



# CE LVD TEST REPORT

For  
LED GRILL FITTING

Model No.: VT-8013, VT-8020, VT-8040, VT-8050, VT-8060, VT-8-10, VT-8-20, VT-8-40, VT-8-50, VT-8-60, VT-8315, VT-8330, VT-8338

Applicant : V-TAC EXPORTS LIMITED  
ROOM NO.301, KAM ON BUILDING 176A QUEENS ROAD  
CENTRAL, CENTRAL, HONGKONG

Manufacturer : V-TAC EXPORTS LIMITED  
ROOM NO.301, KAM ON BUILDING 176A QUEENS ROAD  
CENTRAL, CENTRAL, HONGKONG

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Report Number : D00.06.0415S-R2

Issued Date : December 26, 2019

Date of Report : December 26, 2019

**Note:**

1. The test data and result is based on the tested sample only.
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| <b>LVD Report</b><br><b>EN60598-1&amp;EN60598-2-1</b><br><b>Luminaires—Part 1 :General requirements and tests</b><br><b>Part 2-1:Particular requirments</b><br><b>Section One – Fixed general purpose luminaires</b> |  |
|--|--|
| Report reference No. ....:   | D00.06.0415S-R2  |
| Testing laboratory .....   | Global-Standard Testing Service Co., Ltd.  |
| Location.....:   | Room 1505, Building B, Chuangxin Plaza, Pingshan Avenue, Pingshan District, Shenzhen, China  |
| Applicant.....:  | V-TAC EXPORTS LIMITED  |
| Address:.....:   | ROOM NO.301, KAM ON BUILDING 176A QUEENS ROAD CENTRAL, CENTRAL, HONGKONG   |
| Manufacturer :.....:   | V-TAC EXPORTS LIMITED  |
| Address:.....:   | ROOM NO.301, KAM ON BUILDING 176A QUEENS ROAD CENTRAL, CENTRAL, HONGKONG   |
| Standards.....:  | EN 60598-2-1:1989<br>EN 60598-1:2015+A1:2018<br>EN 61347-1:2015<br>EN 61347-2-13:2014+A1:2017<br>EN 62031:2008+A2:2015<br>EN 62471:2008<br>EN 62493:2015 |
| Procedure deviation.....:  | N/A  |
| Non-standard test method.....:   | N/A  |
| Type of test equipment .....   | LED GRILL FITTING  |
| Trade mark.....:   |    |
| Model/Type designation.....:   | VT-8013, VT-8020, VT-8040, VT-8050, VT-8060, VT-8-10, VT-8-20, VT-8-40, VT-8-50, VT-8-60, VT-8315, VT-8330, VT-8338                                      |
| Rating.....:   | Rating : AC100-240V, 50/60Hz, Max.40W  |
| TRF originator.....:   | Global-Standard Testing Service Co., Ltd.  |
| Copyright blank test report:   | Global-Standard Testing Service Co., Ltd.  |
| Test item particulars:   | --   |
| Operating Condition  | Continuous   |
| Tested for IT power systems  | No   |
| IT testing, phase-phase voltage (V)  | N/A.   |
| Class of equipment   | Class II equipment and Fixed equipment   |
| Protection against ingress of water  | IP20   |


**Possible test case verdicts :**


|   |        |
|---|--------|
| test case does not apply to the test object | N(/A.) |
| test object does meet the requirement       | P(ass) |
| test object does not meet the requirement   | F(ail) |

Name and address of the testing laboratory :

Global-Standard Testing Service Co., Ltd.  
Room 1505, Building B, Chuangxin Plaza, Pingshan Avenue,  
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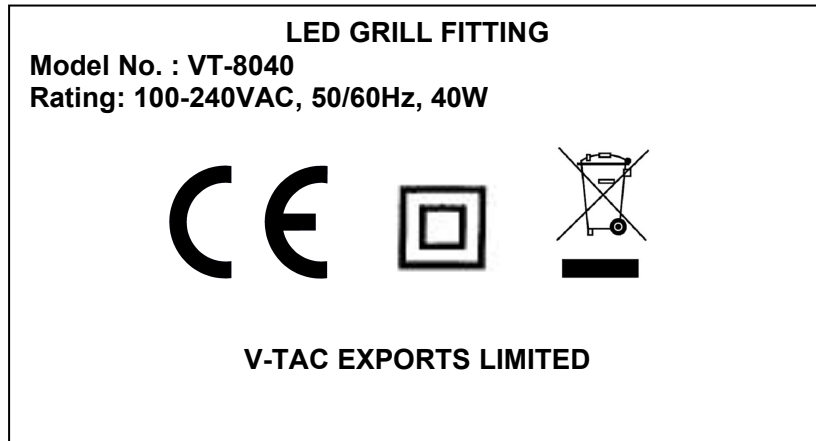
**Tested by :**  December 23, 2019  
Signature Date  
Evan Chen / Test Engineer  
Name/title

**Reviewed by :**  December 26, 2019  
Signature Date  
Gloria Wang / Project engineer  
Name/title

**Approved by :**  December 26, 2019  
Signature Date  
Nico Xie / Manager  
Name/title

|   |   |
|---|---|
| <p><b>General remarks:</b></p> <p>Clause number between brackets refer to clauses in IEC 60598-1</p> <p>"(see remark #)" refers to a remark appended to the report.</p> <p>"(see appended table)" refers to a table appended to the report.</p> <p>Throughout this report a comma is used as the decimal separator.</p> <p>The test results presented in this report relate only to the object tested.</p> <p>This report shall not be reproduced except in full without the written approval of the testing laboratory.</p> <p>Unless otherwise specified, test are made under normal conditions at an ambient temperature within the range of 15°C to 35°C, RH45% to 75% and an air pressure of 860mbar of 1060mbar</p>   | <p>Attachment with:</p> <p>1) Photo documentation</p> |
| <p>The test results presented in this report relate only to the object tested.<br/>This report shall not be reproduced, except in full, without the written approval of the Issuing testing laboratory.</p> <p>This report covers LED GRILL FITTING with models VT-8013, VT-8020, VT-8040, VT-8050, VT-8060, VT-8-10, VT-8-20, VT-8-40, VT-8-50, VT-8-60, VT-8315, VT-8330, VT-8338.</p> <p>LED GRILL FITTING with different power depended on lamp LED numbers and dimension of shade.</p> <p>All tests were performed by model VT-8040 to represent the other identical models.</p> <p>The Safety specifications of LED modules for general lighting was evaluated with reference to EN 62031</p> <p>Fixed Luminaires were supplied by SELV equipment controlgear isolated electrical control gear, between live parts of control gear and lamp enclosure was separated by double or reinforce insulation<br/>SELV equipment controlgear are approved by CE</p> <p>The European standard IEC 62493 for requirement has considered.</p> <p>The European standard IEC 62471 for LED laser product requirement has considered.</p> <p>This report is based on report D00.06.0415S-R1 which issued on May 10, 2018.</p> |   |

**Label**



Note: Due to similarity of the labels, only above label was listed.

- The above copy of marking plate as an example, All the other models will have the same marking plate except the model name and input rating only and other parameter

-The above markings are the minimum requirements required by the safety standard. For the final productions samples, the additional markings which do not give rise to misunderstanding may be added.

- the height of WEEE directive mark is at least 7mm height.

**IEC 60598-2-1**

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

| 1.2 (0)   | <b>GENERAL TEST REQUIREMENTS</b>                   |   |   |
|-----------|--|---|---|
| 1.2 (0.1) | Information for luminaire design considered..... : | Standard EN60432<br>Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> | — |
| 1.2 (0.3) | More sections applicable..... :                    | Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>                     | — |

| 1.4 (2)   | <b>CLASSIFICATION</b>  |   |   |
|-----------|--|---|---|
| 1.4 (2.2) | Type of protection .....   | Class II  | — |
| 1.4 (2.3) | Degree of protection..... :  | IP20  | — |
| 1.4 (2.4) | Luminaire suitable for direct mounting on normally flammable surfaces..... : | Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> | — |
| 1.4 (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"/> | — |

| 1.5 (3)      | <b>MARKING</b>                        |         | P   |
|--------------|---------------------------------------|---------|-----|
| 1.5 (3.2)    | Mandatory markings                    |         | P   |
|              | Position of the marking               |         | P   |
|              | Format of symbols/text                |         | P   |
| 1.5 (3.3)    | Additional information                |         | P   |
|              | Language of instructions              | English | P   |
| 1.5 (3.3.1)  | Combination luminaires                |         | N/A |
| 1.5 (3.3.2)  | Nominal frequency in Hz               | 50/60   | N/A |
| 1.5 (3.3.3)  | Operating temperature                 |         | N/A |
| 1.5 (3.3.4)  | Symbol or warning notice              |         | N/A |
| 1.5 (3.3.5)  | Wiring diagram                        |         | N/A |
| 1.5 (3.3.6)  | Special conditions                    |         | N/A |
| 1.5 (3.3.7)  | Metal halide lamp luminaire – warning |         | N/A |
| 1.5 (3.3.8)  | Limitation for semi-luminaires        |         | N/A |
| 1.5 (3.3.9)  | Power factor and supply current       |         | N/A |
| 1.5 (3.3.10) | Suitability for use indoors           |         | N/A |
| 1.5 (3.3.11) | Luminaires with remote control        |         | N/A |
| 1.5 (3.3.12) | Clip-mounted luminaire – warning      |         | N/A |
| 1.5 (3.3.13) | Specifications of protective shields  |         | N/A |
| 1.5 (3.3.14) | Symbol for nature of supply           | AC      | P   |

