



Technical Report No.: BTLR200710001-1

Dated: 2020-07-10

Client: Name: Shenzhen Toppo Lighting Co., Ltd.
Address: D Building of 6th, Huanping Road, Gaoqiao Zone, Pingdi Town, Longgang District, 518116 Shenzhen, PEOPLE'S REPUBLIC OF CHINA


Manufacturing place: Manufacturer's name: same as client
Address: same as client
Factory's name: same as client
Address: same as client

Test subject: Product: LED Fixture Light
Type: TP-TR02-20XYY-AQMMM-ZZZ; TP-TR04-35XYY-AQMMM-ZZZ; TP-TR05-40XYY-AQMMM-ZZZ; TP-TR05-55XYY-AQMMM-ZZZ; TP-TR05-75XYY-AQMMM-ZZZ; TP-TR06-75XYY-AQMMM-ZZZ; TP-TR02-22XYY-BQMMM-ZZZ; TP-TR02-22XYY-DQMMM-ZZZ; TP-TR03-30XYY-BQMMM-ZZZ; TP-TR03-30XYY-DQMMM-ZZZ; TP-TR04-40XYY-BQMMM-ZZZ; TP-TR04-40XYY-DQMMM-ZZZ; TP-TR04-60XYY-BQMMM-ZZZ; TP-TR04-60XYY-DQMMM-ZZZ; TP-TR05-40XYY-BQMMM-ZZZ; TP-TR05-40XYY-DQMMM-ZZZ; TP-TR05-60XYY-BQMMM-ZZZ; TP-TR05-60XYY-DQMMM-ZZZ; TP-TR08-1AXYY-BQMMM-ZZZ; TP-TR08-1AXYY-DQMMM-ZZZ; TP-TR02-20XYY-EQMMM-ZZZ; TP-TR04-30XYY-EQMMM-ZZZ; TP-TR05-25XYY-EQMMM-ZZZ; TP-TR05-50XYY-EQMMM-ZZZ; TP-TR06-30XYY-EQMMM-ZZZ; TP-TR06-50XYY-EQMMM-ZZZ.

"X" can be B,E,G,S,K,P,A,D,R, stands for brightness for LED,
B: Basic(70-80LM/W), E: Eco(80-90LM/W), G: General(90-100LM/W), S: Standard(100-110LM/W), K: Kernel(110-120LM/W), P: Premium(120-130LM/W), A: Advanced(130-140LM/W), D: Deluxe(140-150LM/W), R: Ritzy(150-160LM/W)

"YY" can be W1, W2, W3, N1, N2, P1, P2, C1, C2, TR, stands for LED Correlated Color Temperature (CCT), W1: 2500-3000K, W2: 3000-3500K, W3: 3500-4000K, N1: 4000-4500K, N2: 4500-5000K, P1: 5000-5500K, P2: 5500-6000K, C1: 6000-6500K, C2: 6500-7000K, TR: Tri-color.

"QMMM-ZZZ" can be any alphanumeric character, stands for different client code for marketing purpose.

Trade mark: 
IEC 60598-2-24:2013
EN 60598-2-24:2013

Test specification:

Purpose of examination: Test according to the test specification for below test
- Clause 24.13.1, 24.13.2 and 24.13.3 for temperature limited test.

Test result: The test results show that the presented products are in compliance with the specified requirements.

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1 Description of the test subject

1.1 Function

- Manufacturer's specification for intended use:
LED Fixture Light suitable for indoor use only.
- Manufacturer's specification for predictive use:
No restrictions provided

1.2 Consideration of the foreseeable use

- Not applicable
- Covered through the applied standard
- Covered by the following comment
- Covered by attached risk analysis

1.3 Technical Data

Fixed general purpose luminaires (LED Fixture Light)

Rated Voltage	:	220-240VAC
Rated Frequency	:	50/60Hz
Rated Power	:	See Appendix No.1 for details
Protection Class	:	I
Degree of Protection	:	IP65
ta	:	40°C

