



TEST REPORT
IEC 60598-2-24
Luminaires
Part 2: Particular requirements
Section 24: Luminaires with limited surface temperature

Report Number.....: LCS190322035BS
Date of issue.....: April 09, 2019
Total number of pages.....: 10 pages

Name of Testing Laboratory

preparing the Report.....: Shenzhen Southern LCS Compliance Testing Laboratory Ltd.

Applicant's name.....: Fulton Science and Technology Lighting Co., Ltd
Address.....: 7F, Building 17, Area C, Liantang Industrial Town, Shangcun
Community, Gongming, Guangming New District, Shenzhen,
Guangdong Province, China.

Test specification:

Standard.....: IEC 60598-2-24:2013 used in conjunction with
IEC 60598-1:2014+A1:2017

Test procedure.....: Type Test

Non-standard test method.....: N/A

Test Report Form No.....: IEC60598_2_24G

Test Report Form(s) Originator.....: Intertek Semko AB

Master TRF.....: 2018-04

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LCSTRF-S-019-A-1

Shenzhen Southern LCS Compliance Testing Laboratory Ltd.

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| | | |
|---|--|--|
| Test item description: | LED Tri-Proof light | |
| Trade Mark: | | |
| Manufacturer: | Same as applicant | |
| Address: | Same as applicant | |
| Model/Type reference: | Details see model list on page 5 | |
| Ratings: | 200-240V~, 50/60Hz, IP66, ta.45°C, for details see model list on page 5 | |
| <input type="checkbox"/> | Testing Laboratory: | |
| Testing location/ address: | Shenzhen Southern LCS Compliance Testing Laboratory Ltd. B Area, 1-2F, Building B, Zhongyu Green High-tech Industrial Park, Wenge Road, Heshuikou, Gongming Street, Guangming New District, Shenzhen, China | |
| Tested by: | Rebecca Qin (Engineer) | |
| Check by: | Eko Yang (Director) | |
| Approved by: | Jesse Liu (Manager) | |
| List of Attachments (including a total number of pages in each attachment): Attachment No. 1: 3 pages of photo documentation. | | |
| Summary of testing: | | |
| Tests performed (name of test and test clause): Tests performed (name of test and test clause): This report includes: 1. Tests for Clause 24.13.1 and 24.13.2 of EN 60598-2-24:2013 of EN 60598-2-24:2013 | Testing location: Shenzhen Southern LCS Compliance Testing Laboratory Ltd. B Area, 1-2F, Building B, Zhongyu Green High-tech Industrial Park, Wenge Road, Heshuikou, Gongming Street, Guangming New District, Shenzhen, China | |
| Summary of compliance with National Differences: List of countries addressed | | |

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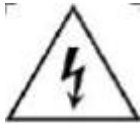
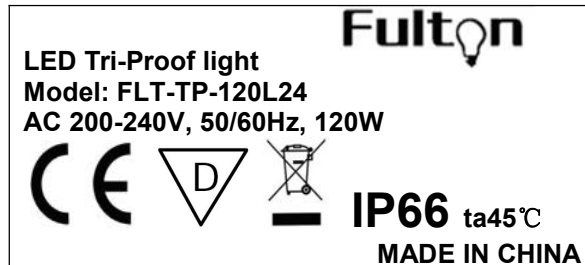
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**Copy of marking plate:**

The artwork below may be only a draft. The use of certification marks on a product must be authorized by the respective NCBs that own these marks.



This label shall be attached near the cover at list of height 15*15mm

Remarks:

1. Representative markings of FLT-TP-120L24, markings of all models are identical except for the model name and rating.
2. Height of CE mark at least 5mm, height of WEEE symbol should not less than 7mm, height of other marks at least 5mm, height of letters and numerals at least 2mm.