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| Clause       | Requirement + Test  | Result - Remark | Verdict |
|--------------|---|-----------------|---------|
| 1.5 (3.3.15) | Rated current of socket outlet  |                 | N/A     |
| 1.5 (3.3.16) | Rough service luminaire   |                 | N/A     |
| 1.5 (3.3.17) | Mounting instruction for type Y, type Z and some type X attachments         |                 | P       |
| 1.5 (3.3.18) | Non-ordinary luminaires with PVC cable                                      |                 | N/A     |
| 1.5 (3.3.19) | Protective conductor current in instruction if applicable                   |                 | N/A     |
| 1.5 (3.3.20) | Provided with information if not intended to be mounted within arm's reach  |                 | N/A     |
| 1.5 (3.3.21) | Non-replaceable and non-user replaceable light sources information provided |                 | N/A     |
|              | Cautionary symbol   |                 | N/A     |
| 1.5 (3.3.22) | Controllable luminaires, classification of insulation provided              |                 | N/A     |
| 1.5 (3.4)    | Test with water   |                 | P       |
|              | Test with hexane  |                 | P       |
|              | Legible after test  |                 | P       |
|              | Label attached  |                 | P       |

|                  |  |  |     |
|------------------|--|--|-----|
| <b>1.6 (4)</b>   | <b>CONSTRUCTION</b>  |  | P   |
| 1.6 (4.2)        | Components replaceable without difficulty  |  | N/A |
| 1.6 (4.3)        | Wireways smooth and free from sharp edges  |  | P   |
| <b>1.6 (4.4)</b> | <b>Lampholders</b>   |  | N/A |
| 1.6 (4.4.1)      | Integral lampholder  |  | N/A |
| 1.6 (4.4.2)      | Wiring connection  |  | N/A |
| 1.6 (4.4.3)      | Lampholder for end-to-end mounting   |  | N/A |
| 1.6 (4.4.4)      | Positioning  |  | N/A |
|                  | - pressure test (N) .....  |  | —   |
|                  | 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) .....   |  | —   |
|                  | After test the lampholder have not moved from its position and show no permanent deformation                             |  | N/A |

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|------------------|---|-----------------|---------|
| Clause           | Requirement + Test  | Result - Remark | Verdict |
| 1.6 (4.4.5)      | Peak pulse voltage  |                 | N/A     |
| 1.6 (4.4.6)      | Centre contact  |                 | N/A     |
| 1.6 (4.4.7)      | Parts in rough service luminaires resistant to tracking                                 |                 | N/A     |
| 1.6 (4.4.8)      | Lamp connectors   |                 | N/A     |
| 1.6 (4.4.9)      | Caps and bases correctly used   |                 | N/A     |
| 1.6 (4.4.10)     | Light source for lampholder or connection according IEC 60061 not connected another way |                 | N/A     |
| <b>1.6 (4.5)</b> | <b>Starter holders</b>  |                 | N/A     |
|                  | Starter holder in luminaires other than class II  |                 | N/A     |
|                  | Starter holder class II construction  |                 | N/A     |
| <b>1.6 (4.6)</b> | <b>Terminal blocks</b>  |                 | N/A     |
|                  | Tails   |                 | N/A     |
|                  | Unsecured blocks  |                 | N/A     |
| <b>1.6 (4.7)</b> | <b>Terminals and supply connections</b>   |                 | P       |
| 1.6 (4.7.1)      | Contact to metal parts  |                 | P       |
| 1.6 (4.7.2)      | Test 8 mm live conductor  |                 | P       |
|                  | Test 8 mm earth conductor   |                 | P       |
| 1.6 (4.7.3)      | Terminals for supply conductors   |                 | P       |
| 1.6 (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 15.8.2   |                 | N/A     |
|                  | - electrical test according to 15.9   |                 | N/A     |
|                  | - heat test according to 15.9.2.3 and 15.9.2.4  |                 | N/A     |
| 1.6 (4.7.4)      | Terminals other than supply connection  |                 | P       |
| 1.6 (4.7.5)      | Heat-resistant wiring/sleeves   |                 | N/A     |
| 1.6 (4.7.6)      | Multi-pole plug   |                 | N/A     |
|                  | - test at 30 N  |                 | N/A     |
| <b>1.6 (4.8)</b> | <b>Switches</b>   |                 | N/A     |
|                  | - adequate rating   |                 | N/A     |
|                  | - adequate fixing   |                 | N/A     |
|                  | - polarized supply  |                 | N/A     |



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|-------------------|--|-----------------|---------|
| Clause            | Requirement + Test   | Result - Remark | Verdict |
|                   | - compliance with IEC 61058-1 for electronic switches                              |                 | N/A     |
| <b>1.6 (4.9)</b>  | <b>Insulating lining and sleeves</b>   |                 | N/A     |
| 1.6 (4.9.1)       | Retention  |                 | N/A     |
|                   | Method of fixing.....:   |                 | —       |
| 1.6 (4.9.2)       | Insulated linings and sleeves:   |                 | N/A     |
|                   | Resistant to a temperature > 20 °C to the wire temperature or                      |                 | N/A     |
|                   | a) & c) Insulation resistance and electric strength                                |                 | N/A     |
|                   | b) Ageing test. Temperature (°C).....:   |                 | N/A     |
| <b>1.6 (4.10)</b> | <b>Double or reinforced insulation</b>   |                 | P       |
| 1.6 (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     |
| 1.6 (4.10.2)      | Assembly gaps:   |                 | P       |
|                   | - not coincidental   |                 | P       |
|                   | - no straight access with test probe   |                 | P       |
| 1.6 (4.10.3)      | Retention of insulation:   |                 | P       |
|                   | - fixed  |                 | P       |
|                   | - unable to be replaced; luminaire inoperative                                     |                 | P       |
|                   | - sleeves retained in position   |                 | P       |
|                   | - lining in lampholder   |                 | N/A     |
| <b>1.6 (4.11)</b> | <b>Electrical connections and current-carrying parts</b>                           |                 | P       |
| 1.6 (4.11.1)      | Contact pressure   |                 | P       |
| 1.6 (4.11.2)      | Screws:  |                 | P       |
|                   | - self-tapping screws  |                 | P       |
|                   | - thread-cutting screws  |                 | N/A     |
| 1.6 (4.11.3)      | Screw locking:   |                 | N/A     |
|                   | - spring washer  |                 | N/A     |
|                   | - rivets   |                 | N/A     |
| 1.6 (4.11.4)      | Material of current-carrying parts   |                 | P       |
| 1.6 (4.11.5)      | No contact to wood or mounting surface   |                 | P       |

| IEC 60598-2-1     |   |                 |         |
|-------------------|---|-----------------|---------|
| Clause            | Requirement + Test  | Result - Remark | Verdict |
| 1.6 (4.11.6)      | Electro-mechanical contact systems                                  |                 | N/A     |
| <b>1.6 (4.12)</b> | <b>Screws and connections (mechanical) and glands</b>               |                 | P       |
| 1.6 (4.12.1)      | Screws not made of soft metal                                       |                 | P       |
|                   | Screws of insulating material                                       |                 | P       |
|                   | Torque test: torque (Nm); part..... :                               |                 | P       |
|                   | Torque test: torque (Nm); part..... :                               |                 | N/A     |
|                   | Torque test: torque (Nm); part..... :                               |                 | N/A     |
| 1.6 (4.12.2)      | Screws with diameter < 3 mm screwed into metal                      |                 | N/A     |
| 1.6 (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     |
| 1.6 (4.12.5)      | Screwed glands; force (Nm)..... :                                   |                 | N/A     |
| <b>1.6 (4.13)</b> | <b>Mechanical strength</b>  |                 | P       |
| 1.6 (4.13.1)      | Impact tests:   |                 | P       |
|                   | - fragile parts; energy (Nm)..... :                                 |                 | N/A     |
|                   | - other parts; energy (Nm)..... :                                   | Canopy: 0.35Nm  | P       |
|                   | 1) live parts   |                 | P       |
|                   | 2) linings  |                 | P       |
|                   | 3) protection   |                 | P       |
|                   | 4) covers   |                 | P       |
| 1.6 (4.13.3)      | Straight test finger  |                 | P       |
| 1.6 (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     |
| 1.6 (4.13.6)      | Tumbling barrel   |                 | N/A     |
| <b>1.6 (4.14)</b> | <b>Suspensions, fixings and means of adjusting</b>                  |                 | P       |
| 1.6 (4.14.1)      | Mechanical load:  |                 | P       |
|                   | A) four times the weight  | Max.1.38Kg      | P       |

