	20A; 250 V	EN 61535	VDE, UL
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^{0}C, tc max=80^{0}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

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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
Luminaire protection *Zabezpieczenie oprawy*	B	RuiLongYuan	TP10D	100-277V, 50/60Hz, Ta = -40°C do 85°C	EN 61643-11 IEC 61643-11	TUV
Luminaire protection *Zabezpieczenie oprawy*	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 *Zabezpieczenie oprawy*	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 *Zabezpieczenie oprawy*	B	LINOYA	LYSPD10A	300Vac, 50Hz, IP67	EN 61643-11	UL
Luminaire protection *Zabezpieczenie oprawy*	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 *Zabezpieczenie oprawy*	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 *Zabezpieczenie oprawy*	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 *Zabezpieczenie oprawy*	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 *Zabezpieczenie oprawy*	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 *Zabezpieczenie oprawy*	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 *Zabezpieczenie oprawy*	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. *Nr objektu / komponentu*	**Code**	**Manufacturer/ trademark** *Producent / znak towarowy*	**Type / model** *Typ / model*	**Technical data** *Dane techniczne*	**Standard** *Norma*	**Mark(s) of conformity[1)]** *Znak zgodności*
Luminaire protection *Zabezpieczenie oprawy*	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 *Zabezpieczenie oprawy*	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 (mm²).....:	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

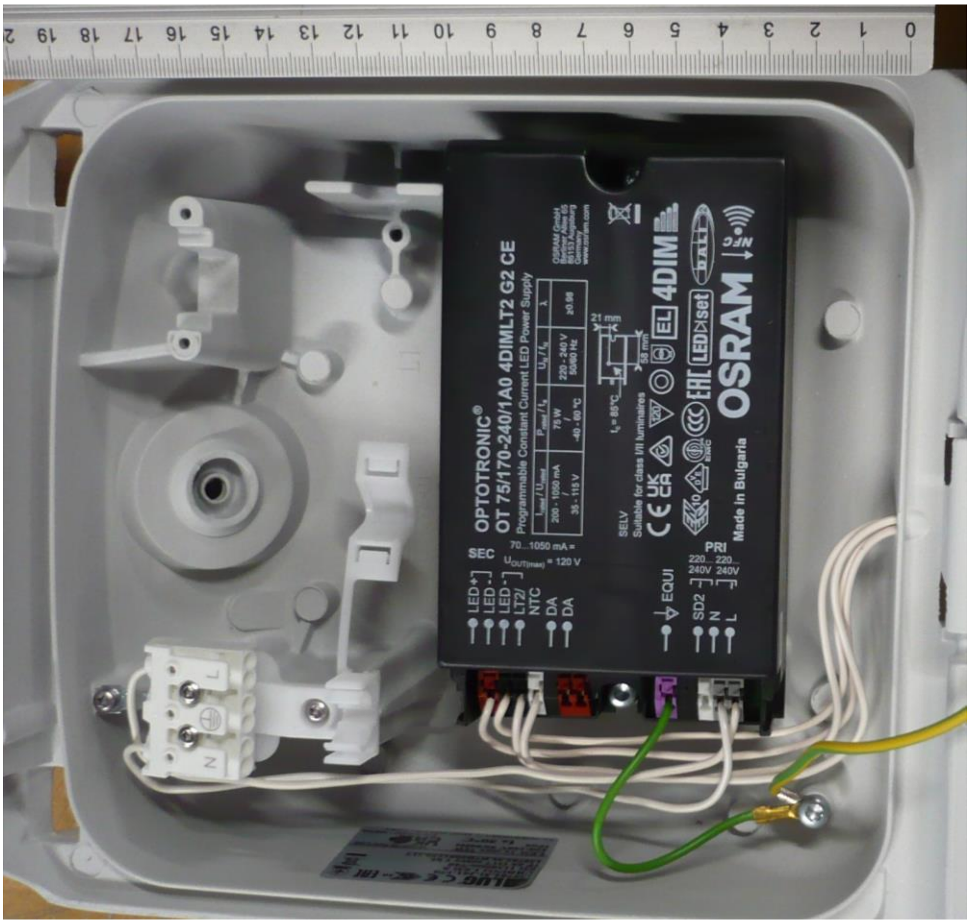
(15.6.3.1) (15.6.3.2)	**TABLE: Contact resistance test / Heating tests**									N/A
	Voltage drop (mV) after 1 h									—
terminal	1	2	3	4	5	6	7	8	9	10
voltage drop (mV)										
	Voltage drop of two inseparable joints									
	Voltage drop after 10th alt. 25th cycle									
	Max. allowed voltage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

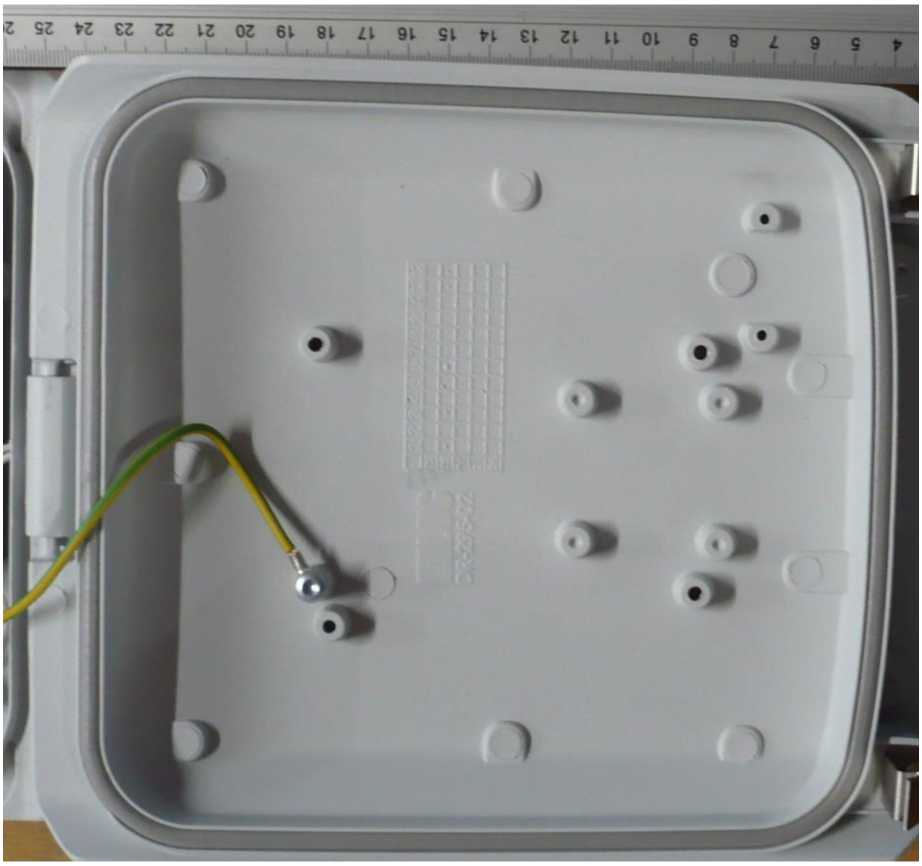
List of test equipment used:

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


OPTOTRONIC®
OT 75/170-240/1A0 4DIMLT2 G2 CE
Programmable Constant Current LED Power Supply
SEC
PRI
4DIM
OSRAM
Made in Bulgaria

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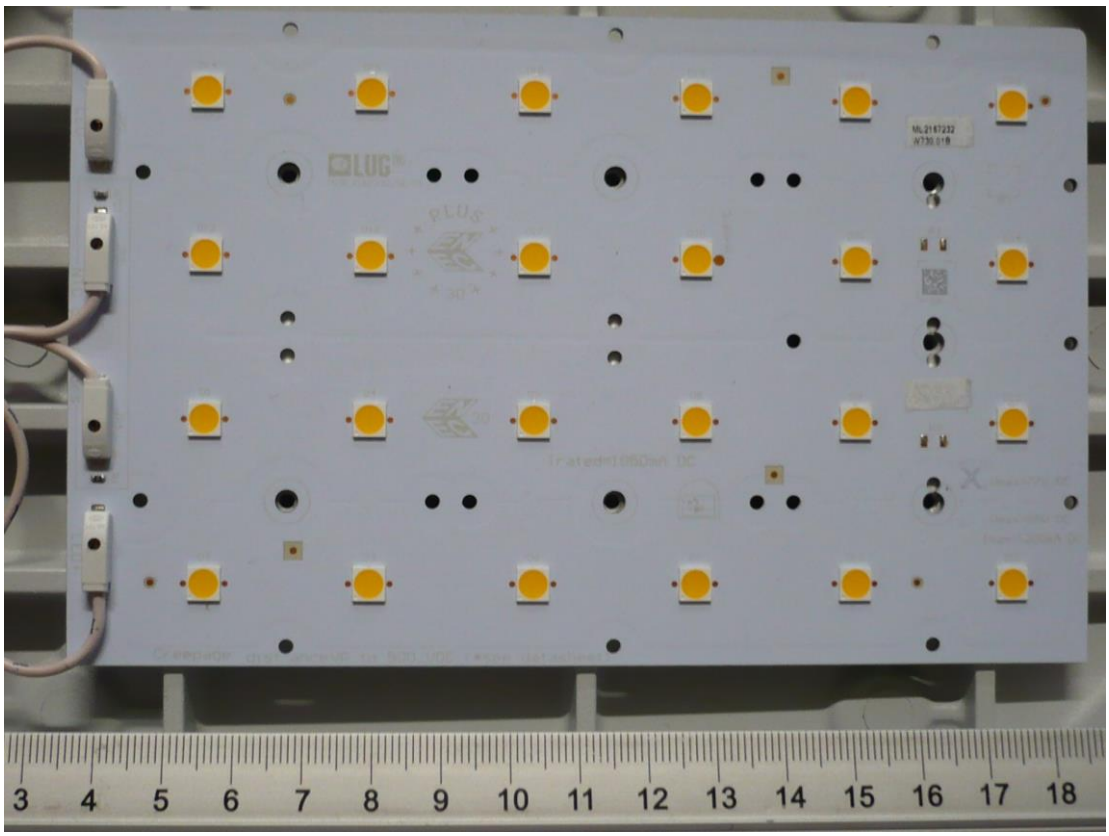
LUG
3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18

Report No.: B5-3/117/B/1/24

IEC60598_2_3M ATTACHMENT			
Clause	Requirement + Test	Result - Remark	Verdict
ATTACHMENT TO TEST REPORT B5-3/117/B/24 **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. ..... : **Attachment Originator**..... : **Master Attachment** ..... :	EU_GD_IEC60598_2_3M UL(Demko) 2022-05-24		
	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 *(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)* 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

Łukasiewicz – IMiF PREDOM Division
Research and Certification Center
02-255 Warszawa, ul. Krakowiaków 53

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

ZERTIFIKAT ◆ CERTIFICATE ◆ 認證證書 ◆ СЕРТИФИКАТ ◆ CERTIFICADO ◆ CERTIFICAT

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

DAkkS Deutsche Akkreditierungsstelle D-ZM-14143-01-00

TÜV SÜD Management Service GmbH • Zertifizierungsstelle • Ridlerstrasse 57 • 80339 München • Germany
www.tuvsud.com/de-certificate-validity-check

MS/01-07/2023

ZERTIFIKAT ◆ CERTIFICATE ◆ 認證證書 ◆ СЕРТИФИКАТ ◆ CERTIFICADO ◆ CERTIFICAT

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

DAkkS Deutsche Akkreditierungsstelle D-ZM-14143-01-00

ZERTIFIKAT ◆ CERTIFICATE ◆ 認證證書 ◆ СЕРТИФИКАТ ◆ CERTIFICADO ◆ CERTIFICAT

Management Service

CERTIFICATE

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

The Certification Body
of TÜV SÜD Management Service GmbH

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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

MS/01-07/2023

ZERTIFIKAT ◆ CERTIFICATE ◆ 認證證書 ◆ СЕРТИФИКАТ ◆ CERTIFICADO ◆ CERTIFICAT

Management Service

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

Annex no. 01 to Certificate of Laboratory approval No. TSP-17025-LB-006.01 from 02.04.2024 to 01.04.2027.

Polska

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, - mechanical strength and resistance to mechanical shocks, - hanging and fixing security, - photobiological hazard, - insulation resistance, - electrical insulation strength, - continuity and resistance of the protective circuit, - leakage current, - resistance to dust, solid objects and water ingress, - creepage distances and clearances - thermal endurance - temperature of parts, - resistance to heat, fire and ignition - corrosion resistance, - linear dimensions, - resistance to moisture, - stability.	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		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		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		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		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		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 recessedluminaires		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

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, - correlated colour temperature (CCT), - colour rendering index (Ra), - chromaticity coordinates.	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		
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); - Voltage dips, short interruptions and voltage variations. - Current Harmonics	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		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

Polska

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, - Precent 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

ŚWIADECTWO ◆ СВИДЕТЕЛЬСТВО ◆ CONFIRMACIÓN ◆ ZEUGNIS ◆ CONFIRMATION

TÜV SÜD Polska

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

TÜV®

ZERTIFIKAT ◆ CERTIFICATE ◆ 認證證書 ◆ СЕРТИФИКАТ ◆ CERTIFICADO ◆ CERTIFICAT

TÜV SÜD Management Service

CERTIFICATE

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**.

Head of Certification Body
Munich, 2023-02-28

IAF

DAkkS Deutsche Akkreditierungsstelle D-ZM-14143-01-00

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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

Head of Certification Body
Munich, 2023-02-28

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CERTIFICAT ◆ CERTIFICADO ◆ СЕРТИФИКАТ ◆ 認證證書 ◆ CERTIFICATE ◆ ZERTIFIKAT

Management Service

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

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ZERTIFIKAT ◆ CERTIFICATE ◆ 認證證書 ◆ СЕРТИФИКАТ ◆ CERTIFICADO ◆ CERTIFICAT

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

EU DECLARATION OF CONFORMITY

LG/2022/04/131

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

Commision 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

EU DECLARATION OF CONFORMITY

LG/2022/04/131

ATTACHMENT

Factory number

130782.5L241.130	130782.5L242.130	130782.5L241.150	130782.5L242.150
130782.5L241.120	130782.5L242.120	130782.5L241.140	130782.5L242.140
130782.5L241.110	130782.5L242.110	130782.5L241.160	130782.5L242.160
130782.5L241.170	130782.5L242.170	130782.5L241.180	130782.5L242.180
130772.5L081.090	130772.5L082.090	130772.5L161.090	130772.5L162.090
130772.5L081.080	130772.5L082.080	130772.5L081.020	130772.5L082.020
130772.5L081.050	130772.5L082.050	130772.5L081.060	130772.5L082.060
130772.5L081.070	130772.5L082.070	130772.5L081.010	130772.5L082.010
130772.5L081.040	130772.5L082.040	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
130772.5L081.190	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	130772.5L161.010	130772.5L162.010
130772.5L161.190	130772.5L162.190	130782.5L081.220	130782.5L082.220
130772.5L161.030	130772.5L162.030	130772.5L161.040	130772.5L162.040
130782.5L081.150	130782.5L082.150	130782.5L081.110	130782.5L082.110
130782.5L081.120	130782.5L082.120	130782.5L081.130	130782.5L082.130
130782.5L081.140	130782.5L082.140	130782.5L081.160	130782.5L082.160
130782.5L081.170	130782.5L082.170	130782.5L081.180	130782.5L082.180
130782.5L161.220	130782.5L162.220	130782.5L161.120	130782.5L162.120
130782.5L161.130	130782.5L162.130	130782.5L161.150	130782.5L162.150
130782.5L161.140	130782.5L162.140	130782.5L161.160	130782.5L162.160
130772.5L121.090	130772.5L122.090	130782.5L161.110	130782.5L162.110
130782.5L161.170	130782.5L162.170	130782.5L161.180	130782.5L162.180
130772.5L121.080	130772.5L122.080	130772.5L201.090	130772.5L202.090
130772.5L121.070	130772.5L122.070	130772.5L121.050	130772.5L122.050
130772.5L121.060	130772.5L122.060	130772.5L121.020	130772.5L122.020
130772.5L121.010	130772.5L122.010	130772.5L121.040	130772.5L122.040
130772.5L121.030	130772.5L122.030	130772.5L121.210	130772.5L122.210
130772.5L201.100	130772.5L202.100	130772.5L121.200	130772.5L122.200
130772.5L201.080	130772.5L202.080	130772.5L121.190	130772.5L122.190
130772.5L201.210	130772.5L202.210	130772.5L041.090	130772.5L042.090
130772.5L201.020	130772.5L202.020	130772.5L201.200	130772.5L202.200
130772.5L201.050	130772.5L202.050	130772.5L201.060	130772.5L202.060
130772.5L201.070	130772.5L202.070	130772.5L201.010	130772.5L202.010
130772.5L201.040	130772.5L202.040	130772.5L201.190	130772.5L202.190
130772.5L201.030	130772.5L202.030	130782.5L121.220	130782.5L201.220
130782.5L122.220	130782.5L202.220	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
130782.5L121.120	130782.5L122.120	130782.5L121.130	130782.5L122.130
130782.5L121.150	130782.5L122.150	130782.5L121.140	130782.5L122.140
130782.5L121.110	130782.5L122.110	130782.5L201.130	130782.5L202.130
130782.5L201.150	130782.5L202.150	130782.5L121.160	130782.5L122.160
130782.5L201.120	130782.5L202.120	130782.5L121.170	130782.5L122.170
130782.5L121.180	130782.5L122.180	130772.5L041.190	130772.5L042.190
130772.5L041.200	130772.5L042.200	130782.5L041.220	130782.5L042.220

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130782.5L201.140	130782.5L202.140	130782.5L201.110	130782.5L202.110
130782.5L201.160	130782.5L202.160	130782.5L201.170	130782.5L202.170
130782.5L201.180	130782.5L202.180	130782.5L041.110	130782.5L042.110
130782.5L041.120	130782.5L042.120	130782.5L041.130	130782.5L042.130
130782.5L041.140	130782.5L042.140	130782.5L041.150	130782.5L042.150
130782.5L041.160	130782.5L042.160	130782.5L041.170	130782.5L042.170
130782.5L041.180	130782.5L042.180	130772.5L241.090	130772.5L242.090
130772.5L241.100	130772.5L242.100	130772.5L241.080	130772.5L242.080
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	130772.5L241.200	130772.5L242.200
130772.5L241.040	130772.5L242.040	130772.5L241.010	130772.5L242.010
130772.5L241.190	130772.5L242.190	130772.5L241.030	130772.5L242.030
130782.5L241.220	130782.5L242.220	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
130772.5L061.010	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
130772.5L141.010	130772.5L142.010	130772.5L061.190	130772.5L062.190
130772.5L141.040	130772.5L142.040	130772.5L071.080	130772.5L072.080
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
130772.5L071.010	130772.5L072.010	130772.5L071.040	130772.5L072.040
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	130772.5L071.190	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
130772.5L151.010	130772.5L152.010	130772.5L151.190	130772.5L152.190
130772.5L151.030	130772.5L152.030	130772.5L151.040	130772.5L152.040
130772.5L091.090	130772.5L092.090	130772.5L091.080	130772.5L092.080
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

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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
130772.5L171.100	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
130772.5L011.010	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
130772.5L111.050	130772.5L112.050	130772.5L111.060	130772.5L112.060
130772.5L111.020	130772.5L112.020	130772.5L111.010	130772.5L112.010
130772.5L111.040	130772.5L112.040	130772.5L111.030	130772.5L112.030
130772.5L111.210	130772.5L112.210	130772.5L181.100	130772.5L182.100
130772.5L181.080	130772.5L182.080	130772.5L111.200	130772.5L112.200
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
130772.5L021.010	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
130772.5L181.200	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
130772.5L031.010	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
130772.5L031.060	130772.5L032.060	130772.5L031.070	130772.5L032.070
130772.5L031.080	130772.5L032.080	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
130772.5L191.200	130772.5L192.200	130772.5L191.010	130772.5L192.010
130772.5L191.040	130772.5L192.040	130772.5L191.030	130772.5L192.030
130772.5L191.190	130772.5L192.190	130772.5L031.190	130772.5L032.190
130772.5L031.200	130772.5L032.200	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

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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
130772.5L221.020	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	130772.5L231.080	130772.5L232.080
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	130772.5L231.200	130772.5L232.200
130772.5L231.040	130772.5L232.040	130772.5L231.010	130772.5L232.010
130772.5L231.190	130772.5L232.190	130772.5L231.030	130772.5L232.030
130782.5L231.140	130782.5L232.140	130782.5L231.130	130782.5L232.130
130782.5L231.110	130782.5L232.110	130782.5L231.160	130782.5L232.160
130782.5L231.170	130782.5L232.170	130782.5L231.180	130782.5L232.180
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
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	130782.5L141.110	130782.5L142.110
130782.5L141.130	130782.5L142.130	130782.5L061.160	130782.5L062.160
130782.5L151.150	130782.5L152.150	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
130782.5L141.170	130782.5L142.170	130782.5L141.180	130782.5L142.180
130782.5L151.140	130782.5L152.140	130782.5L071.110	130782.5L072.110
130782.5L071.130	130782.5L072.130	130782.5L151.110	130782.5L152.110
130782.5L151.130	130782.5L152.130	130782.5L071.160	130782.5L072.160
130782.5L151.160	130782.5L152.160	130782.5L071.170	130782.5L072.170
130782.5L071.180	130782.5L072.180	130782.5L151.170	130782.5L152.170
130782.5L151.180	130782.5L152.180	130782.5L131.220	130782.5L132.220
130782.5L141.220	130782.5L142.220	130782.5L151.220	130782.5L152.220
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

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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
130782.5L101.160	130782.5L102.160	130782.5L111.120	130782.5L112.120
130782.5L111.220	130782.5L112.220	130782.5L192.220	130782.5L191.220
130782.5L181.110	130782.5L182.110	130782.5L181.130	130782.5L182.130
130782.5L191.150	130782.5L192.150	130782.5L101.170	130782.5L102.170
130782.5L181.160	130782.5L182.160	130782.5L101.180	130782.5L102.180
130782.5L191.120	130782.5L192.120	130782.5L111.140	130782.5L112.140
130782.5L181.170	130782.5L182.170	130782.5L181.180	130782.5L182.180
130782.5L191.140	130782.5L192.140	130782.5L111.110	130782.5L112.110
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	130782.5L111.130	130782.5L112.130
130782.5L111.160	130782.5L112.160	130782.5L191.110	130782.5L192.110
130782.5L191.130	130782.5L192.130	130782.5L191.160	130782.5L192.160
130782.5L111.170	130782.5L112.170	130782.5L111.180	130782.5L112.180
130782.5L191.170	130782.5L192.170	130782.5L191.180	130782.5L192.180
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
130782.5L031.160	130782.5L032.160	130782.5L031.170	130782.5L032.170
130782.5L031.180	130782.5L032.180	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
130782.5L221.160	130782.5L222.160	130782.5L231.120	130782.5L232.120
130782.5L221.170	130782.5L222.170	130782.5L221.180	130782.5L222.180

Accessory factory numbers

150170.01409

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

DECLARATION OF CONFORMITY

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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 UK acts:

Electrical Equipment (Safety) Regulations 2016 (S.I. 2016/1101)

Electromagnetic Compatibility Regulations 2016 (S.I. 2016/1091)

Electrical and Electronic Equipment Regulations 2012 (S.I. 2012/3032)

The Ecodesign for Energy-Related Products and Energy Information (Amendment) (EU Exit) Regulations 2019 No.539

and the following harmonized standards:

BS EN IEC 60598-1:2021
BS EN 60598-2-3:2003+A1:2011
BS EN IEC 55015:2019+A11:2020
BS EN 61547:2009
BS EN IEC 61000-3-2:2019+A1:2021
BS EN 61000-3-3:2013+A1:2019
BS EN 61000-3-3:2013+A2:2021
BS EN 62493:2015
BS EN IEC 63000:2018
BS EN 62471:2008

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

130782.5L241.130	130782.5L242.130	130782.5L241.150	130782.5L242.150
130782.5L241.120	130782.5L242.120	130782.5L241.140	130782.5L242.140
130782.5L241.110	130782.5L242.110	130782.5L241.160	130782.5L242.160
130782.5L241.170	130782.5L242.170	130782.5L241.180	130782.5L242.180
130772.5L081.090	130772.5L082.090	130772.5L161.090	130772.5L162.090
130772.5L081.080	130772.5L082.080	130772.5L081.020	130772.5L082.020
130772.5L081.050	130772.5L082.050	130772.5L081.060	130772.5L082.060
130772.5L081.070	130772.5L082.070	130772.5L081.010	130772.5L082.010
130772.5L081.040	130772.5L082.040	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
130772.5L081.190	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	130772.5L161.010	130772.5L162.010
130772.5L161.190	130772.5L162.190	130782.5L081.220	130782.5L082.220
130772.5L161.030	130772.5L162.030	130772.5L161.040	130772.5L162.040
130782.5L081.150	130782.5L082.150	130782.5L081.110	130782.5L082.110
130782.5L081.120	130782.5L082.120	130782.5L081.130	130782.5L082.130
130782.5L081.140	130782.5L082.140	130782.5L081.160	130782.5L082.160
130782.5L081.170	130782.5L082.170	130782.5L081.180	130782.5L082.180
130782.5L161.220	130782.5L162.220	130782.5L161.120	130782.5L162.120
130782.5L161.130	130782.5L162.130	130782.5L161.150	130782.5L162.150
130782.5L161.140	130782.5L162.140	130782.5L161.160	130782.5L162.160
130772.5L121.090	130772.5L122.090	130782.5L161.110	130782.5L162.110
130782.5L161.170	130782.5L162.170	130782.5L161.180	130782.5L162.180
130772.5L121.080	130772.5L122.080	130772.5L201.090	130772.5L202.090
130772.5L121.070	130772.5L122.070	130772.5L121.050	130772.5L122.050
130772.5L121.060	130772.5L122.060	130772.5L121.020	130772.5L122.020
130772.5L121.010	130772.5L122.010	130772.5L121.040	130772.5L122.040
130772.5L121.030	130772.5L122.030	130772.5L121.210	130772.5L122.210
130772.5L201.100	130772.5L202.100	130772.5L121.200	130772.5L122.200
130772.5L201.080	130772.5L202.080	130772.5L121.190	130772.5L122.190
130772.5L201.210	130772.5L202.210	130772.5L041.090	130772.5L042.090
130772.5L201.020	130772.5L202.020	130772.5L201.200	130772.5L202.200
130772.5L201.050	130772.5L202.050	130772.5L201.060	130772.5L202.060
130772.5L201.070	130772.5L202.070	130772.5L201.010	130772.5L202.010
130772.5L201.040	130772.5L202.040	130772.5L201.190	130772.5L202.190
130772.5L201.030	130772.5L202.030	130782.5L121.220	130782.5L201.220
130782.5L122.220	130782.5L202.220	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
130782.5L121.120	130782.5L122.120	130782.5L121.130	130782.5L122.130
130782.5L121.150	130782.5L122.150	130782.5L121.140	130782.5L122.140
130782.5L121.110	130782.5L122.110	130782.5L201.130	130782.5L202.130
130782.5L201.150	130782.5L202.150	130782.5L121.160	130782.5L122.160
130782.5L201.120	130782.5L202.120	130782.5L121.170	130782.5L122.170
130782.5L121.180	130782.5L122.180	130772.5L041.190	130772.5L042.190
130772.5L041.200	130772.5L042.200	130782.5L041.220	130782.5L042.220

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130782.5L201.140	130782.5L202.140	130782.5L201.110	130782.5L202.110
130782.5L201.160	130782.5L202.160	130782.5L201.170	130782.5L202.170
130782.5L201.180	130782.5L202.180	130782.5L041.110	130782.5L042.110
130782.5L041.120	130782.5L042.120	130782.5L041.130	130782.5L042.130
130782.5L041.140	130782.5L042.140	130782.5L041.150	130782.5L042.150
130782.5L041.160	130782.5L042.160	130782.5L041.170	130782.5L042.170
130782.5L041.180	130782.5L042.180	130772.5L241.090	130772.5L242.090
130772.5L241.100	130772.5L242.100	130772.5L241.080	130772.5L242.080
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	130772.5L241.200	130772.5L242.200
130772.5L241.040	130772.5L242.040	130772.5L241.010	130772.5L242.010
130772.5L241.190	130772.5L242.190	130772.5L241.030	130772.5L242.030
130782.5L241.220	130782.5L242.220	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
130772.5L061.010	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
130772.5L141.010	130772.5L142.010	130772.5L061.190	130772.5L062.190
130772.5L141.040	130772.5L142.040	130772.5L071.080	130772.5L072.080
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
130772.5L071.010	130772.5L072.010	130772.5L071.040	130772.5L072.040
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	130772.5L071.190	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
130772.5L151.010	130772.5L152.010	130772.5L151.190	130772.5L152.190
130772.5L151.030	130772.5L152.030	130772.5L151.040	130772.5L152.040
130772.5L091.090	130772.5L092.090	130772.5L091.080	130772.5L092.080
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

