



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-3/175/B/17**  
Date of issue ..... : **08.06.2018**  
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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|   |  |  |
|---|--|--|
| <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<br>O/Kętrzyn ul. Chrobrego 8, 11-400 Kętrzyn, Poland |  |
| <b>Model/Type reference</b> .....   | Coreline Malaga LED BRP101...II...-series<br>and Coreline Malaga LED BRP102...II...-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-3/175/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-3/175/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**

**Example 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> ..... : connection block / supply cord<br>..... :   |  |
| <b>Possible test case verdicts:</b><br>- test case does not apply to the test object ..... : N/A<br>- test object does meet the requirement ..... : P (Pass)<br>- 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.<br>"(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 IEC 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><br><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<br>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 LED BRP101...II... - series<br/>and Coreline Malaga LED BRP102...II... - 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   | connector  |
| ta  | 35°C   |

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

BRP101 LED35/740 II 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. BRP101</li> <li>2. LED35</li> <li>3. 740</li> <li>4. II</li> <li>5. DM</li> <li>6. MSP</li> <li>7. SRG10</li> <li>7. FU</li> <li>8. H07RN-F 3x1.5 3</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 II</li> <li>- Optic DM, DW – Road distribution – core version</li> <li>- Marine salt protected coating</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:**

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

After review of construction luminaires Coreline Malaga LED BRP101 LED37/740 II DM and Coreline Malaga LED BRP102LED110/740 II 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"/><br>Lamp standard:      | —        |
| 3.2 (0.3)      | More sections applicable..... :  | Yes <input checked="" type="checkbox"/> No <input type="checkbox"/><br>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 II   | 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        |

| IEC 60598-2-3     |  |                 |            |
|-------------------|--|-----------------|------------|
| 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>P</b>   |
| 3.6 (4.10.1)      | No contact, mounting surface – accessible metal parts – wiring of basic insulation   |                 | P          |
|                   | Safe installation fixed luminaires   |                 | P          |
|                   | 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>P</b>   |
|                   | - fixed  |                 | P          |
|                   | - unable to be replaced; luminaire inoperative   |                 | N/A        |
|                   | - sleeves retained in position   |                 | P          |
|                   | - 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,<br>glass cover – 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      |

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|-------------------|--|------------------------------|------------|
| 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        |

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| 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        |

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| 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 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        |
| <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 (°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          |

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| 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     |

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|-------------------|---|--|----------|
| 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><br>BRP102... - 0,0225m <sup>2</sup> | P        |
|                   | - used load (N) ..... :   | BRP101 – 25,2N<br>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      |

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| 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>N/A</b> |
| 3.8 (7.2.1 + 7.2.3) | Accessible metal parts   |  | N/A        |
|                     | Metal parts in contact with supporting surface                                       |  | N/A        |
|                     | Resistance < 0,5 Ω .....   |  | N/A        |
|                     | Self-tapping screws used   |  | N/A        |
|                     | Thread-forming screws  |  | N/A        |
|                     | 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  |  | N/A        |
|                     | Compliance with 4.7.3  |  | N/A        |
|                     | 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   |  | N/A        |
| 3.8 (7.2.7)         | Electrolytic corrosion of the earth terminal   |  | N/A        |
| 3.8 (7.2.8)         | Material of earth terminal   |  | N/A        |

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| Clause        | Requirement + Test                                  | Result - Remark | Verdict |
|               | 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)  | Earthing core coloured green-yellow                 |                 | N/A     |
|               | Length of earth conductor                           |                 | N/A     |
| 3.8.1 (-)     | Attachment prevented from rotation                  |                 | 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.....  | 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   |