2 Order

2.1 Date of Purchase Order, Customer's Reference

2020-07-01

2.2 Receipt of Test Sample, Condition, Location

2 pcs samples were recieved on 2020-07-08;
Shenzhen Belling Efficiency Testing Laboratory Co., Ltd.
1F, No.1 building,Meibaohe industrial park,Dalang street,Longhua district,Shenzhen,China

2.3 Date of Testing

2020-07-01 to 2020-07-10

2.4 Location of Testing and/or Evaluation

Shenzhen Belling Efficiency Testing Laboratory Co., Ltd.
1F, No.1 building,Meibaohe industrial park,Dalang street,Longhua district,Shenzhen,China

2.5 Points of Non-compliance or Exceptions of the Test Procedure


Nil



3 Test Results

3.1 Positive Test Results

Clause	Requirement + Test	Result - Remark	Verdict
24.13.1 (-)	Special temperature limits – normal operation	(see Annex 1)	Pass
24.13.2 (-)	Special temperature limits – abnormal operation	(see Annex 1)	Pass
24.13.3 (-)	Special temperature limits – fault conditions		Not Applicable

Annex 1:	Temperature measurements, thermal tests for	 symbol	P
	Type reference.....:	TP-TR05-60DTR-DFN1B-001	—
	Lamp used.....:	LED	—
	Lamp control gear used.....:	BK-BHL060-1650AM	—
	Mounting position of luminaire.....:	As in normal use	—
	Supply wattage (W).....:	58.0W [240V]	—
	Supply current (A).....:	0.251A [240V]	—
	Calculated power factor.....:	0.962 [240V]	—
	Table: measured temperatures corrected for $t_a = 40\text{ °C}$:		P
	- abnormal operating mode.....:	LED driver output shorted circuit, output shutdown immediately, the temperature rise of components are lower than temperature rise of components at normal heating test	—
	- test 1: rated voltage.....:	--	—
	- test 2: 1,06 times rated voltage or 1,05 times rated wattage.....:	1.06 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.....:	264V	—
	Through wiring or looping-in wiring loaded by a current of A during the test		—
Temperature measurements, (°C)			
Part	Ambient	Clause 24.13.1 – normal	Clause 12.5 – abnormal



		test 1	test 2	test 3	limit	test 4	limit
Metal enclosure above LED driver (horizontal surface)	40	--	64.8	--	90	--	--
Metal enclosure near LED driver (vertical surface)	40	--	66.4	--	90	--	--
Plastic translucent cover above LED driver (horizontal surface)	40	--	60.3	--	90	--	--
Plastic translucent cover near LED driver (vertical surface)	40	--	61.0	--	90	--	--
Supplementary information: Max. temperature were recorded.							

4 Remark

4.1 All models have similar mechanical structure and electric structure, the model TP-TR05-60DTR-DFN1B-001 was chosen as representative model to perform all tests

4.2 Appendix No. 1: Model list;
Appendix No. 2: Photo documentation

5 Documentation

Nil.

6 Summary

The test specifications are met.

Shenzhen Belling Efficiency Testing Laboratory Co., Ltd.

