

Visual Comfort & Co.

TEST REPORT

SCOPE OF WORK

LM-79 testing report

REPORT NUMBER

250623168GZU-017

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REVISION DATE

None

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DOCUMENT CONTROL NUMBER

Report format for LM-79_G

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Report No.: 250623168GZU-017

TEST REPORT

TEST OF ONE LED LUMINAIRE

MODEL NO. KWTB61727XXXCG

Remark: "XXX" represents the color of the appearance.

RENDERED TO

Visual Comfort & Co.

Contact Name: Javan Rivero

7400 LINDER AVE. SKOKIE, IL, 60077

Email: jrivero@visualcomfort.com

Phone No.: 847-410-4552

<u>TEST:</u>	Electrical and Photometric as required to the IES LM-79 test standard.
<u>AUTHORIZATION:</u>	The testing performed was authorized by signed quote number: QGZ250619128.
<u>STANDARDS USED:</u>	The following American National Standards or Illuminating Engineering Society of North America Test Guides were used in part or totally to test each specimen:
IES LM-79-24	Approved Method for the Electrical and Photometric Measurements of Solid-State Lighting Products
ANSI C78.377-2017 (R2022)	Specifications of the Chromaticity of Solid State Lighting Products
<u>DESCRIPTION OF SAMPLE:</u>	The client submitted one sample of model KWTB61727XXXCG. The sample was received by Intertek in undamaged condition and tested as received. The sample designation was S250623168-018.
<u>MANUFACTURER /FACTORY & ADDRESS:</u>	Guangzhou Xiongyi Precision Metalworking Co., Ltd Hantang Industrial Zone, Langbian Village, Shiji Town, Panyu District, Guangzhou City, Guangdong Province, China 511450
<u>DATES OF TESTS:</u>	12 July 2025
<u>ISSUED BY:</u>	Intertek Testing Services Shenzhen Ltd. Guangzhou Branch
<u>TEST LOCATION:</u>	Room101/301/401/102/202/302/402/502/602/702/802, No. 7-2, Caipin Road, Huangpu District, Guangzhou, Guangdong, China

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TEST REPORT

SUMMARY

Model Number:	KWTB61727XXXCG
Description:	LED Luminaries
Brand Name:	--

Test Condition: 120V, 60Hz For KWTB61727XXXCG

Criteria	Result
Total Lumen Output	64.5 lm
Total Power	8.2 W
Luminaire Efficacy	7.9 lm/W
S/MH(C0/180)	9.46
S/MH(C90/270)	18.38
Correlated Color Temperature (CCT)	2388 K
Color Rendering Index (CRI)	93
R9	58
Chromaticity Coordinate (x)	0.4842
Chromaticity Coordinate (y)	0.4099
Chromaticity Coordinate (u')	0.2786
Chromaticity Coordinate (v')	0.5308

Remark:

N/A

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TEST REPORT

EQUIPMENT LIST

Equipment Used	Model Number	Control Number
Goniophotometer System	Go-R5000	SA063-16
KONICA MINOLTA - Illuminance meter	CX-2B_WL	SA063-16-01
Standard Lamp	D215S	SA063-16-06
Digital Power Meter	PLM3000	SA063-16-09
AC power source for Goniophotometer	PCR-1000WH	SA063-16-10
Temperature Meter	S500-TH	SA047-182

GENERAL REMARK

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When determining for test conclusion, measurement uncertainty of tests has been considered.

Throughout this report a ☐ comma ☒ point is used as the decimal separator.

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TEST REPORT

TEST METHOD

Seasoning in Sample Orientation – LED Products

No seasoning was performed in accordance with IES LM-79

Light Distribution and Output Measurements

Light Distribution and total light output (luminous flux) were measured using a Go-R5000 Type-C Rotating Mirror Goniophotometer. Temperature 25°C and relative humidity of 60% was measured at a position in the testing laboratory.

The lamp rotates only around the fixed vertical axle in the prescribed burning position. The lamp and mirror permit the measurement of luminous intensity at the direction of any horizontal or vertical angle without tilting the lamp. The lamp was allowed to stabilize before measurements were made.

Chromaticity Measurements

Chromaticity was measured using a 2 meters integrating sphere spectral lamp measurement system, 4 π geometry, with an interior coating reflectance no less than 95 %. Temperature was measured at a position inside the sphere shielded from direct light. Relative humidity of 65% was measured at a position in the testing laboratory.

Spectral radiant flux measurements were made using spectroradiometer attached to the detector port of the integrating sphere. Each lamp was allowed to stabilise before measurements were made. The calibration of the integrating sphere spectroradiometer system is by the reference/standard lamps which are traceable to National Institute of Metrology P.R. CHINA. Lamp efficacy (lumens per watt) for each lamp model was then computed based on the luminous flux result. Electrical measurements including voltage, power and power factor were measured using YOKOGAWA - Digital Power Meter., model WT310E.