LCSTRF-S-019-A-1

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| Test item particulars : | | | | | | | | | |
|---|--|---------------|------------------|---------------|---------|------|----------------|---|------------------|
| Classification of installation and use : | Fixed luminaires for indoor and outdoor use | | | | | | | | |
| Supply Connection : | AC inlet | | | | | | | | |
| Protection Class : | Class I | | | | | | | | |
| Degree of Protection : | IP65 | | | | | | | | |
| Possible test case verdicts: | | | | | | | | | |
| - test case does not apply to the test object..... : | N/A | | | | | | | | |
| - test object does meet the requirement..... : | P (Pass) | | | | | | | | |
| - test object does not meet the requirement..... : | F (Fail) | | | | | | | | |
| Testing : | | | | | | | | | |
| Date of receipt of test item : | March 22, 2019 | | | | | | | | |
| Date (s) of performance of tests : | March 22, 2019 - April 09, 2019 | | | | | | | | |
| | | | | | | | | | |
| General remarks: | | | | | | | | | |
| <p>This report shall not be reproduced except in full without the written approval of the testing laboratory. The test results presented in this report relate only to the item tested. "(See Enclosure #)" refers to additional information appended to the report. "(See appended table)" refers to a table appended to the report. Clause numbers between brackets refer to clauses in IEC/EN 60598-1.</p> <p>Throughout this report a <input checked="" type="checkbox"/> comma / <input type="checkbox"/> point is used as the decimal separator.</p> <p>According to the EU directives which have been aligned with EU NLF (new legislative framework), both of manufacturer and importer's name and address shall be affixed on the product or, where that is not possible, on its packaging or in a document accompanying the product before the product is placed on the EU market.</p> <p style="text-align: center;">Modified Information</p> <table border="1" style="margin-left: auto; margin-right: auto; border-collapse: collapse;"> <thead> <tr> <th style="text-align: center;">Version</th> <th style="text-align: center;">Report No.</th> <th style="text-align: center;">Revision Date</th> <th style="text-align: center;">Summary</th> </tr> </thead> <tbody> <tr> <td style="text-align: center;">V1.0</td> <td style="text-align: center;">LCS190322035BS</td> <td style="text-align: center;">/</td> <td style="text-align: center;">Original Version</td> </tr> </tbody> </table> | | Version | Report No. | Revision Date | Summary | V1.0 | LCS190322035BS | / | Original Version |
| Version | Report No. | Revision Date | Summary | | | | | | |
| V1.0 | LCS190322035BS | / | Original Version | | | | | | |
| Manufacturer's Declaration per sub-clause 4.2.5 of IEC 02: | | | | | | | | | |
| The application for obtaining a CB Test Certificate includes more than one factory location and a declaration from the Manufacturer stating that the sample(s) submitted for evaluation is (are) representative of the products from each factory has been provided.....: | <input type="checkbox"/> Yes <input checked="" type="checkbox"/> Not applicable | | | | | | | | |
| When differences exist; they shall be identified in the General product information section. | | | | | | | | | |
| Name and address of factory (ies) : Same as manufacturer | | | | | | | | | |

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General product information:

Product: LED Tri-Proof light

Rating: AC 200-240V, 50/60Hz, ta=45°C, IP66, Class I, suitable for direct mounting on normally flammable surfaces, for indoor and outdoor use.

- Same series models have similar construction except for the size and power.
- Unless otherwise specified, the model FLT-TP-120L24 was chosen as representative model to perform all test.

Model list:

| Model | Wattage(W) |
|---------------|------------|
| FLT-TP-20L6 | 20 |
| FLT-TP-30L6 | 30 |
| FLT-TP-50L12 | 50 |
| FLT-TP-60L12 | 60 |
| FLT-TP-80L15 | 80 |
| FLT-TP-80L18 | 80 |
| FLT-TP-100L18 | 100 |
| FLT-TP-100L24 | 100 |
| FLT-TP-120L24 | 120 |



| ANNEX 2 | TABLE: Temperature measurements, thermal tests of Section 12 | | |
|---------|---|---|---|
| | Type reference.....: | FLT-TP-120L24 | — |
| | Lamp used.....: | LED module | — |
| | Lamp control gear used.....: | LC 57/1050/54 fixCC Ip SNC2 | — |
| | Mounting position of luminaire.....: | According to instruction from manufacturer(Fixing ring) | — |
| | Supply wattage (W).....: | 122,6 | — |
| | Supply current (A).....: | 0,528 | — |
| | Calculated power factor.....: | 0,962 | — |
| | Table: measured temperatures corrected for ta = 45 °C: | | |
| | - abnormal operating mode.....: | LED driver output short circuit. | — |
| | - test 1: rated voltage.....: | -- | — |
| | - test 2: 1,06 times rated voltage or 1,05 times rated wattage.....: | U=1,06x240=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.....: | LED driver output short circuit: LED driver protection immediately | — |
| | Through wiring or looping-in wiring loaded by a current of A during the test | -- | — |