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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
130772.5L171.100	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
130772.5L011.010	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
130772.5L111.050	130772.5L112.050	130772.5L111.060	130772.5L112.060
130772.5L111.020	130772.5L112.020	130772.5L111.010	130772.5L112.010
130772.5L111.040	130772.5L112.040	130772.5L111.030	130772.5L112.030
130772.5L111.210	130772.5L112.210	130772.5L181.100	130772.5L182.100
130772.5L181.080	130772.5L182.080	130772.5L111.200	130772.5L112.200
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
130772.5L021.010	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
130772.5L181.200	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
130772.5L031.010	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
130772.5L031.060	130772.5L032.060	130772.5L031.070	130772.5L032.070
130772.5L031.080	130772.5L032.080	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
130772.5L191.200	130772.5L192.200	130772.5L191.010	130772.5L192.010
130772.5L191.040	130772.5L192.040	130772.5L191.030	130772.5L192.030
130772.5L191.190	130772.5L192.190	130772.5L031.190	130772.5L032.190
130772.5L031.200	130772.5L032.200	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

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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
130772.5L221.020	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	130772.5L231.080	130772.5L232.080
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	130772.5L231.200	130772.5L232.200
130772.5L231.040	130772.5L232.040	130772.5L231.010	130772.5L232.010
130772.5L231.190	130772.5L232.190	130772.5L231.030	130772.5L232.030
130782.5L231.140	130782.5L232.140	130782.5L231.130	130782.5L232.130
130782.5L231.110	130782.5L232.110	130782.5L231.160	130782.5L232.160
130782.5L231.170	130782.5L232.170	130782.5L231.180	130782.5L232.180
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
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	130782.5L141.110	130782.5L142.110
130782.5L141.130	130782.5L142.130	130782.5L061.160	130782.5L062.160
130782.5L151.150	130782.5L152.150	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
130782.5L141.170	130782.5L142.170	130782.5L141.180	130782.5L142.180
130782.5L151.140	130782.5L152.140	130782.5L071.110	130782.5L072.110
130782.5L071.130	130782.5L072.130	130782.5L151.110	130782.5L152.110
130782.5L151.130	130782.5L152.130	130782.5L071.160	130782.5L072.160
130782.5L151.160	130782.5L152.160	130782.5L071.170	130782.5L072.170
130782.5L071.180	130782.5L072.180	130782.5L151.170	130782.5L152.170
130782.5L151.180	130782.5L152.180	130782.5L131.220	130782.5L132.220
130782.5L141.220	130782.5L142.220	130782.5L151.220	130782.5L152.220
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

DECLARATION OF CONFORMITY

LG/2022/04/131

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
130782.5L101.160	130782.5L102.160	130782.5L111.120	130782.5L112.120
130782.5L111.220	130782.5L112.220	130782.5L192.220	130782.5L191.220
130782.5L181.110	130782.5L182.110	130782.5L181.130	130782.5L182.130
130782.5L191.150	130782.5L192.150	130782.5L101.170	130782.5L102.170
130782.5L181.160	130782.5L182.160	130782.5L101.180	130782.5L102.180
130782.5L191.120	130782.5L192.120	130782.5L111.140	130782.5L112.140
130782.5L181.170	130782.5L182.170	130782.5L181.180	130782.5L182.180
130782.5L191.140	130782.5L192.140	130782.5L111.110	130782.5L112.110
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	130782.5L111.130	130782.5L112.130
130782.5L111.160	130782.5L112.160	130782.5L191.110	130782.5L192.110
130782.5L191.130	130782.5L192.130	130782.5L191.160	130782.5L192.160
130782.5L111.170	130782.5L112.170	130782.5L111.180	130782.5L112.180
130782.5L191.170	130782.5L192.170	130782.5L191.180	130782.5L192.180
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
130782.5L031.160	130782.5L032.160	130782.5L031.170	130782.5L032.170
130782.5L031.180	130782.5L032.180	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
130782.5L221.160	130782.5L222.160	130782.5L231.120	130782.5L232.120
130782.5L221.170	130782.5L222.170	130782.5L221.180	130782.5L222.180

Accessory factory numbers

150170.01409

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

LUMILEDS

ILLUMINATION

Lumen Maintenance Package for LUXEON 5050

(published: Oct 30, 2023)

Section 1 - Model Description, Models Covered, Energy Star LM-80 Cover Sheet and TM-21-11 Results

Section 2 - LM-80 Test Reports

Section 1

1.1 Models Description

LUXEON 5050 Square LES with model number L150-4070503000050 (nominal CCT 4000K, 30V) was used in this LM-80 testing. Figure 1 shows the overall mechanical dimension of this product in mm.

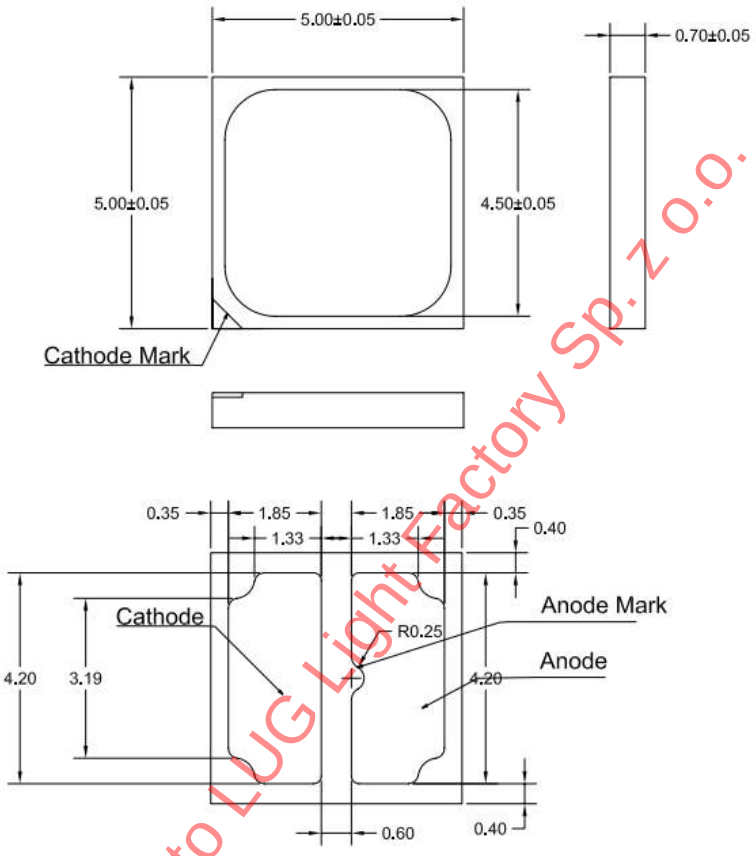

Figure 1. Mechanical drawing for LUXEON 5050 Square LES

1.2 Additional Models Covered

The LM-80 test result here can be applied to the following part numbers:

Product Family	Part Number	Color
LUXEON 5050 (Square LES)	L150-AABB50CC000S0 (DUT)	White
LUXEON 5050 (Round LES)	L150-AABB50CC00000	White

For LUXEON 5050 (Square LES): AA designates nominal ANSI CCT (40=4000K, 50=5000K, 57=5700K, 65=6500K), BB designates minimum CRI (70=70CRI, 80=80CRI, 90=90CRI), CC designates voltage (06=6V, 30=30V).

For LUXEON 5050 (Round LES): AA designates nominal ANSI CCT (40=4000K, 50=5000K, 57=5700K, 65=6500K), BB designates minimum CRI (70=70CRI, 80=80CRI, 90=90CRI), CC designates voltage (06=6V, 24=24V).

Please note LUXEON 5050 (Square LES) 6V parts have an equivalent drive current If' that can be determined as follows: If' = If*5.

Please note LUXEON 5050 (Round LES) 6V parts have an equivalent drive current If' that can be determined as follows: If' = If*4.

1.3 ENERGY STAR® Cover Sheet

ENERGY STAR® LM-80 Cover Sheet

Administrative Information

Tested subcomponent series: LUXEON 5050 Square

Tested subcomponent model number: L150-407050300000S0

(4000K)

Report issue date: Oct 30, 2023 (see Section 2 for details)

Report revision date (if applicable): n/a

Testing start date: Apr 19, 2019

Testing completion date: Feb 27, 2022

DUT sampling method: 36 samples per test condition (see Section 2 for details)

DUT Identification

DUT manufacturer's name: Lumileds LLC

DUT identification, e.g., model number: L150-407050300000S0

Description of DUT, including if the DUT is an LED package or module: LED package

DUT Characteristics

Total input power (W): 4.55 W initial average power at max maintenance current

Average current density per LED die (mA/mm²): 300 mA/mm² at max current

Average power density per LED die (W/mm²): 9.07 W/mm² at max current

Representative CRI (R_a) of the tested sample set: 70 minimum

(Indicate whether the reported value is the mean or median value of the sample set, or per unit)

Minimum die edge to die edge spacing: 0.4 mm

1.4 TM-21-11 Data

Lumen maintenance L_{70} lifetimes are calculated according to IESNA TM-21-11 method with 17,000 hrs of maintenance data with sample size of 36 per test condition.

Test Conditions	alpha	B	Reported L_{70} (hrs)
70mA 55°C	1.9887E-07	1.0124	102,000
70mA 85°C	4.2484E-07	1.0072	102,000
70mA 105°C	5.2323E-09	0.9921	102,000

Additional Projection per TM-21-11:

Projected L_{70}

	If = 70mA
Ts = 55°C	1,855,724
Ts = 85°C	856,403
Ts = 105°C	66,644,632

Projected L_{80}

	If = 70mA
Ts = 55°C	1,184,263
Ts = 85°C	542,094
Ts = 105°C	41,124,019

Projected L_{90}

	If = 70mA
Ts = 55°C	591,992
Ts = 85°C	264,854
Ts = 105°C	18,613,243

Section 2 LM-80 Test Report

Report Reference No.	Current	Ts Temperature
LUMI012-B1-180	70mA	55°C
	70mA	85°C
	70mA	105°C

About Lumileds

Companies developing automotive, mobile, IoT and illumination lighting applications need a partner who can collaborate with them to push the boundaries of light. With over 100 years of inventions and industry firsts, Lumileds is a global lighting solutions company that helps customers around the world deliver differentiated solutions to gain and maintain a competitive edge. As the inventor of Xenon technology, a pioneer in halogen lighting and the leader in high performance LEDs, Lumileds builds innovation, quality and reliability into its technology, products and every customer engagement. Together with its customers, Lumileds is making the world better, safer, more beautiful—with light.

To learn more about our lighting solutions, visit lumileds.com.

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TESTING
NVLAP LAB CODE 500055-0

LM-80 17000 Hour Interval Test Report

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

CSA Group Report: LUMI012-B1-180

May 19, 2021

Manufacturer:	**LUMILEDS**
Models tested:	**L150-4070503000050** **LUXEON 5050**
Test conditions:	36 devices @ 55.0 C, 0.070 A 36 devices @ 85.0 C, 0.070 A 36 devices @ 105.0 C, 0.070 A

Prepared for:
Lumileds Lighting Company, LLC
370 W. Trimble Road
San Jose, CA 95131

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: L150-4070503000050					
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 (Δu'v')
TC1	0.070	55	17000	100.8	0.0007
TC2	0.070	85	17000	100.0	0.0017
TC3	0.070	105	17000	99.2	0.0027

LM-80-15 Reporting requirements	
1. Number of samples tested:	36 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 LM-80-15. 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 measurment 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 ±2.0%
13. Chromaticity shift reported over the measurement time	see data tables for individual test conditions
14. Test start date	July 15, 2019
15. ANSI target and calculated CCT values	see data tables

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

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TABLE 1.1 - Initial ANSI Target & Calculated CCT Results — **L150-407050300000S0**

Load board ID	Device number	Zero hour measurements		Load board ID	Device number	Zero hour measurements		Load board ID	Device number	Zero hour measurements	
		ANSI Target* CCT (K)	Initial Calculated CCT (K)			ANSI Target* CCT (K)	Initial Calculated CCT (K)			ANSI Target* CCT (K)	Initial Calculated CCT (K)
240000107666031C	D1	3985±275	3958	710000108415031C	D1	3985±275	3927	020000107325031C	D1	3985±275	3962
	D2	3985±275	3936		D2	3985±275	3963		D2	3985±275	3969
	D3	3985±275	3969		D3	3985±275	3961		D3	3985±275	3973
	D4	3985±275	3969		D4	3985±275	3947		D4	3985±275	3957
	D5	3985±275	3953		D5	3985±275	3934		D5	3985±275	3969
	D6	3985±275	3949		D6	3985±275	3970		D6	3985±275	3959
	D7	3985±275	3954		D7	3985±275	3956		D7	3985±275	3951
	D8	3985±275	3966		D8	3985±275	3963		D8	3985±275	3929
	D9	3985±275	3950		D9	3985±275	3928		D9	3985±275	3943
	D10	3985±275	3949		D10	3985±275	3970		D10	3985±275	3992
	D11	3985±275	3955		D11	3985±275	3946		D11	3985±275	3931
	D12	3985±275	3959		D12	3985±275	3950		D12	3985±275	3945
2A0000107ECA031C	D1	3985±275	3953	E0000001078AF031C	D1	3985±275	3971	C400001082AC031C	D1	3985±275	3949
	D2	3985±275	3965		D2	3985±275	3959		D2	3985±275	3953
	D3	3985±275	3954		D3	3985±275	3960		D3	3985±275	3941
	D4	3985±275	3953		D4	3985±275	3944		D4	3985±275	3958
	D5	3985±275	3962		D5	3985±275	3936		D5	3985±275	3957
	D6	3985±275	3959		D6	3985±275	3977		D6	3985±275	3947
	D7	3985±275	3959		D7	3985±275	3975		D7	3985±275	3952
	D8	3985±275	3963		D8	3985±275	3961		D8	3985±275	3981
	D9	3985±275	3938		D9	3985±275	3948		D9	3985±275	3944
	D10	3985±275	3948		D10	3985±275	3952		D10	3985±275	3957
	D11	3985±275	3942		D11	3985±275	3932		D11	3985±275	3958
	D12	3985±275	3976		D12	3985±275	3962		D12	3985±275	3979

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

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Load board ID	Device number	Zero hour measurements	
		ANSI Target* CCT (K)	Initial Calculated CCT (K)
8E000107E45031C	D1	3985±275	3927
	D2	3985±275	3947
	D3	3985±275	3940
	D4	3985±275	3957
	D5	3985±275	3942
	D6	3985±275	3958
	D7	3985±275	3947
	D8	3985±275	3952
	D9	3985±275	3953
	D10	3985±275	3947
	D11	3985±275	3950
	D12	3985±275	3969

Load board ID	Device number	Zero hour measurements	
		ANSI Target* CCT (K)	Initial Calculated CCT (K)
F000001076E2031C	D1	3985±275	3957
	D2	3985±275	3963
	D3	3985±275	3966
	D4	3985±275	3950
	D5	3985±275	3947
	D6	3985±275	3934
	D7	3985±275	3941
	D8	3985±275	3934
	D9	3985±275	3937
	D10	3985±275	3952
	D11	3985±275	3957
	D12	3985±275	3947

Load board ID	Device number	Zero hour measurements	
		ANSI Target* CCT (K)	Initial Calculated CCT (K)
DE000010772031C	D1	3985±275	3950
	D2	3985±275	3943
	D3	3985±275	3947
	D4	3985±275	3957
	D5	3985±275	3954
	D6	3985±275	3942
	D7	3985±275	3954
	D8	3985±275	3945
	D9	3985±275	3963
	D10	3985±275	3959
	D11	3985±275	3938
	D12	3985±275	3950

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

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Test Condition 1 55 °C 0.070 A

TABLE 2.0 - LUMEN MAINTENANCE RESULTS **L150-407050300000S0**

Test Condition 1 55 °C 0.070 A

Photometric test drive current: 0.070 A
Photometric test ambient temperature: 25 ± 2 °C
Failures observed: none

Load board ID	Device number	Zero hour measurements		Lumen Maintenance (%)										
		Flux (lm)	Vf (V)	1000	2000	3000	4000	5000	6000	7000	8000	9000	10000	11000
240000107666031C	D1	373.53	28.13	101.1	101.2	101.3	101.4	101.3	101.4	101.4	101.5	101.5	101.4	101.4
	D2	375.40	28.24	100.9	101.0	101.0	101.1	101.0	101.1	101.1	101.1	101.2	101.2	101.2
	D3	372.60	28.16	100.9	100.9	101.0	101.1	101.0	101.1	101.1	101.1	101.2	101.1	101.1
	D4	373.75	28.24	100.8	100.8	100.9	101.0	100.9	100.9	100.9	101.0	101.0	101.0	101.0
	D5	375.25	28.15	100.7	100.7	100.8	100.9	100.9	100.9	100.9	100.9	101.0	101.0	101.0
	D6	372.07	28.20	100.8	100.8	100.9	101.0	100.9	100.9	101.0	101.1	101.1	101.1	101.0
	D7	373.63	28.14	100.7	100.7	100.8	100.9	100.8	100.8	100.8	100.9	100.9	100.9	100.9
	D8	375.16	28.17	100.7	100.7	100.8	100.9	100.9	100.9	100.9	100.9	101.0	100.9	100.9
	D9	373.28	28.18	100.7	100.8	100.9	101.0	100.9	100.9	101.0	101.0	101.1	101.1	101.1
	D10	375.56	28.18	100.5	100.6	100.6	100.7	100.7	100.7	100.7	100.8	100.8	100.8	100.8
	D11	374.85	28.17	100.6	100.6	100.6	100.8	100.7	100.7	100.7	100.8	100.8	100.8	100.8
	D12	375.93	28.18	100.6	100.6	100.7	100.7	100.7	100.6	100.6	100.7	100.7	100.7	100.7
2A0000107ECA031C	D1	375.38	28.16	100.8	100.8	100.9	101.1	100.9	101.0	100.9	101.1	101.0	101.1	101.1
	D2	374.74	28.16	100.9	101.0	101.0	101.2	101.1	101.1	101.1	101.2	101.2	101.2	101.2
	D3	371.34	28.27	100.9	100.9	101.0	101.1	100.9	100.9	100.9	101.0	101.0	101.1	101.1
	D4	373.48	28.19	100.7	100.8	100.9	101.0	100.9	100.8	100.8	100.9	100.9	100.9	100.9
	D5	373.92	28.18	100.8	100.7	100.9	101.1	100.9	101.0	101.0	101.0	101.0	101.1	101.1
	D6	374.34	28.25	100.8	100.8	100.9	101.1	100.9	101.0	101.0	101.1	101.1	101.1	101.1
	D7	373.71	28.18	100.8	100.9	100.9	101.1	101.0	101.0	101.0	101.1	101.1	101.1	101.1
	D8	371.30	28.22	100.7	100.8	100.9	101.1	101.0	101.0	101.0	101.1	101.1	101.0	101.1
	D9	372.06	28.20	100.7	100.7	100.8	101.0	100.9	100.9	100.9	101.0	101.0	101.1	101.0
	D10	377.80	28.20	100.7	100.7	100.8	101.0	100.8	100.8	100.8	100.9	100.9	101.0	101.0
	D11	374.08	28.18	100.7	100.8	100.8	101.0	100.9	100.9	100.9	101.0	101.0	101.1	101.0
	D12	374.55	28.27	100.6	100.7	100.8	101.0	100.8	100.9	100.8	100.9	101.0	101.0	100.9

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TABLE 2.0 - LUMEN MAINTENANCE RESULTS L150-40705030000S0

Test Condition 1 55 °C 0.070 A

Photometric test drive current: 0.070 A
Photometric test ambient temperature: 25 ± 2 °C
Failures observed: none

Load board ID	Device number	Zero hour measurements Flux (lm)	Vf (V)	Lumen Maintenance (%) 1000	2000	3000	4000	5000	6000	7000	8000	9000	10000	11000
8E000107E45031C	D1	375.33	28.18	100.8	100.7	100.9	101.0	100.9	100.9	100.9	101.0	101.1	101.0	101.0
	D2	374.22	28.18	100.9	101.0	101.0	101.2	101.1	101.1	101.1	101.2	101.2	101.2	101.2
	D3	374.17	28.17	100.9	101.0	101.1	101.2	101.1	101.0	101.0	101.1	101.2	101.1	101.1
	D4	374.00	28.19	100.9	100.8	100.9	101.0	100.9	100.9	100.9	101.0	101.0	101.0	101.0
	D5	374.23	28.26	100.7	100.8	100.8	101.0	100.9	101.0	101.0	101.0	101.1	101.1	101.1
	D6	369.23	28.22	100.9	100.9	101.0	101.2	101.1	101.1	101.1	101.2	101.3	101.3	101.3
	D7	376.42	28.24	100.7	100.7	100.8	101.0	100.8	100.9	100.8	100.9	101.0	100.9	100.9
	D8	375.35	28.18	100.6	100.6	100.6	100.8	100.7	100.7	100.7	100.8	100.8	100.8	100.8
	D9	373.95	28.14	100.8	100.8	100.9	101.0	100.9	100.9	100.9	101.0	101.1	101.0	101.0
	D10	371.80	28.16	101.1	101.1	101.2	101.3	101.2	101.2	101.2	101.3	101.4	101.3	101.3
	D11	373.85	28.19	100.6	100.6	100.7	100.9	100.7	100.7	100.7	100.8	100.8	100.8	100.8
	D12	374.23	28.20	100.7	100.8	100.8	100.9	100.7	100.7	100.7	100.8	100.9	100.8	100.8
			n	36	36	36	36	36	36	36	36	36	36	36
			mean	100.8	100.8	100.9	101.0	100.9	100.9	100.9	101.0	101.0	101.0	101.0
			median	100.7	100.8	100.9	101.0	100.9	100.9	100.9	101.0	101.0	101.0	101.0
			std. dev.	0.1	0.1	0.1	0.2	0.1	0.2	0.2	0.2	0.2	0.2	0.2
			min	100.5	100.6	100.6	100.7	100.7	100.6	100.6	100.7	100.7	100.7	100.7
			max	101.1	101.2	101.3	101.4	101.3	101.4	101.4	101.5	101.5	101.4	101.4

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Test Condition 1 55 °C 0.070 A

TABLE 2.0 - LUMEN MAINTENANCE RESULTS **L150-407050300000S0**

Test Condition 1 55 °C 0.070 A

Photometric test drive current: 0.070 A
Photometric test ambient temperature: 25 ± 2 °C
Failures observed: none

Load board ID	Device number	Zero hour measurements		Lumen Maintenance (%)										
		Flux (lm)	Vf (V)	12000	13000	14000	15000	16000	17000					
240000107666031C	D1	373.53	28.13	101.4	101.3	101.4	101.3	101.2	101.1					
	D2	375.40	28.24	101.1	101.1	101.2	101.2	101.1	101.0					
	D3	372.60	28.16	101.1	101.0	101.1	101.1	101.0	100.9					
	D4	373.75	28.24	100.9	100.9	101.0	100.9	100.9	100.8					
	D5	375.25	28.15	100.9	100.9	101.1	101.0	101.0	100.8					
	D6	372.07	28.20	101.1	101.0	101.2	101.1	101.1	101.0					
	D7	373.63	28.14	100.9	100.8	100.9	100.8	100.8	100.7					
	D8	375.16	28.17	100.9	100.9	101.0	100.9	100.9	100.8					
	D9	373.28	28.18	101.0	101.0	101.1	101.1	101.0	101.0					
	D10	375.56	28.18	100.8	100.7	100.9	100.8	100.7	100.7					
	D11	374.85	28.17	100.7	100.7	100.8	100.8	100.7	100.6					
	D12	375.93	28.18	100.7	100.6	100.7	100.7	100.6	100.6					
2A0000107ECA031C	D1	375.38	28.16	101.1	101.0	101.1	101.1	101.0	100.9					
	D2	374.74	28.16	101.2	101.1	101.2	101.2	101.1	101.0					
	D3	371.34	28.27	101.0	101.0	101.1	101.0	101.0	100.9					
	D4	373.48	28.19	100.9	100.9	100.9	100.9	100.9	100.7					
	D5	373.92	28.18	101.1	101.0	101.1	101.1	101.0	100.9					
	D6	374.34	28.25	101.1	101.1	101.1	101.1	101.1	101.0					
	D7	373.71	28.18	101.1	101.1	101.2	101.1	101.1	100.9					
	D8	371.30	28.22	101.1	101.1	101.1	101.1	101.1	101.0					
	D9	372.06	28.20	101.0	101.0	101.1	101.0	100.8	100.9					
	D10	377.80	28.20	100.9	100.9	100.9	100.9	100.8	100.7					
	D11	374.08	28.18	101.0	100.9	101.0	100.9	100.9	100.8					
	D12	374.55	28.27	100.9	100.9	101.0	100.9	100.9	100.8					

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TABLE 2.0 - LUMEN MAINTENANCE RESULTS L150-40705030000S0

Test Condition 1 55 °C 0.070 A

Photometric test drive current: 0.070 A
Photometric test ambient temperature: 25 ± 2 °C
Failures observed: none

Load board ID	Device number	Zero hour measurements Flux (lm)	Vf (V)	Lumen Maintenance (%) 12000	13000	14000	15000	16000	17000
8E000107E45031C	D1	375.33	28.18	101.0	101.0	101.1	101.0	101.0	100.9
	D2	374.22	28.18	101.2	101.2	101.2	101.2	101.1	101.0
	D3	374.17	28.17	101.1	101.1	101.1	101.0	101.0	100.9
	D4	374.00	28.19	100.9	100.9	100.9	100.9	100.8	100.7
	D5	374.23	28.26	101.1	101.1	101.1	101.1	101.1	101.0
	D6	369.23	28.22	101.2	101.2	101.3	101.2	101.2	101.1
	D7	376.42	28.24	100.8	100.8	100.9	100.9	100.8	100.7
	D8	375.35	28.18	100.7	100.7	100.7	100.7	100.6	100.5
	D9	373.95	28.14	101.0	101.0	101.0	101.0	101.0	100.9
	D10	371.80	28.16	101.2	101.2	101.2	101.2	101.2	101.0
	D11	373.85	28.19	100.7	100.7	100.8	100.7	100.7	100.6
	D12	374.23	28.20	100.7	100.7	100.8	100.7	100.7	100.6
			n	36	36	36	36	36	36
			mean	101.0	101.0	101.0	101.0	100.9	100.8
			median	101.0	101.0	101.1	101.0	101.0	100.9
			std. dev.	0.2	0.2	0.2	0.2	0.2	0.2
			min	100.7	100.6	100.7	100.7	100.6	100.5
			max	101.4	101.3	101.4	101.3	101.2	101.1

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Test Condition 1 55 °C 0.070 A

TABLE 2.1 - PHOTOSYNTHETIC PHOTON FLUX MAINTENANCE RESULTS **L150-407050300000S0**

Test Condition 1 55 °C 0.070 A

Photometric test drive current: 0.070 A
Photometric test ambient temperature: 25 ± 2 °C
Failures observed: none

