



Test Report issued under the responsibility of:  
PL-3 ITE PREDOM Division

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

Report Number. .... : **BS-3/174/B/17**  
Date of issue ..... : **07.06.2018**  
Total number of pages ..... : **42**

Name of Testing Laboratory  
preparing the Report ..... : **ITE PREDOM Division**

Applicant's name ..... : Philips Lighting Poland sp. z o.o. 64-920 Piła, ul. Kossaka 150  
Address ..... : O/Kętrzyn ul. Chrobrego 8, 11-400 Kętrzyn, Poland

**Test specification:**

Standard ..... : IEC 60598-2-3:2002/AMD1:2011 used in conjunction with  
IEC 60598-1:2014  
Test procedure..... : CB Scheme  
Non-standard test method..... : N/A

Test Report Form No..... : IEC60598\_2\_3K  
Test Report Form(s) Originator.... : Intertek Semko AB  
Master TRF ..... : 2016-09

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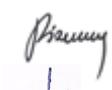
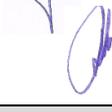
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<b>Test item description</b> .....	Luminaires for road and street lighting	
<b>Trade Mark</b> .....	Philips	
<b>Manufacturer</b> .....	Philips Lighting Poland sp. z o.o. 64-920 Piła, ul. Kossaka 150 O/Kętrzyn ul. Chrobrego 8, 11-400 Kętrzyn, Poland	
<b>Model/Type reference</b> .....	Coreline Malaga LED BRP101...I...-series and Coreline Malaga LED BRP102...I...-series	
<b>Ratings</b> .....	220 – 240V, 50/60Hz, IP65	
<b>Responsible Testing Laboratory (as applicable), testing procedure and testing location(s):</b>		
<input checked="" type="checkbox"/>	<b>CB Testing Laboratory:</b>	ITE PREDOM Division
<b>Testing location/ address</b> .....		02-255 Warszawa, ul. Krakowiaków 53, Poland
<input type="checkbox"/>	<b>Associated CB Testing Laboratory:</b>	
<b>Testing location/ address</b> .....		
<b>Tested by (name, function, signature) .....</b>		E. Bizunowicz 
<b>Approved by (name, function, signature) ..</b>		T. Małyska 
<b>Supervised by (name, function, signature) :</b>		A. Piotrowski 
<input type="checkbox"/>	<b>Testing procedure: CTF Stage 1:</b>	
<b>Testing location/ address</b> .....		
<b>Tested by (name, function, signature) .....</b>		
<b>Approved by (name, function, signature) ..</b>		
<input type="checkbox"/>	<b>Testing procedure: CTF Stage 2:</b>	
<b>Testing location/ address</b> .....		
<b>Tested by (name + signature).....</b>		
<b>Witnessed by (name, function, signature) . :</b>		
<b>Approved by (name, function, signature) ..</b>		
<input type="checkbox"/>	<b>Testing procedure: CTF Stage 3:</b>	
<input type="checkbox"/>	<b>Testing procedure: CTF Stage 4:</b>	
<b>Testing location/ address</b> .....		
<b>Tested by (name, function, signature) .....</b>		
<b>Witnessed by (name, function, signature) . :</b>		
<b>Approved by (name, function, signature) ..</b>		
<b>Supervised by (name, function, signature) :</b>		

**List of Attachments (including a total number of pages in each attachment):**

-Attachment No. 1 ( Report Reference No. BS-3/174/B/1/17 – 2 pages )

**Summary of testing: Tests Result – Positive****Tests performed (name of test and test clause):**

IEC 60598-2-3:2002/AMD1:2011 used in conjunction with IEC 60598-1:2014

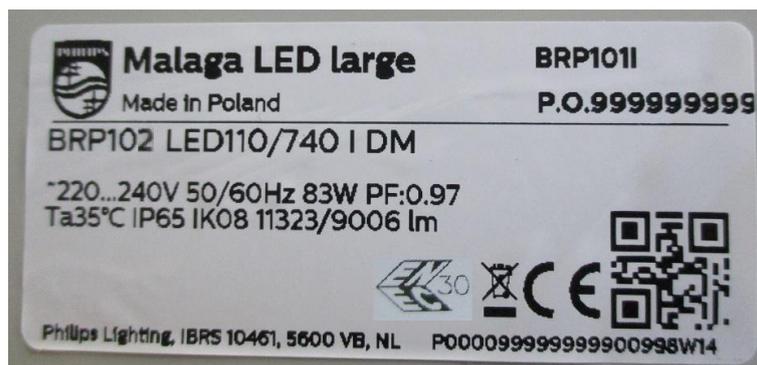
**Testing location:**

ITE PREDOM Division  
02-255 Warszawa, ul. Krakowiaków 53, Poland

**Summary of compliance with National Differences: P**

See Attachment No. 1 ( Report Reference No. BS-3/174/B/1/17 – 2 pages )

**The product fulfils the requirements of EN 60598-2-3:2003 + A1:2011 used in conjunction with EN 60598-1:2015**

**Copy of marking plate:**

<b>Test item particulars</b> ..... : Luminaires for road and street lighting	
<b>Classification of installation and use</b> ..... : Normal	
<b>Supply Connection</b> ..... : terminal block ..... :	
<b>Possible test case verdicts:</b> - 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)	
<b>Testing</b> ..... :	
<b>Date of receipt of test item</b> ..... : 14.04.2018	
<b>Date (s) of performance of tests</b> ..... : 14.04.2018 – 07.06.2018	
<b>General remarks:</b>	
"(See Enclosure #)" refers to additional information appended to the report. "(See appended table)" refers to a table appended to the report.	
<b>Throughout this report a <input checked="" type="checkbox"/> comma / <input type="checkbox"/> point is used as the decimal separator.</b>	
Clause numbers between brackets refer to clauses in IEC 60598-1	
<b>Manufacturer's Declaration per sub-clause 4.2.5 of IECEE 02:</b>	
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..... :	<input type="checkbox"/> <b>Yes</b> <input checked="" type="checkbox"/> <b>Not applicable</b>
<b>When differences exist; they shall be identified in the General product information section.</b>	
<b>Name and address of factory (ies)</b> .....	Philips Lighting Poland sp. z o.o. 64-920 Piła, ul. Kossaka 150 O/Kętrzyn ul. Chrobrego 8, 11-400 Kętrzyn, Poland

**General product information:**

<b>Name and address of the license holder:</b>	<b>Philips Lighting Poland sp. z o.o. 64-920 Piła, ul. Kossaka 150 O/Kętrzyn ul. Chrobrego 8, 11-400 Kętrzyn, Poland</b>
<b>Address of the factory:</b>	<b>Philips Lighting Poland sp. z o.o. 64-920 Piła, ul. Kossaka 150 O/Kętrzyn ul. Chrobrego 8, 11-400 Kętrzyn, Poland</b>
<b>Name of product:</b>	<b>Luminaires for road and street lighting</b>
<b>Type (model):</b>	<b>Coreline Malaga BRP101...I... - series and Coreline Malaga BRP102...I... - series (see bellow)</b>
<b>Trade mark :</b>	<b>PHILIPS</b>
<b>Technical data:</b>	
rated voltage	220-240V
rated current	max. 0,7 A
rated frequency	50/60Hz
number of lamps	30 - 90 LEDs
type of lamp	LED
protection against electric shock	class I
degree of protection	IP 65; IK08
classification of the luminaires, with respect to the supporting material	normal
mains connections	terminal block
ta	35°C