Temperature measurements, (°C)

| Part | Ambient | Clause 12.4 – normal | | | | Clause 12.5 – abnormal | |
|--------------------------------------|---------|----------------------|--------|--------|-------|------------------------|-------|
| | | test 1 | test 2 | test 3 | limit | test 4 | limit |
| LED PCB | 45 | -- | 71,2 | -- | 110 | -- | -- |
| Internal wire near LED | 45 | -- | 65,1 | -- | 80 | -- | -- |
| Plastic parts near LED | 45 | -- | 56,5 | -- | Ref. | -- | -- |
| tc of LED lamp controlgear | 45 | -- | 65,4 | -- | 80 | -- | -- |
| Horizontal side of Plastic enclosure | 45 | -- | 58,3 | -- | 90 | -- | -- |
| Vertical side of Plastic enclosure | 45 | -- | 56,4 | -- | 150 | -- | -- |

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| | | | | | | | |
|--|----|----|------|----|-----|----|----|
| Vertical side of Plastic enclosure which near the wall | 45 | -- | 56,9 | -- | 150 | -- | -- |
| Mounting surface | 45 | -- | 47,2 | -- | 90 | -- | -- |
| Supplementary information: | | | | | | | |

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Attachment No.1

Photo Documentation

View:
Model:
FLT-TP-
120L24

- General
- Front
- Rear
- Internal
- Top
- Bottom
- PWB



Figure 1

View:

- General
- Front
- Rear
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- Top
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Figure 2

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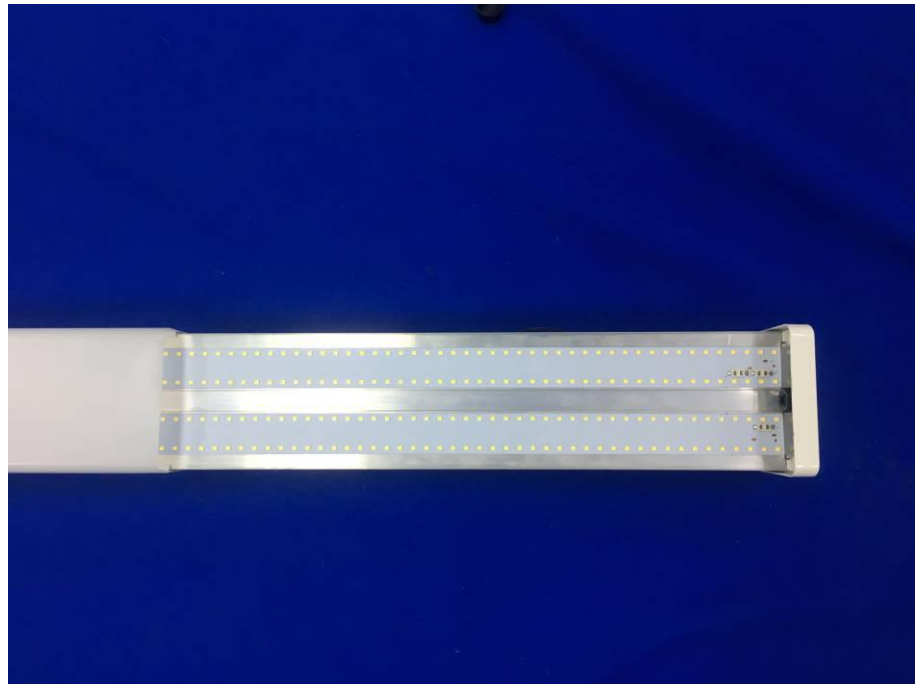


Figure 3

View:

- General
- Front
- Rear
- Internal
- Top
- Bottom
- PWB

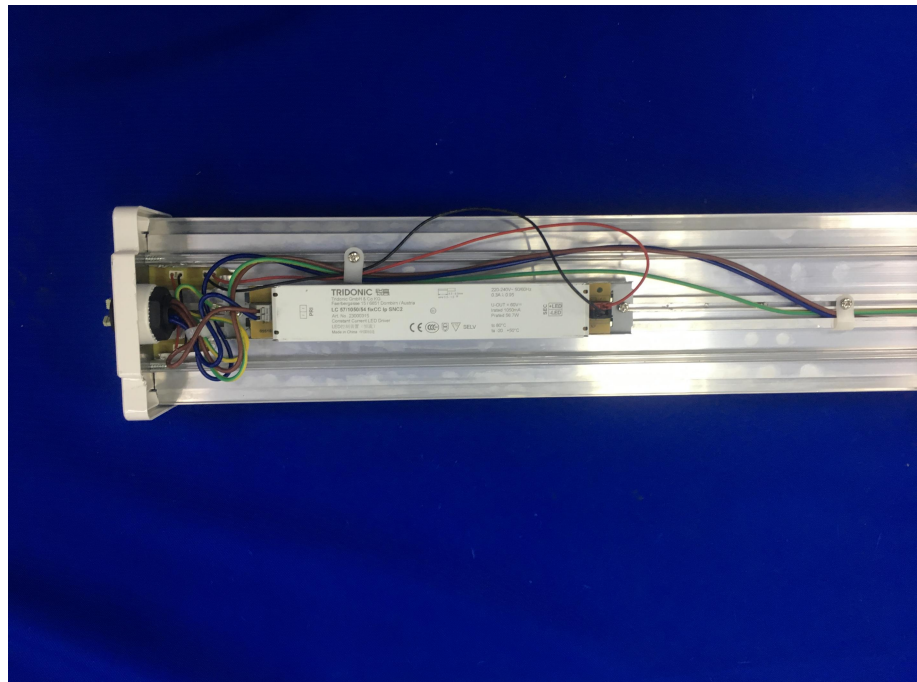


Figure 4

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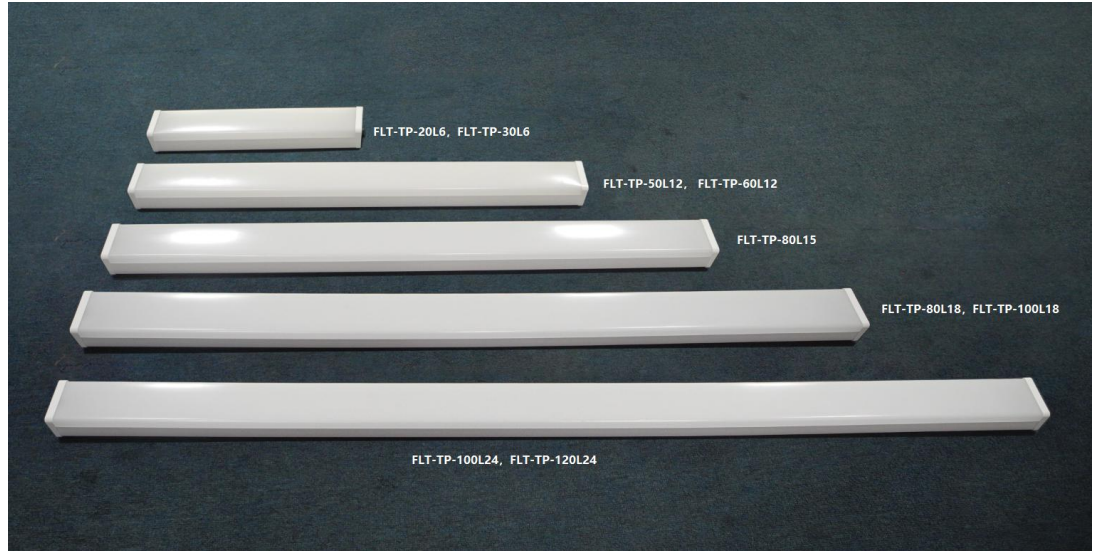


Figure 5

-----End of Test Report-----

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