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| Clause            | Requirement + Test   | Result - Remark              | Verdict |
|-------------------|--|------------------------------|---------|
|                   | 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     |
| 1.6 (4.14.2)      | Load to flexible cables  |                              | N/A     |
|                   | Mass (kg) ..... :  |                              | —       |
|                   | Stress in conductors (N/mm <sup>2</sup> ) ..... :                  |                              | N/A     |
|                   | Mass (kg) of semi-luminaire ..... :                                |                              | —       |
|                   | Bending moment (Nm) of semi-luminaire ..... :                      |                              | N/A     |
| 1.6 (4.14.3)      | Adjusting devices:   |                              | N/A     |
|                   | - flexing test; number of cycles..... :                            |                              | N/A     |
|                   | - strands broken..... :  |                              | N/A     |
|                   | - electric strength test afterwards                                |                              | N/A     |
| 1.6 (4.14.4)      | Telescopic tubes: cords not fixed to tube; no strain on conductors |                              | P       |
| 1.6 (4.14.5)      | Guide pulleys  |                              | N/A     |
| 1.6 (4.14.6)      | Strain on socket-outlets   |                              | N/A     |
| <b>1.6 (4.15)</b> | <b>Flammable materials</b>   |                              | P       |
|                   | - glow- wire test 650°C..... :                                     | See Test Table 1.15 (13.3.2) | P       |
|                   | - spacing $\geq 30$ 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     |
| 1.6 (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>1.6 (4.16)</b> | <b>Luminaires for mounting on normally flammable surfaces</b>      |                              | P       |

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|-------------------|--|------------------------------|---------|
| Clause            | Requirement + Test   | Result - Remark              | Verdict |
|                   | No lamp control gear.....:   | (compliance with Section 12) | P       |
| 1.6 (4.16.1)      | Lamp control gear spacing:   |                              | N/A     |
|                   | - spacing 35 mm  |                              | N/A     |
|                   | - spacing 10 mm  |                              | N/A     |
| 1.6 (4.16.2)      | Thermal protection:  |                              | N/A     |
|                   | - in lamp control gear   |                              | N/A     |
|                   | - external   |                              | N/A     |
|                   | - fixed position   |                              | N/A     |
|                   | - temperature marked lamp control gear   |                              | N/A     |
| 1.6 (4.16.3)      | Design to satisfy the test of 12.6   | (see clause 12.6)            | N/A     |
| <b>1.6 (4.17)</b> | <b>Drain holes</b>   |                              | N/A     |
|                   | Clearance at least 5 mm  |                              | N/A     |
| <b>1.6 (4.18)</b> | <b>Resistance to corrosion</b>   |                              | P       |
| 1.6 (4.18.1)      | - rust-resistance  |                              | P       |
| 1.6 (4.18.2)      | - season cracking in copper  |                              | N/A     |
| 1.6 (4.18.3)      | - corrosion of aluminium   |                              | N/A     |
| 1.6 (4.19)        | Igniters compatible with ballast   |                              | N/A     |
| 1.6 (4.20)        | Rough service vibration  |                              | N/A     |
| <b>1.6 (4.21)</b> | <b>Protective shield</b>   |                              | N/A     |
| 1.6 (4.21.1)      | Shield fitted if tungsten halogen lamps or metal halide lamps                        |                              | N/A     |
|                   | Shield of glass if tungsten halogen lamps  |                              | N/A     |
| 1.6 (4.21.2)      | Particles from a shattering lamp not impair safety                                   |                              | N/A     |
| 1.6 (4.21.3)      | No direct path   |                              | N/A     |
| 1.6 (4.21.4)      | Impact test on shield  |                              | P       |
|                   | Glow-wire test on lamp compartment.....:   | See Test Table 1.15 (13.3.2) | P       |
| 1.6 (4.22)        | Attachments to lamps not cause overheating or damage                                 |                              | N/A     |
| 1.6 (4.23)        | Semi-luminaires comply Class II  |                              | N/A     |
| <b>1.6 (4.24)</b> | <b>Photobiological hazards</b>   |                              | N/A     |
| 1.6 (4.24.1)      | No excessive UV radiation if tungsten halogen lamps and metal halide lamps (Annex P) |                              | N/A     |
| 1.6 (4.24.2)      | Retinal blue light hazard  |                              | N/A     |
|                   | Luminaires with $E_{thr}$ :  |                              | N/A     |

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|-------------------|--|-----------------|---------|
| Clause            | Requirement + Test   | Result - Remark | Verdict |
|                   | a) Fixed luminaires  |                 | N/A     |
|                   | - distance x m, borderline between RG1 and RG2... :  |                 | N/A     |
|                   | - marking and instruction according 3.2.23   |                 | N/A     |
|                   | b) Portable and handheld luminaires  |                 | N/A     |
|                   | - marking according 3.2.23 if RG1 exceeded at 200 mm according to IEC/TR 62778   |                 | N/A     |
|                   | Portable luminaires for children IEC 60598-2-10 and Mains socket outlet nightlights IEC 60598-2-12 not exceed RG1 at 200 mm according to IEC/62778 |                 | N/A     |
| <b>1.6 (4.25)</b> | <b>Mechanical hazard</b>   |                 | P       |
|                   | No sharp point or edges  |                 | P       |
| <b>1.6 (4.26)</b> | <b>Short-circuit protection</b>  |                 | N/A     |
| 1.6 (4.26.1)      | Adequate means of uninsulated accessible SELV parts  |                 | N/A     |
| 1.6 (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>1.6 (4.27)</b> | <b>Terminal blocks with integrated screwless earthing contacts</b>   |                 | N/A     |
|                   | Test according Annex V   |                 | N/A     |
|                   | Pull test of terminal fixing (20 N)  |                 | N/A     |
|                   | After test, resistance < 0,05 Ω  |                 | N/A     |
|                   | Pull test of mechanical connection (50 N)  |                 | N/A     |
|                   | After test, resistance < 0,05 Ω  |                 | N/A     |
|                   | Voltage drop test, resistance < 0,05 Ω   |                 | N/A     |
| <b>1.6 (4.28)</b> | <b>Fixing of thermal sensing control</b>   |                 | N/A     |
|                   | Not plug-in or easily replaceable type   |                 | N/A     |
|                   | Reliably kept in position  |                 | N/A     |
|                   | No adhesive fixing if UV radiations from a lamp can degrade the fixing   |                 | N/A     |
|                   | Not outside the luminaire enclosure  |                 | N/A     |
|                   | Test of adhesive fixing:   |                 | N/A     |
|                   | Max. temperature on adhesive material (°C)..... :  |                 | —       |
|                   | 100 cycles between t min and t max   |                 | N/A     |
|                   | Temperature sensing control still in position  |                 | N/A     |

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|-------------------|---|-----------------|---------|
| Clause            | Requirement + Test  | Result - Remark | Verdict |
| <b>1.6 (4.29)</b> | <b>Luminaires with non-replaceable light source</b>   |                 | P       |
|                   | Not possible to replace light source  |                 | P       |
|                   | Live part not accessible after parts have been opened by hand or tools  |                 | P       |
| <b>1.6 (4.30)</b> | <b>Luminaires with non-user replaceable light source</b>  |                 | N/A     |
|                   | If protective cover provide protection against electric shock and marked with "caution, electric shock risk" symbol:  |                 | N/A     |
|                   | Minimum two fixing means  |                 | N/A     |
| <b>1.6 (4.31)</b> | <b>Insulation between circuits</b>  |                 | P       |
|                   | 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       |
| 1.6 (4.31.1)      | SELV circuits   |                 | P       |
|                   | Used SELV source  |                 | P       |
|                   | Voltage $\leq$ ELV  |                 | P       |
|                   | 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     |
| 1.6 (4.31.2)      | FELV circuits   |                 | N/A     |
|                   | Used FELV source  |                 | N/A     |
|                   | Voltage $\leq$ ELV  |                 | N/A     |
|                   | Insulating of FELV circuits from LV supply  |                 | N/A     |
|                   | FELV circuits insulated from accessible parts according Table X.1   |                 | N/A     |