**List of the luminaires****Choice sheet of the luminaires Coreline Malaga BRP101...I... - series and Coreline Malaga BRP102...I... - series:****Example:**

BRP101 LED35/740 I DM MSP SRG10 H07RN-F 3Gx1.5 3

1
2
3
4
5
6
7
8

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

- |  |  |
|--|--|
| <ol style="list-style-type: none"> <li>1. <b>BRP101</b></li> <li>2. <b>LED35</b></li> <li>3. <b>740</b></li> <li>4. <b>I</b></li> <li>5. <b>DM</b></li> <li>6. <b>MSP</b></li> <li>7. <b>PZM-35</b></li> <li>7. <b>SRG10</b></li> <li>7. <b>FU</b></li> <li>8. <b>H07RN-F 3x1.5 3</b></li> </ol> | <ul style="list-style-type: none"> <li>- Code of the series (101, 102- CoreLine Malaga LED)</li> <li>- LEDGINE flux(x100) [lumen] range: from LED35 to LED 110</li> <li>- LEDGINE version/color – CRI&gt;70 NW 4000K</li> <li>- Class I</li> <li>- Optic DM, DW – Road distribution – core version</li> <li>- Marine salt protected coating</li> <li>- Photocell MicroMINI 35Lux</li> <li>- 10kV Surge Protection Device</li> <li>- Fuse 6A</li> <li>- POWER CABLE H07-RN-F Yx1.5 3m (1,5 mm<sup>2</sup>) Y is 2 or 3 core,</li> </ul> |
|--|--|

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

<b>LED's and electronic led driver system</b>	<b>PCB LED</b>	<b>Driver</b>	<b>Current</b>
<p style="text-align: center;"><b>LEDxxx</b></p> <p>Example: LED35 – 3500lm LED55 – 5500lm LED75 – 7500lm LED110 – 11000lm</p>	<p style="text-align: center;">PCB XXX XXX XX</p> <p>Example: PCB LER MC 30 NICH W740 5 140 PCB LER MC 60 NICH W740 5 140 PCB LER MC 90 NICH W740 5 140 (60 –no of LEDs; W740 –color temp)</p>	<p style="text-align: center;">Xi FP xxW xxxA xxxxx</p> <p>Example: Xitanium 50W 0.70A 230V-J cXt Xitanium Dim 100W 0.7A 1-10V 230V Y-sXt Xitanium 100W 0.7A 230V Y</p>	max.0,7A

After review of construction luminaires Coreline Malaga LED BRP101 LED37/740 I DM and Coreline Malaga LED BRP102LED110/740 I DM have been tested as a representative of all models of luminaires.

## IEC 60598-2-3

Clause	Requirement + Test	Result - Remark	Verdict
<b>3.2 (0)</b>	<b>GENERAL TEST REQUIREMENTS</b>		<b>P</b>
3.2 (0.1)	Information for luminaire design considered..... :	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> Lamp standard:	—
3.2 (0.3)	More sections applicable..... :	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> Section/s: EN 62031	—
<b>3.4 (2)</b>	<b>CLASSIFICATION OF LUMINAIRES</b>		<b>P</b>
3.4 (2.2)	Type of protection .....	Class I	P
3.4 (2.3)	Degree of protection .....	IP65	P
3.4 (2.4)	Luminaire suitable for direct mounting on normally flammable surfaces..... :	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	—
3.4 (2.5)	Luminaire for normal use .....	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	—
	Luminaire for rough service .....	Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	—
3.4 (-)	Modes of installation of road or street lighting		—
	a) on a pipe	Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	—
	b) on a mast arm	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	—
	c) on a post top	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	—
	d) on span or suspension wires	Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	—
	e) on a wall	Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	—
<b>3.5 (3)</b>	<b>MARKING</b>		<b>P</b>
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	50/60Hz	P
3.5 (3.3.3)	Operating temperature		P
3.5 (3.3.4)	Symbol or warning notice		N/A
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
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

IEC 60598-2-3			
Clause	Requirement + Test	Result - Remark	Verdict
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
	Cautionary symbol		P
3.5 (3.3.22)	Controllable luminaires, classification of insulation provided		P
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		P
	f) Suitability for indoors use		N/A
	g) Dimensions of the compartment		N/A
	h) Torque setting to be applied to bolts or screws		P
	i) Maximum mounting height		P

<b>3.6 (4)</b>	<b>CONSTRUCTION</b>		<b>P</b>
3.6 (4.2)	Components replaceable without difficulty		P
3.6 (4.3)	Wireways smooth and free from sharp edges		P
<b>3.6 (4.4)</b>	<b>Lampholders</b>		<b>N/A</b>
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

<b>IEC 60598-2-3</b>			
Clause	Requirement + Test	Result - Remark	Verdict
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
<b>3.6 (4.5)</b>	<b>Starter holders</b>		<b>N/A</b>
	Starter holder in luminaires other than class II		N/A
	Starter holder class II construction		N/A
<b>3.6 (4.6)</b>	<b>Terminal blocks</b>		<b>N/A</b>
	Tails		N/A
	Unsecured blocks		N/A
<b>3.6 (4.7)</b>	<b>Terminals and supply connections</b>		<b>P</b>
3.6 (4.7.1)	Contact to metal parts		N/A
3.6 (4.7.2)	Test 8 mm live conductor		P
	Test 8 mm earth conductor		P
3.6 (4.7.3)	Terminals for supply conductors		P
3.6 (4.7.3.1)	Welded method and material		N/A
	- stranded or solid conductor		N/A
	- spot welding		N/A
	- welding between wires		N/A
	- Type Z attachment		N/A
	- mechanical test according to 15.6.2		N/A
	- electrical test according to 15.6.3		N/A
	- heat test according to 15.6.3.2.3 and 15.6.3.2.4		N/A
3.6 (4.7.4)	Terminals other than supply connection		P
3.6 (4.7.5)	Heat-resistant wiring/sleeves		N/A

<b>IEC 60598-2-3</b>			
Clause	Requirement + Test	Result - Remark	Verdict
3.6 (4.7.6)	Multi-pole plug		N/A
	- test at 30 N		N/A
<b>3.6 (4.8)</b>	<b>Switches</b>		<b>N/A</b>
	- adequate rating		N/A
	- adequate fixing		N/A
	- polarized supply		N/A
	- compliance with IEC 61058-1 for electronic switches		N/A
<b>3.6 (4.9)</b>	<b>Insulating lining and sleeves</b>		<b>N/A</b>
3.6 (4.9.1)	Retention		N/A
	Method of fixing.....:		N/A
3.6 (4.9.2)	Insulated linings and sleeves:		<b>N/A</b>
	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
<b>3.6 (4.10)</b>	<b>Double or reinforced insulation</b>		<b>N/A</b>
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
	Interference suppression capacitors according to IEC 60384-14		N/A
3.6 (4.10.2)	Assembly gaps:		N/A
	- not coincidental		N/A
	- no straight access with test probe		N/A
3.6 (4.10.3)	Retention of insulation:		<b>N/A</b>
	- fixed		N/A
	- unable to be replaced; luminaire inoperative		N/A
	- sleeves retained in position		N/A
	- lining in lampholder		N/A
1.6 (4.10.4)	Protective impedance device		<b>N/A</b>
	Double or reinforced insulation bridged by appropriate and at least two resistors or two Y2 capacitors or one Y1 capacitor		N/A
	Y1 or Y2 capacitors comply with IEC 60384-14		N/A
	Resistors comply with test (a) in 14.1 of IEC 60065		N/A