Load board ID	Device number	Zero hour measurements PPF (µmol/s)	Zero hour measurements VF (V)	Photosynthetic Photon Flux Maintenance (%) 1000	2000	3000	4000	5000	6000	7000	8000	9000	10000	11000
240000107666031C	D1	4.90	28.13	101.0	101.0	101.1	101.3	101.2	101.2	101.3	101.3	101.3	101.3	101.3
	D2	4.91	28.24	100.8	100.8	100.8	101.0	100.9	101.0	101.0	101.0	101.1	101.1	101.1
	D3	4.90	28.16	100.7	100.8	100.8	101.0	100.9	101.0	101.0	101.1	101.1	101.0	101.0
	D4	4.90	28.24	100.7	100.7	100.7	100.9	100.8	100.9	100.9	100.9	101.0	100.9	100.9
	D5	4.92	28.15	100.6	100.6	100.7	100.8	100.8	100.8	100.8	100.9	100.9	100.9	100.9
	D6	4.88	28.20	100.7	100.7	100.8	100.9	100.8	100.9	100.9	101.0	101.0	101.0	101.0
	D7	4.90	28.14	100.6	100.6	100.7	100.8	100.7	100.7	100.8	100.8	100.8	100.8	100.8
	D8	4.91	28.17	100.6	100.6	100.7	100.8	100.8	100.8	100.8	100.9	100.9	100.9	100.8
	D9	4.89	28.18	100.6	100.7	100.7	100.9	100.8	100.8	100.9	100.9	101.0	101.0	101.0
	D10	4.92	28.18	100.4	100.4	100.5	100.7	100.6	100.6	100.7	100.7	100.7	100.7	100.7
	D11	4.92	28.17	100.5	100.5	100.5	100.7	100.6	100.6	100.6	100.7	100.7	100.7	100.7
	D12	4.92	28.18	100.5	100.5	100.6	100.6	100.6	100.6	100.6	100.6	100.7	100.7	100.6
2A0000107ECA031C	D1	4.91	28.16	100.6	100.7	100.7	101.0	100.8	100.9	100.9	101.0	101.0	101.0	101.0
	D2	4.90	28.16	100.8	100.9	100.9	101.1	101.0	101.0	101.0	101.1	101.1	101.1	101.1
	D3	4.87	28.27	100.7	100.7	100.8	101.0	100.8	100.8	100.8	101.0	100.9	101.0	101.0
	D4	4.89	28.19	100.6	100.6	100.7	100.9	100.7	100.7	100.7	100.8	100.8	100.8	100.8
	D5	4.90	28.18	100.6	100.6	100.7	101.0	100.8	100.9	100.9	101.0	101.0	101.0	101.0
	D6	4.89	28.25	100.7	100.7	100.8	101.0	100.8	100.9	100.9	101.0	101.0	101.0	101.0
	D7	4.90	28.18	100.7	100.7	100.8	101.0	100.9	100.9	100.9	101.0	101.0	101.0	101.1
	D8	4.86	28.22	100.6	100.7	100.7	101.0	100.9	100.9	100.9	101.0	101.0	100.9	101.0
	D9	4.87	28.20	100.6	100.6	100.7	100.9	100.8	100.8	100.8	100.9	100.9	101.0	100.9
	D10	4.95	28.20	100.6	100.6	100.6	100.9	100.7	100.7	100.7	100.8	100.8	100.9	100.9
	D11	4.91	28.18	100.6	100.6	100.7	100.9	100.8	100.8	100.8	100.9	100.9	101.0	100.9
	D12	4.92	28.27	100.5	100.6	100.7	100.9	100.7	100.8	100.7	100.8	100.9	100.9	100.9

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TABLE 2.1 - PHOTOSYNTHETIC PHOTON FLUX MAINTENANCE RESULTS L150-40705030000S0

Test Condition 1 55 °C 0.070 A

Photometric test drive current: 0.070 A
Photometric test ambient temperature: 25 ± 2 °C
Failures observed: none

Load board ID	Device number	Zero hour measurements PPF (µmol/s)	Zero hour measurements VF (V)	Photosynthetic Photon Flux Maintenance (%) 1000	2000	3000	4000	5000	6000	7000	8000	9000	10000	11000
8E000107E45031C	D1	4.92	28.18	100.7	100.6	100.7	100.9	100.8	100.9	100.9	101.0	101.0	101.0	101.0
	D2	4.88	28.18	100.8	100.8	100.9	101.0	101.0	101.0	101.0	101.1	101.1	101.1	101.1
	D3	4.89	28.17	100.8	100.8	100.9	101.1	100.9	101.0	100.9	101.0	101.1	101.0	101.0
	D4	4.91	28.19	100.8	100.7	100.7	100.9	100.8	100.8	100.8	100.9	100.9	100.9	100.9
	D5	4.89	28.26	100.6	100.7	100.7	100.9	100.8	100.9	100.9	101.0	101.0	101.0	101.0
	D6	4.85	28.22	100.8	100.8	100.9	101.1	101.0	101.0	101.0	101.1	101.2	101.2	101.2
	D7	4.93	28.24	100.6	100.6	100.7	100.9	100.7	100.8	100.8	100.9	100.9	100.8	100.8
	D8	4.92	28.18	100.5	100.5	100.5	100.7	100.6	100.6	100.6	100.7	100.7	100.7	100.7
	D9	4.90	28.14	100.7	100.7	100.7	100.9	100.8	100.8	100.8	100.9	101.0	100.9	101.0
	D10	4.88	28.16	101.0	101.0	101.0	101.2	101.1	101.1	101.1	101.2	101.2	101.2	101.2
	D11	4.90	28.19	100.5	100.5	100.5	100.8	100.6	100.6	100.6	100.7	100.7	100.7	100.8
	D12	4.91	28.20	100.7	100.6	100.7	100.8	100.7	100.7	100.6	100.7	100.8	100.7	100.8
			n	36	36	36	36	36	36	36	36	36	36	36
			mean	100.7	100.7	100.7	100.9	100.8	100.8	100.8	100.9	100.9	100.9	100.9
			median	100.6	100.7	100.7	100.9	100.8	100.8	100.8	100.9	101.0	101.0	101.0
			std. dev.	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1
			min	100.4	100.4	100.5	100.6	100.6	100.6	100.6	100.6	100.7	100.7	100.6
			max	101.0	101.0	101.1	101.3	101.2	101.2	101.3	101.3	101.3	101.3	101.3

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Test Condition 1 55 °C 0.070 A

TABLE 2.1 - PHOTOSYNTHETIC PHOTON FLUX MAINTENANCE RESULTS **L150-407050300000S0**

Test Condition 1 55 °C 0.070 A

Photometric test drive current: 0.070 A
Photometric test ambient temperature: 25 ± 2 °C
Failures observed: none

Load board ID	Device number	Zero hour measurements		Photosynthetic Photon Flux Maintenance (%)										
		PPF (µmol/s)	VF (V)	12000	13000	14000	15000	16000	17000					
240000107666031C	D1	4.90	28.13	101.2	101.2	101.3	101.2	101.1	101.0					
	D2	4.91	28.24	101.1	101.0	101.1	101.1	101.0	100.9					
	D3	4.90	28.16	101.0	101.0	101.1	101.0	101.0	100.8					
	D4	4.90	28.24	100.9	100.8	100.9	100.8	100.8	100.7					
	D5	4.92	28.15	100.9	100.9	101.0	100.9	100.9	100.8					
	D6	4.88	28.20	101.0	101.0	101.1	101.0	101.0	100.9					
	D7	4.90	28.14	100.8	100.8	100.8	100.7	100.8	100.6					
	D8	4.91	28.17	100.9	100.8	100.9	100.8	100.8	100.8					
	D9	4.89	28.18	100.9	101.0	101.0	101.0	100.9	100.9					
	D10	4.92	28.18	100.7	100.7	100.8	100.7	100.7	100.6					
	D11	4.92	28.17	100.7	100.7	100.8	100.7	100.7	100.6					
	D12	4.92	28.18	100.6	100.6	100.7	100.6	100.6	100.5					
2A0000107ECA031C	D1	4.91	28.16	101.0	101.0	101.0	101.0	100.9	100.8					
	D2	4.90	28.16	101.1	101.1	101.1	101.1	101.1	100.9					
	D3	4.87	28.27	101.0	100.9	101.0	100.9	100.9	100.8					
	D4	4.89	28.19	100.8	100.8	100.8	100.8	100.8	100.6					
	D5	4.90	28.18	101.0	101.0	101.0	101.0	100.9	100.8					
	D6	4.89	28.25	101.0	101.0	101.1	101.0	101.0	100.9					
	D7	4.90	28.18	101.0	101.1	101.1	101.0	101.0	100.9					
	D8	4.86	28.22	101.0	101.0	101.1	101.1	101.0	100.9					
	D9	4.87	28.20	100.9	101.0	101.0	101.0	100.8	100.8					
	D10	4.95	28.20	100.8	100.8	100.9	100.8	100.7	100.7					
	D11	4.91	28.18	100.9	100.9	100.9	100.9	100.8	100.7					
	D12	4.92	28.27	100.8	100.9	100.9	100.8	100.8	100.8					

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TABLE 2.1 - PHOTOSYNTHETIC PHOTON FLUX MAINTENANCE RESULTS **L150-40705030000S0**

Test Condition 1 **55 °C** **0.070 A**

Photometric test drive current: 0.070 A
Photometric test ambient temperature: 25 ± 2 °C
Failures observed: none

Load board ID	Device number	Zero hour measurements PPF (µmol/s)	VF (V)	Photosynthetic Photon Flux Maintenance (%) 12000	13000	14000	15000	16000	17000
8E0000107E45031C	D1	4.92	28.18	101.0	101.0	101.0	100.9	101.0	100.8
	D2	4.88	28.18	101.1	101.1	101.1	101.1	101.1	100.9
	D3	4.89	28.17	101.0	101.0	101.0	101.0	100.9	100.8
	D4	4.91	28.19	100.8	100.8	100.8	100.8	100.8	100.6
	D5	4.89	28.26	101.0	101.0	101.0	101.0	101.0	100.9
	D6	4.85	28.22	101.2	101.2	101.2	101.1	101.2	101.0
	D7	4.93	28.24	100.8	100.8	100.8	100.8	100.8	100.6
	D8	4.92	28.18	100.6	100.6	100.6	100.6	100.5	100.4
	D9	4.90	28.14	100.9	101.0	101.0	100.9	100.9	100.9
	D10	4.88	28.16	101.1	101.1	101.1	101.1	101.1	101.0
	D11	4.90	28.19	100.7	100.7	100.7	100.7	100.6	100.6
	D12	4.91	28.20	100.7	100.7	100.7	100.6	100.6	100.5
			n	36	36	36	36	36	36
			mean	100.9	100.9	101.0	100.9	100.9	100.8
			median	100.9	101.0	101.0	100.9	100.9	100.8
			std. dev.	0.1	0.2	0.2	0.2	0.2	0.1
			min	100.6	100.6	100.6	100.6	100.5	100.4
			max	101.2	101.2	101.3	101.2	101.2	101.0

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Test Condition 1 55 °C 0.070 A

TABLE 2.2 - PHOTON FLUX, FAR RED MAINTENANCE RESULTS **L150-407050300000S0**

Test Condition 1 55 °C 0.070 A

Photometric test drive current: 0.070 A
Photometric test ambient temperature: 25 ± 2 °C
Failures observed: none

Load board ID	Device number	Zero hour measurements		Photon Flux Far Red Maintenance, 700-800nm (%)										
		PF_{FR} (µmol/s)	VF (V)	1000	2000	3000	4000	5000	6000	7000	8000	9000	10000	11000
240000107666031C	D1	0.14	28.13	100.6	100.7	101.0	101.3	101.4	101.3	101.6	101.7	101.6	101.7	102.0
	D2	0.15	28.24	100.4	100.6	100.7	100.9	101.5	101.3	101.2	101.5	101.5	101.7	101.8
	D3	0.14	28.16	100.7	100.7	100.9	101.3	101.3	101.3	101.5	101.7	101.6	101.8	101.8
	D4	0.14	28.24	100.5	100.7	100.8	101.0	101.2	101.5	101.5	101.5	101.6	101.6	101.9
	D5	0.15	28.15	100.2	100.2	100.7	100.7	100.8	101.0	100.8	101.2	101.2	101.2	101.4
	D6	0.14	28.20	100.4	100.3	100.7	100.7	100.9	101.2	101.1	101.5	101.4	101.4	101.6
	D7	0.14	28.14	100.2	100.3	100.6	101.0	101.0	101.1	101.4	101.3	101.4	101.5	101.5
	D8	0.14	28.17	100.2	100.3	100.6	100.8	100.9	101.0	101.3	101.2	101.3	101.5	101.4
	D9	0.14	28.18	100.5	100.5	100.7	101.0	101.2	101.4	101.5	101.6	101.8	101.6	101.8
	D10	0.14	28.18	100.1	100.4	100.8	100.8	101.0	101.0	101.3	101.3	101.2	101.4	101.6
	D11	0.14	28.17	100.2	100.3	100.4	100.6	100.8	101.1	101.1	101.3	101.1	101.5	101.5
	D12	0.14	28.18	100.0	100.3	100.4	100.7	100.8	100.8	101.0	101.0	100.9	101.0	101.0
2A0000107ECA031C	D1	0.14	28.16	100.5	100.7	100.8	101.3	101.1	101.5	101.3	101.5	101.7	101.8	101.8
	D2	0.14	28.16	100.6	100.9	100.9	101.4	101.3	101.4	101.6	101.4	101.7	101.7	101.9
	D3	0.14	28.27	100.7	100.8	101.1	101.4	101.4	101.5	101.5	101.8	101.6	101.6	101.9
	D4	0.14	28.19	100.3	100.5	100.6	101.0	101.1	101.1	101.1	101.1	101.4	101.4	101.7
	D5	0.14	28.18	100.5	100.7	101.0	101.1	101.3	101.4	101.7	101.5	101.5	101.8	101.8
	D6	0.14	28.25	100.6	100.8	101.2	101.4	101.3	101.5	101.6	101.5	101.5	101.9	102.0
	D7	0.14	28.18	100.7	100.8	100.7	101.1	101.3	101.7	101.6	101.5	101.5	101.6	102.0
	D8	0.14	28.22	100.3	100.8	100.8	101.2	101.2	101.3	101.6	101.5	101.5	101.7	102.0
	D9	0.14	28.20	100.3	100.5	100.9	101.0	101.0	101.3	101.4	101.4	101.5	101.7	101.7
	D10	0.15	28.20	100.4	100.6	100.9	101.0	101.0	101.0	101.2	101.2	101.3	101.5	101.9
	D11	0.14	28.18	100.6	100.7	100.9	101.4	101.0	101.4	101.5	101.5	101.4	101.7	101.9
	D12	0.14	28.27	100.5	100.8	101.1	101.2	101.3	101.4	101.3	101.5	101.6	101.6	101.8

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TABLE 2.2 - PHOTON FLUX, FAR RED MAINTENANCE RESULTS **L150-40705030000S0**

Test Condition 1 **55 °C** **0.070 A**

Photometric test drive current: 0.070 A
Photometric test ambient temperature: 25 ± 2 °C
Failures observed: none

Load board ID	Device number	Zero hour measurements		Photon Flux Far Red Maintenance, 700-800nm (%)										
		PF_{FR} (µmol/s)	**VF (V)**	**1000**	**2000**	**3000**	**4000**	**5000**	**6000**	**7000**	**8000**	**9000**	**10000**	**11000**
8E000107E45031C	D1	0.15	28.18	100.6	100.5	100.8	101.1	101.2	101.1	101.3	101.3	101.5	101.5	101.5
	D2	0.14	28.18	100.4	100.2	100.5	101.0	101.1	101.0	101.0	101.2	101.3	101.2	101.4
	D3	0.14	28.17	100.5	100.7	101.1	101.1	101.3	101.2	101.0	101.5	101.6	101.5	101.6
	D4	0.14	28.19	100.2	100.2	100.5	100.7	100.8	100.8	100.8	101.1	101.1	101.1	101.2
	D5	0.14	28.26	100.5	100.6	100.9	101.1	101.3	101.3	101.3	101.5	101.7	101.6	101.7
	D6	0.14	28.22	100.7	100.3	100.6	101.2	101.1	101.2	101.1	101.4	101.8	101.6	101.8
	D7	0.14	28.24	100.5	100.5	100.6	100.6	100.8	101.1	100.9	101.1	101.2	101.5	101.3
	D8	0.14	28.18	100.6	100.6	100.5	100.9	100.8	101.0	100.8	100.9	101.2	101.3	101.3
	D9	0.14	28.14	100.5	100.4	100.5	100.9	101.1	101.0	101.1	101.1	101.3	101.4	101.5
	D10	0.14	28.16	100.9	100.5	100.8	100.9	101.4	101.3	101.3	101.2	101.5	101.4	101.5
	D11	0.14	28.19	100.3	100.5	100.4	100.8	101.1	100.9	100.9	101.2	101.4	101.5	101.4
	D12	0.14	28.20	100.6	100.5	100.7	101.0	101.1	101.1	101.0	101.4	101.2	101.4	101.4
			n	36	36	36	36	36	36	36	36	36	36	36
			mean	100.5	100.5	100.7	101.0	101.1	101.2	101.3	101.4	101.4	101.5	101.6
			median	100.5	100.5	100.8	101.0	101.1	101.2	101.3	101.4	101.5	101.5	101.7
			std. dev.	0.2	0.2	0.2	0.2	0.2	0.2	0.3	0.2	0.2	0.2	0.3
			min	100.0	100.2	100.4	100.6	100.8	100.8	100.8	100.9	100.9	101.0	101.0
			max	100.9	100.9	101.2	101.4	101.5	101.7	101.7	101.8	101.8	101.9	102.0

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Test Condition 1 55 °C 0.070 A

TABLE 2.2 - PHOTON FLUX, FAR RED MAINTENANCE RESULTS **L150-407050300000S0**

Test Condition 1 55 °C 0.070 A

Photometric test drive current: 0.070 A
Photometric test ambient temperature: 25 ± 2 °C
Failures observed: none

Load board ID	Device number	Zero hour measurements		Photon Flux Far Red Maintenance, 700-800nm (%)										
		PF_{FR} (µmol/s)	VF (V)	12000	13000	14000	15000	16000	17000					
240000107666031C	D1	0.14	28.13	101.8	101.8	101.9	101.9	101.9	101.5					
	D2	0.15	28.24	101.8	101.6	102.0	101.8	101.8	101.6					
	D3	0.14	28.16	102.1	102.0	101.9	101.9	101.8	101.9					
	D4	0.14	28.24	101.8	102.1	101.9	102.0	101.8	101.7					
	D5	0.15	28.15	101.4	101.8	101.7	101.6	101.4	101.5					
	D6	0.14	28.20	101.7	101.8	101.6	101.7	101.6	101.5					
	D7	0.14	28.14	101.6	101.4	101.7	101.5	101.5	101.2					
	D8	0.14	28.17	101.7	101.4	101.6	101.6	101.5	101.5					
	D9	0.14	28.18	101.8	101.6	101.9	102.0	101.8	101.8					
	D10	0.14	28.18	101.3	101.5	101.5	101.7	101.6	101.4					
	D11	0.14	28.17	101.4	101.5	101.2	101.4	101.3	101.3					
	D12	0.14	28.18	101.3	101.4	101.5	101.2	101.2	101.2					
2A0000107ECA031C	D1	0.14	28.16	101.8	102.0	101.8	101.6	102.0	101.8					
	D2	0.14	28.16	101.8	102.1	101.8	102.0	101.8	101.9					
	D3	0.14	28.27	101.8	102.1	101.9	101.9	101.8	101.9					
	D4	0.14	28.19	101.5	101.6	101.6	101.3	101.6	101.3					
	D5	0.14	28.18	101.7	102.0	101.7	101.8	101.8	101.9					
	D6	0.14	28.25	101.9	102.1	102.0	101.9	101.9	101.9					
	D7	0.14	28.18	101.7	102.1	102.2	101.8	102.0	102.0					
	D8	0.14	28.22	101.8	102.1	101.9	101.8	102.0	101.8					
	D9	0.14	28.20	101.9	101.9	102.0	101.9	101.9	101.7					
	D10	0.15	28.20	101.8	101.8	101.7	101.5	101.6	101.8					
	D11	0.14	28.18	101.8	101.9	101.8	101.6	101.9	101.9					
	D12	0.14	28.27	101.6	101.9	101.8	101.7	101.6	101.8					

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TABLE 2.2 - PHOTON FLUX, FAR RED MAINTENANCE RESULTS														L150-40705030000S0
Test Condition 1		55 °C	0.070 A											
Load board ID	Device number	Zero hour measurements		Photometric test drive current: 0.070 A Photometric test ambient temperature: 25 ± 2 °C Failures observed: none										
		PF$_{FR}$ (µmol/s)	VF (V)	Photon Flux Far Red Maintenance, 700-800nm (%)										
				12000	13000	14000	15000	16000	17000					
8E0000107E45031C	D1	0.15	28.18	101.7	101.9	101.8	101.7	101.6	101.7					
	D2	0.14	28.18	101.5	101.6	101.3	101.6	101.3	101.6					
	D3	0.14	28.17	101.6	101.9	101.7	101.8	101.7	101.7					
	D4	0.14	28.19	101.5	101.2	101.3	101.2	101.3	101.1					
	D5	0.14	28.26	101.5	101.9	101.9	101.9	101.6	101.8					
	D6	0.14	28.22	101.8	101.9	101.9	101.7	101.9	101.7					
	D7	0.14	28.24	101.5	101.5	101.3	101.3	101.3	101.4					
	D8	0.14	28.18	101.2	101.5	101.4	101.3	101.0	101.3					
	D9	0.14	28.14	101.9	101.6	101.6	101.6	101.5	101.6					
	D10	0.14	28.16	101.6	101.8	101.6	101.5	101.3	101.6					
	D11	0.14	28.19	101.2	101.4	101.4	101.2	101.3	101.5					
	D12	0.14	28.20	101.3	101.5	101.3	101.4	101.3	101.4					
			n	36	36	36	36	36	36					
			mean	101.6	101.7	101.7	101.6	101.6	101.6					
			median	101.7	101.8	101.7	101.7	101.6	101.6					
			std. dev.	0.2	0.3	0.2	0.2	0.3	0.2					
			min	101.2	101.2	101.2	101.2	101.0	101.1					
			max	102.1	102.1	102.2	102.0	102.0	102.0					

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Test Condition 1 55 °C 0.070 A

TABLE 2.3 - CHROMATICITY SHIFT RESULTS **L150-407050300000S0**

Test Condition 1 55 °C 0.070 A

Photometric test drive current: 0.070 A
Photometric test ambient temperature: 25 ± 2 °C
Failures observed: none

Load board ID	Device number	Zero hour measurements			Chromaticity shift (Δu'v')										
		u'	v'		1000	2000	3000	4000	5000	6000	7000	8000	9000	10000	11000
240000107666031C	D1	0.2247	0.5050		0.0005	0.0006	0.0006	0.0006	0.0006	0.0006	0.0006	0.0006	0.0006	0.0006	0.0006
	D2	0.2249	0.5058		0.0005	0.0006	0.0005	0.0006	0.0006	0.0005	0.0005	0.0005	0.0006	0.0006	0.0006
	D3	0.2247	0.5042		0.0005	0.0005	0.0005	0.0005	0.0005	0.0006	0.0005	0.0005	0.0006	0.0006	0.0006
	D4	0.2243	0.5051		0.0005	0.0005	0.0006	0.0005	0.0005	0.0005	0.0005	0.0006	0.0006	0.0006	0.0006
	D5	0.2246	0.5054		0.0005	0.0005	0.0006	0.0005	0.0006	0.0006	0.0006	0.0006	0.0006	0.0006	0.0006
	D6	0.2248	0.5053		0.0005	0.0005	0.0006	0.0005	0.0005	0.0005	0.0005	0.0006	0.0006	0.0006	0.0005
	D7	0.2247	0.5051		0.0005	0.0005	0.0005	0.0005	0.0005	0.0005	0.0005	0.0005	0.0005	0.0005	0.0005
	D8	0.2243	0.5054		0.0005	0.0005	0.0005	0.0005	0.0005	0.0005	0.0005	0.0005	0.0006	0.0005	0.0005
	D9	0.2245	0.5059		0.0005	0.0005	0.0005	0.0005	0.0005	0.0005	0.0005	0.0005	0.0006	0.0006	0.0005
	D10	0.2249	0.5051		0.0005	0.0005	0.0005	0.0005	0.0005	0.0005	0.0005	0.0005	0.0006	0.0005	0.0005
	D11	0.2247	0.5051		0.0005	0.0005	0.0005	0.0005	0.0006	0.0006	0.0005	0.0006	0.0006	0.0005	0.0005
	D12	0.2244	0.5057		0.0005	0.0005	0.0005	0.0005	0.0006	0.0006	0.0005	0.0006	0.0006	0.0006	0.0006
2A0000107ECA031C	D1	0.2245	0.5058		0.0005	0.0005	0.0005	0.0006	0.0005	0.0005	0.0006	0.0006	0.0006	0.0006	0.0005
	D2	0.2241	0.5060		0.0005	0.0005	0.0005	0.0005	0.0005	0.0005	0.0006	0.0006	0.0006	0.0006	0.0006
	D3	0.2248	0.5049		0.0004	0.0005	0.0005	0.0005	0.0005	0.0005	0.0005	0.0005	0.0006	0.0006	0.0005
	D4	0.2246	0.5054		0.0004	0.0005	0.0006	0.0006	0.0005	0.0006	0.0006	0.0006	0.0006	0.0006	0.0006
	D5	0.2246	0.5050		0.0005	0.0005	0.0006	0.0005	0.0005	0.0006	0.0005	0.0005	0.0005	0.0006	0.0005
	D6	0.2242	0.5059		0.0005	0.0005	0.0005	0.0006	0.0005	0.0005	0.0006	0.0005	0.0006	0.0006	0.0006
	D7	0.2247	0.5049		0.0005	0.0005	0.0005	0.0005	0.0005	0.0005	0.0006	0.0005	0.0005	0.0006	0.0005
	D8	0.2243	0.5055		0.0005	0.0005	0.0006	0.0006	0.0005	0.0006	0.0005	0.0005	0.0005	0.0006	0.0005
	D9	0.2249	0.5057		0.0005	0.0006	0.0006	0.0006	0.0006	0.0005	0.0006	0.0005	0.0006	0.0006	0.0006
	D10	0.2247	0.5056		0.0005	0.0005	0.0005	0.0006	0.0005	0.0006	0.0006	0.0005	0.0006	0.0006	0.0006
	D11	0.2251	0.5050		0.0004	0.0005	0.0005	0.0005	0.0005	0.0005	0.0005	0.0005	0.0005	0.0006	0.0005
	D12	0.2245	0.5044		0.0004	0.0005	0.0005	0.0005	0.0005	0.0005	0.0005	0.0005	0.0005	0.0005	0.0005

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TABLE 2.3 - CHROMATICITY SHIFT RESULTS **L150-407050300000S0**

Test Condition 1 **55 °C** **0.070 A**

Photometric test drive current: 0.070 A
Photometric test ambient temperature: 25 ± 2 °C
Failures observed: none

Load board ID	Device number	Zero hour measurements u'	v'		Chromaticity shift (Δu'v') 1000	2000	3000	4000	5000	6000	7000	8000	9000	10000	11000
8E000107E45031C	D1	0.2252	0.5057		0.0005	0.0006	0.0006	0.0006	0.0006	0.0006	0.0006	0.0006	0.0006	0.0006	0.0006
	D2	0.2242	0.5067		0.0005	0.0005	0.0006	0.0005	0.0006	0.0006	0.0006	0.0006	0.0006	0.0006	0.0006
	D3	0.2246	0.5062		0.0005	0.0006	0.0006	0.0006	0.0006	0.0006	0.0006	0.0006	0.0006	0.0006	0.0006
	D4	0.2248	0.5048		0.0005	0.0005	0.0006	0.0006	0.0006	0.0006	0.0006	0.0006	0.0006	0.0006	0.0006
	D5	0.2246	0.5063		0.0005	0.0006	0.0006	0.0005	0.0006	0.0005	0.0006	0.0006	0.0006	0.0006	0.0006
	D6	0.2248	0.5048		0.0005	0.0006	0.0006	0.0006	0.0006	0.0006	0.0006	0.0006	0.0006	0.0006	0.0006
	D7	0.2247	0.5057		0.0005	0.0005	0.0006	0.0006	0.0006	0.0006	0.0006	0.0006	0.0006	0.0006	0.0006
	D8	0.2247	0.5053		0.0005	0.0006	0.0006	0.0006	0.0006	0.0006	0.0006	0.0006	0.0006	0.0006	0.0007
	D9	0.2246	0.5055		0.0005	0.0005	0.0006	0.0005	0.0005	0.0005	0.0006	0.0006	0.0006	0.0006	0.0006
	D10	0.2250	0.5049		0.0005	0.0006	0.0006	0.0005	0.0006	0.0006	0.0006	0.0006	0.0006	0.0006	0.0006
	D11	0.2246	0.5056		0.0005	0.0006	0.0006	0.0006	0.0006	0.0006	0.0006	0.0006	0.0006	0.0007	0.0006
	D12	0.2245	0.5047		0.0005	0.0005	0.0006	0.0005	0.0005	0.0006	0.0006	0.0006	0.0006	0.0006	0.0006
				n	36	36	36	36	36	36	36	36	36	36	36
				mean	0.0005	0.0005	0.0006	0.0005	0.0005	0.0005	0.0006	0.0006	0.0006	0.0006	0.0006
				median	0.0005	0.0005	0.0006	0.0005	0.0005	0.0006	0.0006	0.0006	0.0006	0.0006	0.0006
				std. dev.	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
				min	0.0004	0.0005	0.0005	0.0005	0.0005	0.0005	0.0005	0.0005	0.0005	0.0005	0.0005
				max	0.0005	0.0006	0.0006	0.0006	0.0006	0.0006	0.0006	0.0006	0.0006	0.0007	0.0007