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|-------------------|--|-----------------|---------|
| Clause            | Requirement + Test   | Result - Remark | Verdict |
|                   | 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     |
| 1.6 (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 of above  |                 | 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     |
| <b>1.6 (4.32)</b> | <b>Overvoltage protective devices</b>  |                 | P       |
|                   | Comply with IEC 61643-11   |                 | P       |
|                   | External to control gear and connected to earth:   |                 | P       |
|                   | - only in fixed luminaires   |                 | P       |
|                   | - only connected to protective earth   |                 | P       |

|                 |  |   |   |
|-----------------|--|---|---|
| <b>1.7 (11)</b> | <b>CREEPAGE DISTANCES AND CLEARANCES</b>                               |   | P |
| 1.7 (11.2)      | Creepage distances and clearances.....:                                | See Table 1.7 (11.2)  | P |
|                 | Working voltage (V).....:  | 100-240VAC  | — |
|                 | Rated pulse voltage (kV).....:   |   | — |
|                 | Voltage form.....:   | Sinusoidal <input checked="" type="checkbox"/><br>Non-sinusoidal <input type="checkbox"/> | — |
|                 | PTI.....:  | < 600 <input checked="" type="checkbox"/> <input type="checkbox"/> ≥ 600                  | — |
|                 | Impulse withstand category (Normal category II) (Category III Annex U) | Category II <input checked="" type="checkbox"/> Category III <input type="checkbox"/>     | — |

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| Clause              | Requirement + Test   | Result - Remark | Verdict |
|---------------------|--|-----------------|---------|
| <b>1.8 (7)</b>      | <b>PROVISION FOR EARTHING</b>  |                 | N/A     |
| 1.8 (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     |
| 1.8 (7.2.2 + 7.2.3) | Earth continuity in joints, etc.   |                 | N/A     |
| 1.8 (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     |
| 1.8 (7.2.5)         | Earth terminal integral part of connector socket                                     |                 | N/A     |
| 1.8 (7.2.6)         | Earth terminal adjacent to mains terminals   |                 | N/A     |
| 1.8 (7.2.7)         | Electrolytic corrosion of the earth terminal   |                 | N/A     |
| 1.8 (7.2.8)         | Material of earth terminal   |                 | N/A     |
|                     | Contact surface bare metal   |                 | N/A     |
| 1.8 (7.2.10)        | Class II luminaire for looping-in  |                 | N/A     |
|                     | Double or reinforced insulation to functional earth                                  |                 | N/A     |
| 1.8 (7.2.11)        | Earthing core coloured green-yellow  |                 | N/A     |
|                     | Length of earth conductor  |                 | N/A     |

|                 |   |               |     |
|-----------------|---|---------------|-----|
| <b>1.9 (14)</b> | <b>SCREW TERMINALS</b>                    |               | P   |
|                 | Separately approved; component list.....: | (see Annex 1) | P   |
|                 | Part of the luminaire.....:               | (see Annex 3) | N/A |

|                 |   |               |   |
|-----------------|---|---------------|---|
| <b>1.9 (15)</b> | <b>SCREWLESS TERMINALS AND ELECTRICAL CONNECTIONS</b> |               | P |
|                 | Separately approved; component list.....:             | (see Annex 1) | P |



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| Clause            | Requirement + Test  | Result - Remark | Verdict |
|-------------------|---|-----------------|---------|
|                   | Part of the luminaire..... :  | (see Annex 4)   | N/A     |
| <b>1.10 (5)</b>   | <b>EXTERNAL AND INTERNAL WIRING</b>   |                 | P       |
| <b>1.10 (5.2)</b> | <b>Supply connection and external wiring</b>  |                 | P       |
| 1.10 (5.2.1)      | Means of connection..... :  |                 | 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 |                 | N/A     |
| 1.10 (5.2.2)      | Type of cable..... :  |                 | P       |
|                   | Nominal cross-sectional area (mm <sup>2</sup> )..... :  | 2 X 0.5         | P       |
|                   | Cables equal to IEC 60227 or IEC 60245  |                 | N/A     |
| 1.10 (5.2.3)      | Type of attachment, X, Y or Z   |                 | P       |
| 1.10 (5.2.5)      | Type Z not connected to screws  |                 | N/A     |
| 1.10 (5.2.6)      | Cable entries:  |                 | N/A     |
|                   | - suitable for introduction   |                 | N/A     |
|                   | - adequate degree of protection   |                 | N/A     |
| 1.10 (5.2.7)      | Cable entries through rigid material have rounded edges   |                 | N/A     |
| 1.10 (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     |
| 1.10 (5.2.9)      | Locking of screwed bushings   |                 | N/A     |
| 1.10 (5.2.10)     | Cord anchorage:   |                 | N/A     |
|                   | - covering protected from abrasion  |                 | N/A     |
|                   | - clear how to be effective   |                 | N/A     |
|                   | - no mechanical or thermal stress   |                 | N/A     |
|                   | - no tying of cables into knots etc.  |                 | N/A     |
|                   | - insulating material or lining   |                 | N/A     |
| 1.10 (5.2.10.1)   | Cord anchorage for type X attachment:   |                 | N/A     |
|                   | a) at least one part fixed  |                 | N/A     |
|                   | b) types of cable   |                 | N/A     |

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|--------------------|--|-----------------|---------|
| Clause             | Requirement + Test   | Result - Remark | Verdict |
|                    | c) no damaging of the cable  |                 | N/A     |
|                    | d) whole cable can be mounted                                      |                 | N/A     |
|                    | e) no touching of clamping screws                                  |                 | N/A     |
|                    | f) metal screw not directly on cable                               |                 | N/A     |
|                    | g) replacement without special tool                                |                 | N/A     |
|                    | Glands not used as anchorage                                       |                 | N/A     |
|                    | Labyrinth type anchorages  |                 | N/A     |
| 1.10<br>(5.2.10.2) | Adequate cord anchorage for type Y and type Z attachment           |                 | N/A     |
| 1.10<br>(5.2.10.3) | Tests:   |                 | N/A     |
|                    | - impossible to push cable; unsafe                                 |                 | N/A     |
|                    | - pull test: 25 times; pull (N)..... :                             |                 | N/A     |
|                    | - torque test: torque (Nm)..... :                                  |                 | N/A     |
|                    | - displacement $\leq$ 2 mm   |                 | N/A     |
|                    | - no movement of conductors  |                 | N/A     |
|                    | - no damage of cable or cord                                       |                 | N/A     |
|                    | - function independent of electrical connection                    |                 | N/A     |
| 1.10<br>(5.2.11)   | External wiring passing into luminaire                             |                 | N/A     |
| 1.10<br>(5.2.12)   | Looping-in terminals   |                 | N/A     |
| 1.10<br>(5.2.13)   | Wire ends not tinned   |                 | N/A     |
|                    | Wire ends tinned: no cold flow                                     |                 | P       |
| 1.10<br>(5.2.14)   | Mains plug same protection   |                 | N/A     |
|                    | Class III luminaire plug   |                 | N/A     |
|                    | No unsafe compatibility  |                 | N/A     |
| 1.10<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     |
| 1.10<br>(5.2.17)   | No standardized interconnecting cables properly assembled          |                 | N/A     |

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|-------------------|--|-----------------|---------|
| Clause            | Requirement + Test   | Result - Remark | Verdict |
| 1.10 (5.2.18)     | Used plug in accordance with   |                 | N/A     |
|                   | - IEC 60083  |                 | N/A     |
|                   | - other standard   |                 | N/A     |
| <b>1.10 (5.3)</b> | <b>Internal wiring</b>   |                 | P       |
| 1.10 (5.3.1)      | Internal wiring of suitable size and type                                      |                 | P       |
|                   | Through wiring   |                 | P       |
|                   | - not delivered/ mounting instruction  |                 | P       |
|                   | - factory assembled  |                 | P       |
|                   | - socket outlet loaded (A)..... :  |                 | P       |
|                   | - temperatures..... : (see Annex 2)  |                 | P       |
|                   | Green- yellow for earth only   |                 | N/A     |
| 1.10 (5.3.1.1)    | Internal wiring connected directly to fixed wiring                             |                 | P       |
|                   | Cross-sectional area (mm <sup>2</sup> )..... :                                 |                 | P       |
|                   | Insulation thickness   |                 | P       |
|                   | Extra insulation added where necessary   |                 | P       |
| 1.10 (5.3.1.2)    | Internal wiring connected to fixed wiring via internal current-limiting device |                 | N/A     |
|                   | Adequate cross-sectional area and insulation thickness                         |                 | N/A     |
| 1.10 (5.3.1.3)    | Double or reinforced insulation for class II                                   |                 | N/A     |
| 1.10 (5.3.1.4)    | Conductors without insulation  |                 | P       |
| 1.10 (5.3.1.5)    | SELV current-carrying parts  |                 | P       |
| 1.10 (5.3.1.6)    | Insulation thickness other than PVC or rubber                                  |                 | P       |
| 1.10 (5.3.2)      | Sharp edges etc.   |                 | P       |
|                   | No moving parts of switches etc.   |                 | P       |
|                   | Joints, raising/lowering devices   |                 | N/A     |
|                   | Telescopic tubes etc.  |                 | N/A     |
|                   | No twisting over 360°  |                 | N/A     |
| 1.10 (5.3.3)      | Insulating bushings:   |                 | P       |
|                   | - suitable fixed   |                 | P       |