IEC 60598-2-3			
Clause	Requirement + Test	Result - Remark	Verdict
<b>3.6 (4.11)</b>	<b>Electrical connections and current-carrying parts</b>		<b>P</b>
3.6 (4.11.1)	Contact pressure		P
3.6 (4.11.2)	Screws:		P
	- self-tapping screws		N/A
	- thread-cutting screws		P
3.6 (4.11.3)	Screw locking:		P
	- spring washer		P
	- 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
<b>3.6 (4.12)</b>	<b>Screws and connections (mechanical) and glands</b>		<b>P</b>
3.6 (4.12.1)	Screws not made of soft metal		P
	Screws of insulating material		N/A
	Torque test: torque (Nm); part .....	Driver, LED module cover, glass cover, earthing – 1,2Nm	P
	Torque test: torque (Nm); part .....		N/A
	Torque test: torque (Nm); part .....		N/A
3.6 (4.12.2)	Screws with diameter < 3 mm screwed into metal		N/A
3.6 (4.12.4)	Locked connections:		N/A
	- fixed arms; torque (Nm) .....		N/A
	- lampholder; torque (Nm) .....		N/A
	- push-button switches; torque 0,8 Nm .....		N/A
3.6 (4.12.5)	Screwed glands; force (Nm) .....	3,25Nm	P
<b>3.6 (4.13)</b>	<b>Mechanical strength</b>		<b>P</b>
3.6 (4.13.1)	Impact tests:		P
	- fragile parts; energy (Nm) .....	0,5Nm	P
	- other parts; energy (Nm) .....	0,70Nm	P
	a) live parts		P
	b) linings		N/A
	c) protection		P
	d) covers		P
3.6 (4.13.3)	Straight test finger		P
3.6 (4.13.4)	Rough service luminaires		N/A
	- IP54 or higher		N/A
	a) fixed		N/A
	b) hand-held		N/A
	c) delivered with a stand		N/A
	d) for temporary installations and suitable for mounting on a stand		N/A

IEC 60598-2-3			
Clause	Requirement + Test	Result - Remark	Verdict
3.6 (4.13.6)	Tumbling barrel		N/A
<b>3.6 (4.14)</b>	<b>Suspensions, fixings and means of adjusting</b>		<b>P</b>
3.6 (4.14.1)	Mechanical load:		P
	A) four times the weight		P
	B) torque 2,5 Nm		P
	C) bracket arm; bending moment (Nm) .....		N/A
	D) load track-mounted luminaires		N/A
	E) clip-mounted luminaires, glass-shelve. Thickness (mm) .....		N/A
	Metal rod. diameter (mm) .....		N/A
	Fixed luminaire or independent control gear without fixing devices		N/A
3.6 (4.14.2)	Load to flexible cables		N/A
	Mass (kg) .....	N/A	—
	Stress in conductors (N/mm <sup>2</sup> ) .....		N/A
	Mass (kg) of semi-luminaire .....		N/A
	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
<b>3.6 (4.15)</b>	<b>Flammable materials</b>		<b>N/A</b>
	- 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
<b>3.6 (4.16)</b>	<b>Luminaires for mounting on normally flammable surfaces</b>		<b>P</b>
	No lamp control gear.....	(compliance with Section 12)	N/A

IEC 60598-2-3			
Clause	Requirement + Test	Result - Remark	Verdict
3.6 (4.16.1)	Lamp control gear spacing:		P
	- spacing 35 mm		N/A
	- spacing 10 mm		P
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		P
3.6 (4.16.3)	Design to satisfy the test of 12.6	(see clause 12.6)	N/A
<b>3.6 (4.17)</b>	<b>Drain holes</b>		<b>N/A</b>
	Clearance at least 5 mm		N/A
<b>3.6 (4.18)</b>	<b>Resistance to corrosion</b>		<b>P</b>
3.6 (4.18.1)	- rust-resistance		N/A
3.6 (4.18.2)	- season cracking in copper		P
3.6 (4.18.3)	- corrosion of aluminium		P
3.6 (4.19)	Igniters compatible with ballast		N/A
3.6 (4.20)	Rough service vibration		N/A
<b>3.6 (4.21)</b>	<b>Protective shield</b>		<b>P</b>
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		P
	Glow-wire test on lamp compartment .....	See Test Table 3.15 (13.3.2)	P
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
<b>3.6 (4.24)</b>	<b>Photobiological hazards</b>		<b>P</b>
3.6 (4.24.1)	No excessive UV radiation if tungsten halogen lamps and metal halide lamps (Annex P)		N/A
3.6 (4.24.2)	Retinal blue light hazard		P
	Class of risk group assessed according to IEC/TR 62778 .....	Risk Group 1 – 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

<b>IEC 60598-2-3</b>			
Clause	Requirement + Test	Result - Remark	Verdict
	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
<b>3.6 (4.25)</b>	<b>Mechanical hazard</b>		<b>P</b>
	No sharp point or edges		P
<b>3.6 (4.26)</b>	<b>Short-circuit protection</b>		<b>N/A</b>
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
	Test chain not melt through		N/A
	Test sample not exceed values of Table 12.1 and 12.2		N/A
<b>3.6 (4.27)</b>	<b>Terminal blocks with integrated screwless earthing contacts</b>		<b>N/A</b>
	Test according Annex V		N/A
	Pull test of terminal fixing (20 N)		N/A
	After test, resistance < 0,05 $\Omega$		N/A
	Pull test of mechanical connection (50 N)		N/A
	After test, resistance < 0,05 $\Omega$		N/A
	Voltage drop test, resistance < 0,05 $\Omega$		N/A
<b>3.6 (4.28)</b>	<b>Fixing of thermal sensing control</b>		<b>N/A</b>
	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 ( $^{\circ}\text{C}$ ) .....: N/A		—
	100 cycles between t min and t max		N/A
	Temperature sensing control still in position		N/A
<b>3.6 (4.29)</b>	<b>Luminaires with non-replaceable light source</b>		<b>N/A</b>
	Not possible to replace light source		N/A
	Live part not accessible after parts have been opened by hand or tools		N/A
<b>3.6 (4.30)</b>	<b>Luminaires with non-user replaceable light source</b>		<b>P</b>
	If protective cover provide protection against electric shock and marked with “caution, electric shock risk” symbol:		P
	Minimum two fixing means		P
<b>3.6 (4.31)</b>	<b>Insulation between circuits</b>		<b>P</b>
	Circuits insulated from LV supply fulfil requirements according 4.31.1 – 4.31.3		P
	Controllable luminaires requiring same level of insulation for all components, the insulation between control terminals and LV supply fulfil requirements according 4.31.1 – 4.31.3		P