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Test Condition 1 55 °C 0.070 A

TABLE 2.3 - CHROMATICITY SHIFT RESULTS **L150-407050300000S0**

Test Condition 1 55 °C 0.070 A

Photometric test drive current: 0.070 A
Photometric test ambient temperature: 25 ± 2 °C
Failures observed: none

Load board ID	Device number	Zero hour measurements u'	Zero hour measurements v'		Chromaticity shift (Δu'v') 12000	13000	14000	15000	16000	17000				
2400001076660031C	D1	0.2247	0.5050		0.0006	0.0006	0.0006	0.0007	0.0007	0.0007				
	D2	0.2249	0.5058		0.0006	0.0005	0.0006	0.0007	0.0007	0.0007				
	D3	0.2247	0.5042		0.0006	0.0006	0.0006	0.0007	0.0007	0.0006				
	D4	0.2243	0.5051		0.0006	0.0006	0.0006	0.0006	0.0007	0.0007				
	D5	0.2246	0.5054		0.0006	0.0006	0.0007	0.0007	0.0007	0.0007				
	D6	0.2248	0.5053		0.0006	0.0006	0.0006	0.0006	0.0007	0.0006				
	D7	0.2247	0.5051		0.0006	0.0005	0.0006	0.0006	0.0006	0.0006				
	D8	0.2243	0.5054		0.0006	0.0006	0.0006	0.0006	0.0006	0.0006				
	D9	0.2245	0.5059		0.0006	0.0006	0.0006	0.0006	0.0006	0.0007				
	D10	0.2249	0.5051		0.0006	0.0006	0.0006	0.0006	0.0006	0.0006				
	D11	0.2247	0.5051		0.0006	0.0006	0.0006	0.0006	0.0006	0.0006				
	D12	0.2244	0.5057		0.0006	0.0006	0.0006	0.0007	0.0007	0.0007				
2A0000107ECA031C	D1	0.2245	0.5058		0.0006	0.0006	0.0006	0.0006	0.0006	0.0007				
	D2	0.2241	0.5060		0.0006	0.0006	0.0006	0.0006	0.0006	0.0006				
	D3	0.2248	0.5049		0.0006	0.0006	0.0006	0.0006	0.0006	0.0006				
	D4	0.2246	0.5054		0.0006	0.0006	0.0006	0.0007	0.0007	0.0007				
	D5	0.2246	0.5050		0.0006	0.0006	0.0006	0.0006	0.0006	0.0006				
	D6	0.2242	0.5059		0.0006	0.0006	0.0006	0.0006	0.0007	0.0007				
	D7	0.2247	0.5049		0.0006	0.0005	0.0006	0.0006	0.0007	0.0006				
	D8	0.2243	0.5055		0.0006	0.0006	0.0006	0.0007	0.0006	0.0007				
	D9	0.2249	0.5057		0.0006	0.0006	0.0006	0.0006	0.0007	0.0006				
	D10	0.2247	0.5056		0.0006	0.0006	0.0006	0.0006	0.0007	0.0007				
	D11	0.2251	0.5050		0.0006	0.0005	0.0006	0.0006	0.0006	0.0006				
	D12	0.2245	0.5044		0.0005	0.0005	0.0005	0.0006	0.0006	0.0006				

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TABLE 2.3 - CHROMATICITY SHIFT RESULTS **L150-40705030000S0**

Test Condition 1 **55 °C** **0.070 A**

Photometric test drive current: 0.070 A
Photometric test ambient temperature: 25 ± 2 °C
Failures observed: none

Load board ID	Device number	Zero hour measurements u'	Zero hour measurements v'		Chromaticity shift (Δu'v') 12000	13000	14000	15000	16000	17000				
8E000107E45031C	D1	0.2252	0.5057		0.0007	0.0006	0.0007	0.0007	0.0007	0.0007				
	D2	0.2242	0.5067		0.0006	0.0006	0.0006	0.0006	0.0007	0.0006				
	D3	0.2246	0.5062		0.0006	0.0006	0.0007	0.0007	0.0007	0.0007				
	D4	0.2248	0.5048		0.0007	0.0006	0.0006	0.0007	0.0007	0.0007				
	D5	0.2246	0.5063		0.0006	0.0006	0.0006	0.0007	0.0007	0.0007				
	D6	0.2248	0.5048		0.0006	0.0006	0.0007	0.0007	0.0007	0.0007				
	D7	0.2247	0.5057		0.0007	0.0006	0.0007	0.0007	0.0007	0.0007				
	D8	0.2247	0.5053		0.0007	0.0006	0.0007	0.0007	0.0007	0.0007				
	D9	0.2246	0.5055		0.0006	0.0006	0.0006	0.0007	0.0007	0.0006				
	D10	0.2250	0.5049		0.0007	0.0006	0.0007	0.0007	0.0007	0.0007				
	D11	0.2246	0.5056		0.0007	0.0006	0.0007	0.0007	0.0007	0.0007				
	D12	0.2245	0.5047		0.0006	0.0006	0.0006	0.0006	0.0007	0.0007				
				n	36	36	36	36	36	36				
				mean	0.0006	0.0006	0.0006	0.0006	0.0007	0.0007				
				median	0.0006	0.0006	0.0006	0.0006	0.0007	0.0007				
				std. dev.	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000				
				min	0.0005	0.0005	0.0005	0.0006	0.0006	0.0006				
				max	0.0007	0.0006	0.0007	0.0007	0.0007	0.0007				

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Test Condition 1 55 °C 0.070 A

TABLE 2.4 - FORWARD VOLTAGE MAINTENANCE RESULTS **L150-407050300000S0**

Test Condition 1 55 °C 0.070 A

Photometric test drive current: 0.070 A
Photometric test ambient temperature: 25 ± 2 °C
Failures observed: none

Load board ID	Device number	Zero hour measurements Vf (V)		Forward Voltage Maintainence (%) 1000	2000	3000	4000	5000	6000	7000	8000	9000	10000	11000
240000107666031C	D1		28.13	100.01	100.03	100.04	100.06	100.06	100.07	100.07	100.07	100.07	100.08	100.08
	D2		28.24	99.99	100.00	100.01	100.03	100.03	100.04	100.04	100.04	100.05	100.05	100.05
	D3		28.16	100.01	100.03	100.04	100.05	100.06	100.06	100.07	100.07	100.07	100.08	100.08
	D4		28.24	100.00	100.02	100.04	100.04	100.05	100.06	100.06	100.07	100.07	100.07	100.07
	D5		28.15	100.00	100.02	100.03	100.04	100.04	100.05	100.05	100.05	100.06	100.06	100.06
	D6		28.20	99.98	100.00	100.01	100.02	100.03	100.04	100.04	100.04	100.05	100.05	100.05
	D7		28.14	100.01	100.03	100.04	100.05	100.05	100.06	100.06	100.07	100.07	100.07	100.08
	D8		28.17	100.01	100.03	100.04	100.05	100.06	100.07	100.07	100.07	100.07	100.08	100.08
	D9		28.18	100.01	100.03	100.04	100.05	100.06	100.07	100.07	100.07	100.07	100.08	100.08
	D10		28.18	100.00	100.02	100.03	100.04	100.05	100.05	100.06	100.06	100.06	100.07	100.07
	D11		28.17	99.99	100.01	100.02	100.04	100.04	100.05	100.05	100.06	100.06	100.06	100.07
	D12		28.18	100.00	100.01	100.03	100.04	100.05	100.05	100.05	100.06	100.06	100.06	100.07
2A0000107ECA031C	D1		28.16	99.98	100.00	100.01	100.02	100.02	100.03	100.03	100.04	100.04	100.05	100.04
	D2		28.16	100.01	100.02	100.04	100.05	100.05	100.06	100.07	100.07	100.07	100.08	100.08
	D3		28.27	100.00	100.01	100.02	100.04	100.04	100.05	100.05	100.06	100.06	100.07	100.07
	D4		28.19	99.99	100.00	100.02	100.03	100.03	100.04	100.04	100.05	100.05	100.06	100.06
	D5		28.18	100.01	100.03	100.04	100.05	100.05	100.06	100.06	100.07	100.07	100.07	100.08
	D6		28.25	99.99	100.02	100.02	100.04	100.04	100.05	100.05	100.06	100.06	100.06	100.07
	D7		28.18	100.01	100.03	100.04	100.05	100.05	100.06	100.07	100.07	100.07	100.08	100.08
	D8		28.22	100.00	100.02	100.04	100.05	100.05	100.06	100.06	100.07	100.07	100.08	100.08
	D9		28.20	99.97	99.99	100.00	100.01	100.02	100.03	100.03	100.04	100.04	100.04	100.04
	D10		28.20	99.98	100.00	100.01	100.02	100.02	100.03	100.03	100.04	100.04	100.04	100.04
	D11		28.18	99.99	100.01	100.02	100.04	100.04	100.05	100.05	100.06	100.06	100.06	100.06
	D12		28.27	99.97	99.99	99.99	100.01	100.01	100.02	100.02	100.03	100.03	100.03	100.03

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TABLE 2.4 - FORWARD VOLTAGE MAINTENANCE RESULTS **L150-40705030000S0**

Test Condition 1 **55 °C** **0.070 A**

Photometric test drive current: 0.070 A
Photometric test ambient temperature: 25 ± 2 °C
Failures observed: none

Load board ID	Device number	Zero hour measurements Vf (V)	Forward Voltage Maintainence (%) 1000	2000	3000	4000	5000	6000	7000	8000	9000	10000	11000
8E0000107E45031C	D1	28.18	99.99	100.01	100.02	100.03	100.03	100.04	100.05	100.05	100.05	100.06	100.06
	D2	28.18	100.01	100.03	100.04	100.05	100.06	100.06	100.07	100.07	100.07	100.08	100.08
	D3	28.17	100.00	100.02	100.03	100.04	100.04	100.05	100.06	100.06	100.06	100.07	100.07
	D4	28.19	100.00	100.02	100.03	100.04	100.05	100.05	100.06	100.06	100.06	100.07	100.07
	D5	28.26	99.98	99.99	100.01	100.01	100.02	100.03	100.03	100.03	100.04	100.05	100.04
	D6	28.22	99.98	100.00	100.01	100.02	100.03	100.03	100.04	100.04	100.04	100.05	100.05
	D7	28.24	99.98	100.00	100.01	100.02	100.03	100.03	100.04	100.04	100.04	100.05	100.05
	D8	28.18	100.00	100.02	100.03	100.04	100.05	100.05	100.06	100.06	100.06	100.08	100.07
	D9	28.14	100.00	100.02	100.04	100.04	100.05	100.06	100.06	100.06	100.06	100.07	100.07
	D10	28.16	100.01	100.02	100.03	100.05	100.05	100.06	100.06	100.07	100.07	100.07	100.07
	D11	28.19	99.99	100.01	100.02	100.03	100.04	100.05	100.05	100.05	100.06	100.06	100.06
	D12	28.20	99.99	100.00	100.01	100.03	100.03	100.04	100.04	100.04	100.05	100.05	100.05
		n	36	36	36	36	36	36	36	36	36	36	36
		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	100.1	100.1	100.1	100.1	100.1	100.1
		std. dev.	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
		min	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
		max	100.0	100.0	100.0	100.1	100.1	100.1	100.1	100.1	100.1	100.1	100.1

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Test Condition 1 55 °C 0.070 A

TABLE 2.4 - FORWARD VOLTAGE MAINTENANCE RESULTS **L150-407050300000S0**

Test Condition 1 55 °C 0.070 A

Photometric test drive current: 0.070 A
Photometric test ambient temperature: 25 ± 2 °C
Failures observed: none

Load board ID	Device number	Zero hour measurements Vf (V)		Forward Voltage Maintainence (%) 12000	13000	14000	15000	16000	17000					
240000107666031C	D1		28.13	100.08	100.08	100.09	100.10	100.09	100.10					
	D2		28.24	100.05	100.05	100.06	100.07	100.06	100.07					
	D3		28.16	100.08	100.08	100.09	100.10	100.09	100.10					
	D4		28.24	100.07	100.08	100.08	100.09	100.08	100.09					
	D5		28.15	100.06	100.07	100.07	100.08	100.07	100.08					
	D6		28.20	100.05	100.06	100.06	100.07	100.06	100.07					
	D7		28.14	100.07	100.08	100.08	100.09	100.08	100.09					
	D8		28.17	100.08	100.08	100.09	100.09	100.09	100.10					
	D9		28.18	100.08	100.08	100.09	100.09	100.09	100.10					
	D10		28.18	100.07	100.07	100.08	100.08	100.08	100.08					
	D11		28.17	100.07	100.07	100.08	100.08	100.07	100.08					
	D12		28.18	100.08	100.07	100.08	100.08	100.07	100.08					
2A0000107ECA031C	D1		28.16	100.04	100.05	100.05	100.06	100.05	100.06					
	D2		28.16	100.07	100.08	100.08	100.09	100.09	100.09					
	D3		28.27	100.06	100.07	100.07	100.08	100.08	100.08					
	D4		28.19	100.05	100.06	100.06	100.07	100.07	100.07					
	D5		28.18	100.07	100.08	100.08	100.09	100.08	100.09					
	D6		28.25	100.07	100.07	100.07	100.08	100.08	100.08					
	D7		28.18	100.08	100.08	100.09	100.09	100.09	100.09					
	D8		28.22	100.08	100.08	100.09	100.10	100.09	100.10					
	D9		28.20	100.04	100.04	100.05	100.06	99.98	100.06					
	D10		28.20	100.04	100.04	100.05	100.05	100.02	100.06					
	D11		28.18	100.06	100.07	100.07	100.08	100.08	100.08					
	D12		28.27	100.04	100.04	100.04	100.05	100.06	100.05					

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TABLE 2.4 - FORWARD VOLTAGE MAINTENANCE RESULTS L150-40705030000S0

Test Condition 1 55 °C 0.070 A

Photometric test drive current: 0.070 A
Photometric test ambient temperature: 25 ± 2 °C
Failures observed: none

Load board ID	Device number	Zero hour measurements Vf (V)	12000	13000	14000	15000	16000	17000					
			Forward Voltage Maintainence (%)										
8E000107E45031C	D1	28.18	100.06	100.06	100.07	100.07	100.07	100.08					
	D2	28.18	100.08	100.08	100.09	100.09	100.09	100.10					
	D3	28.17	100.07	100.07	100.08	100.08	100.08	100.08					
	D4	28.19	100.07	100.07	100.08	100.08	100.08	100.08					
	D5	28.26	100.05	100.05	100.05	100.06	100.06	100.07					
	D6	28.22	100.05	100.05	100.06	100.07	100.06	100.07					
	D7	28.24	100.05	100.05	100.06	100.06	100.06	100.06					
	D8	28.18	100.07	100.07	100.08	100.09	100.08	100.09					
	D9	28.14	100.07	100.07	100.08	100.08	100.08	100.09					
	D10	28.16	100.07	100.08	100.08	100.09	100.08	100.09					
	D11	28.19	100.06	100.07	100.07	100.08	100.07	100.08					
	D12	28.20	100.05	100.06	100.07	100.07	100.06	100.07					
		n	36	36	36	36	36	36					
		mean	100.1	100.1	100.1	100.1	100.1	100.1					
		median	100.1	100.1	100.1	100.1	100.1	100.1					
		std. dev.	0.0	0.0	0.0	0.0	0.0	0.0					
		min	100.0	100.0	100.0	100.1	100.0	100.1					
		max	100.1	100.1	100.1	100.1	100.1	100.1					

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Test Condition 2 85 °C 0.070 A

TABLE 3.0 - LUMEN MAINTENANCE RESULTS **L150-407050300000S0**

Test Condition 2 85 °C 0.070 A

Photometric test drive current: 0.070 A
Photometric test ambient temperature: 25 ± 2 °C
Failures observed: none

Load board ID	Device number	Zero hour measurements		Lumen Maintenance (%)										
		Flux (lm)	Vf (V)	1000	2000	3000	4000	5000	6000	7000	8000	9000	10000	11000
7100001084150 31C	D1	376.39	28.17	100.6	100.7	100.6	100.6	100.5	100.3	100.3	100.3	100.3	100.2	100.2
	D2	375.42	28.18	100.4	100.4	100.4	100.4	100.2	100.1	100.0	100.0	99.9	99.9	99.8
	D3	374.92	28.23	100.8	100.8	100.7	100.7	100.6	100.5	100.4	100.4	100.4	100.3	100.3
	D4	368.57	28.20	100.6	100.6	100.6	100.6	100.5	100.4	100.3	100.3	100.3	100.2	100.2
	D5	376.31	28.19	100.5	100.5	100.5	100.4	100.3	100.2	100.1	100.1	100.0	100.0	99.9
	D6	374.73	28.17	100.6	100.7	100.6	100.6	100.5	100.4	100.4	100.3	100.3	100.3	100.2
	D7	374.02	28.15	100.8	100.8	100.7	100.7	100.6	100.5	100.4	100.4	100.4	100.3	100.3
	D8	372.14	28.17	100.8	100.8	100.7	100.7	100.6	100.5	100.4	100.4	100.4	100.3	100.3
	D9	374.71	28.22	100.7	100.7	100.7	100.6	100.5	100.4	100.3	100.3	100.3	100.2	100.2
	D10	375.09	28.18	100.8	100.7	100.7	100.7	100.5	100.5	100.4	100.4	100.4	100.3	100.3
	D11	374.75	28.16	100.5	100.5	100.5	100.4	100.3	100.2	100.1	100.1	100.1	100.1	100.0
	D12	375.76	28.29	100.7	100.7	100.7	100.6	100.5	100.4	100.3	100.4	100.3	100.3	100.2
E000001078AF031C	D1	370.42	28.18	100.8	100.8	100.8	100.7	100.6	100.5	100.5	100.5	100.5	100.5	100.2
	D2	373.94	28.17	100.7	100.8	100.7	100.6	100.6	100.5	100.4	100.5	100.4	100.4	100.3
	D3	374.31	28.21	100.8	100.8	100.7	100.6	100.5	100.5	100.4	100.4	100.3	100.3	100.2
	D4	371.14	28.21	100.8	100.8	100.8	100.8	100.6	100.5	100.4	100.5	100.5	100.4	100.4
	D5	374.92	28.25	100.6	100.6	100.6	100.5	100.4	100.3	100.2	100.2	100.1	100.1	100.0
	D6	373.16	28.28	100.8	100.8	100.8	100.7	100.6	100.6	100.5	100.5	100.4	100.5	100.4
	D7	372.21	28.18	100.9	100.9	100.8	100.7	100.6	100.5	100.4	100.4	100.4	100.4	100.4
	D8	372.69	28.30	100.8	100.8	100.8	100.7	100.6	100.5	100.5	100.5	100.5	100.5	100.4
	D9	373.48	28.26	100.7	100.7	100.7	100.6	100.5	100.5	100.4	100.4	100.3	100.3	100.3
	D10	374.77	28.25	100.8	100.8	100.8	100.7	100.7	100.6	100.5	100.6	100.5	100.5	100.4
	D11	376.33	28.13	100.7	100.7	100.7	100.6	100.4	100.4	100.3	100.3	100.2	100.2	100.2
	D12	374.70	28.20	100.8	100.9	100.8	100.7	100.6	100.5	100.5	100.5	100.4	100.5	100.4

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TABLE 3.0 - LUMEN MAINTENANCE RESULTS **L150-40705030000S0**

Test Condition 2 85 °C 0.070 A

Photometric test drive current: 0.070 A
Photometric test ambient temperature: 25 ± 2 °C
Failures observed: none

Load board ID	Device number	Zero hour measurements Flux (lm)	Vf (V)	Lumen Maintenance (%) 1000	2000	3000	4000	5000	6000	7000	8000	9000	10000	11000
F000001076E2031C	D1	374.00	28.13	100.8	100.8	100.8	100.7	100.6	100.5	100.5	100.5	100.5	100.5	100.4
	D2	372.56	28.26	101.0	100.9	101.0	100.9	100.8	100.7	100.7	100.7	100.6	100.6	100.6
	D3	372.04	28.16	101.0	100.9	101.0	100.9	100.8	100.7	100.6	100.6	100.6	100.6	100.5
	D4	373.07	28.23	100.7	100.7	100.7	100.6	100.5	100.4	100.3	100.4	100.3	100.3	100.2
	D5	372.70	28.20	100.7	100.7	100.7	100.6	100.5	100.4	100.3	100.3	100.3	100.3	100.2
	D6	372.70	28.19	100.8	100.7	100.7	100.7	100.6	100.5	100.4	100.4	100.4	100.3	100.3
	D7	374.67	28.27	100.7	100.7	100.7	100.7	100.6	100.5	100.4	100.5	100.4	100.4	100.4
	D8	372.85	28.17	100.7	100.7	100.7	100.6	100.5	100.4	100.4	100.4	100.3	100.3	100.3
	D9	369.39	28.16	101.2	101.2	101.2	101.1	101.0	100.9	100.8	100.8	100.7	100.6	100.6
	D10	371.41	28.23	100.5	100.5	100.5	100.5	100.4	100.2	100.2	100.1	100.1	100.0	100.0
	D11	375.89	28.12	100.5	100.5	100.5	100.5	100.3	100.2	100.2	100.2	100.1	100.1	100.0
	D12	372.40	28.19	100.6	100.6	100.5	100.5	100.4	100.3	100.2	100.2	100.2	100.2	100.1
			n	36	36	36	36	36	36	36	36	36	36	36
			mean	100.7	100.7	100.7	100.6	100.5	100.4	100.4	100.4	100.3	100.3	100.2
			median	100.7	100.7	100.7	100.6	100.5	100.5	100.4	100.4	100.3	100.3	100.3
			std. dev.	0.1	0.1	0.1	0.1	0.1	0.2	0.2	0.2	0.2	0.2	0.2
			min	100.4	100.4	100.4	100.4	100.2	100.1	100.0	100.0	99.9	99.9	99.8
			max	101.2	101.2	101.2	101.1	101.0	100.9	100.8	100.8	100.7	100.6	100.6

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Test Condition 2 85 °C 0.070 A

TABLE 3.0 - LUMEN MAINTENANCE RESULTS **L150-407050300000S0**

Test Condition 2 85 °C 0.070 A

Photometric test drive current: 0.070 A
Photometric test ambient temperature: 25 ± 2 °C
Failures observed: none

Load board ID	Device number	Zero hour measurements		Lumen Maintenance (%)										
		Flux (lm)	Vf (V)	12000	13000	14000	15000	16000	17000					
7100001084150 31C	D1	376.39	28.17	100.1	100.1	100.1	100.0	99.8	99.9					
	D2	375.42	28.18	99.7	99.7	99.7	99.6	99.6	99.5					
	D3	374.92	28.23	100.2	100.1	100.1	100.0	100.0	99.9					
	D4	368.57	28.20	100.1	100.0	100.0	100.0	99.9	99.8					
	D5	376.31	28.19	99.8	99.8	99.8	99.7	99.7	99.6					
	D6	374.73	28.17	100.1	100.1	100.1	100.1	100.1	100.0					
	D7	374.02	28.15	100.2	100.2	100.2	100.2	100.2	100.1					
	D8	372.14	28.17	100.2	100.2	100.2	100.2	100.1	100.1					
	D9	374.71	28.22	100.1	100.0	100.1	100.1	100.1	100.0					
	D10	375.09	28.18	100.2	100.2	100.2	100.2	100.2	100.1					
	D11	374.75	28.16	99.9	99.9	99.9	99.9	99.8	99.7					
	D12	375.76	28.29	100.1	100.1	100.1	100.0	100.0	99.9					
E000001078AF031C	D1	370.42	28.18	100.4	100.4	100.4	100.4	100.3	100.2					
	D2	373.94	28.17	100.3	100.2	100.2	100.2	100.2	100.0					
	D3	374.31	28.21	100.2	100.0	100.1	100.1	100.0	99.8					
	D4	371.14	28.21	100.3	100.3	100.2	100.3	100.2	100.1					
	D5	374.92	28.25	100.0	99.9	99.9	99.9	99.9	99.7					
	D6	373.16	28.28	100.4	100.3	100.3	100.3	100.3	100.2					
	D7	372.21	28.18	100.3	100.2	100.2	100.3	100.2	100.1					
	D8	372.69	28.30	100.4	100.3	100.3	100.3	100.3	100.2					
	D9	373.48	28.26	100.2	100.2	100.2	100.2	100.1	100.0					
	D10	374.77	28.25	100.4	100.3	100.4	100.4	100.3	100.2					
	D11	376.33	28.13	100.1	100.0	100.1	100.0	100.0	99.8					
	D12	374.70	28.20	100.4	100.3	100.3	100.3	100.2	100.2					

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TABLE 3.0 - LUMEN MAINTENANCE RESULTS **L150-40705030000S0**

Test Condition 2 **85 °C** **0.070 A**

Photometric test drive current: 0.070 A
Photometric test ambient temperature: 25 ± 2 °C
Failures observed: none

Load board ID	Device number	Zero hour measurements Flux (lm)	Zero hour measurements Vf (V)	Lumen Maintenance (%) 12000	13000	14000	15000	16000	17000
F00001076E2031C	D1	374.00	28.13	100.4	100.3	100.4	100.3	100.3	100.2
	D2	372.56	28.26	100.5	100.5	100.5	100.4	100.5	100.4
	D3	372.04	28.16	100.5	100.4	100.4	100.3	100.3	100.2
	D4	373.07	28.23	100.1	100.1	100.1	100.0	100.0	99.9
	D5	372.70	28.20	100.1	100.1	100.1	100.0	100.0	99.9
	D6	372.70	28.19	100.2	100.1	100.2	100.1	100.1	99.9
	D7	374.67	28.27	100.3	100.2	100.3	100.2	100.2	100.0
	D8	372.85	28.17	100.2	100.2	100.2	100.1	100.1	100.0
	D9	369.39	28.16	100.4	100.3	100.3	100.1	100.0	99.9
	D10	371.41	28.23	99.9	99.9	99.9	99.8	99.8	99.7
	D11	375.89	28.12	99.9	99.9	100.0	99.9	99.8	99.7
	D12	372.40	28.19	100.0	99.9	100.0	99.9	99.8	99.7
			n	36	36	36	36	36	36
			mean	100.2	100.1	100.2	100.1	100.1	100.0
			median	100.2	100.1	100.2	100.1	100.1	100.0
			std. dev.	0.2	0.2	0.2	0.2	0.2	0.2
			min	99.7	99.7	99.7	99.6	99.6	99.5
			max	100.5	100.5	100.5	100.4	100.5	100.4

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Test Condition 2 85 °C 0.070 A

TABLE 3.1 - PHOTOSYNTHETIC PHOTON FLUX MAINTENANCE RESULTS **L150-407050300000S0**

Test Condition 2 85 °C 0.070 A

Photometric test drive current: 0.070 A
Photometric test ambient temperature: 25 ± 2 °C
Failures observed: none