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| Clause             | Requirement + Test                                       | Result - Remark | Verdict |
|--------------------|--|-----------------|---------|
| 3.10<br>(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<br>(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<br>(5.2.10.2) | Adequate cord anchorage for type Y and type Z attachment |                 | N/A     |
| 3.10<br>(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<br>(5.2.11)   | External wiring passing into luminaire                   |                 | P       |
| 3.10<br>(5.2.12)   | Looping-in terminals                                     |                 | N/A     |
| 3.10<br>(5.2.13)   | Wire ends not tinned                                     |                 | N/A     |
|                    | Wire ends tinned: no cold flow                           |                 | N/A     |
| 3.10<br>(5.2.14)   | Mains plug same protection                               |                 | N/A     |
|                    | Class III luminaire plug                                 |                 | N/A     |
|                    | No unsafe compatibility                                  |                 | N/A     |

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|----------------------|--|--------------------------|----------|
| Clause               | Requirement + Test   | Result - Remark          | Verdict  |
| 3.10<br>(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<br>(5.2.17)     | No standardized interconnecting cables properly assembled                      |                          | N/A      |
| 3.10<br>(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  |                          | N/A      |
| 3.10<br>(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<br>(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<br>(5.3.1.3)    | Double or reinforced insulation for class II                                   |                          | P        |
| 3.10<br>(5.3.1.4)    | Conductors without insulation  |                          | N/A      |
| 3.10<br>(5.3.1.5)    | SELV current-carrying parts  |                          | N/A      |
| 3.10<br>(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        |

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|---------------|--|-----------------|---------|
| 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:  |  | P        |
|                 | - basic insulated metal parts not accessible during starter or lamp replacement  |  | P        |
|                 | - basic insulation not accessible other than during starter or lamp replacement  |  | N/A      |
|                 | - glass protective shields not used as supplementary insulation  |  | P        |

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|----------------|---|-----------------|---------|
| 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<br>LED/740 I DM - PCB LER MC<br>30 NICH W740 5 140<br>Coreline Malaga LED BRP102<br>LED/740 I DM - PCB LER MC<br>90 NICH W740 5 140 | —        |

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|--------------------|--|-------------------------|---------|
| Clause             | Requirement + Test   | Result - Remark         | Verdict |
| 3.12<br>(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<br>(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<br>(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<br>(12.7.1)   | Luminaire without temperature sensing control                            |                         | N/A     |
| 3.12<br>(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     |

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|--------------------|--|---|---------|
| Clause             | Requirement + Test   | Result - Remark   | Verdict |
| 3.12<br>(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<br>(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<br>(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        |

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|---------------|---|-----------------|---------|
| 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 |

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|------------------|--|-----------------|---------|
| Clause           | Requirement + Test   | Result - Remark | Verdict |
| 3.14<br>(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 .....  | 2980V           | P       |
|                  | - between live parts and metal parts .....   | 2980V           | 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<br>(13.2.1) | Ball-pressure test .....                     | See Test Table 3.15 (13.2.1) | P        |
| 3.15<br>(13.3.1) | Needle-flame test (10 s).....                | See Test Table 3.15 (13.3.1) | P        |
| 3.15<br>(13.3.2) | Glow-wire test (650°C).....                  | See Test Table 3.15 (13.3.2) | N/A      |
| 3.15 (13.4)      | Proof tracking test (IEC 60112) .....        | See Test Table 3.15 (13.4)   | N/A      |

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| Clause | Requirement + Test | Result - Remark | Verdict |
|--------|--------------------|-----------------|---------|
|--------|--------------------|-----------------|---------|

| 3.7 (11.2)                             | TABLE: 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 –<br>1,32mm<br>for 240V –<br>1,44mm | 11.1   | 13,3   | for 220V –<br>2,2mm<br>for 240V –<br>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                      |   |
|  |   |                         |                       |                          |   |
| Supplementary information:             |   |                         |                       |                          |   |