IEC 60598-2-3			
Clause	Requirement + Test	Result - Remark	Verdict
3.6 (4.31.1)	SELV circuits		N/A
	Used SELV source		N/A
	Voltage $\leq$ ELV		N/A
	Insulating of SELV circuits from LV supply		N/A
	Insulating of SELV circuits from other non SELV circuits		N/A
	Insulating of SELV circuits from FELV		N/A
	Insulating of SELV circuits from other SELV circuits		N/A
	SELV circuits insulated from accessible parts according Table X.1		N/A
	Plugs not able to enter 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		P
	Used FELV source		P
	Voltage $\leq$ ELV		P
	Insulating of FELV circuits from LV supply		P
	FELV circuits insulated from accessible parts according Table X.1		P
	Plugs not able to enter 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
	- 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

IEC 60598-2-3			
Clause	Requirement + Test	Result - Remark	Verdict
<b>3.6 (4.32)</b>	<b>Overvoltage protective devices</b>		<b>P</b>
	Comply with IEC 61643-11		P
	External to controlgear and connected to earth:		P
	- only in fixed luminaires		P
	- only connected to protective earth		P
3.6.1 (-)	At least IP X3 or X5 respectively. IP ..... :	IP 65	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
	- drag coefficient ..... :	1,2	P
	- loaded area (m <sup>2</sup> ) ..... :	BRP101... - 0,0165m <sup>2</sup> BRP102... - 0,0225m <sup>2</sup>	P
	- used load (N) ..... :	BRP101 – 25,2N BRP102 – 34,4N	P
	- measured deformation (cm/m) ..... :	0	P
	- no rotation	0cm	P
3.6.4 (-)	Adjustable lampholders		N/A
3.6.5 (-)	Luminaires installed above 5 m, glass covers shall be:		P
	a) glass that fractures into small pieces (test according to 3.6.5.1), or		N/A
	b) glass having a high impact shock resistance (test according to 3.6.5.2), or		P
	c) protected by any means to retain glass fragments		N/A
	For tunnel luminaires 3.6.5.1 apply		N/A
	Method of protection declared by the manufacturer		P
3.6.5.1 (-)	Protection by the use of glass that fractures into small pieces		N/A
	- number of particles is more than 40 ..... :		N/A
3.6.5.2 (-)	Protection by the use of high impact resistant glass		P
3.6.5.2.1 (-)	Glass covers have high mechanical strength	IK08	P
	Test according IEC 62262 with test apparatus according IEC 60068-2-75 with impact energy of 5J on preconditioned sample		P
3.6.5.2.2 (-)	Glass covers not break into large pieces		P
	- test according 3.6.5.1, number of particles is more than 20 ..... :	63	P
3.6.6 (-)	Connection compartment of column-integrated luminaire		N/A
	- provides adequate space		N/A
	- means for attachment		N/A

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

<b>3.7 (11)</b>	<b>CREEPAGE DISTANCES AND CLEARANCES</b>		<b>P</b>
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 <input checked="" type="checkbox"/> Category III <input type="checkbox"/>	—

<b>3.8 (7)</b>	<b>PROVISION FOR EARTHING</b>		<b>P</b>
3.8 (7.2.1 + 7.2.3)	Accessible metal parts		P
	Metal parts in contact with supporting surface		P
	Resistance < 0,5 $\Omega$ .....	0,09 $\Omega$	P
	Self-tapping screws used		N/A
	Thread-forming screws		P
	Thread-forming screw used in a groove		N/A
	Earth makes contact first		N/A
	Terminal blocks with integrated screwless earthing contacts tested according Annex V		N/A
	Protective earthing of the luminaire not via built-in control gear		N/A
3.8 (7.2.2 + 7.2.3)	Earth continuity in joints, etc.		N/A
3.8 (7.2.4)	Locking of clamping means		P
	Compliance with 4.7.3		P
	Terminal blocks with integrated screwless earthing contacts tested according Annex V		N/A
3.8 (7.2.5)	Earth terminal integral part of connector socket		N/A
3.8 (7.2.6)	Earth terminal adjacent to mains terminals		P
3.8 (7.2.7)	Electrolytic corrosion of the earth terminal		P
3.8 (7.2.8)	Material of earth terminal		P

IEC 60598-2-3			
Clause	Requirement + Test	Result - Remark	Verdict
	Contact surface bare metal		P
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)	Earthing core coloured green-yellow		P
	Length of earth conductor		P
3.8.1 (-)	Attachment prevented from rotation		P

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.....	Terminal block / supply cord	P
	Outdoor luminaire has not PVC insulated external wiring if not class III or SELV $\leq 25$ V a.c./60 V d.c. or protected from outdoor environment		P
3.10 (5.2.2)	Type of cable .....	See Annex 1: components	P
	Nominal cross-sectional area (mm <sup>2</sup> ).....	See Annex 1: components	P
	Cables equal to IEC 60227 or IEC 60245		P
3.10 (5.2.3)	Type of attachment, X, Y or Z		P
3.10 (5.2.5)	Type Z not connected to screws		N/A
3.10 (5.2.6)	Cable entries:		P
	- suitable for introduction		P
	- adequate degree of protection		P
3.10 (5.2.7)	Cable entries through rigid material have rounded edges		P
3.10 (5.2.8)	Insulating bushings:		N/A
	- suitably fixed		N/A
	- material in bushings		N/A
	- material not likely to deteriorate		N/A
	- tubes or guards made of insulating material		N/A
3.10 (5.2.9)	Locking of screwed bushings		P

## IEC 60598-2-3

Clause	Requirement + Test	Result - Remark	Verdict
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		N/A
3.10 (5.2.10.1)	Cord anchorage for type X attachment:		P
	a) at least one part fixed		P
	b) types of cable		P
	c) no damaging of the cable		P
	d) whole cable can be mounted		P
	e) no touching of clamping screws		N/A
	f) metal screw not directly on cable		N/A
	g) replacement without special tool		P
	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:		P
	- impossible to push cable; unsafe		P
	- pull test: 25 times; pull (N) .....: 120N		P
	- torque test: torque (Nm) .....: 0,35Nm		P
	- displacement $\leq 2$ mm		P
	- no movement of conductors		P
	- no damage of cable or cord		P
	- function independent of electrical connection		P
3.10 (5.2.11)	External wiring passing into luminaire		P
3.10 (5.2.12)	Looping-in terminals		N/A
3.10 (5.2.13)	Wire ends not tinned		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