Load board ID	Device number	Zero hour measurements		Photosynthetic Photon Flux Maintenance (%)										
		PPF (µmol/s)	VF (V)	1000	2000	3000	4000	5000	6000	7000	8000	9000	10000	11000
7100001084150 31C	D1	4.92	28.17	100.6	100.6	100.6	100.6	100.5	100.4	100.4	100.4	100.4	100.4	100.3
	D2	4.91	28.18	100.4	100.5	100.4	100.4	100.3	100.2	100.2	100.2	100.1	100.1	100.0
	D3	4.91	28.23	100.7	100.8	100.7	100.7	100.6	100.5	100.5	100.5	100.5	100.4	100.4
	D4	4.84	28.20	100.6	100.6	100.6	100.6	100.5	100.4	100.4	100.5	100.4	100.4	100.3
	D5	4.92	28.19	100.5	100.5	100.5	100.5	100.4	100.3	100.2	100.3	100.2	100.2	100.1
	D6	4.90	28.17	100.6	100.7	100.6	100.6	100.5	100.5	100.5	100.5	100.4	100.4	100.4
	D7	4.89	28.15	100.7	100.7	100.7	100.7	100.6	100.6	100.5	100.6	100.5	100.5	100.5
	D8	4.89	28.17	100.8	100.8	100.7	100.8	100.6	100.6	100.5	100.6	100.5	100.5	100.5
	D9	4.89	28.22	100.7	100.7	100.7	100.6	100.5	100.5	100.4	100.5	100.4	100.4	100.3
	D10	4.90	28.18	100.7	100.7	100.7	100.7	100.6	100.5	100.5	100.5	100.5	100.5	100.4
	D11	4.90	28.16	100.5	100.5	100.5	100.5	100.4	100.3	100.2	100.3	100.3	100.2	100.2
	D12	4.92	28.29	100.7	100.7	100.7	100.7	100.6	100.5	100.5	100.5	100.4	100.4	100.4
E000001078AF031C	D1	4.86	28.18	100.7	100.7	100.8	100.7	100.7	100.6	100.6	100.6	100.6	100.6	100.4
	D2	4.89	28.17	100.7	100.7	100.7	100.7	100.6	100.6	100.5	100.6	100.5	100.5	100.5
	D3	4.90	28.21	100.8	100.8	100.7	100.7	100.6	100.5	100.5	100.5	100.4	100.4	100.3
	D4	4.86	28.21	100.8	100.8	100.8	100.8	100.7	100.6	100.6	100.6	100.6	100.6	100.5
	D5	4.90	28.25	100.6	100.6	100.6	100.5	100.4	100.4	100.3	100.3	100.3	100.3	100.2
	D6	4.89	28.28	100.8	100.8	100.8	100.8	100.7	100.6	100.6	100.6	100.6	100.6	100.6
	D7	4.87	28.18	100.8	100.8	100.8	100.7	100.6	100.6	100.5	100.5	100.5	100.5	100.5
	D8	4.89	28.30	100.8	100.8	100.8	100.8	100.7	100.6	100.6	100.6	100.6	100.6	100.6
	D9	4.89	28.26	100.7	100.7	100.7	100.7	100.6	100.6	100.5	100.5	100.5	100.5	100.5
	D10	4.91	28.25	100.8	100.8	100.8	100.8	100.7	100.7	100.6	100.7	100.6	100.6	100.6
	D11	4.92	28.13	100.7	100.6	100.7	100.6	100.5	100.5	100.4	100.5	100.4	100.4	100.4
	D12	4.90	28.20	100.8	100.8	100.8	100.8	100.7	100.6	100.6	100.6	100.6	100.6	100.6

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TABLE 3.1 - PHOTOSYNTHETIC PHOTON FLUX MAINTENANCE RESULTS — **L150-40705030000S0**

Test Condition 2 — **85 °C** — **0.070 A**

Photometric test drive current: 0.070 A
Photometric test ambient temperature: 25 ± 2 °C
Failures observed: none

Load board ID	Device number	Zero hour measurements PPF (µmol/s)	Zero hour measurements VF (V)	Photosynthetic Photon Flux Maintenance (%) 1000	2000	3000	4000	5000	6000	7000	8000	9000	10000	11000
F000001076E2031C	D1	4.89	28.13	100.8	100.8	100.8	100.7	100.7	100.6	100.6	100.7	100.6	100.6	100.6
	D2	4.89	28.26	100.9	100.9	101.0	100.9	100.9	100.8	100.8	100.8	100.8	100.8	100.8
	D3	4.87	28.16	100.9	100.9	100.9	100.9	100.8	100.8	100.7	100.7	100.7	100.7	100.7
	D4	4.89	28.23	100.6	100.7	100.7	100.6	100.6	100.5	100.4	100.5	100.4	100.4	100.4
	D5	4.88	28.20	100.7	100.7	100.7	100.7	100.6	100.5	100.4	100.5	100.4	100.4	100.4
	D6	4.89	28.19	100.7	100.7	100.7	100.7	100.6	100.5	100.5	100.5	100.5	100.4	100.4
	D7	4.90	28.27	100.7	100.7	100.8	100.7	100.6	100.5	100.5	100.6	100.5	100.5	100.5
	D8	4.87	28.17	100.6	100.7	100.7	100.7	100.6	100.5	100.5	100.5	100.5	100.5	100.4
	D9	4.85	28.16	101.1	101.1	101.1	101.1	101.0	100.9	100.8	100.9	100.8	100.7	100.7
	D10	4.87	28.23	100.5	100.5	100.6	100.5	100.4	100.3	100.3	100.3	100.3	100.2	100.2
	D11	4.92	28.12	100.5	100.5	100.6	100.5	100.4	100.3	100.3	100.3	100.3	100.3	100.2
	D12	4.88	28.19	100.6	100.6	100.6	100.6	100.5	100.4	100.3	100.4	100.3	100.3	100.3
			n	36	36	36	36	36	36	36	36	36	36	36
			mean	100.7	100.7	100.7	100.7	100.6	100.5	100.5	100.5	100.5	100.5	100.4
			median	100.7	100.7	100.7	100.7	100.6	100.5	100.5	100.5	100.5	100.4	100.4
			std. dev.	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.2	0.2	0.2	0.2
			min	100.4	100.5	100.4	100.4	100.3	100.2	100.2	100.2	100.1	100.1	100.0
			max	101.1	101.1	101.1	101.1	101.0	100.9	100.8	100.9	100.8	100.8	100.8

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Test Condition 2 85 °C 0.070 A

TABLE 3.1 - PHOTOSYNTHETIC PHOTON FLUX MAINTENANCE RESULTS **L150-407050300000S0**

Test Condition 2 85 °C 0.070 A

Photometric test drive current: 0.070 A
Photometric test ambient temperature: 25 ± 2 °C
Failures observed: none

Load board ID	Device number	Zero hour measurements		Photosynthetic Photon Flux Maintenance (%)										
		PPF (µmol/s)	VF (V)	12000	13000	14000	15000	16000	17000					
7100001084150 31C	D1	4.92	28.17	100.3	100.3	100.3	100.2	100.0	100.1					
	D2	4.91	28.18	99.9	99.9	100.0	99.9	99.8	99.8					
	D3	4.91	28.23	100.3	100.3	100.3	100.2	100.2	100.1					
	D4	4.84	28.20	100.3	100.2	100.2	100.2	100.2	100.1					
	D5	4.92	28.19	100.0	100.0	100.0	100.0	99.9	99.9					
	D6	4.90	28.17	100.3	100.3	100.3	100.3	100.3	100.2					
	D7	4.89	28.15	100.4	100.4	100.4	100.4	100.4	100.3					
	D8	4.89	28.17	100.4	100.4	100.4	100.4	100.3	100.3					
	D9	4.89	28.22	100.3	100.2	100.3	100.3	100.3	100.2					
	D10	4.90	28.18	100.4	100.4	100.4	100.4	100.4	100.3					
	D11	4.90	28.16	100.1	100.1	100.1	100.1	100.1	100.0					
	D12	4.92	28.29	100.3	100.3	100.3	100.2	100.3	100.2					
E000001078AF031C	D1	4.86	28.18	100.5	100.5	100.6	100.5	100.5	100.4					
	D2	4.89	28.17	100.5	100.4	100.4	100.4	100.4	100.2					
	D3	4.90	28.21	100.3	100.2	100.2	100.2	100.1	100.0					
	D4	4.86	28.21	100.5	100.4	100.4	100.4	100.4	100.3					
	D5	4.90	28.25	100.2	100.2	100.2	100.1	100.1	100.0					
	D6	4.89	28.28	100.5	100.6	100.5	100.5	100.5	100.4					
	D7	4.87	28.18	100.4	100.4	100.4	100.4	100.4	100.3					
	D8	4.89	28.30	100.5	100.5	100.5	100.5	100.5	100.4					
	D9	4.89	28.26	100.4	100.4	100.4	100.4	100.3	100.2					
	D10	4.91	28.25	100.5	100.5	100.5	100.5	100.5	100.4					
	D11	4.92	28.13	100.3	100.3	100.3	100.2	100.2	100.1					
	D12	4.90	28.20	100.5	100.5	100.5	100.5	100.5	100.4					

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TABLE 3.1 - PHOTOSYNTHETIC PHOTON FLUX MAINTENANCE RESULTS L150-40705030000S0

Test Condition 2 85 °C 0.070 A

Photometric test drive current: 0.070 A
Photometric test ambient temperature: 25 ± 2 °C
Failures observed: none

Load board ID	Device number	Zero hour PPF (µmol/s)	Zero hour VF (V)	12000	13000	14000	15000	16000	17000					
F000001076E2031C	D1	4.89	28.13	100.5	100.5	100.5	100.5	100.5	100.4					
	D2	4.89	28.26	100.7	100.7	100.7	100.7	100.7	100.6					
	D3	4.87	28.16	100.6	100.6	100.6	100.5	100.5	100.4					
	D4	4.89	28.23	100.3	100.3	100.3	100.2	100.2	100.1					
	D5	4.88	28.20	100.3	100.3	100.3	100.2	100.2	100.1					
	D6	4.89	28.19	100.3	100.3	100.3	100.2	100.2	100.1					
	D7	4.90	28.27	100.4	100.4	100.4	100.4	100.4	100.2					
	D8	4.87	28.17	100.4	100.3	100.4	100.3	100.3	100.2					
	D9	4.85	28.16	100.5	100.5	100.4	100.3	100.2	100.1					
	D10	4.87	28.23	100.1	100.1	100.1	100.0	100.0	99.9					
	D11	4.92	28.12	100.1	100.1	100.2	100.1	100.0	100.0					
	D12	4.88	28.19	100.2	100.1	100.2	100.1	100.0	99.9					
			n	36	36	36	36	36	36					
			mean	100.4	100.3	100.3	100.3	100.3	100.2					
			median	100.4	100.3	100.4	100.3	100.3	100.2					
			std. dev.	0.2	0.2	0.2	0.2	0.2	0.2					
			min	99.9	99.9	100.0	99.9	99.8	99.8					
			max	100.7	100.7	100.7	100.7	100.7	100.6					

Photosynthetic Photon Flux Maintenance (%) applies to columns 12000–17000.

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Test Condition 2 85 °C 0.070 A

TABLE 3.2 - PHOTON FLUX, FAR RED MAINTENANCE RESULTS **L150-407050300000S0**

Test Condition 2 85 °C 0.070 A

Photometric test drive current: 0.070 A
Photometric test ambient temperature: 25 ± 2 °C
Failures observed: none

Load board ID	Device number	Zero hour measurements		Photon Flux Far Red Maintenance, 700-800nm (%)										
		PF_{FR} (µmol/s)	VF (V)	1000	2000	3000	4000	5000	6000	7000	8000	9000	10000	11000
7100001084150 31C	D1	0.15	28.17	101.7	102.3	102.5	102.7	102.9	103.2	103.4	103.6	103.4	103.6	103.8
	D2	0.14	28.18	101.6	101.9	102.3	102.6	102.6	103.0	102.9	103.1	102.9	103.3	103.4
	D3	0.14	28.23	101.9	102.2	102.7	103.0	103.1	103.4	103.2	103.6	103.4	103.4	103.7
	D4	0.14	28.20	101.7	102.0	102.3	102.7	102.8	103.2	103.2	103.5	103.4	103.4	103.6
	D5	0.14	28.19	101.7	102.0	102.2	102.6	103.0	102.8	103.0	103.1	103.1	103.1	103.4
	D6	0.14	28.17	101.9	102.1	102.5	102.9	103.1	103.4	103.3	103.9	103.5	103.6	103.8
	D7	0.14	28.15	101.5	102.0	102.5	102.7	102.9	103.1	103.1	103.2	103.2	103.5	103.8
	D8	0.14	28.17	101.7	102.1	102.4	102.8	102.9	103.3	103.4	103.2	103.3	103.5	103.6
	D9	0.14	28.22	101.9	102.4	102.6	102.8	102.9	103.1	103.2	103.5	103.4	103.4	103.6
	D10	0.14	28.18	101.8	102.3	102.5	103.0	102.9	103.1	103.2	103.6	103.7	103.6	103.9
	D11	0.14	28.16	101.5	101.8	102.4	102.6	102.7	102.9	102.9	103.1	103.3	103.3	103.6
	D12	0.14	28.29	101.9	102.2	102.5	102.8	103.0	103.2	103.4	103.6	103.4	103.6	103.8
E000001078AF031C	D1	0.14	28.18	101.8	102.4	102.7	102.9	103.0	103.2	103.4	103.6	103.4	103.6	103.9
	D2	0.14	28.17	102.0	102.0	102.7	102.8	103.2	103.1	103.5	103.6	103.6	103.6	104.1
	D3	0.14	28.21	102.3	102.5	103.0	103.0	103.1	103.4	103.5	103.5	103.6	103.7	103.8
	D4	0.14	28.21	101.9	102.3	102.8	103.0	103.1	103.3	103.3	103.8	103.6	103.6	104.0
	D5	0.14	28.25	102.0	101.9	102.8	102.8	102.8	102.9	102.9	103.4	103.2	103.4	103.4
	D6	0.14	28.28	101.9	102.3	102.7	102.8	103.2	103.3	103.5	103.5	103.6	103.6	103.8
	D7	0.14	28.18	101.8	102.3	102.8	102.9	103.2	103.2	103.4	103.4	103.5	103.5	103.8
	D8	0.14	28.30	101.9	102.4	103.0	103.1	103.4	103.3	103.6	103.8	103.7	103.8	104.1
	D9	0.14	28.26	101.8	102.4	102.5	102.8	103.1	103.0	103.1	103.4	103.5	103.6	103.7
	D10	0.14	28.25	101.8	102.3	102.8	102.9	103.2	102.9	103.5	103.5	103.5	103.7	103.9
	D11	0.14	28.13	102.0	102.3	102.5	103.1	103.1	103.2	103.4	103.4	103.3	103.5	103.7
	D12	0.14	28.20	101.8	102.1	102.4	102.8	103.0	102.9	103.0	103.2	103.2	103.3	103.5

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TABLE 3.2 - PHOTON FLUX, FAR RED MAINTENANCE RESULTS L150-40705030000S0

Test Condition 2 85 °C 0.070 A

Photometric test drive current: 0.070 A
Photometric test ambient temperature: 25 ± 2 °C
Failures observed: none

Load board ID	Device number	Zero hour measurements: PF_{FR} (µmol/s)	Zero hour measurements: VF (V)	Photon Flux Far Red Maintenance, 700-800nm (%)										
				1000	2000	3000	4000	5000	6000	7000	8000	9000	10000	11000
F000001076E2031C	D1	0.14	28.13	102.0	102.4	102.5	102.9	103.0	103.2	103.3	103.9	103.6	103.9	104.0
	D2	0.14	28.26	102.0	102.4	102.5	102.7	103.1	103.3	103.4	103.7	103.7	103.8	103.8
	D3	0.14	28.16	102.1	102.4	102.8	103.1	103.3	103.2	103.5	103.8	103.6	104.0	104.3
	D4	0.14	28.23	101.4	102.3	102.5	102.7	102.8	103.1	103.1	103.5	103.2	103.5	103.7
	D5	0.14	28.20	101.8	102.2	102.5	102.7	103.1	103.0	103.3	103.7	103.5	103.6	103.6
	D6	0.14	28.19	102.1	102.6	102.6	103.2	103.3	103.4	103.5	103.8	103.6	104.2	104.1
	D7	0.14	28.27	102.0	102.5	102.6	103.0	103.2	103.2	103.4	103.9	103.5	103.8	104.0
	D8	0.14	28.17	102.1	102.8	103.0	103.4	103.4	103.3	103.8	104.1	103.8	104.1	104.2
	D9	0.14	28.16	102.0	102.6	102.7	103.1	103.1	103.2	103.2	103.6	103.5	103.8	103.9
	D10	0.14	28.23	101.7	102.4	102.7	103.0	102.8	103.1	103.3	103.4	103.3	103.4	103.5
	D11	0.14	28.12	101.6	102.0	102.2	102.8	102.8	102.6	103.0	103.3	103.2	103.6	103.5
	D12	0.14	28.19	101.5	102.3	102.2	102.7	102.8	103.0	103.2	103.7	103.4	103.7	103.6
			n	36	36	36	36	36	36	36	36	36	36	36
			mean	101.8	102.3	102.6	102.9	103.0	103.1	103.3	103.5	103.4	103.6	103.8
			median	101.9	102.3	102.5	102.8	103.1	103.2	103.3	103.5	103.4	103.6	103.8
			std. dev.	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2
			min	101.4	101.8	102.2	102.6	102.6	102.6	102.9	103.1	102.9	103.1	103.4
			max	102.3	102.8	103.0	103.4	103.4	103.4	103.8	104.1	103.8	104.2	104.3

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Test Condition 2 85 °C 0.070 A

TABLE 3.2 - PHOTON FLUX, FAR RED MAINTENANCE RESULTS **L150-407050300000S0**

Test Condition 2 85 °C 0.070 A

Photometric test drive current: 0.070 A
Photometric test ambient temperature: 25 ± 2 °C
Failures observed: none

Load board ID	Device number	Zero hour measurements		Photon Flux Far Red Maintenance, 700-800nm (%)										
		PF_{FR} (µmol/s)	VF (V)	12000	13000	14000	15000	16000	17000					
7100001084150 31C	D1	0.15	28.17	103.7	104.0	103.9	104.0	104.1	103.9					
	D2	0.14	28.18	103.4	103.4	103.5	103.4	103.4	103.4					
	D3	0.14	28.23	103.7	103.7	103.9	103.9	103.7	103.7					
	D4	0.14	28.20	103.7	103.8	103.8	103.9	103.7	103.8					
	D5	0.14	28.19	103.3	103.4	103.4	103.6	103.8	103.5					
	D6	0.14	28.17	104.0	104.1	104.2	104.2	104.1	104.1					
	D7	0.14	28.15	103.6	103.8	103.7	103.8	103.8	103.9					
	D8	0.14	28.17	103.7	103.7	103.7	103.9	103.9	104.0					
	D9	0.14	28.22	103.8	103.6	103.8	104.0	103.9	103.9					
	D10	0.14	28.18	103.8	104.1	103.8	103.9	104.1	103.8					
	D11	0.14	28.16	103.5	103.7	103.7	103.8	103.7	103.8					
	D12	0.14	28.29	103.8	103.7	103.8	103.8	103.9	103.8					
E000001078AF031C	D1	0.14	28.18	104.1	104.0	104.0	104.2	104.1	103.9					
	D2	0.14	28.17	104.1	104.3	104.0	104.0	104.0	104.2					
	D3	0.14	28.21	103.7	104.0	104.2	104.0	104.2	104.0					
	D4	0.14	28.21	104.2	104.1	104.1	104.1	104.2	104.2					
	D5	0.14	28.25	103.6	103.5	103.7	103.6	103.7	103.7					
	D6	0.14	28.28	103.8	104.1	104.1	103.9	104.0	104.1					
	D7	0.14	28.18	104.1	104.3	104.0	103.9	104.2	104.0					
	D8	0.14	28.30	104.1	104.5	104.2	104.3	104.3	104.3					
	D9	0.14	28.26	103.7	103.8	103.9	103.9	104.0	103.8					
	D10	0.14	28.25	104.0	103.9	104.1	104.0	104.2	104.1					
	D11	0.14	28.13	103.7	103.8	103.9	104.1	103.9	104.1					
	D12	0.14	28.20	103.6	103.6	103.6	103.7	103.9	103.9					

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TABLE 3.2 - PHOTON FLUX, FAR RED MAINTENANCE RESULTS **L150-40705030000S0**

Test Condition 2 **85 °C** **0.070 A**

Photometric test drive current: 0.070 A
Photometric test ambient temperature: 25 ± 2 °C
Failures observed: none

Load board ID	Device number	Zero hour measurements PF_{FR} (µmol/s)	Zero hour measurements VF (V)	Photon Flux Far Red Maintenance, 700-800nm (%) 12000	13000	14000	15000	16000	17000					
F000001076E2031C	D1	0.14	28.13	104.1	104.1	104.0	104.0	104.3	103.9					
	D2	0.14	28.26	104.0	104.0	104.2	103.7	104.2	104.0					
	D3	0.14	28.16	104.0	104.1	104.2	104.1	104.1	103.9					
	D4	0.14	28.23	103.6	103.7	103.7	103.7	103.7	103.7					
	D5	0.14	28.20	103.8	103.9	103.8	103.8	103.9	103.8					
	D6	0.14	28.19	104.2	104.1	104.3	104.2	104.4	104.0					
	D7	0.14	28.27	104.0	104.2	104.3	104.1	104.1	104.2					
	D8	0.14	28.17	104.3	104.4	104.4	104.4	104.3	104.4					
	D9	0.14	28.16	103.5	103.6	103.6	103.3	103.4	103.3					
	D10	0.14	28.23	103.6	103.6	103.7	104.0	103.7	103.8					
	D11	0.14	28.12	103.5	103.7	103.8	103.8	103.7	103.8					
	D12	0.14	28.19	103.6	103.7	103.8	103.8	103.7	103.9					
			n	36	36	36	36	36	36					
			mean	103.8	103.9	103.9	103.9	103.9	103.9					
			median	103.7	103.9	103.9	103.9	103.9	103.9					
			std. dev.	0.3	0.3	0.2	0.2	0.3	0.2					
			min	103.3	103.4	103.4	103.3	103.4	103.3					
			max	104.3	104.5	104.4	104.4	104.4	104.4					

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Test Condition 2 85 °C 0.070 A

TABLE 3.3 - CHROMATICITY SHIFT RESULTS **L150-407050300000S0**

Test Condition 2 85 °C 0.070 A

Photometric test drive current: 0.070 A
Photometric test ambient temperature: 25 ± 2 °C
Failures observed: none

Load board ID	Device number	Zero hour measurements u'	Zero hour measurements v'		Chromaticity shift (Δu'v') 1000	2000	3000	4000	5000	6000	7000	8000	9000	10000	11000
7100001084150 31C	D1	0.2248	0.5066		0.0007	0.0008	0.0008	0.0009	0.0010	0.0010	0.0011	0.0011	0.0012	0.0013	0.0013
	D2	0.2242	0.5057		0.0007	0.0008	0.0009	0.0009	0.0010	0.0011	0.0011	0.0012	0.0013	0.0014	0.0014
	D3	0.2246	0.5051		0.0006	0.0007	0.0008	0.0009	0.0009	0.0009	0.0010	0.0011	0.0012	0.0012	0.0012
	D4	0.2250	0.5050		0.0006	0.0008	0.0008	0.0008	0.0009	0.0009	0.0010	0.0010	0.0011	0.0012	0.0012
	D5	0.2248	0.5062		0.0007	0.0008	0.0009	0.0009	0.0010	0.0011	0.0011	0.0012	0.0013	0.0014	0.0014
	D6	0.2241	0.5055		0.0006	0.0008	0.0008	0.0009	0.0010	0.0010	0.0011	0.0011	0.0012	0.0013	0.0013
	D7	0.2242	0.5062		0.0006	0.0008	0.0008	0.0009	0.0010	0.0011	0.0011	0.0012	0.0013	0.0014	0.0014
	D8	0.2247	0.5046		0.0006	0.0008	0.0008	0.0009	0.0010	0.0010	0.0011	0.0012	0.0012	0.0013	0.0013
	D9	0.2248	0.5065		0.0007	0.0008	0.0009	0.0009	0.0010	0.0010	0.0011	0.0012	0.0013	0.0013	0.0014
	D10	0.2240	0.5057		0.0006	0.0007	0.0008	0.0009	0.0009	0.0010	0.0010	0.0011	0.0012	0.0012	0.0013
	D11	0.2246	0.5061		0.0007	0.0008	0.0009	0.0010	0.0010	0.0011	0.0011	0.0012	0.0013	0.0013	0.0014
	D12	0.2246	0.5056		0.0006	0.0008	0.0008	0.0009	0.0009	0.0011	0.0011	0.0012	0.0013	0.0013	0.0014
E000001078AF031C	D1	0.2246	0.5045		0.0006	0.0007	0.0008	0.0008	0.0009	0.0010	0.0010	0.0011	0.0012	0.0012	0.0013
	D2	0.2243	0.5057		0.0006	0.0007	0.0008	0.0009	0.0009	0.0010	0.0011	0.0012	0.0012	0.0012	0.0013
	D3	0.2244	0.5054		0.0006	0.0007	0.0008	0.0008	0.0009	0.0010	0.0011	0.0011	0.0011	0.0012	0.0013
	D4	0.2248	0.5055		0.0006	0.0008	0.0008	0.0009	0.0009	0.0010	0.0011	0.0011	0.0011	0.0012	0.0012
	D5	0.2248	0.5061		0.0007	0.0008	0.0009	0.0010	0.0011	0.0012	0.0013	0.0013	0.0014	0.0015	0.0015
	D6	0.2243	0.5048		0.0006	0.0007	0.0008	0.0009	0.0010	0.0010	0.0011	0.0011	0.0012	0.0013	0.0013
	D7	0.2241	0.5054		0.0007	0.0008	0.0009	0.0009	0.0010	0.0011	0.0011	0.0011	0.0012	0.0013	0.0013
	D8	0.2247	0.5048		0.0006	0.0007	0.0008	0.0008	0.0009	0.0010	0.0010	0.0011	0.0012	0.0012	0.0012
	D9	0.2246	0.5057		0.0007	0.0008	0.0008	0.0009	0.0010	0.0011	0.0011	0.0012	0.0012	0.0013	0.0013
	D10	0.2247	0.5053		0.0007	0.0008	0.0008	0.0009	0.0010	0.0010	0.0011	0.0011	0.0012	0.0012	0.0013
	D11	0.2249	0.5061		0.0007	0.0008	0.0009	0.0009	0.0011	0.0011	0.0011	0.0012	0.0013	0.0013	0.0014
	D12	0.2243	0.5055		0.0007	0.0008	0.0009	0.0009	0.0010	0.0011	0.0012	0.0012	0.0013	0.0014	0.0014

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TABLE 3.3 - CHROMATICITY SHIFT RESULTS **L150-407050300000S0**

Test Condition 2 **85 °C** **0.070 A**

Photometric test drive current: 0.070 A
Photometric test ambient temperature: 25 ± 2 °C
Failures observed: none

Load board ID	Device number	Zero hour measurements u'	Zero hour measurements v'		Chromaticity shift (Δu'v') 1000	2000	3000	4000	5000	6000	7000	8000	9000	10000	11000
F000001076E2031C	D1	0.2243	0.5060		0.0006	0.0007	0.0008	0.0008	0.0009	0.0009	0.0010	0.0011	0.0011	0.0012	0.0012
	D2	0.2247	0.5047		0.0006	0.0007	0.0008	0.0009	0.0010	0.0010	0.0011	0.0012	0.0012	0.0013	0.0013
	D3	0.2242	0.5057		0.0006	0.0006	0.0007	0.0008	0.0008	0.0009	0.0009	0.0010	0.0010	0.0011	0.0011
	D4	0.2248	0.5054		0.0007	0.0008	0.0009	0.0010	0.0010	0.0011	0.0011	0.0012	0.0012	0.0013	0.0014
	D5	0.2246	0.5059		0.0007	0.0008	0.0008	0.0009	0.0010	0.0010	0.0011	0.0011	0.0012	0.0013	0.0013
	D6	0.2252	0.5053		0.0007	0.0008	0.0009	0.0009	0.0010	0.0010	0.0011	0.0011	0.0012	0.0012	0.0013
	D7	0.2247	0.5059		0.0006	0.0007	0.0007	0.0008	0.0009	0.0009	0.0010	0.0011	0.0011	0.0012	0.0012
	D8	0.2248	0.5063		0.0006	0.0007	0.0008	0.0008	0.0009	0.0009	0.0010	0.0010	0.0011	0.0011	0.0011
	D9	0.2251	0.5053		0.0006	0.0007	0.0008	0.0008	0.0009	0.0009	0.0010	0.0010	0.0011	0.0012	0.0013
	D10	0.2247	0.5053		0.0006	0.0008	0.0008	0.0009	0.0010	0.0010	0.0012	0.0012	0.0013	0.0014	0.0014
	D11	0.2244	0.5058		0.0007	0.0008	0.0009	0.0009	0.0010	0.0010	0.0011	0.0011	0.0012	0.0013	0.0013
	D12	0.2247	0.5056		0.0006	0.0007	0.0008	0.0008	0.0009	0.0009	0.0009	0.0010	0.0011	0.0011	0.0011
				n	36	36	36	36	36	36	36	36	36	36	36
				mean	0.0006	0.0008	0.0008	0.0009	0.0010	0.0010	0.0011	0.0011	0.0012	0.0013	0.0013
				median	0.0006	0.0008	0.0008	0.0009	0.0010	0.0010	0.0011	0.0011	0.0012	0.0013	0.0013
				std. dev.	0.0000	0.0001	0.0000	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001
				min	0.0006	0.0006	0.0007	0.0008	0.0008	0.0009	0.0009	0.0010	0.0010	0.0011	0.0011
				max	0.0007	0.0008	0.0009	0.0010	0.0011	0.0012	0.0013	0.0013	0.0014	0.0015	0.0015