Engineer: Ahkam Chen
Ahkam Chen
Project Handler

Technical Report checked: Kewin Liu
Kewin Liu
Designated Reviewer



Appendix No.1: Model list

Series	Model No.	Rated Power (W)	Length(m)	LED driver	LED Quantites (pcs)
A	TP-TR02-20XYY-AQMMM-ZZZ	20	0.6	BK-BHL030-0750AM	132
	TP-TR04-35XYY-AQMMM-ZZZ	35	1.2	BK-BHL040-1000AM	234
	TP-TR05-40XYY-AQMMM-ZZZ	40	1.5	BK-BHL040-1000AM	234
	TP-TR05-55XYY-AQMMM-ZZZ	55	1.5	BK-BHL060-1650AM	234
	TP-TR05-75XYY-AQMMM-ZZZ	75	1.5	BK-BHL070-2000AM	416
	TP-TR06-75XYY-AQMMM-ZZZ	75	1.8	BK-BHL070-2000AM	416
B and D	TP-TR02-22XYY-BQMMM-ZZZ TP-TR02-22XYY-DQMMM-ZZZ	22	0.6	BK-BHL030-0750AM	143
	TP-TR03-30XYY-BQMMM-ZZZ TP-TR03-30XYY-DQMMM-ZZZ	30	0.9	BK-BHL030-0750AM	169
	TP-TR04-40XYY-BQMMM-ZZZ TP-TR04-40XYY-DQMMM-ZZZ	40	1.2	BK-BHL040-1000AM	234
	TP-TR04-60XYY-BQMMM-ZZZ TP-TR04-60XYY-DQMMM-ZZZ	60	1.2	BK-BHL060-1650AM	325
	TP-TR05-40XYY-BQMMM-ZZZ TP-TR05-40XYY-DQMMM-ZZZ	40	1.5	BK-BHL040-1000AM	234
	TP-TR05-60XYY-BQMMM-ZZZ TP-TR05-60XYY-DQMMM-ZZZ	60	1.5	BK-BHL060-1650AM	325
	TP-TR08-1AXYY-BQMMM-ZZZ TP-TR08-1AXYY-DQMMM-ZZZ	100	2.4	BK-BHL060-1650AM*2	520
	TP-TR02-20XYY-EQMMM-ZZZ	20	0.6	BK-BHL030-0750AM	78
	TP-TR04-30XYY-EQMMM-ZZZ	30	1.2	BK-BHL040-1000AM	156
	TP-TR05-25XYY-EQMMM-ZZZ	25	1.5	BK-BHL040-1000AM	182
TP-TR05-50XYY-EQMMM-ZZZ	50	1.5	BK-BHL060-1650AM	182	
TP-TR06-30XYY-EQMMM-ZZZ	30	1.8	BK-BHL040-1000AM	208	
TP-TR06-50XYY-EQMMM-ZZZ	50	1.8	BK-BHL060-1650AM	208	

“X” can be B,E,G,S,K,P,A,D,R,stands for brightness for LED,
 B:Basic(70-80LM/W),E:Eco(80-90LM/W),G:General(90-100LM/W),S:Standard(100-110LM/W),K:Kernel(110-120LM/W),P:Premium(120-130LM/W),A:Advanced(130-140LM/W),D:Deluxe(140-150LM/W),R:Ritzy(150-160LM/W)

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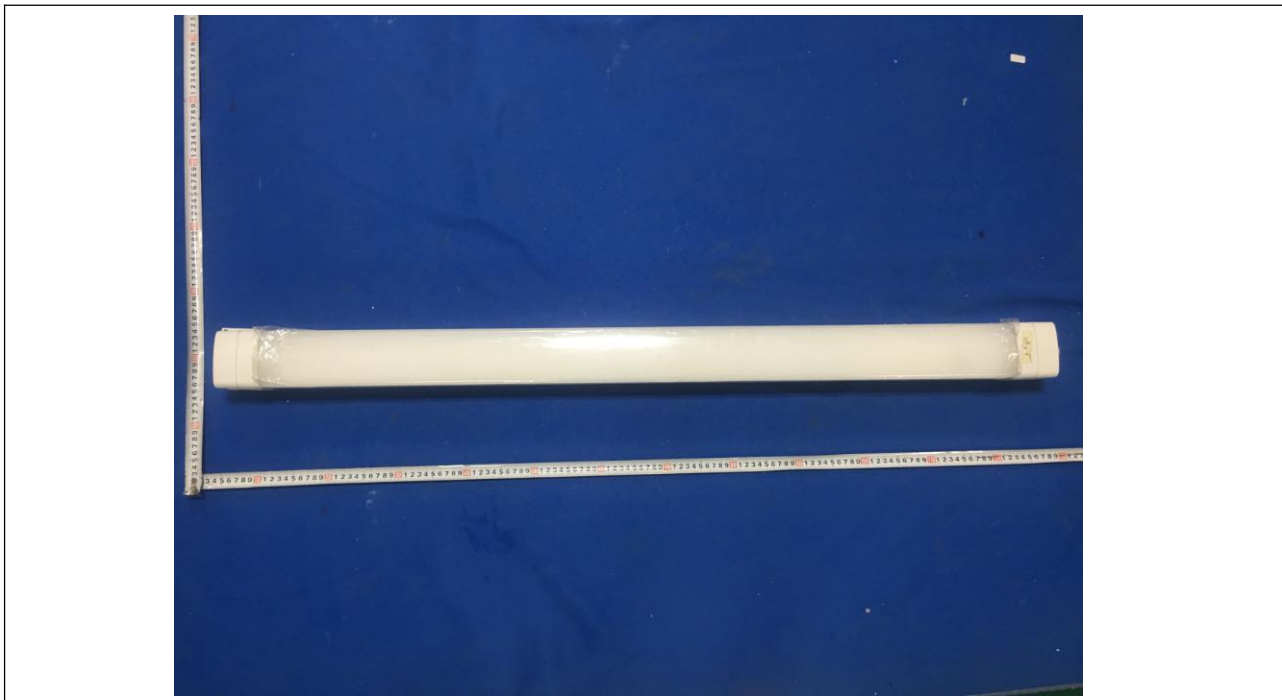
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Appendix No.2: Photo documentation