<b>IEC 60598-2-3</b>			
Clause	Requirement + Test	Result - Remark	Verdict
3.10 (5.2.16)	Appliance inlets (IEC 60320)		N/A
	Installation couplers (IEC 61535)		N/A
	Other appliance inlet or connector according relevant IEC standard		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
<b>3.10 (5.3)</b>	<b>Internal wiring</b>		<b>P</b>
3.10 (5.3.1)	Internal wiring of suitable size and type		P
	Through wiring		N/A
	- not delivered/ mounting instruction		N/A
	- factory assembled		N/A
	- socket outlet loaded (A) .....		N/A
	- temperatures.....	(see Annex 2)	N/A
	Green-yellow for earth only		P
3.10 (5.3.1.1)	Internal wiring connected directly to fixed wiring		P
	Cross-sectional area (mm <sup>2</sup> ) .....	0,75; 1,0mm <sup>2</sup>	P
	Insulation thickness		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
	Adequate cross-sectional area and insulation thickness		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 current-carrying parts		N/A
3.10 (5.3.1.6)	Insulation thickness other than PVC or rubber		P
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

**IEC 60598-2-3**

Clause	Requirement + Test	Result - Remark	Verdict
3.10 (5.3.3)	Insulating bushings:		N/A
	- suitable fixed		N/A
	- material in bushings		N/A
	- material not likely to deteriorate		N/A
	- cables with protective sheath		N/A
3.10 (5.3.4)	Joints and junctions effectively insulated		N/A
3.10 (5.3.5)	Strain on internal wiring		N/A
3.10 (5.3.6)	Wire carriers		N/A
3.10 (5.3.7)	Wire ends not tinned		N/A
	Wire ends tinned: no cold flow		N/A
3.10.1 (-)	Cord anchorage if applicable		P
	- pull test: 25 times; pull (N) .....: 60N		P
	- torque test: torque (Nm) .....: 0,25Nm		P

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

IEC 60598-2-3			
Clause	Requirement + Test	Result - Remark	Verdict
3.11 (8.2.3.b)	BC lampholder of metal in class I luminaires shall be earthed		N/A
3.11 (8.2.3.c)	SELV circuits with exposed current carrying parts:		N/A
	Ordinary luminaire:		N/A
	- voltage under load (V) .....		N/A
	- no-load 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
	- nominal 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
1.11 (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 $\mu$ F not exceed 50 V 1 min after disconnection		N/A
	Portable luminaire with capacitor > 0,1 $\mu$ F (0.25) not exceed 34 V 1 s after disconnection		N/A
	Other luminaires with capacitor > 0,1 $\mu$ F (0.25) with plug and track adaptors not exceed 60 V 5 s after disconnection		N/A

<b>3.12 (12)</b>	<b>ENDURANCE TEST AND THERMAL TEST</b>		<b>P</b>
3.12.2 (-)	If IP > IP 20 relevant test of (12.4), (12.5) and (12.6) after (9.2) before (9.3) specified in 3.13		—
3.12 (12.3)	Endurance test:		P
	- mounting-position .....	Normal	—
	- test temperature (°C) .....	45°C	—
	- total duration (h).....	240h	—
	- supply voltage: Un factor; calculated voltage (V) ...	264V	—
	- lamp used .....	Coreline Malaga LED BRP101 LED/740 I DM - PCB LER MC 30 NICH W740 5 140 Coreline Malaga LED BRP102 LED/740 I DM - PCB LER MC 90 NICH W740 5 140	—

IEC 60598-2-3			
Clause	Requirement + Test	Result - Remark	Verdict
3.12 (12.3.2)	After endurance test:		P
	- no part unserviceable		P
	- luminaire not unsafe		P
	- no damage to track system		N/A
	- marking legible		P
	- no cracks, deformation etc.		P
3.12 (12.4)	Thermal test (normal operation)	(see Annex 2)	P
3.12 (12.5)	Thermal test (abnormal operation)	(see Annex 2)	N/A
3.12 (12.6)	Thermal test (failed lamp control gear condition):		N/A
3.12 (12.6.1)	Through wiring or looping-in wiring loaded by a current of (A) .....	N/A	—
	- case of abnormal conditions .....	N/A	—
	- electronic lamp control gear		N/A
	- measured winding temperature (°C): at 1,1 Un .....	N/A	—
	- measured mounting surface temperature (°C) at 1,1 Un .....		N/A
	- calculated mounting surface temperature (°C) .....		N/A
	- track-mounted luminaires		N/A
3.12 (12.6.2)	Temperature sensing control		N/A
	- 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

IEC 60598-2-3			
Clause	Requirement + Test	Result - Remark	Verdict
3.12 (12.7.1.2)	Luminaire with discharge lamp, fluorescent lamp > 70W, transformer > 10 VA		N/A
	- case of abnormal conditions .....	N/A	—
	- measured winding temperature (°C): at 1,1 Un .....	N/A	—
	- measured temperature of fixing point/exposed part (°C): at 1,1 Un .....	N/A	—
	- calculated temperature of fixing point/exposed part (°C) .....	N/A	—
	Ball-pressure test .....	See Table 3.15 (13.2.1)	N/A
3.12 (12.7.1.3)	Luminaire with short circuit proof transformers ≤ 10 VA		N/A
	- case of abnormal conditions .....	N/A	—
	- 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 <input type="checkbox"/> No <input checked="" type="checkbox"/>	—
	- manual reset cut-out .....	Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	—
	- auto reset cut-out .....	Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	—
	- 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		P

<b>3.13 (9)</b>	<b>RESISTANCE TO DUST AND MOISTURE</b>		<b>P</b>
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 .....	IP 65	—
	- mounting position during test .....	Normal	—
	- fixing screws tightened; torque (Nm) .....	15Nm	—
	- tests according to clauses .....	9.2.2,9.2.7	—
	- electric strength test afterwards		P
	a) no deposit in dust-proof luminaire		N/A
	b) no talcum in dust-tight luminaire		P
	c) no trace of water on current-carrying parts or on insulation where it could become a hazard		P

IEC 60598-2-3			
Clause	Requirement + Test	Result - Remark	Verdict
	c.1) For luminaires without drain holes – no water entry		P
	c.2) For luminaires with drain holes – no hazardous water entry		N/A
	d) no water in watertight or pressure watertight 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		P
	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 .....	12mm	—
	Insulation resistance (MΩ) .....	>10MΩ	—
	SELV		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		P
	- between live parts of different polarity .....	>10MΩ	P
	- between live parts and mounting surface .....	>10MΩ	P
	- between live parts and metal parts .....	>10MΩ	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 .....	>10MΩ	P
	- Insulation bushings as described in Section 5 .....		N/A

**IEC 60598-2-3**

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		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		P
	- between live parts of different polarity .....	1480V	P
	- between live parts and mounting surface .....	1480V	P
	- between live parts and metal parts.....	1480V	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 .....	1480V	P
	- Insulation bushings as described in Section 5 .....		N/A
3.14 (10.3)	Touch current or protective conductor current (mA):	0,04	P