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|-------------------------------|--|---|--|------------------------------------|----------|
| Clause                        | Requirement + Test                               | Result - Remark                                       |  |                                    | Verdict  |
| <b>3.15<br/>(13.3.1)</b>      | <b>TABLE: Needle-flame test (IEC 60695-11-5)</b> |   |  |                                    | <b>P</b> |
| Object/ Part No./<br>Material | Manufacturer/<br>trademark                       | Duration of<br>application of test<br>flame (ta); (s) | Ignition of<br>specified layer<br>Yes/No | Duration of<br>burning (tb)<br>(s) | Verdict  |
| 224-101                       | WAGO   | 10  | No                                       | 2                                  | P        |
| Supplementary information:    |  |   |  |                                    |          |

| <b>3.15<br/>(13.3.2)</b>  | <b>TABLE: Glow-wire test (IEC 60695-2-11)</b> |  |                                    |         | <b>N/A</b> |
|---|---|--|------------------------------------|---------|------------|
| <b>Glow wire temperature .....</b>  |   | 650°C                                    |                                    |         | —          |
| Object/ Part No./<br>Material   | Manufacturer/<br>trademark                    | Ignition of<br>specified layer<br>Yes/No | Duration of<br>burning (tb)<br>(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:  |   |  |                                    |         |            |

| <b>3.15 (13.4)</b>            | <b>TABLE: Proof tracking test (IEC 60112)</b> |  |  |  | <b>N/A</b> |
|-------------------------------|---|--|--|--|------------|
| <b>Test voltage PTI .....</b> |   | 175 V  |  |  | —          |
| Object/ Part No./ Material    | Manufacturer/<br>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.       | 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<br>50...60 Hz 0.7A<br>Tc=80 °                  | EN 61347-1,<br>EN 61347-2-13             | DEKRA  |   |
| Electronic led driver   | A    | PHILIPS LIGHTING ELECTRONICS           | Xitanium Dim 100W 0.7A 1-10V 230V Y-sXt | 220-240V<br>50...60 Hz 0.7A<br>Tc=80 °                  | EN 61347-1,<br>EN 61347-2-13             | ENEC05   |   |
| Electronic led driver   | A    | PHILIPS LIGHTING ELECTRONICS           | Xitanium 100W 0.7A 230V Y               | 220-240V<br>50...60 Hz 0.7A<br>Tc=80 °                  | EN 61347-1,<br>EN 61347-2-13             | ENEC05   |   |
| PCB LED                 | B    | PHILIPS/ Opulent                       | PCB LER MC 60 NICH W740 5 140           | 79V, 0.7A<br>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<br>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<br>Tc=85 °                                    | EN 62031                                 | Tested by ITE PREDOM Division (Report No. BS-3/078/B/17) |   |
| SURGE PROTECTIVE DEVICE | B    | CPT CIRPROTEC                          | NSS-10/230-D-LCF-P                      | Imax 10kA, In 5kA, Un 230V (50/60Hz), Ta= -40°C to 80°C | EN 60598-2-3<br><br>IEC 61643-11         | Tested together with the appliance<br><br>CB             |   |
| fuse                    | A    | ADELS                                  | TB1SI OF FU-175201                      | 250V 6,3A<br>1,6W                                       | EN 60127-6<br>EN 60127-1                 | VDE  |   |
| Photocell               | B    | Zodion                                 | MicroMINI                               | -20°C, +75°C,<br>198-264 V                              | EN 60598-2-3<br><br>EN 50081<br>EN 50082 | Tested together with the appliance<br>CE                 |   |
| Terminal block          | A    | WAGO                                   | 224-101                                 | 400V, 24A, max<br>2,5 mm <sup>2</sup>                   | EN 60998-1<br>EN 60998-2-2               | UL, VDE  |   |
| Cable for mains         | A    | HELUKABEL                              | H07RN-F<br>3G1,5/2x1,5                  | 1,5mm <sup>2</sup> ,<br>450/750V                        | EN 60598-2-3<br><br>EN 50525-2-21        | Tested together with appliance<br>CE                     |   |
| Cable for mains         | A    | La Triventa Cavi SPA                   | H07RN-F<br>3G1,5/2x1,5                  | 1,5mm <sup>2</sup> ,<br>450/750V                        | IEC 60245-4                              | HAR  |   |
| Cable for mains         | A    | ElettroBrescia                         | H07RN-F<br>3G1,5/2x1,5                  | 1,5mm <sup>2</sup> ,<br>450/750V                        | EN 50525-2-21                            | HAR  |   |
| Cable for mains         | A    | Elpar                                  | H07RN-F<br>3G1,5/2x1,5                  | 1,5mm <sup>2</sup> ,<br>450/750V                        | PN EN 60228                              | VDE  |   |
| Cable for mains         | A    | Nexans                                 | H07RN-F<br>3G1,5/2x1,5                  | 1,5mm <sup>2</sup> ,<br>450/750V                        | EN 50525-2-21                            | HAR  |   |