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| Clause       | Requirement + Test                         | Result - Remark | Verdict |
|--------------|--|-----------------|---------|
|              | - material in bushings                     |                 | P       |
|              | - material not likely to deteriorate       |                 | P       |
|              | - cables with protective sheath            |                 | N/A     |
| 1.10 (5.3.4) | Joints and junctions effectively insulated |                 | N/A     |
| 1.10 (5.3.5) | Strain on internal wiring                  |                 | P       |
| 1.10 (5.3.6) | Wire carriers                              |                 | P       |
| 1.10 (5.3.7) | Wire ends not tinned                       |                 | N/A     |
|              | Wire ends tinned: no cold flow             |                 | N/A     |

|                 |  |  |     |
|-----------------|--|--|-----|
| <b>1.11 (8)</b> | <b>PROTECTION AGAINST ELECTRIC SHOCK</b>   |  | P   |
| 1.11 (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                        |  | N/A |
|                 | Lamp and starterholders in portable and adjustable luminaires comply with double or reinforced insulation requirements |  | N/A |
|                 | Basic insulation only accessible under lamp or starter replacement   |  | N/A |
|                 | Protection in any position   |  | P   |
|                 | Double-ended tungsten filament lamp  |  | N/A |
|                 | Insulation lacquer not reliable  |  | N/A |
|                 | Double-ended high pressure discharge lamp  |  | N/A |
|                 | Relevant warning according to 3.2.18 fitted to the luminaire   |  | N/A |
| 1.11 (8.2.2)    | Portable luminaire adjusted in most unfavourable position  |  | N/A |
| 1.11 (8.2.3.a)  | Class II luminaire:  |  | N/A |
|                 | - basic insulated metal parts not accessible during starter or lamp replacement  |  | N/A |
|                 | - basic insulation not accessible other than during starter or lamp replacement  |  | N/A |

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|----------------|--|-----------------|---------|
| Clause         | Requirement + Test   | Result - Remark | Verdict |
|                | - glass protective shields not used as supplementary insulation      |                 | N/A     |
| 1.11 (8.2.3.b) | BC lampholder of metal in class I luminaires shall be earthed        |                 | N/A     |
| 1.11 (8.2.3.c) | SELV circuits with exposed current carrying parts:                   |                 | P       |
|                | Ordinary luminaire:  |                 | P       |
|                | - touch current .....  | 0.03mA          | P       |
|                | - no-load voltage.....   |                 | N/A     |
|                | Other than ordinary luminaire:                                       |                 | N/A     |
|                | - nominal voltage .....  |                 | N/A     |
| 1.11 (8.2.4)   | Portable luminaire have protection independent of supporting surface |                 | N/A     |
| 1.11 (8.2.5)   | Compliance with the standard test finger or relevant probe           |                 | P       |
| 1.11 (8.2.6)   | Covers reliably secured  |                 | P       |
| 1.11 (8.2.7)   | Discharging of capacitors $\geq 0,5 \mu\text{F}$                     |                 | P       |
|                | Portable plug connected luminaire with capacitor                     |                 | N/A     |
|                | Other plug connected luminaire with capacitor                        |                 | N/A     |
|                | Discharge device on or within capacitor                              |                 | P       |
|                | Discharge device mounted separately                                  |                 | N/A     |

|                  |   |                 |   |
|------------------|---|-----------------|---|
| <b>1.12 (12)</b> | <b>ENDURANCE TEST AND THERMAL TEST</b>  |                 | P |
| 1.12 (-)         | If IP > IP 20 relevant test of (12.4), (12.5) and (12.6) after (9.2) before (9.3) specified in 4.13 |                 | — |
| 1.12 (12.3)      | Endurance test:   |                 | P |
|                  | - mounting-position.....  | Normal position | — |
|                  | - test temperature (°C).....  | 25°C            | — |
|                  | - total duration (h).....   | 240h            | — |
|                  | - supply voltage: Un factor; calculated voltage (V)...  | 254.4VAC        | — |
|                  | - lamp used.....  | LED             | — |
| 1.12 (12.3.2)    | After endurance test:   |                 | P |
|                  | - no part unserviceable   |                 | P |
|                  | - luminaire not unsafe  |                 | P |

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| Clause          | Requirement + Test   | Result - Remark | Verdict |
|-----------------|--|-----------------|---------|
|                 | - no damage to track system  |                 | N/A     |
|                 | - marking legible  |                 | P       |
|                 | - no cracks, deformation etc.  |                 | P       |
| 1.12 (12.4)     | Thermal test (normal operation)                                      | (see Annex 2)   | N/A     |
| 1.12 (12.5)     | Thermal test (abnormal operation)                                    | (see Annex 2)   | N/A     |
| 1.12 (12.6)     | Thermal test (failed lamp control gear condition):                   |                 | N/A     |
| 1.12 (12.6.1)   | Through wiring or looping-in wiring loaded by a current of (A) ..... |                 | —       |
|                 | - case of abnormal conditions.....                                   |                 | —       |
|                 | - electronic lamp control gear                                       |                 | N/A     |
|                 | - measured winding temperature (°C): at 1,1 Un .....                 |                 | —       |
|                 | - measured mounting surface temperature (°C) at 1,1 Un.....          |                 | N/A     |
|                 | - calculated mounting surface temperature (°C) .....                 |                 | N/A     |
|                 | - track-mounted luminaires   |                 | N/A     |
| 1.12 (12.6.2)   | Temperature sensing control  |                 | N/A     |
|                 | - case of abnormal conditions.....                                   |                 | —       |
|                 | - 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     |
| 1.12 (12.7)     | Thermal test (failed lamp control gear in plastic luminaires):       |                 | N/A     |
| 1.12 (12.7.1)   | Luminaire without temperature sensing control                        |                 | N/A     |
| 1.12 (12.7.1.1) | Luminaire with fluorescent lamp ≤ 70W                                |                 | N/A     |
|                 | Test method 12.7.1.1 or Annex W .....                                |                 | —       |
|                 | Test according to 12.7.1.1:  |                 | N/A     |
|                 | - case of abnormal conditions.....                                   |                 | —       |
|                 | - Ballast failure at supply voltage (V) .....                        |                 | —       |
|                 | - 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     |

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|-----------------|--|--|---------|
| Clause          | Requirement + Test   | Result - Remark  | Verdict |
|                 | - case of abnormal conditions.....:  |  | —       |
|                 | - measured winding temperature (°C): at 1,1 Un.....:                       |  | —       |
|                 | - measured temperature of fixing point/exposed part (°C): at 1,1 Un.....:  |  | —       |
|                 | - calculated temperature of fixing point/exposed part (°C).....:           |  | —       |
|                 | Ball-pressure test.....:   | See Table 1.15 (13.2.1)                                  | N/A     |
| 1.12 (12.7.1.2) | Luminaire with discharge lamp, fluorescent lamp > 70W, transformer > 10 VA |  | N/A     |
|                 | - case of abnormal conditions.....:  |  | —       |
|                 | - measured winding temperature (°C): at 1,1 Un.....:                       |  | —       |
|                 | - measured temperature of fixing point/exposed part (°C): at 1,1 Un.....:  |  | —       |
|                 | - calculated temperature of fixing point/exposed part (°C).....:           |  | —       |
|                 | Ball-pressure test.....:   | See Table 1.15 (13.2.1)                                  | N/A     |
| 1.12 (12.7.1.3) | Luminaire with short circuit proof transformers ≤ 10 VA                    |  | N/A     |
|                 | - case of abnormal conditions.....:  |  | —       |
|                 | - Components retained in place after the test                              |  | N/A     |
|                 | - Test with standard test finger after the test                            |  | N/A     |
| 1.12 (12.7.2)   | Luminaire with temperature sensing control                                 |  | N/A     |
|                 | - thermal link.....:   | Yes <input type="checkbox"/> No <input type="checkbox"/> | —       |
|                 | - manual reset cut-out.....:   | Yes <input type="checkbox"/> No <input type="checkbox"/> | —       |
|                 | - auto reset cut-out.....:   | Yes <input type="checkbox"/> No <input type="checkbox"/> | —       |
|                 | - case of abnormal conditions.....:  |  | —       |
|                 | - highest measured temperature of fixing point/exposed part (°C):.....:    |  | —       |
|                 | Ball-pressure test.....:   | See Table 1.15 (13.2.1)                                  | N/A     |
| <b>1.13 (9)</b> | <b>RESISTANCE TO DUST, SOLID OBJECTS AND MOISTURE</b>                      |  | P       |
| 1.13 (-)        | If IP > IP 20 the order of tests as specified in clause 1.12               |  | P       |
| 1.13 (9.2)      | Tests for ingress of dust, solid objects and moisture:                     |  | —       |
|                 | - classification according to IP.....:                                     | IP20   | —       |