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Test Condition 2 85 °C 0.070 A

TABLE 3.3 - CHROMATICITY SHIFT RESULTS **L150-407050300000S0**

Test Condition 2 85 °C 0.070 A

Photometric test drive current: 0.070 A
Photometric test ambient temperature: 25 ± 2 °C
Failures observed: none

Load board ID	Device number	Zero hour measurements u'	Zero hour measurements v'		Chromaticity shift (Δu'v') 12000	13000	14000	15000	16000	17000				
7100001084150 31C	D1	0.2248	0.5066		0.0014	0.0014	0.0015	0.0015	0.0016	0.0017				
	D2	0.2242	0.5057		0.0015	0.0015	0.0016	0.0017	0.0017	0.0018				
	D3	0.2246	0.5051		0.0013	0.0014	0.0015	0.0015	0.0016	0.0017				
	D4	0.2250	0.5050		0.0012	0.0013	0.0014	0.0015	0.0015	0.0016				
	D5	0.2248	0.5062		0.0015	0.0015	0.0016	0.0017	0.0017	0.0018				
	D6	0.2241	0.5055		0.0014	0.0014	0.0015	0.0015	0.0016	0.0017				
	D7	0.2242	0.5062		0.0014	0.0015	0.0016	0.0017	0.0017	0.0018				
	D8	0.2247	0.5046		0.0014	0.0015	0.0015	0.0016	0.0016	0.0017				
	D9	0.2248	0.5065		0.0014	0.0015	0.0016	0.0016	0.0017	0.0017				
	D10	0.2240	0.5057		0.0013	0.0014	0.0015	0.0015	0.0016	0.0016				
	D11	0.2246	0.5061		0.0014	0.0015	0.0016	0.0016	0.0016	0.0018				
	D12	0.2246	0.5056		0.0014	0.0015	0.0016	0.0017	0.0017	0.0018				
E000001078AF031C	D1	0.2246	0.5045		0.0013	0.0013	0.0014	0.0015	0.0015	0.0016				
	D2	0.2243	0.5057		0.0013	0.0014	0.0014	0.0015	0.0016	0.0016				
	D3	0.2244	0.5054		0.0014	0.0014	0.0015	0.0015	0.0016	0.0016				
	D4	0.2248	0.5055		0.0013	0.0014	0.0014	0.0015	0.0015	0.0016				
	D5	0.2248	0.5061		0.0016	0.0016	0.0017	0.0018	0.0019	0.0019				
	D6	0.2243	0.5048		0.0014	0.0015	0.0015	0.0016	0.0016	0.0017				
	D7	0.2241	0.5054		0.0014	0.0014	0.0015	0.0016	0.0016	0.0017				
	D8	0.2247	0.5048		0.0013	0.0014	0.0014	0.0015	0.0015	0.0016				
	D9	0.2246	0.5057		0.0014	0.0015	0.0015	0.0016	0.0017	0.0017				
	D10	0.2247	0.5053		0.0013	0.0014	0.0015	0.0015	0.0015	0.0016				
	D11	0.2249	0.5061		0.0015	0.0016	0.0016	0.0017	0.0017	0.0018				
	D12	0.2243	0.5055		0.0015	0.0015	0.0016	0.0017	0.0017	0.0018				

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TABLE 3.3 - CHROMATICITY SHIFT RESULTS **L150-407050300000S0**

Test Condition 2 **85 °C** **0.070 A**

Photometric test drive current: 0.070 A
Photometric test ambient temperature: 25 ± 2 °C
Failures observed: none

Load board ID	Device number	Zero hour measurements u'	Zero hour measurements v'		Chromaticity shift (Δu'v') 12000	13000	14000	15000	16000	17000				
F000001076E2031C	D1	0.2243	0.5060		0.0013	0.0013	0.0014	0.0014	0.0015	0.0015				
	D2	0.2247	0.5047		0.0014	0.0015	0.0015	0.0016	0.0016	0.0017				
	D3	0.2242	0.5057		0.0012	0.0013	0.0013	0.0014	0.0014	0.0015				
	D4	0.2248	0.5054		0.0014	0.0015	0.0016	0.0016	0.0017	0.0017				
	D5	0.2246	0.5059		0.0014	0.0014	0.0015	0.0016	0.0016	0.0016				
	D6	0.2252	0.5053		0.0013	0.0014	0.0015	0.0015	0.0016	0.0016				
	D7	0.2247	0.5059		0.0013	0.0013	0.0014	0.0014	0.0015	0.0016				
	D8	0.2248	0.5063		0.0012	0.0012	0.0013	0.0014	0.0014	0.0015				
	D9	0.2251	0.5053		0.0013	0.0014	0.0015	0.0016	0.0017	0.0018				
	D10	0.2247	0.5053		0.0015	0.0016	0.0016	0.0018	0.0018	0.0019				
	D11	0.2244	0.5058		0.0014	0.0014	0.0015	0.0016	0.0016	0.0017				
	D12	0.2247	0.5056		0.0013	0.0013	0.0013	0.0014	0.0014	0.0015				
				n	36	36	36	36	36	36				
				mean	0.0014	0.0014	0.0015	0.0016	0.0016	0.0017				
				median	0.0014	0.0014	0.0015	0.0016	0.0016	0.0017				
				std. dev.	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001				
				min	0.0012	0.0012	0.0013	0.0014	0.0014	0.0015				
				max	0.0016	0.0016	0.0017	0.0018	0.0019	0.0019				

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Test Condition 2 85 °C 0.070 A

TABLE 3.4 - FORWARD VOLTAGE MAINTENANCE RESULTS **L150-407050300000S0**

Test Condition 2 85 °C 0.070 A

Photometric test drive current: 0.070 A
Photometric test ambient temperature: 25 ± 2 °C
Failures observed: none

Load board ID	Device number	Zero hour measurements Vf (V)		Forward Voltage Maintainence (%) 1000	2000	3000	4000	5000	6000	7000	8000	9000	10000	11000
710000108415031C	D1		28.17	99.99	100.01	100.02	100.03	100.03	100.04	100.04	100.04	100.04	100.05	100.05
	D2		28.18	100.00	100.03	100.04	100.05	100.05	100.06	100.06	100.06	100.07	100.07	100.07
	D3		28.23	99.99	100.01	100.02	100.03	100.04	100.04	100.05	100.05	100.05	100.05	100.05
	D4		28.20	99.99	100.01	100.02	100.03	100.04	100.04	100.05	100.05	100.05	100.05	100.05
	D5		28.19	100.00	100.02	100.03	100.04	100.05	100.05	100.06	100.06	100.06	100.07	100.07
	D6		28.17	100.02	100.04	100.05	100.06	100.07	100.07	100.08	100.08	100.08	100.08	100.09
	D7		28.15	100.01	100.03	100.03	100.04	100.05	100.05	100.06	100.06	100.06	100.07	100.07
	D8		28.17	100.01	100.03	100.04	100.05	100.05	100.07	100.06	100.06	100.07	100.07	100.07
	D9		28.22	99.99	100.01	100.02	100.03	100.03	100.04	100.05	100.05	100.05	100.05	100.06
	D10		28.18	100.01	100.03	100.04	100.06	100.06	100.07	100.07	100.08	100.08	100.08	100.08
	D11		28.16	100.00	100.02	100.03	100.04	100.04	100.05	100.05	100.06	100.06	100.06	100.06
	D12		28.29	99.98	100.00	100.01	100.02	100.02	100.03	100.03	100.04	100.04	100.04	100.05
E000001078AF031C	D1		28.18	100.02	100.05	100.06	100.07	100.08	100.08	100.09	100.09	100.09	100.10	100.08
	D2		28.17	100.02	100.04	100.05	100.06	100.07	100.07	100.08	100.08	100.08	100.09	100.06
	D3		28.21	99.99	100.01	100.02	100.03	100.04	100.04	100.04	100.05	100.05	100.05	100.04
	D4		28.21	100.02	100.04	100.05	100.06	100.07	100.07	100.08	100.08	100.09	100.09	100.10
	D5		28.25	99.98	100.00	100.01	100.02	100.03	100.03	100.03	100.04	100.04	100.04	100.05
	D6		28.28	99.97	99.99	99.99	100.00	100.01	100.02	100.02	100.02	100.03	100.03	100.04
	D7		28.18	100.01	100.03	100.05	100.05	100.06	100.07	100.07	100.08	100.08	100.08	100.08
	D8		28.30	99.96	99.98	99.99	99.99	100.00	100.01	100.01	100.02	100.02	100.02	100.02
	D9		28.26	99.98	100.00	100.00	100.01	100.02	100.03	100.03	100.03	100.04	100.04	100.04
	D10		28.25	99.97	99.99	100.00	100.01	100.02	100.02	100.03	100.03	100.03	100.04	100.04
	D11		28.13	100.00	100.02	100.03	100.04	100.05	100.05	100.06	100.06	100.06	100.06	100.06
	D12		28.20	99.99	100.01	100.02	100.03	100.04	100.05	100.05	100.05	100.05	100.06	100.06

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TABLE 3.4 - FORWARD VOLTAGE MAINTENANCE RESULTS **L150-40705030000S0**

Test Condition 2 85 °C 0.070 A

Photometric test drive current: 0.070 A
Photometric test ambient temperature: 25 ± 2 °C
Failures observed: none

Load board ID	Device number	Zero hour measurements Vf (V)	Forward Voltage Maintainence (%) 1000	2000	3000	4000	5000	6000	7000	8000	9000	10000	11000
F000001076E2031C	D1	28.13	99.99	100.00	100.01	100.03	100.03	100.04	100.04	100.04	100.05	100.05	100.05
	D2	28.26	100.00	100.02	100.03	100.04	100.05	100.05	100.06	100.06	100.06	100.06	100.07
	D3	28.16	100.03	100.05	100.06	100.08	100.08	100.09	100.09	100.10	100.10	100.10	100.10
	D4	28.23	100.00	100.01	100.02	100.03	100.04	100.04	100.05	100.05	100.05	100.06	100.06
	D5	28.20	100.01	100.04	100.05	100.06	100.06	100.07	100.08	100.08	100.08	100.08	100.09
	D6	28.19	100.01	100.03	100.04	100.05	100.06	100.06	100.07	100.07	100.07	100.07	100.08
	D7	28.27	100.00	100.02	100.03	100.04	100.04	100.05	100.06	100.06	100.06	100.07	100.07
	D8	28.17	100.02	100.04	100.05	100.06	100.07	100.08	100.08	100.09	100.09	100.09	100.09
	D9	28.16	100.01	100.03	100.04	100.05	100.06	100.06	100.06	100.07	100.07	100.07	100.07
	D10	28.23	99.98	100.01	100.02	100.03	100.04	100.04	100.04	100.05	100.05	100.05	100.05
	D11	28.12	100.01	100.03	100.04	100.05	100.05	100.06	100.06	100.06	100.06	100.07	100.07
	D12	28.19	99.99	100.01	100.03	100.04	100.04	100.05	100.05	100.06	100.06	100.06	100.06
		n	36	36	36	36	36	36	36	36	36	36	36
		mean	100.0	100.0	100.0	100.0	100.0	100.1	100.1	100.1	100.1	100.1	100.1
		median	100.0	100.0	100.0	100.0	100.0	100.1	100.1	100.1	100.1	100.1	100.1
		std. dev.	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
		min	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
		max	100.0	100.1	100.1	100.1	100.1	100.1	100.1	100.1	100.1	100.1	100.1

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Test Condition 2 85 °C 0.070 A

TABLE 3.4 - FORWARD VOLTAGE MAINTENANCE RESULTS **L150-407050300000S0**

Test Condition 2 85 °C 0.070 A

Photometric test drive current: 0.070 A
Photometric test ambient temperature: 25 ± 2 °C
Failures observed: none

Load board ID	Device number	Zero hour measurements Vf (V)		Forward Voltage Maintainence (%) 12000	13000	14000	15000	16000	17000
7100001084150 31C	D1		28.17	100.04	100.05	100.06	100.07	100.05	100.07
	D2		28.18	100.07	100.08	100.08	100.08	100.08	100.09
	D3		28.23	100.05	100.06	100.07	100.07	100.08	100.08
	D4		28.20	100.05	100.06	100.07	100.07	100.09	100.07
	D5		28.19	100.07	100.07	100.08	100.09	100.10	100.09
	D6		28.17	100.09	100.09	100.10	100.10	100.11	100.11
	D7		28.15	100.07	100.07	100.08	100.08	100.08	100.09
	D8		28.17	100.07	100.08	100.08	100.09	100.08	100.09
	D9		28.22	100.05	100.06	100.07	100.07	100.07	100.08
	D10		28.18	100.08	100.09	100.10	100.10	100.10	100.11
	D11		28.16	100.06	100.07	100.08	100.08	100.07	100.08
	D12		28.29	100.04	100.05	100.06	100.07	100.06	100.07
E000001078AF031C	D1		28.18	100.10	100.11	100.12	100.12	100.12	100.13
	D2		28.17	100.09	100.10	100.10	100.11	100.10	100.11
	D3		28.21	100.05	100.06	100.07	100.07	100.06	100.07
	D4		28.21	100.09	100.10	100.11	100.11	100.11	100.11
	D5		28.25	100.04	100.05	100.05	100.06	100.05	100.06
	D6		28.28	100.03	100.04	100.04	100.05	100.05	100.05
	D7		28.18	100.08	100.09	100.09	100.10	100.10	100.10
	D8		28.30	100.03	100.03	100.04	100.04	100.04	100.05
	D9		28.26	100.04	100.04	100.05	100.06	100.05	100.06
	D10		28.25	100.04	100.05	100.05	100.06	100.05	100.06
	D11		28.13	100.06	100.07	100.07	100.08	100.07	100.08
	D12		28.20	100.06	100.07	100.07	100.07	100.07	100.08

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TABLE 3.4 - FORWARD VOLTAGE MAINTENANCE RESULTS								L150-40705030000S0
Test Condition 2	85 °C	0.070 A						
Load board ID	Device number	Zero hour measurements	Photometric test drive current: 0.070 A Photometric test ambient temperature: 25 ± 2 °C Failures observed: none					
		Vf (V)	Forward Voltage Maintainence (%)					
			12000	13000	14000	15000	16000	17000
F000001076E2031C	D1	28.13	100.05	100.06	100.07	100.07	100.07	100.07
	D2	28.26	100.06	100.07	100.08	100.08	100.08	100.08
	D3	28.16	100.10	100.11	100.12	100.12	100.12	100.13
	D4	28.23	100.05	100.07	100.07	100.07	100.07	100.08
	D5	28.20	100.08	100.09	100.10	100.10	100.10	100.11
	D6	28.19	100.07	100.08	100.09	100.09	100.09	100.10
	D7	28.27	100.07	100.08	100.09	100.09	100.09	100.10
	D8	28.17	100.09	100.10	100.10	100.11	100.10	100.11
	D9	28.16	100.07	100.08	100.08	100.09	100.09	100.09
	D10	28.23	100.05	100.06	100.07	100.07	100.07	100.08
	D11	28.12	100.07	100.08	100.08	100.09	100.08	100.09
	D12	28.19	100.06	100.07	100.08	100.08	100.08	100.09
		n	36	36	36	36	36	36
		mean	100.1	100.1	100.1	100.1	100.1	100.1
		median	100.1	100.1	100.1	100.1	100.1	100.1
		std. dev.	0.0	0.0	0.0	0.0	0.0	0.0
		min	100.0	100.0	100.0	100.0	100.0	100.0
		max	100.1	100.1	100.1	100.1	100.1	100.1

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Test Condition 3 105 °C 0.070 A

TABLE 4.0 - LUMEN MAINTENANCE RESULTS **L150-407050300005O**

Test Condition 3 105 °C 0.070 A

Photometric test drive current: 0.070 A
Photometric test ambient temperature: 25 ± 2 °C
Failures observed: none

Load board ID	Device number	Zero hour measurements		Lumen Maintenance (%)										
		Flux (lm)	Vf (V)	1000	2000	3000	4000	5000	6000	7000	8000	9000	10000	11000
020000107325031C	D1	373.05	28.18	100.3	100.1	99.9	99.7	99.7	99.5	99.4	99.3	99.3	99.3	99.3
	D2	370.11	28.19	100.5	100.3	100.1	99.9	99.9	99.6	99.5	99.4	99.3	99.5	99.5
	D3	370.39	28.20	100.4	100.3	100.1	100.0	99.9	99.7	99.6	99.6	99.5	99.7	99.6
	D4	373.03	28.20	100.4	100.3	100.0	99.9	99.9	99.6	99.5	99.5	99.4	99.5	99.4
	D5	373.04	28.19	100.7	100.6	100.4	100.2	100.2	99.9	99.8	99.8	99.7	99.7	99.6
	D6	370.88	28.17	100.4	100.2	100.0	99.9	99.9	99.6	99.6	99.6	99.5	99.7	99.7
	D7	369.71	28.19	100.6	100.3	100.1	100.0	100.0	99.9	99.8	99.8	99.7	99.7	99.7
	D8	374.65	28.18	100.2	100.0	99.8	99.7	99.6	99.3	99.1	99.0	98.9	98.9	98.8
	D9	376.18	28.28	100.4	100.3	100.1	100.0	99.9	99.7	99.6	99.5	99.4	99.5	99.4
	D10	372.16	28.29	100.5	100.4	100.3	100.1	100.2	99.9	99.8	99.8	99.7	99.8	99.7
	D11	376.11	28.27	100.4	100.2	100.0	99.8	99.8	99.4	99.4	99.3	99.1	99.2	99.1
	D12	377.56	28.19	100.1	99.9	99.7	99.6	99.5	99.2	99.1	99.0	98.9	99.0	98.9
C400001082AC031C	D1	369.84	28.15	100.3	100.2	99.9	99.8	99.6	99.5	99.4	99.3	99.2	99.3	99.1
	D2	371.61	28.19	100.3	100.1	99.9	99.9	99.7	99.5	99.4	99.4	99.3	99.3	99.1
	D3	373.95	28.18	100.5	100.4	100.2	100.1	99.9	99.7	99.6	99.5	99.4	99.3	99.1
	D4	372.81	28.23	100.4	100.3	100.1	99.9	99.8	99.6	99.5	99.4	99.3	99.3	99.2
	D5	373.88	28.17	100.4	100.2	100.0	99.9	99.7	99.5	99.4	99.4	99.3	99.4	99.3
	D6	373.39	28.30	100.4	100.2	100.0	99.9	99.8	99.5	99.5	99.5	99.4	99.4	99.3
	D7	372.32	28.21	100.4	100.3	100.0	99.9	99.7	99.5	99.4	99.3	99.2	99.2	99.1
	D8	375.33	28.28	100.3	100.2	100.0	99.9	99.7	99.6	99.5	99.6	99.5	99.7	99.7
	D9	373.72	28.22	100.3	100.1	100.0	99.8	99.7	99.6	99.5	99.5	99.4	99.4	99.3
	D10	375.02	28.15	100.2	100.1	99.9	99.8	99.6	99.4	99.3	99.3	99.1	99.1	99.0
	D11	376.29	28.12	100.2	100.0	99.8	99.7	99.5	99.3	99.1	99.0	98.8	98.7	98.4
	D12	374.51	28.16	100.3	100.1	99.9	99.8	99.5	99.3	99.2	99.2	99.1	99.1	99.0

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TABLE 4.0 - LUMEN MAINTENANCE RESULTS L150-40705030000S0

Test Condition 3 105 °C 0.070 A

Photometric test drive current: 0.070 A
Photometric test ambient temperature: 25 ± 2 °C
Failures observed: none

Load board ID	Device number	Zero hour measurements		Lumen Maintenance (%)										
		Flux (lm)	Vf (V)	1000	2000	3000	4000	5000	6000	7000	8000	9000	10000	11000
DE000010772003 1C	D1	374.28	28.12	100.3	100.0	99.9	99.7	99.4	99.3	99.2	99.2	99.1	99.2	99.1
	D2	374.85	28.17	100.3	100.1	99.9	99.7	99.5	99.4	99.2	99.3	99.1	99.2	99.1
	D3	370.53	28.21	100.5	100.5	100.5	100.3	100.1	100.0	99.9	100.0	99.9	99.9	99.8
	D4	369.54	28.18	100.4	100.4	100.3	100.0	99.9	99.7	99.6	99.6	99.4	99.4	99.3
	D5	373.27	28.19	100.3	100.2	100.0	99.8	99.6	99.5	99.4	99.4	99.2	99.3	99.2
	D6	374.95	28.21	100.2	100.1	99.9	99.7	99.5	99.2	99.1	99.1	98.9	98.9	98.7
	D7	374.70	28.24	100.3	100.2	100.0	99.8	99.6	99.5	99.3	99.3	99.2	99.2	99.0
	D8	375.46	28.20	100.2	100.2	100.1	99.9	99.7	99.5	99.4	99.4	99.3	99.4	99.3
	D9	374.52	28.23	100.4	100.3	100.1	99.9	99.7	99.5	99.4	99.3	99.2	99.2	99.0
	D10	375.40	28.22	100.4	100.3	100.2	100.0	99.8	99.6	99.5	99.5	99.3	99.3	99.2
	D11	377.02	28.17	100.3	100.1	100.0	99.7	99.5	99.3	99.2	99.1	98.9	98.9	98.8
	D12	377.01	28.19	100.4	100.2	100.0	99.9	99.6	99.4	99.3	99.3	99.2	99.3	99.2
			n	36	36	36	36	36	36	36	36	36	36	36
			mean	100.4	100.2	100.0	99.9	99.7	99.5	99.4	99.4	99.3	99.3	99.2
			median	100.4	100.2	100.0	99.9	99.7	99.5	99.4	99.4	99.3	99.3	99.2
			std. dev.	0.1	0.1	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.3	0.3
			min	100.1	99.9	99.7	99.6	99.4	99.2	99.1	99.0	98.8	98.7	98.4
			max	100.7	100.6	100.5	100.3	100.2	100.0	99.9	100.0	99.9	99.9	99.8

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Test Condition 3 105 °C 0.070 A

TABLE 4.0 - LUMEN MAINTENANCE RESULTS **L150-407050300005O**

Test Condition 3 105 °C 0.070 A

Photometric test drive current: 0.070 A
Photometric test ambient temperature: 25 ± 2 °C
Failures observed: none

Load board ID	Device number	Zero hour measurements		Lumen Maintenance (%)										
		Flux (lm)	Vf (V)	12000	13000	14000	15000	16000	17000					
020000107325031C	D1	373.05	28.18	99.3	99.2	99.3	99.5	99.7	99.6					
	D2	370.11	28.19	99.4	99.3	99.2	99.3	99.4	99.2					
	D3	370.39	28.20	99.5	99.5	99.5	99.8	99.9	99.8					
	D4	373.03	28.20	99.3	99.2	99.2	99.5	99.5	99.3					
	D5	373.04	28.19	99.6	99.5	99.4	99.5	99.6	99.4					
	D6	370.88	28.17	99.6	99.7	99.7	100.0	100.1	99.9					
	D7	369.71	28.19	99.6	99.5	99.5	99.7	99.9	99.7					
	D8	374.65	28.18	98.6	98.5	98.4	98.5	98.5	98.3					
	D9	376.18	28.28	99.4	99.4	99.4	99.8	100.0	99.8					
	D10	372.16	28.29	99.7	99.6	99.7	99.9	100.2	100.0					
	D11	376.11	28.27	98.9	98.9	98.8	98.9	98.9	98.7					
	D12	377.56	28.19	98.8	98.8	98.9	99.2	99.3	99.2					
C400001082AC031C	D1	369.84	28.15	99.1	99.0	99.1	99.4	99.4	99.2					
	D2	371.61	28.19	99.0	98.9	98.9	99.1	99.0	98.8					
	D3	373.95	28.18	98.9	98.6	98.5	98.6	98.5	98.2					
	D4	372.81	28.23	99.1	99.1	99.1	99.2	99.2	99.1					
	D5	373.88	28.17	99.2	99.2	99.2	99.3	99.3	99.1					
	D6	373.39	28.30	99.2	99.2	99.1	99.4	99.4	99.2					
	D7	372.32	28.21	99.0	98.8	98.8	98.8	98.8	98.6					
	D8	375.33	28.28	99.6	99.5	99.7	100.4	100.4	100.1					
	D9	373.72	28.22	99.2	99.2	99.3	99.6	99.7	99.6					
	D10	375.02	28.15	98.8	98.6	98.5	98.6	98.5	98.3					
	D11	376.29	28.12	98.2	97.4	97.6	97.7	97.6	97.3					
	D12	374.51	28.16	99.0	98.9	98.8	99.2	99.2	99.0					

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TABLE 4.0 - LUMEN MAINTENANCE RESULTS **L150-40705030000S0**

Test Condition 3 105 °C 0.070 A

Photometric test drive current: 0.070 A
Photometric test ambient temperature: 25 ± 2 °C
Failures observed: none

Load board ID	Device number	Zero hour measurements: Flux (lm)	Zero hour measurements: Vf (V)	Lumen Maintenance (%) 12000	13000	14000	15000	16000	17000
DE0000107720031C	D1	374.28	28.12	99.0	99.1	99.0	99.5	99.5	99.3
	D2	374.85	28.17	99.0	99.1	99.0	99.6	99.6	99.5
	D3	370.53	28.21	99.8	99.8	99.9	100.2	100.3	100.1
	D4	369.54	28.18	99.2	99.2	99.2	99.5	99.5	99.4
	D5	373.27	28.19	99.2	99.2	99.2	99.4	99.5	99.4
	D6	374.95	28.21	98.6	98.5	98.4	98.5	98.4	98.2
	D7	374.70	28.24	98.9	98.9	98.9	99.1	99.1	98.8
	D8	375.46	28.20	99.3	99.3	99.3	99.6	99.9	99.7
	D9	374.52	28.23	98.9	98.9	98.8	99.0	99.0	98.8
	D10	375.40	28.22	99.0	99.0	98.9	99.4	99.3	99.2
	D11	377.02	28.17	98.7	98.7	98.6	98.8	98.8	98.6
	D12	377.01	28.19	99.1	99.1	99.1	99.4	99.4	99.4
			n	36	36	36	36	36	36
			mean	99.1	99.1	99.1	99.3	99.3	99.2
			median	99.1	99.1	99.1	99.4	99.4	99.2
			std. dev.	0.4	0.4	0.4	0.5	0.6	0.6
			min	98.2	97.4	97.6	97.7	97.6	97.3
			max	99.8	99.8	99.9	100.4	100.4	100.1

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Test Condition 3 105 °C 0.070 A

TABLE 4.1 - PHOTOSYNTHETIC PHOTON FLUX MAINTENANCE RESULTS **L150-407050300005O**

Test Condition 3 105 °C 0.070 A

Photometric test drive current: 0.070 A
Photometric test ambient temperature: 25 ± 2 °C
Failures observed: none