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 LED BRP101<br>LED37/740 II DM | —        |        |       |                        |       |
|  | Lamp used .....  | PCB LER MC 30 NICH W740<br>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 $t_a = 35\text{ }^\circ\text{C}$ :                |   | <b>P</b> |        |       |                        |       |
|  | - abnormal operating mode .....  | N/A   | —        |        |       |                        |       |
|  | - test 1: rated voltage .....  | N/A   | —        |        |       |                        |       |
|  | - test 2: 1,06 times rated voltage or 1,05 times rated<br>wattage.....                       | 254,4V  | —        |        |       |                        |       |
|  | - test 3: Load on wiring to socket-outlet, 1,06 times<br>voltage or 1,05 times wattage ..... | N/A   | —        |        |       |                        |       |
|  | - test 4: 1,1 times rated voltage or 1,05 times rated<br>wattage.....                        | N/A   | —        |        |       |                        |       |
|  | Through wiring or looping-in wiring loaded by a<br>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   | -   | 58,1     | -      | 80,0  | -                      | -     |
| Led module   | 35,1   | -   | 71,2     | -      | 85,0  | -                      | -     |
| Internal wiring  | 35,1   | -   | 50,2     | -      | 90,0  | -                      | -     |
| Terminal block<br>224-101                                      | 35,1   | -   | 37,5     | -      | 85,0  | -                      | -     |
|  |  |   |          |        |       |                        |       |
| Supplementary information:                                     |  |   |          |        |       |                        |       |

## IEC 60598-2-3

| Clause | Requirement + Test | Result - Remark | Verdict |
|--------|--------------------|-----------------|---------|
|--------|--------------------|-----------------|---------|

| ANNEX 2                               | TABLE: Temperature measurements, thermal tests of Section 12                                 |                      |  |        | P     |                        |       |
|---------------------------------------|--|----------------------|--|--------|-------|------------------------|-------|
|                                       | Type reference .....   | :                    | Coreline Malaga LED BRP102<br>LED110/740 II DM |        | —     |                        |       |
|                                       | Lamp used .....  | :                    | PCB LER MC 90 NICH W740<br>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<br>wattage.....                       | :                    | 254,4V   |        | —     |                        |       |
|                                       | - test 3: Load on wiring to socket-outlet, 1,06 times<br>voltage or 1,05 times wattage ..... | :                    | N/A  |        | —     |                        |       |
|                                       | - test 4: 1,1 times rated voltage or 1,05 times rated<br>wattage.....                        | :                    | N/A  |        | —     |                        |       |
|                                       | Through wiring or looping-in wiring loaded by a<br>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   | -                    | 59,4   | -      | 80,0  | -                      | -     |
| Led module                            | 35,1   | -                    | 74,1   | -      | 85,0  | -                      | -     |
| Internal wiring                       | 35,1   | -                    | 58,1   | -      | 90,0  | -                      | -     |
| Terminal block<br>224-101             | 35,1   | -                    | 39,5   | -      | 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)<br>(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 |
|--------|--------------------|-----------------|---------|
|--------|--------------------|-----------------|---------|

Coreline Malaga LED BRP101 LED37/740 II DM



IEC 60598-2-3

| Clause | Requirement + Test | Result - Remark | Verdict |
|--------|--------------------|-----------------|---------|
|--------|--------------------|-----------------|---------|