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|---------------|--|------------------|---------|
| Clause        | Requirement + Test   | Result - Remark  | Verdict |
|               | - mounting position during test.....:  | As in normal use | —       |
|               | - fixing screws tightened; torque (Nm).....:   | 0.8Nm            | —       |
|               | - tests according to clauses.....:   |                  | —       |
|               | - electric strength test afterwards  |                  | N/A     |
|               | a) no deposit in dust-proof luminaire  |                  | N/A     |
|               | b) no talcum in dust-tight luminaire   |                  | N/A     |
|               | c) no trace of water on current-carrying parts or on insulation where it could become a hazard |                  | N/A     |
|               | d) i) For luminaires without drain holes – no water entry                                      |                  | N/A     |
|               | d) ii) For luminaires with drain holes – no hazardous water entry                              |                  | N/A     |
|               | e) no water in watertight luminaire  |                  | N/A     |
|               | f) no contact with live parts (IP 2X)  |                  | P       |
|               | f) no entry into enclosure (IP 3X and IP 4X)   |                  | N/A     |
|               | f) no contact with live parts (IP3X and IP4X)  |                  | N/A     |
|               | g) no trace of water on part of lamp requiring protection from splashing water                 |                  | N/A     |
|               | h) no damage of protective shield or glass envelope  |                  | N/A     |
| 1.13 (9.3)    | Humidity test 48 h   | 25°C, 93%RH      | P       |

|                  |  |  |     |
|------------------|--|--|-----|
| <b>1.14 (10)</b> | <b>INSULATION RESISTANCE AND ELECTRIC STRENGTH</b>   |  | P   |
| 1.14 (10.2.1)    | Insulation resistance test   |  | P   |
|                  | Cable or cord covered by metal foil or replaced by a metal rod of mm Ø .....   |  | —   |
|                  | Insulation resistance (MΩ).....:   |  | —   |
|                  | 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 |



| IEC 60598-2-1 |   |                 |         |
|---------------|---|-----------------|---------|
| Clause        | Requirement + Test  | Result - Remark | Verdict |
|               | Other than SELV   |                 | P       |
|               | - between live parts of different polarity..... :   | >100M           | P       |
|               | - between live parts and mounting surface..... :  | >100M           | P       |
|               | - between live parts and metal parts..... :   | >100M           | P       |
|               | - between live parts of different polarity through action of a switch..... :  |                 | N/A     |
|               | - between the outer surface of a flexible cord or cable where it is clamped in a cord anchorage and accessible metal parts..... : |                 | N/A     |
|               | - Insulation bushings as described in Section 5 .....   |                 | P       |
| 1.14 (10.2.2) | Electric strength test  |                 | P       |
|               | Dummy lamp  |                 | N/A     |
|               | Luminaires with ignitors after 24 h test  |                 | N/A     |
|               | Luminaires with manual ignitors   |                 | N/A     |
|               | Test voltage (V)..... :   |                 | 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..... :   | 3000V           | P       |
|               | - between live parts and mounting surface..... :  | 3000V           | P       |
|               | - between live parts and metal parts..... :   | 3000V           | P       |
|               | - between live parts of different polarity through action of a switch..... :  |                 | N/A     |
|               | - between the outer surface of a flexible cord or cable where it is clamped in a cord anchorage and accessible metal parts..... : |                 | N/A     |
|               | - Insulation bushings as described in Section 5 .....   |                 | P       |
| 1.14 (10.3)   | Touch current or protective conductor current (mA):   | 0.03mA          | P       |

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

| 1.15 (13)     | <b>RESISTANCE TO HEAT, FIRE AND TRACKING</b> |                              | P   |
|---------------|--|------------------------------|-----|
| 1.15 (13.2.1) | Ball-pressure test..... :                    | See Test Table 1.15 (13.2.1) | P   |
| 1.15 (13.3.1) | Needle-flame test (10 s)..... :              | See Test Table 1.15 (13.3.1) | P   |
| 1.15 (13.3.2) | Glow-wire test (650°C)..... :                | See Test Table 1.15 (13.3.2) | P   |
| 1.15 (13.4)   | Proof tracking test (IEC 60112)..... :       | See Test Table 1.15 (13.4)   | N/A |

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

|  |   |     |     |     |     |      |     |
|--|---|-----|-----|-----|-----|------|-----|
| <b>1.7 (11.2)</b>                                | <b>TABLES: Creepage distances and clearances</b>                      |     |     |     |     |      | P   |
| <b>Table 11.1</b>                                | <b>Minimum distances (mm) for a.c. (50/60 Hz) sinusoidal voltages</b> |     |     |     |     |      | P   |
| RMS working voltage (V) not exceeding            | 50  | 150 | 250 | 500 | 750 | 1000 |     |
| <b>Creepage distances</b>                        |   |     |     |     |     |      |     |
| Required basic insulation, PTI $\geq$ 600        | 0,6   | 0,8 | 1,5 | 3   | 4   | 5,5  |     |
| Measured   | -   | -   | -   | -   | -   | -    |     |
| Required basic insulation, PTI < 600             | 1,2   | 1,6 | 2,5 | 5   | 8   | 10   |     |
| Measured   | -   | -   | -   | -   | -   | -    |     |
| Required supplementary insulation PTI $\geq$ 600 | -   | 0,8 | 1,5 | 3   | 4   | 5,5  |     |
| Measured   | -   | -   | -   | -   | -   | -    |     |
| Required supplementary insulation PTI < 600      | -   | 1,6 | 2,5 | 5   | 8   | 10   |     |
| Measured   | -   | -   | 3,2 | -   | -   | -    |     |
| Required reinforced insulation                   | -   | 3,2 | 5   | 6   | 8   | 11   |     |
| Measured   | -   | -   | -   | -   | -   | -    |     |
| <b>Clearances</b>                                |   |     |     |     |     |      |     |
| Required basic insulation                        | 0,2   | 0,8 | 1,5 | 3   | 4   | 5,5  |     |
| Measured   | -   | -   | -   | -   | -   | -    |     |
| Required supplementary insulation                | -   | 0,8 | 1,5 | 3   | 4   | 5,5  |     |
| Measured   | -   | -   | 3,2 | -   | -   | -    |     |
| Required reinforced insulation                   | -   | 1,6 | 3   | 6   | 8   | 11   |     |
| Measured   | -   | -   | -   | -   | -   | -    |     |
| <b>Table 11.2</b>                                | <b>Minimum distances (mm) for non-sinusoidal pulse voltages</b>       |     |     |     |     |      | N/A |
| Rated pulse voltage (peak kV)                    | 2,0   | 2,5 | 3,0 | 4,0 | 5,0 | 6,0  | 8,0 |
| Required clearances                              | 1,0   | 1,5 | 2   | 3   | 4   | 5,5  | 8   |
| Measured   |   |     |     |     |     |      |     |
| Rated pulse voltage (peak kV)                    | 10  | 12  | 15  | 20  | 25  | 30   | 40  |
| Required clearances                              | 11  | 14  | 18  | 25  | 33  | 40   | 60  |
| Measured   |   |     |     |     |     |      |     |
| Rated pulse voltage (peak kV)                    | 50  | 60  | 80  | 100 | -   | -    | -   |
| Required clearances                              | 75  | 90  | 130 | 170 | -   | -    | -   |
| Measured   |   |     |     |     |     |      |     |

| IEC 60598-2-1 |                    |                 |         |
|---------------|--------------------|-----------------|---------|
| Clause        | Requirement + Test | Result - Remark | Verdict |