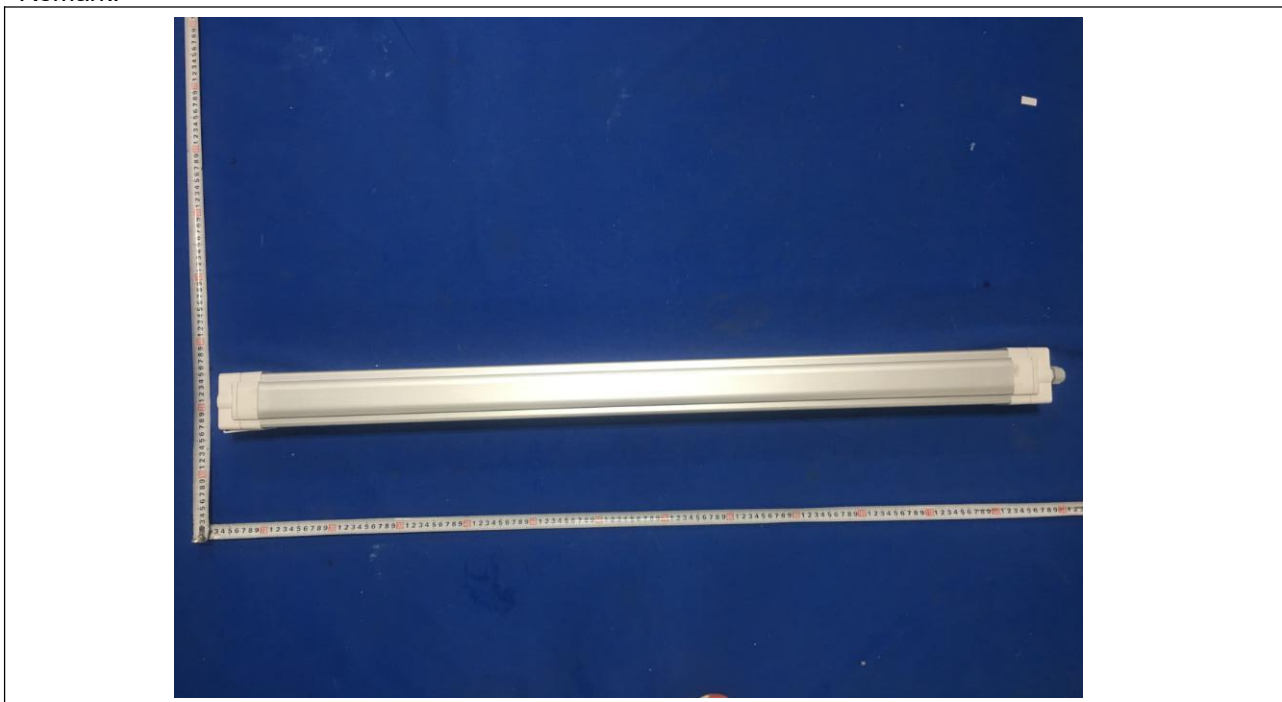
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