Load board ID	Device number	Zero hour measurements		Photosynthetic Photon Flux Maintenance (%)										
		PPF (µmol/s)	VF (V)	1000	2000	3000	4000	5000	6000	7000	8000	9000	10000	11000
020000107325031C	D1	4.88	28.18	100.3	100.2	100.1	100.0	100.0	99.8	99.7	99.7	99.6	99.7	99.7
	D2	4.86	28.19	100.6	100.4	100.3	100.2	100.2	99.9	99.9	99.8	99.7	99.9	99.9
	D3	4.85	28.20	100.5	100.4	100.3	100.2	100.2	100.0	99.9	99.9	99.9	100.0	100.0
	D4	4.89	28.20	100.4	100.4	100.2	100.1	100.2	99.9	99.9	99.9	99.8	99.9	99.8
	D5	4.89	28.19	100.8	100.6	100.5	100.5	100.5	100.2	100.1	100.1	100.0	100.1	100.0
	D6	4.87	28.17	100.4	100.3	100.2	100.2	100.2	99.9	99.9	100.0	99.9	100.1	100.1
	D7	4.85	28.19	100.6	100.4	100.3	100.2	100.3	100.2	100.1	100.1	100.0	100.1	100.1
	D8	4.91	28.18	100.3	100.2	100.0	100.0	99.9	99.6	99.5	99.4	99.3	99.3	99.2
	D9	4.91	28.28	100.5	100.4	100.3	100.2	100.2	100.0	99.9	99.9	99.8	99.9	99.9
	D10	4.89	28.29	100.6	100.5	100.4	100.4	100.4	100.2	100.1	100.2	100.1	100.2	100.1
	D11	4.93	28.27	100.4	100.3	100.2	100.1	100.1	99.8	99.7	99.6	99.5	99.6	99.5
	D12	4.93	28.19	100.2	100.1	99.9	99.8	99.8	99.5	99.4	99.4	99.3	99.4	99.3
C400001082AC031C	D1	4.85	28.15	100.4	100.3	100.1	100.0	99.9	99.8	99.7	99.7	99.6	99.6	99.5
	D2	4.87	28.19	100.3	100.2	100.1	100.1	99.9	99.8	99.7	99.7	99.6	99.6	99.6
	D3	4.88	28.18	100.6	100.5	100.3	100.2	100.1	100.0	99.9	99.8	99.7	99.7	99.5
	D4	4.89	28.23	100.5	100.4	100.2	100.2	100.0	99.9	99.8	99.8	99.7	99.7	99.6
	D5	4.91	28.17	100.4	100.3	100.2	100.1	100.0	99.8	99.8	99.7	99.7	99.8	99.7
	D6	4.89	28.30	100.5	100.4	100.2	100.1	100.0	99.9	99.8	99.8	99.8	99.8	99.8
	D7	4.88	28.21	100.5	100.4	100.2	100.1	100.0	99.8	99.7	99.7	99.6	99.7	99.6
	D8	4.92	28.28	100.4	100.3	100.2	100.1	100.0	99.9	99.9	99.9	99.9	100.1	100.1
	D9	4.89	28.22	100.3	100.2	100.2	100.1	100.0	99.9	99.8	99.8	99.8	99.8	99.8
	D10	4.91	28.15	100.3	100.2	100.1	100.0	99.9	99.7	99.7	99.6	99.5	99.5	99.4
	D11	4.91	28.12	100.3	100.1	100.0	99.9	99.7	99.6	99.4	99.4	99.2	99.1	98.9
	D12	4.91	28.16	100.4	100.3	100.1	100.0	99.8	99.7	99.6	99.6	99.5	99.6	99.5

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TABLE 4.1 - PHOTOSYNTHETIC PHOTON FLUX MAINTENANCE RESULTS **L150-40705030000S0**

Test Condition 3 105 °C 0.070 A

Photometric test drive current: 0.070 A
Photometric test ambient temperature: 25 ± 2 °C
Failures observed: none

Load board ID	Device number	Zero hour measurements		Photosynthetic Photon Flux Maintenance (%)										
		PPF (µmol/s)	VF (V)	1000	2000	3000	4000	5000	6000	7000	8000	9000	10000	11000
DE000010772003 1C	D1	4.90	28.12	100.3	100.2	100.1	99.9	99.7	99.6	99.5	99.5	99.5	99.6	99.5
	D2	4.90	28.17	100.4	100.2	100.1	100.0	99.8	99.7	99.6	99.6	99.5	99.6	99.5
	D3	4.85	28.21	100.6	100.6	100.6	100.5	100.4	100.3	100.2	100.3	100.2	100.3	100.2
	D4	4.85	28.18	100.5	100.5	100.4	100.3	100.1	100.0	99.9	99.9	99.8	99.8	99.7
	D5	4.89	28.19	100.4	100.3	100.2	100.1	99.9	99.8	99.7	99.8	99.6	99.7	99.7
	D6	4.91	28.21	100.3	100.2	100.1	99.9	99.7	99.6	99.5	99.5	99.3	99.3	99.1
	D7	4.91	28.24	100.4	100.3	100.2	100.1	99.9	99.8	99.7	99.7	99.6	99.6	99.5
	D8	4.90	28.20	100.2	100.3	100.2	100.1	99.9	99.8	99.7	99.8	99.7	99.7	99.7
	D9	4.91	28.23	100.4	100.4	100.3	100.2	100.0	99.9	99.7	99.7	99.6	99.6	99.5
	D10	4.92	28.22	100.5	100.4	100.3	100.2	100.0	99.9	99.8	99.8	99.7	99.7	99.6
	D11	4.93	28.17	100.3	100.2	100.1	99.9	99.8	99.6	99.5	99.5	99.4	99.3	99.2
	D12	4.93	28.19	100.4	100.3	100.2	100.1	99.9	99.8	99.7	99.7	99.6	99.7	99.6
			n	36	36	36	36	36	36	36	36	36	36	36
			mean	100.4	100.3	100.2	100.1	100.0	99.8	99.8	99.8	99.7	99.7	99.7
			median	100.4	100.3	100.2	100.1	100.0	99.8	99.7	99.8	99.7	99.7	99.6
			std. dev.	0.1	0.1	0.1	0.1	0.2	0.2	0.2	0.2	0.2	0.3	0.3
			min	100.2	100.1	99.9	99.8	99.7	99.5	99.4	99.4	99.2	99.1	98.9
			max	100.8	100.6	100.6	100.5	100.5	100.3	100.2	100.3	100.2	100.3	100.2

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Test Condition 3 105 °C 0.070 A

TABLE 4.1 - PHOTOSYNTHETIC PHOTON FLUX MAINTENANCE RESULTS **L150-407050300000S0**

Test Condition 3 105 °C 0.070 A

Photometric test drive current: 0.070 A
Photometric test ambient temperature: 25 ± 2 °C
Failures observed: none

Load board ID	Device number	Zero hour measurements		Photosynthetic Photon Flux Maintenance (%)										
		PPF (µmol/s)	VF (V)	12000	13000	14000	15000	16000	17000					
020000107325031C	D1	4.88	28.18	99.7	99.7	99.7	99.9	100.1	99.9					
	D2	4.86	28.19	99.8	99.7	99.7	99.7	99.9	99.6					
	D3	4.85	28.20	99.9	99.9	99.9	100.1	100.3	100.1					
	D4	4.89	28.20	99.7	99.7	99.7	99.9	99.9	99.8					
	D5	4.89	28.19	99.9	99.9	99.8	99.9	100.0	99.8					
	D6	4.87	28.17	100.0	100.1	100.2	100.4	100.4	100.3					
	D7	4.85	28.19	100.0	100.0	100.0	100.1	100.3	100.1					
	D8	4.91	28.18	99.1	99.0	98.9	98.9	99.0	98.8					
	D9	4.91	28.28	99.8	99.9	99.9	100.2	100.4	100.3					
	D10	4.89	28.29	100.1	100.1	100.1	100.3	100.5	100.4					
	D11	4.93	28.27	99.4	99.3	99.3	99.3	99.3	99.1					
	D12	4.93	28.19	99.3	99.3	99.3	99.6	99.7	99.6					
C400001082AC031C	D1	4.85	28.15	99.5	99.4	99.5	99.7	99.8	99.5					
	D2	4.87	28.19	99.4	99.3	99.3	99.5	99.4	99.1					
	D3	4.88	28.18	99.3	99.1	99.0	99.0	98.9	98.7					
	D4	4.89	28.23	99.6	99.5	99.5	99.7	99.7	99.6					
	D5	4.91	28.17	99.7	99.6	99.7	99.7	99.7	99.6					
	D6	4.89	28.30	99.6	99.6	99.6	99.8	99.8	99.6					
	D7	4.88	28.21	99.4	99.3	99.3	99.3	99.2	99.1					
	D8	4.92	28.28	100.0	100.0	100.1	100.8	100.8	100.6					
	D9	4.89	28.22	99.7	99.7	99.8	100.0	100.1	100.0					
	D10	4.91	28.15	99.2	99.1	99.0	99.0	99.0	98.8					
	D11	4.91	28.12	98.6	97.9	98.2	98.2	98.1	97.8					
	D12	4.91	28.16	99.4	99.4	99.3	99.6	99.7	99.5					

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TABLE 4.1 - PHOTOSYNTHETIC PHOTON FLUX MAINTENANCE RESULTS **L150-4070503000050**

Test Condition 3 **105 °C** **0.070 A**

Photometric test drive current: 0.070 A
Photometric test ambient temperature: 25 ± 2 °C
Failures observed: none

Load board ID	Device number	Zero hour measurements PPF (µmol/s)	Zero hour measurements VF (V)	Photosynthetic Photon Flux Maintenance (%) 12000	13000	14000	15000	16000	17000
DE0000107720031C	D1	4.90	28.12	99.4	99.5	99.5	99.9	99.9	99.7
	D2	4.90	28.17	99.5	99.5	99.5	100.0	100.0	99.9
	D3	4.85	28.21	100.2	100.3	100.3	100.5	100.7	100.5
	D4	4.85	28.18	99.6	99.7	99.6	99.9	99.9	99.8
	D5	4.89	28.19	99.6	99.7	99.6	99.8	99.9	99.8
	D6	4.91	28.21	99.0	99.0	98.8	98.9	98.9	98.7
	D7	4.91	28.24	99.4	99.4	99.4	99.5	99.5	99.3
	D8	4.90	28.20	99.7	99.7	99.7	99.9	100.2	100.0
	D9	4.91	28.23	99.4	99.4	99.3	99.5	99.4	99.3
	D10	4.92	28.22	99.5	99.5	99.4	99.7	99.7	99.6
	D11	4.93	28.17	99.1	99.1	99.1	99.2	99.2	99.0
	D12	4.93	28.19	99.5	99.5	99.5	99.8	99.8	99.7
			n	36	36	36	36	36	36
			mean	99.6	99.5	99.5	99.7	99.7	99.6
			median	99.5	99.5	99.5	99.8	99.8	99.6
			std. dev.	0.3	0.4	0.4	0.5	0.6	0.6
			min	98.6	97.9	98.2	98.2	98.1	97.8
			max	100.2	100.3	100.3	100.8	100.8	100.6

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Test Condition 3 105 °C 0.070 A

TABLE 4.2 - PHOTON FLUX, FAR RED MAINTENANCE RESULTS **L150-407050300000S0**

Test Condition 3 105 °C 0.070 A

Photometric test drive current: 0.070 A
Photometric test ambient temperature: 25 ± 2 °C
Failures observed: none

Load board ID	Device number	Zero hour measurements		Photon Flux Far Red Maintenance, 700-800nm (%)										
		PF_{FR} (µmol/s)	VF (V)	1000	2000	3000	4000	5000	6000	7000	8000	9000	10000	11000
020000107325031C	D1	0.14	28.18	103.2	103.8	104.5	104.7	105.2	105.4	105.4	105.7	106.0	106.0	106.1
	D2	0.14	28.19	103.6	104.3	104.8	105.2	105.7	105.8	106.0	106.0	106.0	106.3	106.4
	D3	0.14	28.20	103.4	103.9	104.8	105.0	105.4	105.5	105.7	106.0	106.0	106.5	106.7
	D4	0.14	28.20	103.4	104.0	104.7	105.0	105.4	105.7	105.7	105.9	106.2	106.2	106.5
	D5	0.14	28.19	103.2	103.9	104.5	105.0	105.1	105.4	105.7	105.7	105.8	105.9	106.3
	D6	0.14	28.17	103.3	104.2	104.6	105.2	105.5	105.9	105.8	106.3	106.4	106.7	106.7
	D7	0.14	28.19	103.5	104.0	104.8	104.9	105.7	105.5	106.1	106.1	106.4	106.5	106.8
	D8	0.15	28.18	103.2	103.7	104.2	104.7	105.0	104.9	105.2	105.2	105.5	105.5	105.5
	D9	0.14	28.28	103.2	104.0	104.5	104.9	105.1	105.4	105.7	105.7	106.1	106.1	106.1
	D10	0.14	28.29	103.4	104.1	104.8	105.3	105.4	105.7	105.8	105.9	106.2	106.4	106.4
	D11	0.15	28.27	103.2	103.8	104.5	105.0	105.2	105.4	105.4	105.6	105.7	105.8	105.8
	D12	0.14	28.19	103.0	103.7	104.1	104.5	105.0	104.9	105.1	105.6	105.4	105.7	105.7
C400001082AC031C	D1	0.14	28.15	103.5	104.3	104.9	105.2	105.3	105.3	105.8	105.9	106.2	106.1	106.5
	D2	0.14	28.19	103.6	104.2	104.8	105.2	105.4	105.5	105.7	105.9	106.2	106.0	106.5
	D3	0.14	28.18	103.4	104.3	104.8	105.2	105.2	105.5	105.5	105.7	105.9	106.1	106.1
	D4	0.14	28.23	103.6	104.4	104.9	105.3	105.7	105.7	105.9	106.1	106.5	106.5	106.7
	D5	0.14	28.17	103.6	104.4	104.9	105.4	105.5	105.5	106.0	105.9	106.2	106.3	106.9
	D6	0.14	28.30	103.3	104.3	105.0	105.5	105.5	105.6	105.9	106.5	106.4	106.5	106.9
	D7	0.14	28.21	103.4	104.2	104.7	105.1	105.2	105.5	105.6	105.9	105.9	106.2	106.3
	D8	0.14	28.28	103.5	104.3	104.8	105.3	105.4	105.5	105.8	106.2	106.1	106.6	107.0
	D9	0.14	28.22	103.4	104.4	104.9	105.3	105.3	105.6	105.8	106.1	106.3	106.3	106.8
	D10	0.14	28.15	103.0	103.9	104.5	105.2	105.3	105.5	105.6	105.9	105.9	106.0	106.2
	D11	0.14	28.12	103.3	104.2	104.8	105.3	105.3	105.3	105.7	105.6	105.7	105.8	105.8
	D12	0.14	28.16	103.4	104.2	104.8	105.1	105.1	105.3	105.4	105.7	105.7	106.2	106.4

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TABLE 4.2 - PHOTON FLUX, FAR RED MAINTENANCE RESULTS **L150-40705030000S0**

Test Condition 3 **105 °C** **0.070 A**

Photometric test drive current: 0.070 A
Photometric test ambient temperature: 25 ± 2 °C
Failures observed: none

Load board ID	Device number	Zero hour measurements PF$_{FR}$ (µmol/s)	Zero hour measurements VF (V)	Photon Flux Far Red Maintenance, 700-800nm (%) 1000	2000	3000	4000	5000	6000	7000	8000	9000	10000	11000
DE000010772003 1C	D1	0.14	28.12	103.1	103.6	104.2	104.8	104.6	104.9	105.0	105.2	105.6	105.7	106.0
	D2	0.14	28.17	102.8	103.6	104.1	104.4	104.6	104.8	105.2	105.4	105.5	105.7	106.0
	D3	0.14	28.21	103.3	103.8	104.5	104.8	104.9	105.3	105.3	106.0	105.9	106.3	106.5
	D4	0.14	28.18	103.6	104.0	104.7	105.2	105.0	105.4	105.4	105.7	105.6	106.0	106.2
	D5	0.14	28.19	103.0	103.9	104.3	104.7	104.8	105.0	105.4	105.7	105.7	106.0	106.1
	D6	0.14	28.21	103.2	104.1	104.2	104.9	104.9	105.2	105.5	105.6	105.6	105.7	105.8
	D7	0.14	28.24	103.2	103.8	104.3	104.8	104.9	105.3	105.3	105.8	105.8	105.9	106.0
	D8	0.14	28.20	103.0	103.7	104.4	104.9	104.9	105.1	105.4	105.8	105.8	106.1	106.4
	D9	0.14	28.23	103.4	104.3	104.6	105.0	105.2	105.2	105.5	105.6	105.6	106.0	106.0
	D10	0.14	28.22	103.1	103.8	104.3	104.6	104.8	104.8	105.3	105.4	105.4	105.8	105.8
	D11	0.15	28.17	103.3	103.9	104.3	104.9	104.7	104.8	105.3	105.4	105.2	105.6	105.8
	D12	0.15	28.19	103.1	103.7	104.3	104.7	104.5	104.9	105.1	105.1	105.3	105.6	105.9
			n	36	36	36	36	36	36	36	36	36	36	36
			mean	103.3	104.0	104.6	105.0	105.2	105.3	105.6	105.8	105.9	106.1	106.3
			median	103.3	104.0	104.6	105.0	105.2	105.4	105.6	105.7	105.9	106.0	106.3
			std. dev.	0.2	0.2	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.4
			min	102.8	103.6	104.1	104.4	104.5	104.8	105.0	105.1	105.2	105.5	105.5
			max	103.6	104.4	105.0	105.5	105.7	105.9	106.1	106.5	106.5	106.7	107.0

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Test Condition 3 105 °C 0.070 A

TABLE 4.2 - PHOTON FLUX, FAR RED MAINTENANCE RESULTS **L150-407050300000S0**

Test Condition 3 105 °C 0.070 A

Photometric test drive current: 0.070 A
Photometric test ambient temperature: 25 ± 2 °C
Failures observed: none

Load board ID	Device number	Zero hour measurements		Photon Flux Far Red Maintenance, 700-800nm (%)										
		PF_{FR} (µmol/s)	VF (V)	12000	13000	14000	15000	16000	17000					
020000107325031C	D1	0.14	28.18	106.4	106.6	106.7	106.8	107.2	107.1					
	D2	0.14	28.19	106.8	106.9	106.6	106.9	107.3	107.1					
	D3	0.14	28.20	106.9	106.8	106.9	107.7	108.0	107.6					
	D4	0.14	28.20	106.6	106.8	106.8	107.1	107.4	107.5					
	D5	0.14	28.19	106.5	106.7	106.5	106.8	106.9	107.1					
	D6	0.14	28.17	107.3	107.2	107.4	107.4	108.1	108.1					
	D7	0.14	28.19	107.0	107.0	107.0	107.2	107.7	107.8					
	D8	0.15	28.18	105.8	105.9	105.6	105.7	106.1	105.9					
	D9	0.14	28.28	106.5	106.9	106.7	107.1	107.8	107.9					
	D10	0.14	28.29	106.9	107.0	107.0	107.5	107.7	107.9					
	D11	0.15	28.27	106.0	106.0	106.1	106.3	106.5	106.4					
	D12	0.14	28.19	105.7	105.9	106.0	106.3	106.7	106.7					
C400001082AC031C	D1	0.14	28.15	106.3	106.6	106.7	107.3	107.4	107.3					
	D2	0.14	28.19	106.3	106.5	106.6	106.7	106.9	106.8					
	D3	0.14	28.18	105.9	105.7	105.8	105.7	105.9	105.8					
	D4	0.14	28.23	106.7	107.1	106.9	107.2	107.3	107.3					
	D5	0.14	28.17	106.9	106.7	106.9	107.1	107.3	107.4					
	D6	0.14	28.30	106.7	107.1	106.9	107.3	107.7	107.6					
	D7	0.14	28.21	106.4	106.6	106.4	106.5	106.6	106.7					
	D8	0.14	28.28	107.0	107.1	107.1	108.0	108.3	108.4					
	D9	0.14	28.22	106.8	107.1	107.0	107.5	107.8	108.1					
	D10	0.14	28.15	106.1	106.1	106.0	106.0	106.1	106.3					
	D11	0.14	28.12	105.6	104.9	105.0	105.0	105.3	105.2					
	D12	0.14	28.16	106.3	106.5	106.4	106.8	107.1	107.2					

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TABLE 4.2 - PHOTON FLUX, FAR RED MAINTENANCE RESULTS **L150-40705030000S0**

Test Condition 3 105 °C 0.070 A

Photometric test drive current: 0.070 A
Photometric test ambient temperature: 25 ± 2 °C
Failures observed: none

Load board ID	Device number	Zero hour measurements PF$_{FR}$ (µmol/s)	Zero hour measurements VF (V)	Photon Flux Far Red Maintenance, 700-800nm (%) 12000	13000	14000	15000	16000	17000
DE0000107720031C	D1	0.14	28.12	106.2	106.0	106.2	106.9	107.0	107.2
	D2	0.14	28.17	106.0	106.1	106.1	106.9	107.1	107.0
	D3	0.14	28.21	106.5	106.7	106.7	107.4	107.4	107.5
	D4	0.14	28.18	106.0	106.4	106.4	106.8	106.8	106.9
	D5	0.14	28.19	106.3	106.5	106.4	106.9	107.1	107.1
	D6	0.14	28.21	105.8	106.0	105.6	106.1	106.0	105.9
	D7	0.14	28.24	105.9	106.2	106.3	106.5	106.5	106.4
	D8	0.14	28.20	106.3	106.3	106.4	107.2	107.4	107.5
	D9	0.14	28.23	105.8	106.0	106.1	106.5	106.3	106.4
	D10	0.14	28.22	105.6	105.8	105.8	106.4	106.5	106.5
	D11	0.15	28.17	105.6	105.9	105.7	106.0	106.3	106.3
	D12	0.15	28.19	105.8	106.0	106.0	106.7	107.0	106.8
			n	36	36	36	36	36	36
			mean	106.3	106.4	106.4	106.8	107.0	107.0
			median	106.3	106.5	106.4	106.8	107.1	107.1
			std. dev.	0.5	0.5	0.5	0.6	0.7	0.7
			min	105.6	104.9	105.0	105.0	105.3	105.2
			max	107.3	107.2	107.4	108.0	108.3	108.4

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Test Condition 3 105 °C 0.070 A

TABLE 4.3 - CHROMATICITY SHIFT RESULTS **L150-407050300000S0**

Test Condition 3 105 °C 0.070 A

Photometric test drive current: 0.070 A
Photometric test ambient temperature: 25 ± 2 °C
Failures observed: none

Load board ID	Device number	Zero hour measurements			Chromaticity shift (Δu'v')										
		u'	v'		1000	2000	3000	4000	5000	6000	7000	8000	9000	10000	11000
020000107325031C	D1	0.2243	0.5056		0.0010	0.0012	0.0014	0.0016	0.0018	0.0020	0.0021	0.0022	0.0023	0.0024	0.0025
	D2	0.2246	0.5046		0.0009	0.0012	0.0014	0.0016	0.0018	0.0020	0.0021	0.0022	0.0023	0.0023	0.0024
	D3	0.2243	0.5049		0.0009	0.0012	0.0014	0.0016	0.0017	0.0019	0.0020	0.0021	0.0023	0.0023	0.0024
	D4	0.2246	0.5052		0.0009	0.0012	0.0014	0.0016	0.0018	0.0019	0.0020	0.0022	0.0023	0.0023	0.0024
	D5	0.2243	0.5051		0.0008	0.0011	0.0012	0.0014	0.0016	0.0018	0.0019	0.0020	0.0021	0.0022	0.0023
	D6	0.2248	0.5048		0.0010	0.0012	0.0014	0.0016	0.0017	0.0019	0.0020	0.0021	0.0023	0.0022	0.0024
	D7	0.2250	0.5048		0.0009	0.0011	0.0013	0.0015	0.0016	0.0018	0.0019	0.0020	0.0022	0.0023	0.0023
	D8	0.2252	0.5057		0.0010	0.0012	0.0014	0.0016	0.0018	0.0020	0.0021	0.0022	0.0024	0.0025	0.0026
	D9	0.2246	0.5062		0.0010	0.0012	0.0014	0.0016	0.0018	0.0020	0.0021	0.0022	0.0023	0.0024	0.0025
	D10	0.2244	0.5037		0.0009	0.0012	0.0014	0.0016	0.0017	0.0019	0.0020	0.0021	0.0023	0.0023	0.0025
	D11	0.2252	0.5056		0.0009	0.0012	0.0014	0.0015	0.0017	0.0019	0.0020	0.0021	0.0023	0.0024	0.0025
	D12	0.2245	0.5063		0.0009	0.0012	0.0014	0.0015	0.0018	0.0019	0.0021	0.0022	0.0023	0.0024	0.0025
C400001082AC031C	D1	0.2250	0.5049		0.0009	0.0011	0.0013	0.0014	0.0016	0.0018	0.0019	0.0020	0.0022	0.0022	0.0023
	D2	0.2248	0.5051		0.0009	0.0011	0.0013	0.0015	0.0016	0.0018	0.0019	0.0020	0.0022	0.0023	0.0024
	D3	0.2244	0.5067		0.0009	0.0011	0.0012	0.0014	0.0016	0.0017	0.0019	0.0020	0.0021	0.0023	0.0024
	D4	0.2247	0.5050		0.0008	0.0010	0.0012	0.0014	0.0016	0.0017	0.0019	0.0020	0.0022	0.0022	0.0024
	D5	0.2247	0.5050		0.0009	0.0011	0.0014	0.0015	0.0018	0.0019	0.0020	0.0021	0.0023	0.0024	0.0025
	D6	0.2248	0.5054		0.0009	0.0011	0.0013	0.0015	0.0017	0.0018	0.0019	0.0020	0.0022	0.0023	0.0024
	D7	0.2248	0.5051		0.0009	0.0011	0.0013	0.0016	0.0017	0.0019	0.0020	0.0021	0.0023	0.0024	0.0025
	D8	0.2243	0.5045		0.0010	0.0012	0.0014	0.0017	0.0019	0.0020	0.0022	0.0022	0.0023	0.0024	0.0025
	D9	0.2248	0.5056		0.0009	0.0012	0.0014	0.0016	0.0017	0.0019	0.0020	0.0021	0.0022	0.0023	0.0024
	D10	0.2246	0.5052		0.0009	0.0011	0.0013	0.0015	0.0016	0.0018	0.0019	0.0020	0.0022	0.0023	0.0024
	D11	0.2241	0.5063		0.0009	0.0011	0.0014	0.0015	0.0017	0.0019	0.0021	0.0022	0.0024	0.0025	0.0027
	D12	0.2243	0.5045		0.0009	0.0011	0.0013	0.0015	0.0017	0.0019	0.0021	0.0022	0.0023	0.0024	0.0026

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TABLE 4.3 - CHROMATICITY SHIFT RESULTS **L150-407050300000S0**

Test Condition 3 **105 °C** **0.070 A**

Photometric test drive current: 0.070 A
Photometric test ambient temperature: 25 ± 2 °C
Failures observed: none

Load board ID	Device number	Zero hour measurements u'	Zero hour measurements v'		Chromaticity shift (Δu'v') 1000	2000	3000	4000	5000	6000	7000	8000	9000	10000	11000
DE000010772003 1C	D1	0.2247	0.5054		0.0009	0.0012	0.0014	0.0016	0.0017	0.0019	0.0021	0.0022	0.0023	0.0024	0.0025
	D2	0.2246	0.5061		0.0009	0.0012	0.0013	0.0016	0.0018	0.0019	0.0021	0.0022	0.0024	0.0025	0.0026
	D3	0.2247	0.5056		0.0009	0.0011	0.0013	0.0015	0.0017	0.0018	0.0019	0.0021	0.0022	0.0023	0.0024
	D4	0.2248	0.5047		0.0010	0.0011	0.0014	0.0016	0.0017	0.0019	0.0020	0.0022	0.0023	0.0025	0.0025
	D5	0.2246	0.5054		0.0009	0.0011	0.0013	0.0016	0.0017	0.0019	0.0020	0.0022	0.0023	0.0024	0.0025
	D6	0.2249	0.5055		0.0009	0.0011	0.0013	0.0015	0.0017	0.0019	0.0020	0.0021	0.0023	0.0024	0.0026
	D7	0.2246	0.5054		0.0009	0.0012	0.0014	0.0016	0.0018	0.0019	0.0021	0.0022	0.0024	0.0024	0.0026
	D8	0.2244	0.5064		0.0010	0.0012	0.0014	0.0016	0.0017	0.0019	0.0021	0.0021	0.0023	0.0024	0.0024
	D9	0.2246	0.5050		0.0009	0.0011	0.0013	0.0015	0.0017	0.0019	0.0021	0.0022	0.0024	0.0025	0.0026
	D10	0.2247	0.5049		0.0009	0.0011	0.0013	0.0015	0.0016	0.0018	0.0019	0.0021	0.0022	0.0023	0.0025
	D11	0.2248	0.5060		0.0010	0.0012	0.0014	0.0016	0.0017	0.0019	0.0021	0.0022	0.0024	0.0025	0.0026
	D12	0.2246	0.5058		0.0008	0.0010	0.0013	0.0015	0.0016	0.0018	0.0020	0.0021	0.0022	0.0023	0.0025
				n	36	36	36	36	36	36	36	36	36	36	36
				mean	0.0009	0.0011	0.0013	0.0015	0.0017	0.0019	0.0020	0.0021	0.0023	0.0024	0.0025
				median	0.0009	0.0011	0.0014	0.0016	0.0017	0.0019	0.0020	0.0021	0.0023	0.0024	0.0025
				std. dev.	0.0000	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001
				min	0.0008	0.0010	0.0012	0.0014	0.0016	0.0017	0.0019	0.0020	0.0021	0.0022	0.0023
				max	0.0010	0.0012	0.0014	0.0017	0.0019	0.0020	0.0022	0.0022	0.0024	0.0025	0.0027