| 1.15<br>(13.2.1)                              | TABLE: Ball Pressure Test of Thermoplastics |                       |                          | P |
|---|---|-----------------------|--------------------------|---|
| <b>Allowed impression diameter (mm) .....</b> |   | 2mm                   |                          | — |
| Object/ Part No./ Material                    | Manufacturer/<br>trademark                  | Test temperature (°C) | Impression diameter (mm) |   |
| PCB   | Various                                     | 125                   | 1.13                     |   |
| Enclosure                                     | Various                                     | 125                   | 1.05                     |   |
| Diffuser                                      | Various                                     | 125                   | 1.33                     |   |
| Supplementary information:                    |   |                       |                          |   |

| 1.15<br>(13.3.1)              | TABLE: Needle-flame test (IEC 60695-11-5) |   |  |                                    | P       |
|-------------------------------|---|---|--|------------------------------------|---------|
| 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 |
| PCB                           | Various                                   | 30s   | Yes                                      | 11s                                | P       |
| Enclosure                     | Various                                   | 30s   | Yes                                      | 10s                                | P       |
| Diffuser                      | Various                                   | 30s   | Yes                                      | 8s                                 | P       |
| Supplementary information:    |   |   |  |                                    |         |

| 1.15<br>(13.3.2)  | TABLE: Glow-wire test (IEC 60695-2-11) |   |  |                                    | P       |
|---|--|---|--|------------------------------------|---------|
| <b>Glow wire temperature .....</b>  |  | 650°C   |  |                                    | —       |
| 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 |
| PCB   | Various                                | 30s   | Yes                                      | 0s                                 | P       |
| Enclosure   | Various                                | 30s   | Yes                                      | 0s                                 | P       |
| Diffuser  | Various                                | 30s   | Yes                                      | 0s                                 | P       |
| 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).....: |  |   |  |                                    | Yes     |
| Supplementary information:  |  |   |  |                                    |         |

| IEC 60598-2-1 |                    |                 |         |
|---------------|--------------------|-----------------|---------|
| Clause        | Requirement + Test | Result - Remark | Verdict |

|                                   |   |  |  |                |
|-----------------------------------|---|--|--|----------------|
| 1.15 (13.4)                       | <b>TABLE: Proof tracking test (IEC 60112)</b> |  |  | N/A            |
| <b>Test voltage PTI .....</b>     | : 175 V                                       |  |  | —              |
| <b>Object/ Part No./ Material</b> | <b>Manufacturer/ trademark</b>                | Withstand 50 drops without failure on three places or on three specimens |  | <b>Verdict</b> |
|                                   |   |  |  |                |
|                                   |   |  |  |                |
|                                   |   |  |  |                |
| Supplementary information:        |   |  |  |                |

| <b>ANNEX 1</b>  | <b>TABLE: Critical components information</b> |                                |                     |   |                 | P   |
|---|---|--------------------------------|---------------------|---|-----------------|---|
| <b>Object / part No.</b>  | <b>Code</b>                                   | <b>Manufacturer/ trademark</b> | <b>Type / model</b> | <b>Technical data</b>                   | <b>Standard</b> | <b>Mark(s) of conformity<sup>1)</sup></b> |
| Metal Enclosure(AL)   | B   | Various                        | Various             | Metal: min. thickness: 2.0mm            | EN 60598-1      | --  |
| LED driver  | B   | V-TAC EXPORTS LIMITED          | VT                  | Rating: 100-240VAC,50/60Hz 0.2A,MAX.40W | EN 61347-2-13   | Tested with appliance                     |
| Diffuser  | B   | Various                        | Various             | V-0, VW-1, 90°C                         | --              | UL  |
| Supply cord   | B   | Various                        | 52(RVV)             | 2x0.5mm <sup>2</sup> 300/300V           | --              | VDE                                       |
| Internal wire   | B   | Various                        | 1015                | 22AWG,105°C V-0                         | --              | UL  |
| LED PCB   | B   | Various                        | Various             | V-0, 130°C. thickness: 1.0mm            | --              | UL  |
| Supplementary information:  |   |                                |                     |   |                 |   |
| <sup>1)</sup> Provided evidence ensures the agreed level of compliance. See OD-CB2039.<br>The codes above have the following meaning:<br>A - The component is replaceable with another one, also certified, with equivalent characteristics<br>B - The component is replaceable if authorised by the test house<br>C - Integrated component tested together with the appliance<br>D - Alternative component |   |                                |                     |   |                 |   |

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

| ANNEX 2 | TABLE: Temperature measurements, thermal tests of Section 12                              |   | p |
|---------|---|---|---|
|         | Type reference.....:  | VT-8040                                     | — |
|         | Lamp used.....:   |   | — |
|         | Lamp control gear used.....:  |   | — |
|         | Mounting position of luminaire.....:  | As in normal use                            | — |
|         | Supply wattage (W).....:  | 39.4W                                       | — |
|         | Supply current (A).....:  | 0.20A                                       | — |
|         | Calculated power factor.....:   |   | — |
|         | Table: measured temperatures corrected for $t_a = 25\text{ }^\circ\text{C}$ :             |   | p |
|         | - abnormal operating mode.....:   |   | — |
|         | - test 1: rated voltage.....:   |   | — |
|         | - test 2: 1,06 times rated voltage or 1,05 times rated wattage.....:                      | Supplied from adapter<br>1.05 x 240V=254.4V | — |
|         | - test 3: Load on wiring to socket-outlet, 1,06 times voltage or 1,05 times wattage.....: |   | — |
|         | - test 4: 1,1 times rated voltage or 1,05 times rated wattage.....:                       |   | — |
|         | Through wiring or looping-in wiring loaded by a current of A during the test .....        |   | — |

**Temperature measurements, ( $^\circ\text{C}$ )**

| Part              | Ambient | Clause 12.4 – normal |        |        |       | Clause 12.5 – abnormal |       |
|-------------------|---------|----------------------|--------|--------|-------|------------------------|-------|
|                   |         | test 1               | test 2 | test 3 | limit | test 4                 | limit |
| Diffuser, outside | 25      | 45.3                 | -      | -      | 90    | -                      | -     |
| Diffuser, inside  | 25      | 53.2                 | -      | -      | 90    | -                      | -     |
| Internal wire     | 25      | 39.6                 | -      | -      | 105   | -                      | -     |
| LED               | 25      | 56.3                 | -      | -      | ref   | -                      | -     |
| LED PCB           | 25      | 55.2                 | -      | -      | 130   | -                      | -     |
| PCB of LED driver | 25      | 54.1                 | -      | -      | 80    | -                      | -     |
| Transformer       | 25      | 89.9                 | -      | -      | 110   | -                      | -     |
| Ambient           | 25      | 25.3                 | -      | -      | --    | -                      | -     |

| IEC 60598-2-1 |                    |                 |         |
|---------------|--------------------|-----------------|---------|
| Clause        | Requirement + Test | Result - Remark | Verdict |

| ANNEX 3     | Screw terminals (part of the luminaire)               |   | N/A |
|-------------|---|---|-----|
| <b>(14)</b> | <b>SCREW TERMINALS</b>                                |   | N/A |
| (14.2)      | Type of terminal..... :                               |   | —   |
|             | Rated current (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> )..... :        |   | —   |
| (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 |

| ANNEX 4     | Screwless terminals (part of the luminaire) |  | N/A |
|-------------|---|--|-----|
| <b>(15)</b> | <b>SCREWLESS TERMINALS</b>                  |  | N/A |
| (15.2)      | Type of terminal..... :                     |  | —   |
|             | Rated current (A)..... :                    |  | —   |
| (15.3.1)    | Material                                    |  | N/A |
| (15.3.2)    | Clamping                                    |  | N/A |

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| Clause     | Requirement + Test  | Result - Remark | Verdict |
|------------|---|-----------------|---------|
| (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     |
| (15.5.1)   | Terminals internal wiring   |                 | N/A     |
| (15.5.1.1) | Pull test spring-type terminals (4 N, 4 samples).....:                            |                 | N/A     |
| (15.5.1.2) | 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  |                 |         |
|            | Voltage drop (mV) after 1 h (4 samples).....:                                     |                 | N/A     |
|            | Voltage drop of two inseparable joints  |                 | N/A     |
|            | Number of cycles:   |                 | —       |
|            | Voltage drop (mV) after 10th alt. 25th cycle (4 samples).....:                    |                 | N/A     |
|            | Voltage drop (mV) after 50th alt. 100th cycle (4 samples).....:                   |                 | N/A     |
|            | After ageing, voltage drop (mV) after 10th alt. 25th cycle (4 samples).....:      |                 | N/A     |
|            | After ageing, voltage drop (mV) after 50th alt. 100th cycle (4 samples).....:     |                 | N/A     |
| (15.6)     | Terminals external wiring   |                 | N/A     |
|            | Terminal size and rating  |                 | N/A     |
| (15.6.2.1) | Pull test spring-type terminals or welded connections (4 samples); pull (N) ..... |                 | N/A     |
|            | Pull test pin or tab terminals (4 samples); pull (N) .....                        |                 | N/A     |