<b>3.15 (13)</b>	<b>RESISTANCE TO HEAT, FIRE AND TRACKING</b>		<b>P</b>
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
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3.7 (11.2)	TABLE: Creepage distances and clearances							P
	Minimum distances (mm) for a.c. (50/60 Hz) sinusoidal voltages							P
	Applicable part of IEC 60598-1 Table 11.1* and 11.2*							P
	Insulation type **	Measured clearance	Required		Measured creepage	Required		
			clearance	*Table		creepage	*Table	
Distance 1:	B	12,1	for 220V – 1,32mm for 240V – 1,44mm	11.1	13,3	for 220V – 2,2mm for 240V – 2,4mm	11.1	
Working voltage (V).....:					220-240		—	
PTI.....:					< 600 <input checked="" type="checkbox"/> ≥ 600 <input type="checkbox"/>		—	
Pulse voltage if applicable (kV) .....					N/A		—	
Supplementary information:								
Distance 2:	B	11,4	2,4mm	11.1	14,0	2,83 mm	11.1	
Working voltage (V).....:					283Vdc		—	
PTI.....:					< 600 <input checked="" type="checkbox"/> ≥ 600 <input type="checkbox"/>		—	
Pulse voltage if applicable (kV) .....					N/A		—	
Supplementary information:								
Distance 3:								
Working voltage (V).....:							—	
PTI.....:					< 600 <input type="checkbox"/> ≥ 600 <input type="checkbox"/>		—	
Pulse voltage if applicable (kV) .....							—	
Supplementary information:								

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

3.15 (13.2.1)	TABLE: Ball Pressure Test of Thermoplastics				P
Allowed impression diameter (mm) .....				2,0	—
Object/ Part No./ Material		Manufacturer/ trademark	Test temperature (°C)	Impression diameter (mm)	
224-101		WAGO	125	0,9	
46.411.7000.50		BJB	125	0,8	
Supplementary information:					

**IEC 60598-2-3**

Clause	Requirement + Test	Result - Remark	Verdict
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3.15 (13.3.1)	TABLE: Needle-flame test (IEC 60695-11-5)				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
224-101	WAGO	10	No	2	P
46.411.7000.50	BJB	10	No	3	P
Supplementary information:					

3.15 (13.3.2)	TABLE: Glow-wire test (IEC 60695-2-11)				N/A
Glow wire temperature .....		650°C			—
Object/ Part No./ Material	Manufacturer/ trademark	Ignition of specified layer Yes/No	Duration of burning (tb) (s)	Verdict	
Any flame or glowing of the sample extinguished within 30 s of withdrawing the glow-wire, and any burning or molten drop did not ignite the underlying parts (Yes/No).....:					
Supplementary information:					

3.15 (13.4)	TABLE: Proof tracking test (IEC 60112)				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:					

## IEC 60598-2-3

Clause	Requirement + Test	Result - Remark	Verdict
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ANNEX 1		TABLE: Critical components information					P
Object / part No.	Code	Manufacturer/ trademark	Type / model	Technical data	Standard	Mark(s) of conformity <sup>1)</sup>	
Electronic led driver	A	PHILIPS LIGHTING ELECTRONICS	Xitanium 50W 0.70A 230V-J cXt	220-240V 50...60 Hz 0.7A Tc=80 °	EN 61347-1 EN 61347-2-13	DEKRA	
Electronic led driver	A	PHILIPS LIGHTING ELECTRONICS	Xitanium Dim 100W 0.7A 1-10V 230V Y-sXt	220-240V 50...60 Hz 0.7A Tc=80 °	EN 61347-1 EN 61347-2-13	ENEC05	
Electronic led driver	A	PHILIPS LIGHTING ELECTRONICS	Xitanium 100W 0.7A 230V Y	220-240V 50...60 Hz 0.7A Tc=80 °	EN 61347-1 EN 61347-2-13	ENEC05	
PCB LED	B	PHILIPS/ Opulent	PCB LER MC 60 NICH W740 5 140	79V, 0.7A Tc=85 °	EN 62031	Tested by ITE PREDOM Division (Report No. BS-3/078/B/17)	
PCB LED	B	PHILIPS/ Opulent	PCB LER MC 90 NICH W740 5 140	118V, 0.7A Tc=85 °	EN 62031	Tested by ITE PREDOM Division (Report No. BS-3/078/B/17)	
PCB LED	B	PHILIPS/ Opulent	PCB LER MC 30 NICH W740 5 140	37V, 0,7A Tc=85 °	EN62031	Tested by ITE PREDOM Division (Report No. BS-3/078/B/17)	
SURGE PROTECTIVE DEVICE	B	CPT CIRPROTEC	NSS-10/230-D-LCF-P	I <sub>max</sub> 10kA, I <sub>n</sub> 5kA, U <sub>n</sub> 230V (50/60Hz), T <sub>a</sub> = -40°C to 80°C	EN 60598-2-3  IEC 61643-11	Tested together with the appliance  CB	
fuse	A	ADELS	TB1SI OF FU-175201	250V 6,3A 1,6W	EN 60127-6 EN 60127-1	VDE	
Photocell	B	Zodion	MicroMINI	-20°C, +75°C, 198-264 V	EN 60598-2-3  EN 50081 EN 50082	Tested together with the appliance  CE	
Terminal block	A	WAGO	224-101	400V, 24A, max 2,5 mm <sup>2</sup>	EN 60998-1 EN 60998-2-2	UL, VDE	
Terminal block	A	BJB	46.411.7000.50	0,5-1mm <sup>2</sup> , 16A/450V	EN 60998-1 EN 60998-2-2	CQC, EAC, VDE	
Cable for mains	A	HELUKABEL	H07RN-F 3G1,5/2x1,5	1,5mm <sup>2</sup> , 450/750V	EN 60598-2-3  EN 50525-2-21	Tested together with appliance CE	
Cable for mains	A	La Triventa Cavi SPA	H07RN-F 3G1,5/2x1,5	1,5mm <sup>2</sup> , 450/750V	IEC 60245-4	HAR	
Cable for mains	A	ElettroBrescia	H07RN-F 3G1,5/2x1,5	1,5mm <sup>2</sup> , 450/750V	EN 50525-2-21	HAR	
Cable for mains	A	Elpar	H07RN-F 3G1,5/2x1,5	1,5mm <sup>2</sup> , 450/750V	PN EN 60228	VDE	
Cable for mains	A	Nexans	H07RN-F 3G1,5/2x1,5	1,5mm <sup>2</sup> , 450/750V	EN 50525-2-21	HAR	
Wire	A	NKT	DYC 1x1,5	300/500V	PN-E-90054	B	
Supplementary information: <sup>1)</sup> 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				
<b>ANNEX 2</b>	<b>TABLE: Temperature measurements, thermal tests of Section 12</b>		<b>P</b>				
	Type reference .....	Coreline Malaga BRP101 LED37/740 I DM	—				
	Lamp used .....	PCB LER MC 30 NICH W740 5 140	—				
	Lamp control gear used .....	Xi FP 50W 0.7A 230V-J cXt	—				
	Mounting position of luminaire .....	Normal	—				
	Supply wattage (W).....	50W	—				
	Supply current (A) .....	N/A	—				
	Calculated power factor .....	0,95	—				
	Table: measured temperatures corrected for $t_a = 35\text{ }^\circ\text{C}$ :		P				
	- abnormal operating mode .....	N/A	—				
	- test 1: rated voltage .....	N/A	—				
	- test 2: 1,06 times rated voltage or 1,05 times rated wattage.....	254,4V	—				
	- test 3: Load on wiring to socket-outlet, 1,06 times voltage or 1,05 times wattage .....	N/A	—				
	- test 4: 1,1 times rated voltage or 1,05 times rated wattage.....	N/A	—				
	Through wiring or looping-in wiring loaded by a current of A during the test .....	N/A	—				
<b>Temperature measurements, (<math>^\circ\text{C}</math>)</b>							
Part	Ambient	Clause 12.4 – normal				Clause 12.5 – abnormal	
		test 1	test 2	test 3	limit	test 4	limit
Driver	35,1	-	58,2	-	80,0	-	-
Led module	35,1	-	71,1	-	85,0	-	-
Internal wiring	35,1	-	50,2	-	90,0	-	-
Terminal block 224-101	35,1	-	37,4	-	85,0	-	-
Supplementary information:							