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Test Condition 3 105 °C 0.070 A

TABLE 4.3 - CHROMATICITY SHIFT RESULTS **L150-407050300000S0**

Test Condition 3 105 °C 0.070 A

Photometric test drive current: 0.070 A
Photometric test ambient temperature: 25 ± 2 °C
Failures observed: none

Load board ID	Device number	Zero hour measurements u'	Zero hour measurements v'		Chromaticity shift (Δu'v') 12000	13000	14000	15000	16000	17000				
020000107325031C	D1	0.2243	0.5056		0.0026	0.0027	0.0028	0.0028	0.0028	0.0027				
	D2	0.2246	0.5046		0.0026	0.0027	0.0028	0.0028	0.0027	0.0027				
	D3	0.2243	0.5049		0.0025	0.0025	0.0026	0.0024	0.0024	0.0023				
	D4	0.2246	0.5052		0.0025	0.0027	0.0027	0.0026	0.0026	0.0026				
	D5	0.2243	0.5051		0.0024	0.0026	0.0026	0.0026	0.0026	0.0025				
	D6	0.2248	0.5048		0.0025	0.0025	0.0026	0.0026	0.0027	0.0027				
	D7	0.2250	0.5048		0.0025	0.0025	0.0027	0.0027	0.0026	0.0026				
	D8	0.2252	0.5057		0.0028	0.0029	0.0030	0.0031	0.0031	0.0031				
	D9	0.2246	0.5062		0.0026	0.0026	0.0027	0.0026	0.0025	0.0026				
	D10	0.2244	0.5037		0.0025	0.0026	0.0027	0.0027	0.0027	0.0027				
	D11	0.2252	0.5056		0.0027	0.0028	0.0029	0.0028	0.0028	0.0028				
	D12	0.2245	0.5063		0.0026	0.0027	0.0028	0.0027	0.0028	0.0028				
C400001082AC031C	D1	0.2250	0.5049		0.0024	0.0025	0.0026	0.0025	0.0025	0.0024				
	D2	0.2248	0.5051		0.0025	0.0026	0.0027	0.0026	0.0026	0.0025				
	D3	0.2244	0.5067		0.0025	0.0027	0.0029	0.0028	0.0029	0.0029				
	D4	0.2247	0.5050		0.0025	0.0025	0.0027	0.0026	0.0027	0.0027				
	D5	0.2247	0.5050		0.0025	0.0026	0.0028	0.0027	0.0028	0.0028				
	D6	0.2248	0.5054		0.0025	0.0025	0.0027	0.0026	0.0026	0.0026				
	D7	0.2248	0.5051		0.0026	0.0027	0.0029	0.0028	0.0028	0.0027				
	D8	0.2243	0.5045		0.0026	0.0027	0.0028	0.0025	0.0026	0.0027				
	D9	0.2248	0.5056		0.0025	0.0026	0.0027	0.0026	0.0025	0.0025				
	D10	0.2246	0.5052		0.0025	0.0027	0.0028	0.0028	0.0028	0.0028				
	D11	0.2241	0.5063		0.0028	0.0030	0.0032	0.0032	0.0032	0.0032				
	D12	0.2243	0.5045		0.0026	0.0027	0.0029	0.0028	0.0028	0.0027				

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TABLE 4.3 - CHROMATICITY SHIFT RESULTS **L150-407050300000S0**

Test Condition 3 **105 °C** **0.070 A**

Photometric test drive current: 0.070 A
Photometric test ambient temperature: 25 ± 2 °C
Failures observed: none

Load board ID	Device number	Zero hour measurements u'	Zero hour measurements v'		Chromaticity shift (Δu'v') 12000	13000	14000	15000	16000	17000				
DE0000107720031C	D1	0.2247	0.5054		0.0026	0.0027	0.0028	0.0027	0.0027	0.0027				
	D2	0.2246	0.5061		0.0027	0.0028	0.0029	0.0027	0.0027	0.0028				
	D3	0.2247	0.5056		0.0025	0.0026	0.0026	0.0026	0.0026	0.0027				
	D4	0.2248	0.5047		0.0026	0.0028	0.0028	0.0028	0.0028	0.0028				
	D5	0.2246	0.5054		0.0026	0.0028	0.0028	0.0028	0.0028	0.0028				
	D6	0.2249	0.5055		0.0027	0.0028	0.0029	0.0030	0.0030	0.0031				
	D7	0.2246	0.5054		0.0027	0.0028	0.0029	0.0029	0.0029	0.0030				
	D8	0.2244	0.5064		0.0026	0.0027	0.0027	0.0027	0.0026	0.0026				
	D9	0.2246	0.5050		0.0028	0.0029	0.0029	0.0029	0.0029	0.0030				
	D10	0.2247	0.5049		0.0026	0.0027	0.0028	0.0026	0.0027	0.0028				
	D11	0.2248	0.5060		0.0027	0.0029	0.0029	0.0030	0.0030	0.0030				
	D12	0.2246	0.5058		0.0026	0.0026	0.0028	0.0027	0.0027	0.0027				
				n	36	36	36	36	36	36				
				mean	0.0026	0.0027	0.0028	0.0027	0.0027	0.0027				
				median	0.0026	0.0027	0.0028	0.0027	0.0027	0.0027				
				std. dev.	0.0001	0.0001	0.0001	0.0002	0.0002	0.0002				
				min	0.0024	0.0025	0.0026	0.0024	0.0024	0.0023				
				max	0.0028	0.0030	0.0032	0.0032	0.0032	0.0032				

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Test Condition 3 105 °C 0.070 A

TABLE 4.4 - FORWARD VOLTAGE MAINTENANCE RESULTS **L150-407050300000S0**

Test Condition 3 105 °C 0.070 A

Photometric test drive current: 0.070 A
Photometric test ambient temperature: 25 ± 2 °C
Failures observed: none

Load board ID	Device number	Zero hour measurements Vf (V)		Forward Voltage Maintainence (%) 1000	2000	3000	4000	5000	6000	7000	8000	9000	10000	11000
020000107325031C	D1		28.18	100.02	100.05	100.06	100.07	100.09	100.09	100.10	100.10	100.10	100.11	100.11
	D2		28.19	100.01	100.03	100.05	100.06	100.07	100.08	100.10	100.09	100.09	100.10	100.10
	D3		28.20	100.00	100.02	100.04	100.05	100.06	100.06	100.08	100.08	100.08	100.08	100.08
	D4		28.20	100.00	100.03	100.04	100.05	100.07	100.07	100.08	100.08	100.08	100.09	100.09
	D5		28.19	100.01	100.03	100.04	100.05	100.07	100.06	100.07	100.07	100.08	100.08	100.08
	D6		28.17	100.02	100.04	100.05	100.07	100.09	100.08	100.09	100.09	100.10	100.10	100.10
	D7		28.19	100.01	100.03	100.04	100.05	100.06	100.07	100.07	100.07	100.08	100.08	100.09
	D8		28.18	100.01	100.03	100.04	100.05	100.05	100.07	100.06	100.07	100.07	100.08	100.08
	D9		28.28	99.99	100.01	100.03	100.04	100.05	100.06	100.07	100.08	100.08	100.08	100.09
	D10		28.29	99.98	100.00	100.01	100.03	100.04	100.05	100.05	100.07	100.07	100.07	100.07
	D11		28.27	99.98	100.00	100.01	100.03	100.04	100.04	100.04	100.05	100.05	100.05	100.06
	D12		28.19	100.00	100.02	100.03	100.05	100.06	100.06	100.06	100.07	100.07	100.07	100.08
C400001082AC031C	D1		28.15	100.02	100.04	100.04	100.06	100.07	100.07	100.10	100.11	100.09	100.10	100.11
	D2		28.19	100.00	100.03	100.02	100.05	100.06	100.06	100.07	100.08	100.08	100.08	100.08
	D3		28.18	99.99	100.02	100.01	100.04	100.05	100.05	100.06	100.06	100.07	100.07	100.07
	D4		28.23	99.99	100.01	100.01	100.04	100.05	100.06	100.06	100.07	100.08	100.08	100.08
	D5		28.17	100.01	100.03	100.04	100.06	100.07	100.08	100.09	100.08	100.08	100.09	100.09
	D6		28.30	99.98	100.01	100.02	100.04	100.06	100.07	100.07	100.07	100.08	100.09	100.09
	D7		28.21	100.00	100.03	100.04	100.05	100.06	100.07	100.08	100.09	100.09	100.09	100.10
	D8		28.28	99.98	100.01	100.02	100.03	100.04	100.06	100.07	100.07	100.07	100.09	100.08
	D9		28.22	100.01	100.03	100.04	100.06	100.07	100.07	100.08	100.09	100.09	100.12	100.10
	D10		28.15	100.01	100.03	100.03	100.05	100.06	100.06	100.07	100.07	100.07	100.08	100.08
	D11		28.12	100.01	100.03	100.03	100.05	100.06	100.06	100.07	100.07	100.08	100.08	100.08
	D12		28.16	100.02	100.04	100.05	100.06	100.07	100.08	100.09	100.09	100.09	100.10	100.10

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TABLE 4.4 - FORWARD VOLTAGE MAINTENANCE RESULTS **L150-40705030000S0**

Test Condition 3 **105 °C** **0.070 A**

Photometric test drive current: 0.070 A
Photometric test ambient temperature: 25 ± 2 °C
Failures observed: none

Load board ID	Device number	Zero hour measurements Vf (V)	Forward Voltage Maintainence (%) 1000	2000	3000	4000	5000	6000	7000	8000	9000	10000	11000
DE000010772003 1C	D1	28.12	100.02	100.04	100.04	100.05	100.07	100.07	100.07	100.07	100.08	100.09	100.09
	D2	28.17	100.02	100.04	100.05	100.06	100.07	100.08	100.09	100.09	100.09	100.10	100.10
	D3	28.21	99.97	100.02	100.03	100.05	100.06	100.06	100.07	100.07	100.07	100.08	100.08
	D4	28.18	99.99	100.03	100.05	100.06	100.07	100.07	100.08	100.08	100.09	100.09	100.09
	D5	28.19	99.99	100.03	100.04	100.05	100.06	100.07	100.08	100.08	100.08	100.09	100.09
	D6	28.21	99.98	100.02	100.03	100.04	100.05	100.05	100.06	100.06	100.06	100.07	100.07
	D7	28.24	99.97	100.01	100.02	100.03	100.04	100.05	100.05	100.06	100.06	100.07	100.07
	D8	28.20	100.00	100.04	100.05	100.06	100.07	100.08	100.08	100.09	100.09	100.10	100.10
	D9	28.23	99.98	100.01	100.02	100.03	100.05	100.05	100.06	100.06	100.06	100.07	100.07
	D10	28.22	99.98	100.01	100.02	100.03	100.05	100.05	100.06	100.06	100.06	100.06	100.06
	D11	28.17	100.00	100.02	100.03	100.04	100.05	100.06	100.06	100.07	100.07	100.07	100.07
	D12	28.19	100.00	100.02	100.03	100.04	100.05	100.05	100.06	100.06	100.07	100.07	100.07
		n	36	36	36	36	36	36	36	36	36	36	36
		mean	100.0	100.0	100.0	100.0	100.1	100.1	100.1	100.1	100.1	100.1	100.1
		median	100.0	100.0	100.0	100.0	100.1	100.1	100.1	100.1	100.1	100.1	100.1
		std. dev.	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
		min	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.1	100.1	100.1
		max	100.0	100.0	100.1	100.1	100.1	100.1	100.1	100.1	100.1	100.1	100.1

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Test Condition 3 105 °C 0.070 A

TABLE 4.4 - FORWARD VOLTAGE MAINTENANCE RESULTS **L150-407050300000S0**

Test Condition 3 105 °C 0.070 A

Photometric test drive current: 0.070 A
Photometric test ambient temperature: 25 ± 2 °C
Failures observed: none

Load board ID	Device number	Zero hour measurements Vf (V)		Forward Voltage Maintainence (%) 12000	13000	14000	15000	16000	17000					
020000107325031C	D1		28.18	100.11	100.14	100.14	100.14	100.15	100.16					
	D2		28.19	100.10	100.12	100.13	100.13	100.14	100.14					
	D3		28.20	100.08	100.10	100.10	100.11	100.11	100.13					
	D4		28.20	100.09	100.10	100.11	100.11	100.12	100.13					
	D5		28.19	100.08	100.10	100.10	100.11	100.11	100.12					
	D6		28.17	100.10	100.12	100.12	100.13	100.14	100.15					
	D7		28.19	100.09	100.10	100.11	100.11	100.11	100.12					
	D8		28.18	100.08	100.09	100.10	100.10	100.10	100.11					
	D9		28.28	100.09	100.11	100.12	100.13	100.14	100.15					
	D10		28.29	100.07	100.09	100.10	100.11	100.12	100.12					
	D11		28.27	100.06	100.07	100.09	100.09	100.08	100.10					
	D12		28.19	100.08	100.08	100.10	100.10	100.10	100.11					
C400001082AC031C	D1		28.15	100.10	100.12	100.12	100.15	100.15	100.14					
	D2		28.19	100.09	100.10	100.11	100.13	100.12	100.12					
	D3		28.18	100.07	100.09	100.09	100.10	100.10	100.10					
	D4		28.23	100.08	100.13	100.11	100.13	100.13	100.13					
	D5		28.17	100.09	100.11	100.12	100.12	100.13	100.13					
	D6		28.30	100.09	100.11	100.12	100.14	100.14	100.14					
	D7		28.21	100.12	100.12	100.12	100.13	100.14	100.14					
	D8		28.28	100.10	100.10	100.11	100.11	100.12	100.12					
	D9		28.22	100.10	100.11	100.14	100.14	100.15	100.14					
	D10		28.15	100.08	100.09	100.11	100.11	100.11	100.11					
	D11		28.12	100.08	100.09	100.10	100.11	100.11	100.12					
	D12		28.16	100.10	100.12	100.12	100.13	100.13	100.14					

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TABLE 4.4 - FORWARD VOLTAGE MAINTENANCE RESULTS — **L150-40705030000S0**

Test Condition 3 — **105 °C** — **0.070 A**

Photometric test drive current: 0.070 A
Photometric test ambient temperature: 25 ± 2 °C
Failures observed: none

Load board ID	Device number	Zero hour measurements Vf (V)	Forward Voltage Maintainence (%) 12000	13000	14000	15000	16000	17000					
DE0000107720031C	D1	28.12	100.08	100.10	100.11	100.12	100.12	100.12					
	D2	28.17	100.10	100.11	100.12	100.13	100.14	100.14					
	D3	28.21	100.08	100.09	100.10	100.11	100.11	100.12					
	D4	28.18	100.09	100.11	100.11	100.12	100.15	100.13					
	D5	28.19	100.09	100.10	100.11	100.11	100.11	100.12					
	D6	28.21	100.07	100.08	100.09	100.10	100.10	100.10					
	D7	28.24	100.06	100.08	100.08	100.09	100.09	100.10					
	D8	28.20	100.10	100.11	100.12	100.13	100.13	100.13					
	D9	28.23	100.06	100.08	100.09	100.09	100.10	100.14					
	D10	28.22	100.06	100.08	100.08	100.09	100.09	100.13					
	D11	28.17	100.08	100.09	100.09	100.10	100.10	100.11					
	D12	28.19	100.07	100.09	100.09	100.10	100.10	100.11					
		n	36	36	36	36	36	36					
		mean	100.1	100.1	100.1	100.1	100.1	100.1					
		median	100.1	100.1	100.1	100.1	100.1	100.1					
		std. dev.	0.0	0.0	0.0	0.0	0.0	0.0					
		min	100.1	100.1	100.1	100.1	100.1	100.1					
		max	100.1	100.1	100.1	100.1	100.2	100.2					

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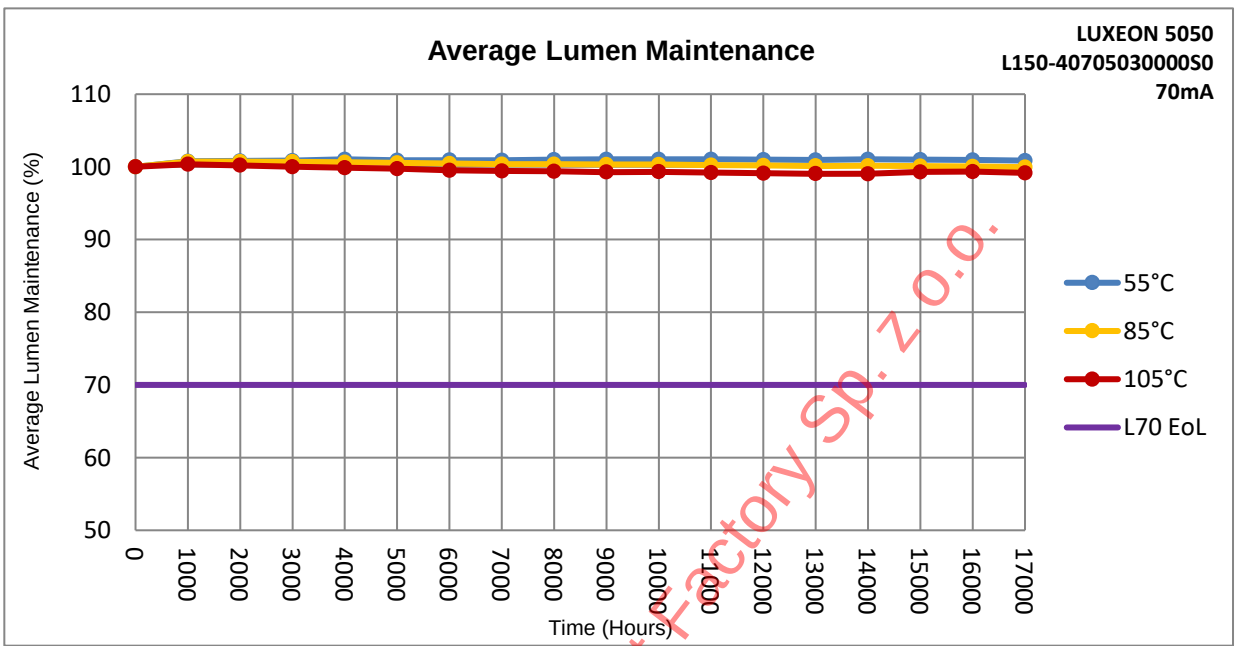
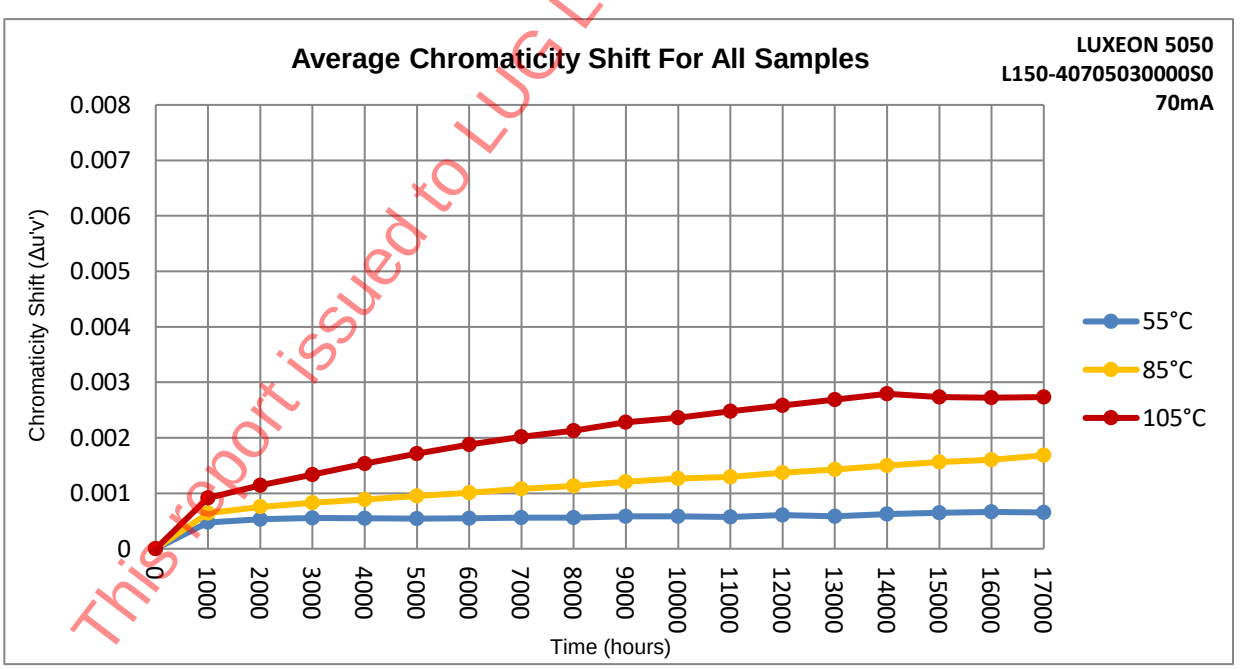
5.0 Charts:





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6.0 Additional Information

6.1 Auxiliary 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 LUMI012, LUXEON 5050 L150-4070503000000S0 load board example.

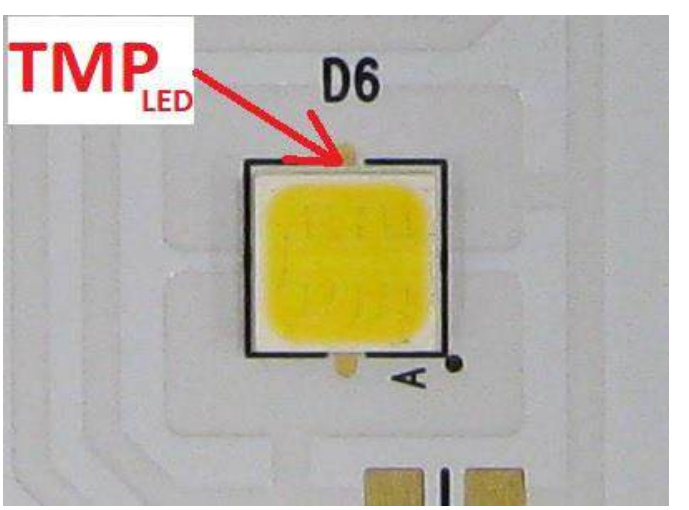

Fig. 2 LUXEON 5050 L150-4070503000000S0 model LED and temperature measurement point.

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6.4 Dimensional Drawing*

* all dimension in millimeters

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- END OF REPORT -

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Manufacturing place: *Miejsce Produkcji*
LUG Light Factory Sp. z o.o.
ul. Gorzowska 11, 65-127 Zielona Góra, Polska / Poland

Trade name: *Znak towarowy:*
LUG

Type(s)/Model(s): *Typ(y), model(e):*
URBINO LED S family
Technical data/ *Dane Techniczne*: 220 - 240V, 50/60Hz, IP66, IK10, cl. I – 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 60598-1:2015; EN 60598-1:2015/A1:2018, EN 62262:2002

(the test reports/ *raporty z badań:* B10-3/093/B/22 + Att.(EU GD and ND ref No. B10-3/093/B/1/22) dated 08-07-2022; B10-3/096/B/22 dated 08-07-2022 performed by the Testing Laboratory Łukasiewicz-IMiF PREDOM Division (Accreditation PCA AB 003).

Date:*Data* 15-07-2022 **Signatures:**

Name:	Józef Foks	Filip Walczak
Position:	Certification Office Łukasiewicz- IMiF PREDOM	Leader of the Łukasiewicz- IMiF PREDOM Division

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For the product: *Dla wyrobów:*

Luminaires for road and street lighting *Oprawy oświetleniowe drogowe i uliczne*

Trade name(s): *Znak towarowy:*

LUG

Type(s)/Model(s): *Typ(y), model(e):*

URBINO LED S family – see the Appendix/ *szczegóły – patrz Załącznik*

Complying with the following EPRS for performance: *Zgodnymi z następującym EPRS dot. cech funkcjonalnych*

EPRS 003:2018-05 based on/ *opartym na*
EN 62722-2-1:2016 - see the test report / *patrz raport z badań*
B10-3/101/B/22 dated/ *z dnia* 21.07.2022 performed by the Testing Laboratory Łukasiewicz-IMiF PREDOM Division (Accreditation PCA AB 003) + (Appendix No 1 – lists of the luminaires – on CD).

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Date: *Data* 29-07-2022

Signatures:

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Position:	Certification Office Łukasiewicz- IMiF PREDOM Division	Leader of the Łukasiewicz- IMiF PREDOM Division

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

File No. R1/ENECPLUS/22/0114

EN

URBINO LED S

220-240V
50/60 Hz
LED
PLUS 30
TR 054
IP 66
IK 10

130782.5L241.110.mod.001
URBINO LED S ED 48W 7430lm 4000K IP66 O11 - for residential area roads gray/graphite I

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

EN

URBINO LED S

Mechanical data

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

Body colour
gray/graphite

Operating temperature range [°C]
-40 ... +40

Body
high pressure die-cast aluminum

Lateral Surface Wind Exposed
0.035 m²

Type
O11,

Corrosion class
C4

Electrical data

Electrical connection
max 3x2,5 mm² wire

Power
220-240V 50/60Hz

Includes light source
yes

Luminaire power [W]
48

Output current [mA]
1000

Type of equipment ED

Light source / lamp LED

Surge protection
10kV

Optical data

Way of lighting
direct

Type of optic
O11 - for residential area roads

Reflector
white

Diffuser
tempered glass

Colour temperature [K]
4000

CRI/Ra
>70

MacAdam's steps
5

ULOR / DLOR
0% / 100%

Lumen luminaire [lm]
7430

Efficacy [lm/W]
155

Photobiological risk group RG1

SVM
0.025

PstLM
0.377

Number of LEDs
24

DarkSky
no

General data

Additional equipment
luminaire with pole mounting bracket ø76mm (index extension: .829), luminaire with adjustable bracket ø60mm with adjustment range from -110° to +55°/-20° to +145° (index extension: .867), luminaire with adjustable bracket ø76mm with adjustment range from -110° to +55°/-20° to +145° (index extension: .876), dual Zhaga connector for IoT controller and motion sensor (index extension: .875)

Additional information
Tilt adjustment: -15° to +15° (every 5°), CRI/Ra >70; the standard version of the luminaire is corrosion resistant according to class C4

Available on request
DALI, DIM 1..10V, knife switch,, CLO, NTC, NEMA connector, ZHAGA connector, version with increased corrosion resistance in accordance with class C5-M, extension of the warranty to 10 years

Other remarks
the pole and boom are not part of the luminaire

Lifetime L90B10
100 000 h

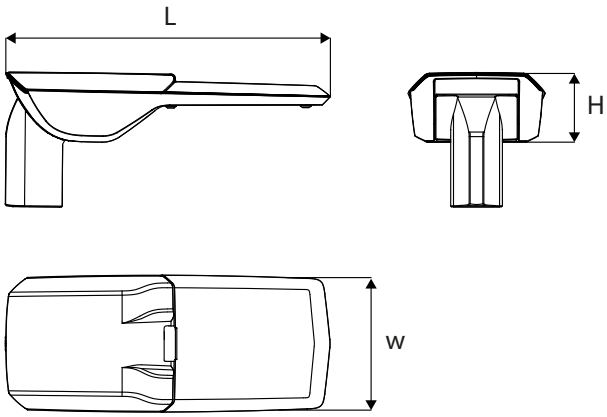
Warranty
5 years

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.
Up-to-date product info and 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%.

EN URBINO LED S

Dimensions

Dimensions [mm] LxWxH	Pallet quantity	Quantity in package	Net weight [kg]
470x200x100	60	1	4.45



Accessories

	☐ 150170.01409	Universal holder for stadium poles ⌀60mm		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		790013.101	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			

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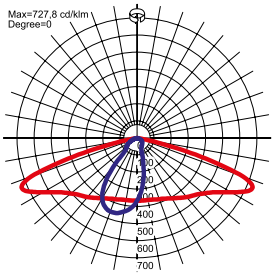
URBINO LED S

Light beam curves



Way of lighting