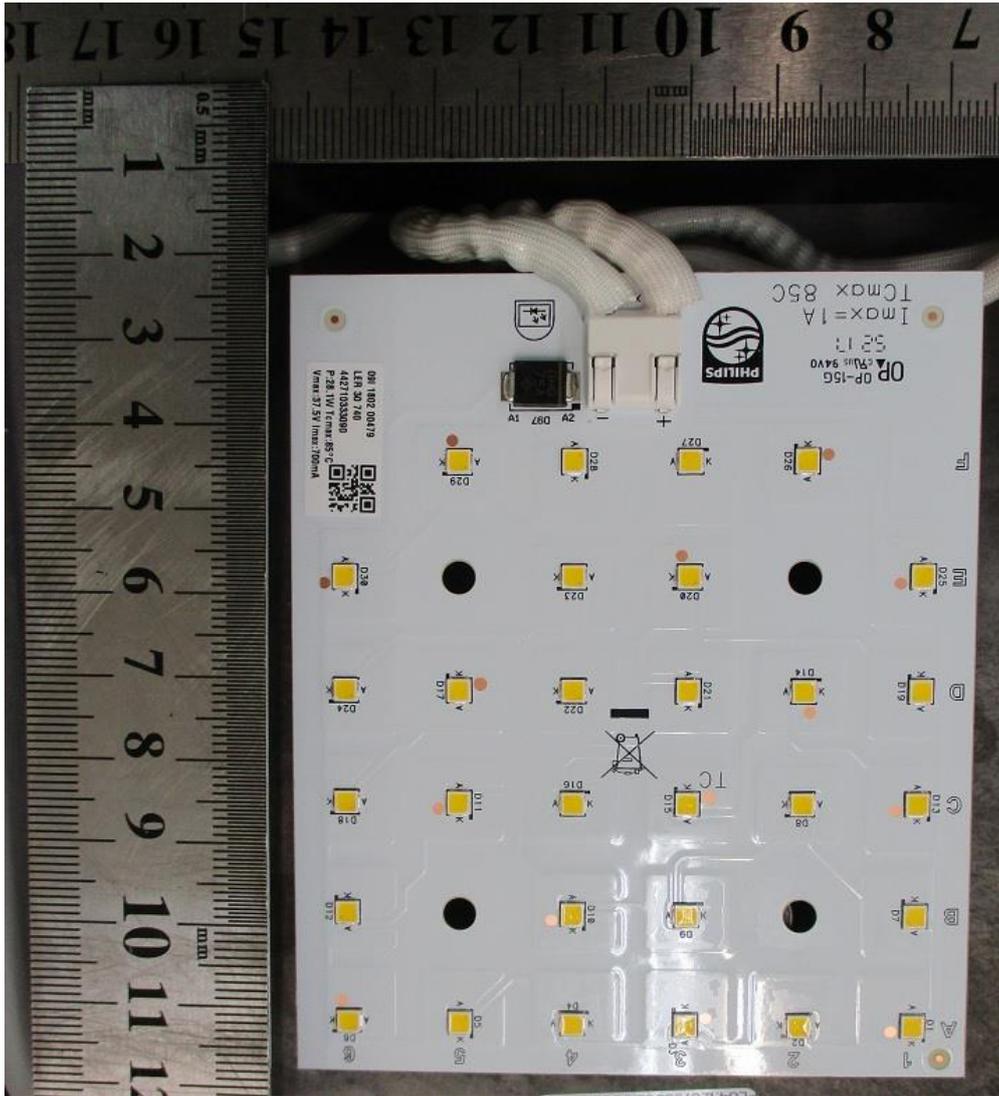
IEC 60598-2-3

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

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

| Clause | Requirement + Test | Result - Remark | Verdict |
|--------|--------------------|-----------------|---------|
|--------|--------------------|-----------------|---------|

Coreline Malaga LED BRP102 LED110/740 II DM



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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