## IEC 60598-2-3

Clause	Requirement + Test	Result - Remark	Verdict
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ANNEX 2	TABLE: Temperature measurements, thermal tests of Section 12				P		
	Type reference .....	:	Coreline Malaga BRP102 LED110/740 I DM		—		
	Lamp used .....	:	PCB LER MC 90 NICH W740 5 140		—		
	Lamp control gear used .....	:	Xi FP 100W 0.7A 230V Y		—		
	Mounting position of luminaire .....	:	Normal		—		
	Supply wattage (W).....	:	100,5W		—		
	Supply current (A) .....	:	N/A		—		
	Calculated power factor .....	:	0,95		—		
	Table: measured temperatures corrected for ta = 35 °C:				P		
	- abnormal operating mode .....	:	N/A		—		
	- test 1: rated voltage .....	:	N/A		—		
	- test 2: 1,06 times rated voltage or 1,05 times rated wattage.....	:	254,4V		—		
	- test 3: Load on wiring to socket-outlet, 1,06 times voltage or 1,05 times wattage .....	:	N/A		—		
	- test 4: 1,1 times rated voltage or 1,05 times rated wattage.....	:	N/A		—		
	Through wiring or looping-in wiring loaded by a current of A during the test .....	:	N/A		—		
<b>Temperature measurements, (°C)</b>							
Part	Ambient	Clause 12.4 – normal				Clause 12.5 – abnormal	
		test 1	test 2	test 3	limit	test 4	limit
Driver	35,1	-	59,5	-	80,0	-	-
Led module	35,1	-	74,2	-	85,0	-	-
Internal wiring	35,1	-	58,0	-	90,0	-	-
Terminal block 224-101	35,1	-	39,7	-	85,0	-	-
Supplementary information:							

## IEC 60598-2-3

Clause	Requirement + Test	Result - Remark	Verdict
<b>ANNEX 3</b>	<b>Screw terminals (part of the luminaire)</b>		<b>N/A</b>
<b>(14)</b>	<b>SCREW TERMINALS</b>		<b>N/A</b>
(14.2)	Type of terminal .....	N/A	—
	Rated current (A) .....	N/A	—
(14.3.2.1)	One or more conductors		N/A
(14.3.2.2)	Special preparation		N/A
(14.3.2.3)	Terminal size		N/A
	Cross-sectional area (mm <sup>2</sup> ) .....	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
<b>ANNEX 4</b>	<b>Screwless terminals (part of the luminaire)</b>		<b>N/A</b>
<b>(15)</b>	<b>SCREWLESS TERMINALS</b>		<b>N/A</b>
(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:	N/A	—
	Voltage drop (mV) after 10th alt. 25th cycle (4 samples) .....		N/A
	Voltage drop (mV) after 50th alt. 100th cycle (4 samples) .....		N/A
	After ageing, voltage drop (mV) after 10th alt. 25th cycle (4 samples) .....		N/A
	After ageing, voltage drop (mV) after 50th alt. 100th cycle (4 samples) .....		N/A
(15.6)	Terminals and connections for external wiring		N/A
(15.6.1)	Conductors		N/A
	Terminal size and rating		N/A
15.6.2	Mechanical tests		N/A
(15.6.2.1)	Pull test spring-type terminals or welded connections (4 samples); pull (N) .....		N/A
(15.6.2.2)	Pull test pin or tab terminals (4 samples); pull (N) .....		N/A
(15.6.3)	Electrical tests		N/A
	Tests according 15.6.3.1 + 15.6.3.2 in IEC 60598-1		N/A

