



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

Report Number.....: LCS190321016BS
Date of issue.....: March 30, 2019
Total number of pages.....: 8 pages

Name of Testing Laboratory

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

Applicant's name.....: Shenzhen Unicorn Lighting Co., Ltd.

Address.....: 1-3F, 3rd Ind. Park, Huayuan Road, Dalang, Longhua, 518109, Shenzhen

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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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 :	TP040LE4F-BO	
Ratings :	AC 220-240V, 50/60Hz, 40W, ta.45°C, IP65, Class I	
<input checked="" 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: 2 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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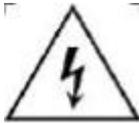
Add: B Area, 1-2F, Building B, Zhongyu Green High-tech Industrial Park, Wenge Road, Heshuikou, Gongming Street, Guangming New District, Shenzhen, China

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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:

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.

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Test item particulars :									
Classification of installation and use :	Fixed luminaires for indoor and outdoor use								
Supply Connection :	Power cord								
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 21, 2019								
Date (s) of performance of tests :	March 21, 2019 - March 30, 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;">LCS190321016BS</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	LCS190321016BS	/	Original Version
Version	Report No.	Revision Date	Summary						
V1.0	LCS190321016BS	/	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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ANNEX 2	TABLE: Temperature measurements, thermal tests of Section 12		
	Type reference.....	TP040LE4F-BO	—
	Lamp used.....	LED module	—
	Lamp control gear used.....	--	—
	Mounting position of luminaire.....	According to instruction from manufacturer(Fixing ring)	—
	Supply wattage (W).....	37,55	—
	Supply current (A).....	0,164	—
	Calculated power factor.....	0,953	—
	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
Supply cords	45	--	52,8	--	90	--	--
LED PCB	45	--	71,6	--	110	--	--
Internal wire near LED	45	--	65,1	--	80	--	--
Plastic parts near LED	45	--	57,0	--	Ref.	--	--
tc of LED lamp controlgear	45	--	65,2	--	75	--	--
Horizontal side of enclosure	45	--	56,3	--	90	--	--
Vertical side of enclosure	45	--	57,1	--	150	--	--
Vertical side of enclosure which near the wall	45	--	57,5	--	150	--	--

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Mounting surface	45	--	48,4	--	90	--	--
Supplementary information:							

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Attachment No.1

Photo Documentation

View:
Model:
TP040LE4F-
BO

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

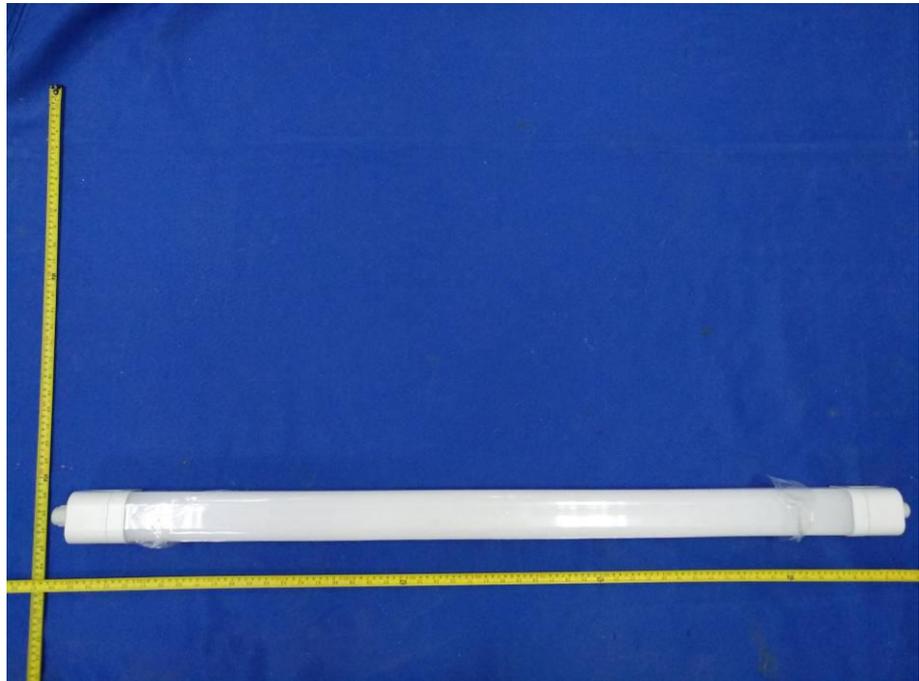


Figure 1

View:

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

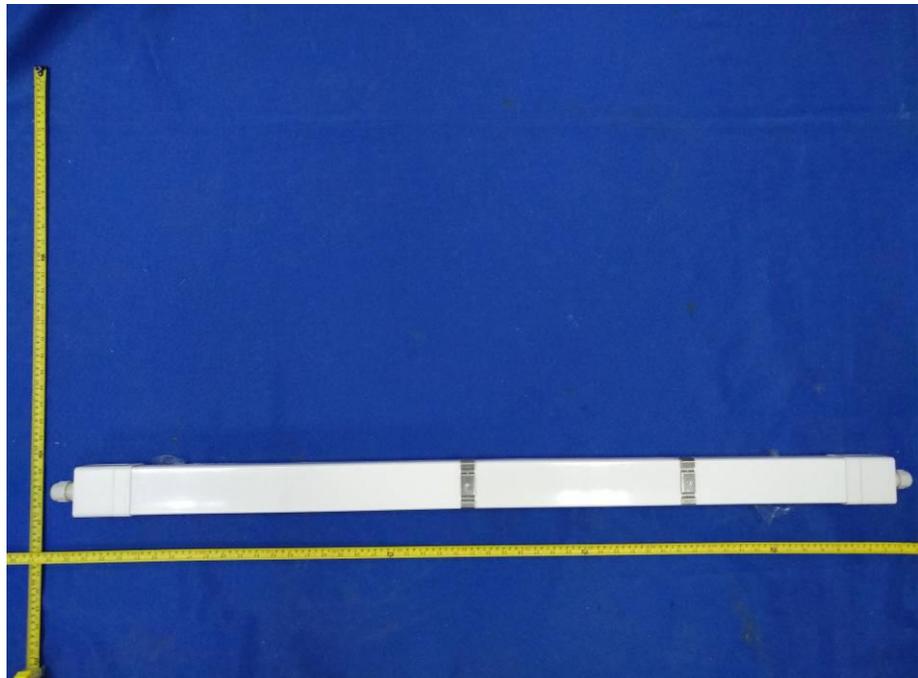


Figure 2

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View:

- General
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Figure 3

View:

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



Figure 4

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