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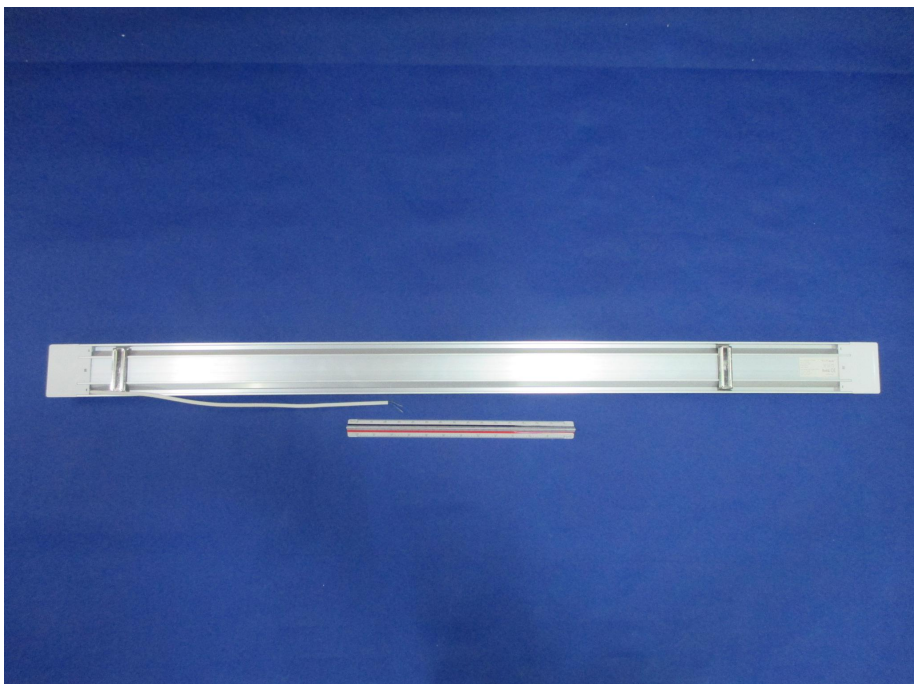
| Clause | Requirement + Test | Result - Remark | Verdict |
|--------|--------------------|-----------------|---------|
|--------|--------------------|-----------------|---------|

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

**Appendix 1**

Photo documentation

|  |   |
|--|---|
| <p>Photo 1</p> <p>View:</p> <p><input checked="" type="checkbox"/> Front</p> <p><input type="checkbox"/> Rear</p> <p><input type="checkbox"/> Right side</p> <p><input type="checkbox"/> Left side</p> <p><input type="checkbox"/> Top</p> <p><input type="checkbox"/> Bottom</p> <p><input type="checkbox"/> Internal</p> |  |
|--|---|

|  |  |
|--|--|
| <p>Photo 2</p> <p>View:</p> <p><input type="checkbox"/> Front</p> <p><input checked="" type="checkbox"/> Rear</p> <p><input type="checkbox"/> Right side</p> <p><input type="checkbox"/> Left side</p> <p><input type="checkbox"/> Top</p> <p><input type="checkbox"/> Bottom</p> <p><input type="checkbox"/> Internal</p> |  |
|--|--|

|  |   |
|--|---|
| <p>Photo 3</p> <p>View:</p> <p><input type="checkbox"/> Front</p> <p><input type="checkbox"/> Rear</p> <p><input type="checkbox"/> Right side</p> <p><input type="checkbox"/> Left side</p> <p><input type="checkbox"/> Top</p> <p><input type="checkbox"/> Bottom</p> <p><input checked="" type="checkbox"/> Internal</p> |  |
|--|---|

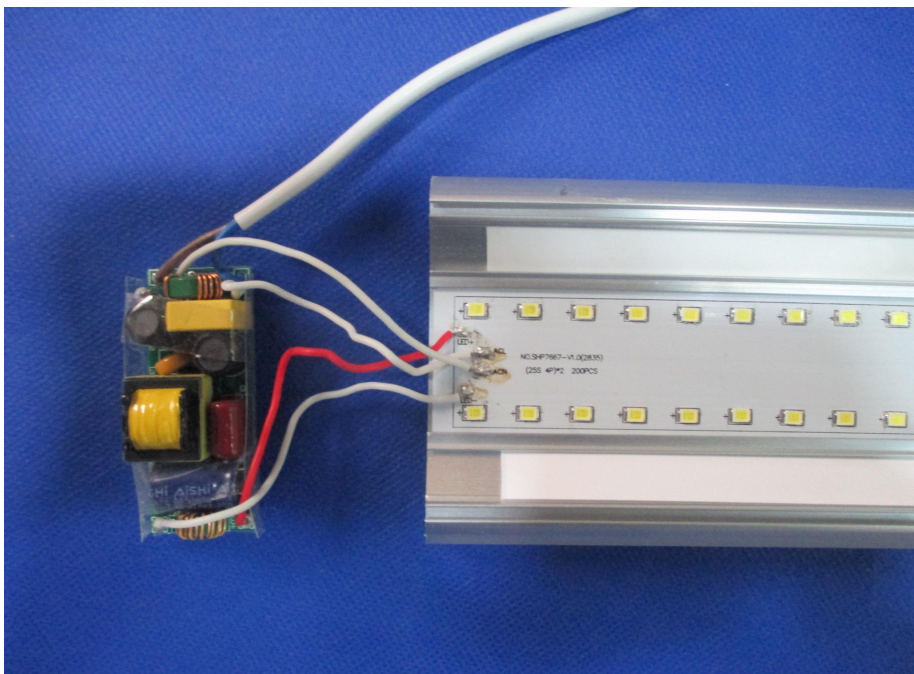
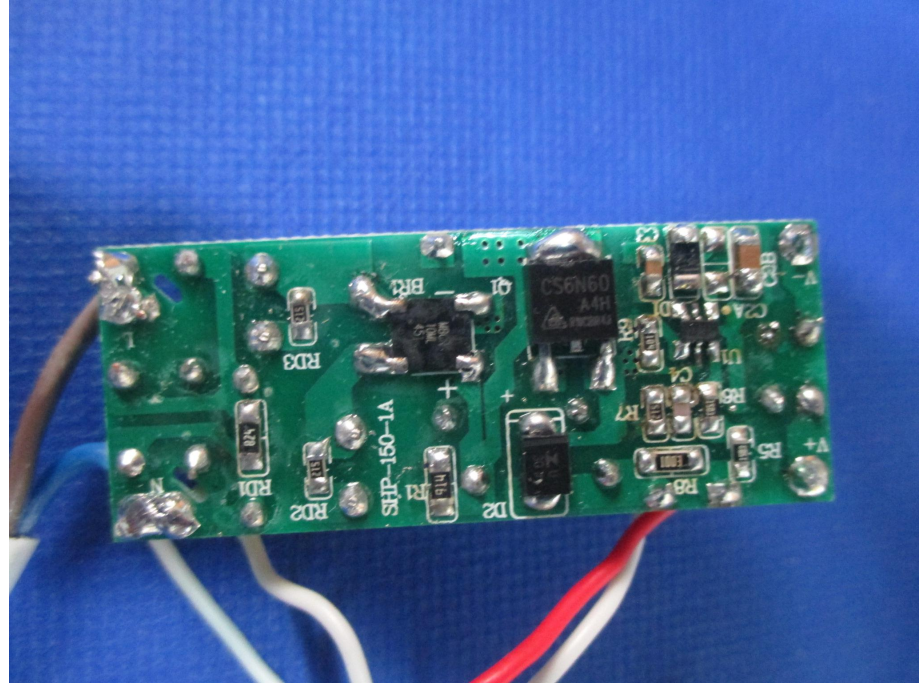
|  |  |
|--|--|
| <p>Photo 4</p> <p>View:</p> <p><input type="checkbox"/> Front</p> <p><input type="checkbox"/> Rear</p> <p><input type="checkbox"/> Right side</p> <p><input type="checkbox"/> Left side</p> <p><input type="checkbox"/> Top</p> <p><input type="checkbox"/> Bottom</p> <p><input checked="" type="checkbox"/> Internal</p> |  |
|--|--|

Photo 5

View:

- Front
- Rear
- Right side
- Left side
- Top
- Bottom
- Internal



---END---