## IEC 60598-2-3

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



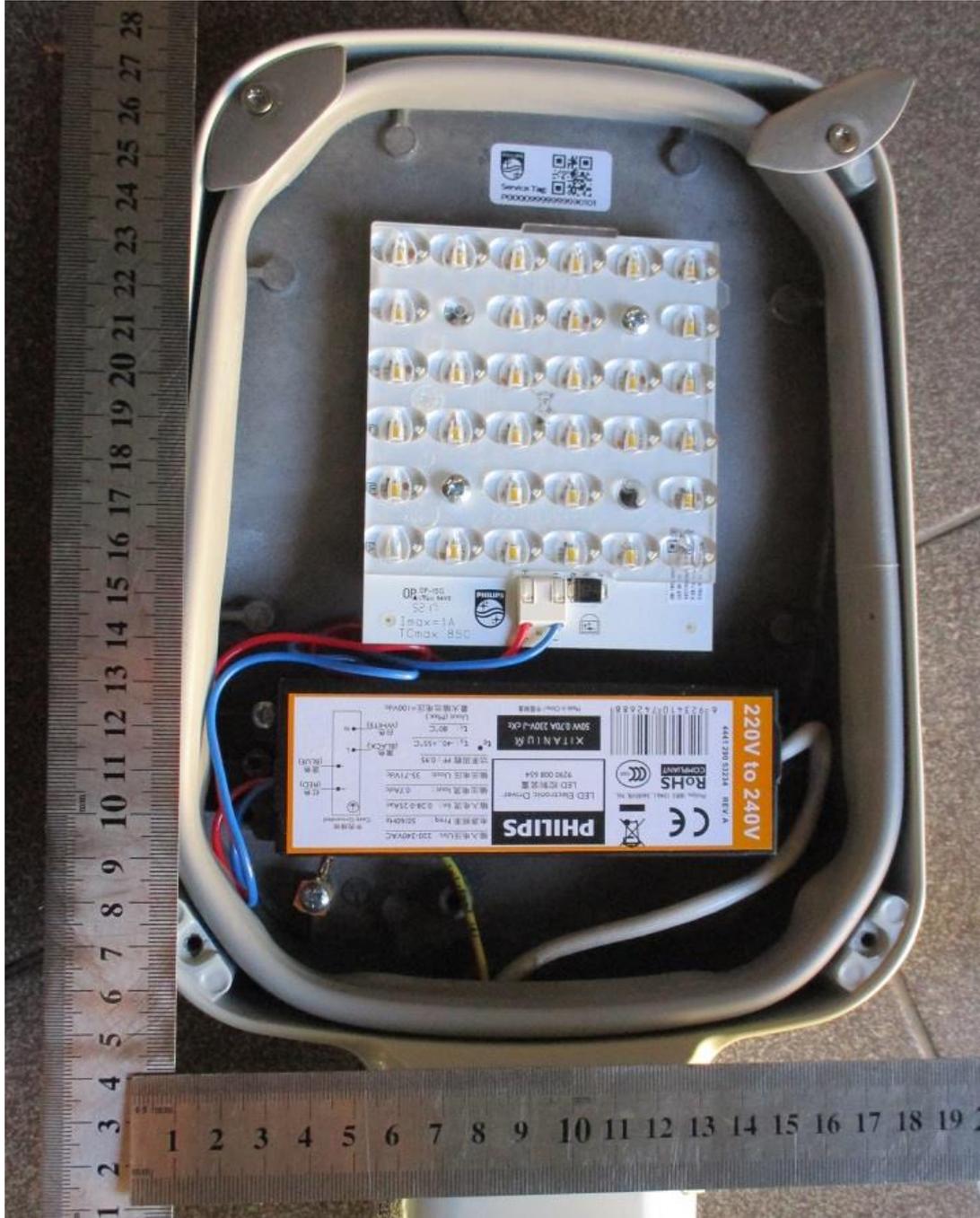
IEC 60598-2-3

Clause	Requirement + Test	Result - Remark	Verdict
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Coreline Malaga LED BRP101 LED37740 I DM

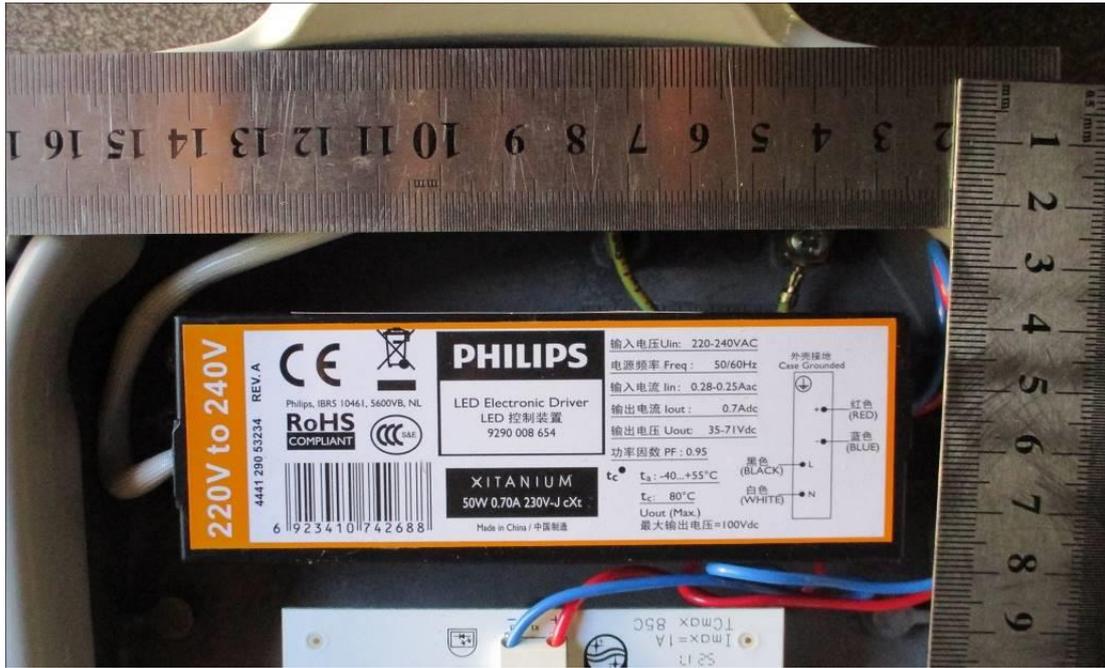


IEC 60598-2-3			
Clause	Requirement + Test	Result - Remark	Verdict

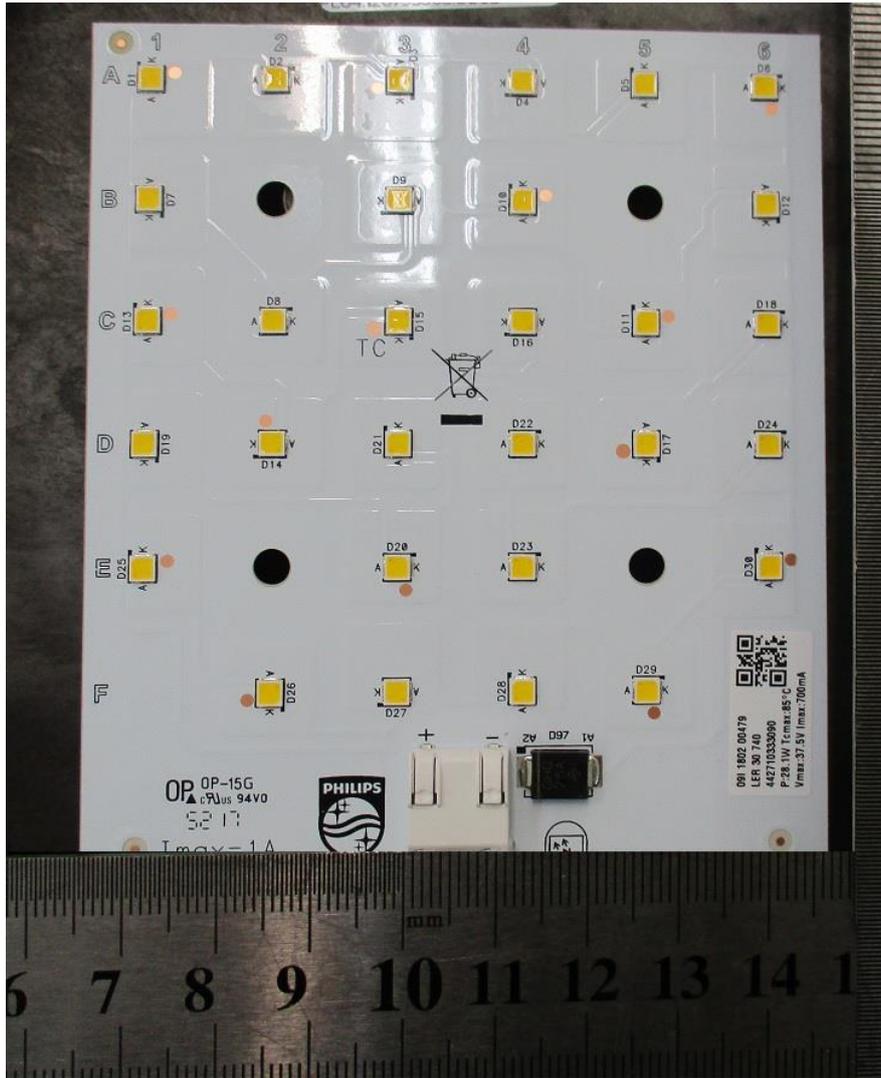


IEC 60598-2-3

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



IEC 60598-2-3

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

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

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

Clause	Requirement + Test	Result - Remark	Verdict
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091 1747 02917  
LER 90 740  
442710326840  
P:84.4W T<sub>cmax</sub>:85°C  
V<sub>max</sub>:118.4V I<sub>max</sub>:700mA