Correction factor (self-absorption) has been considered when doing measurement.

Standard lamp used for Goniophotometer method:

Model: D215S

Current: 4.809A DC

Standard lamp used for integrating sphere:

Model: D204

Current: 3.958A DC

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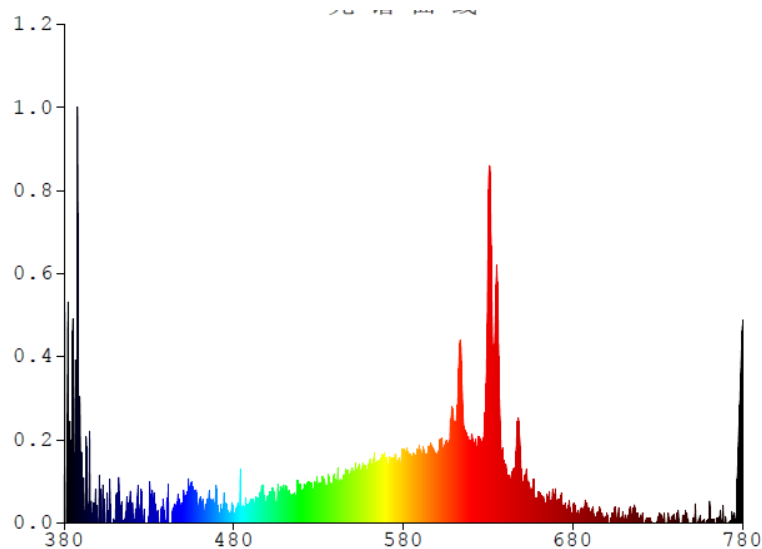
TEST REPORT

RESULTS OF TESTS

Test Condition: 120V, 60Hz For KWTB61727XXXCG

Spectral Distribution over Visible Wavelengths

nm	mW/nm	nm	mW/nm	nm	mW/nm	nm	mW/nm	nm	mW/nm
380	0.0000	480	0.0000	580	0.0152	680	0.0023	780	0.0427
385	0.0430	485	0.0017	585	0.0130	685	0.0031		
390	0.0150	490	0.0015	590	0.0146	690	0.0020		
395	0.0184	495	0.0054	595	0.0161	695	0.0000		
400	0.0000	500	0.0036	600	0.0138	700	0.0017		
405	0.0000	505	0.0042	605	0.0169	705	0.0030		
410	0.0000	510	0.0045	610	0.0194	710	0.0000		
415	0.0000	515	0.0040	615	0.0249	715	0.0018		
420	0.0033	520	0.0068	620	0.0161	720	0.0015		
425	0.0031	525	0.0064	625	0.0180	725	0.0004		
430	0.0016	530	0.0078	630	0.0583	730	0.0009		
435	0.0024	535	0.0074	635	0.0540	735	0.0000		
440	0.0000	540	0.0088	640	0.0103	740	0.0000		
445	0.0039	545	0.0099	645	0.0109	745	0.0007		
450	0.0032	550	0.0113	650	0.0084	750	0.0000		
455	0.0064	555	0.0101	655	0.0061	755	0.0015		
460	0.0044	560	0.0114	660	0.0063	760	0.0004		
465	0.0040	565	0.0117	665	0.0059	765	0.0000		
470	0.0043	570	0.0138	670	0.0048	770	0.0009		
475	0.0042	575	0.0135	675	0.0028	775	0.0015		



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TEST REPORT

RESULTS OF TESTS (cont'd)

Test Condition: 120V, 60Hz For KWTB61727XXXCG

Total operation burning time: 60 minutes

Stabilization time: 30 minutes

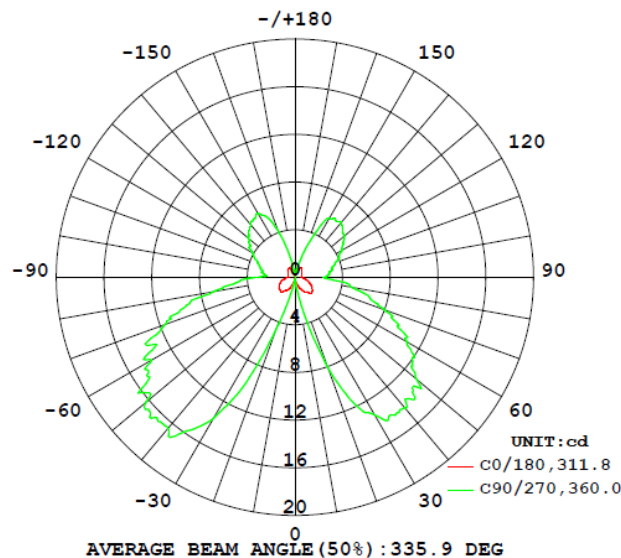
Photometric Measurements at 25°C – Distribution Method

Intertek Sample No.	Base Orientation	Correlated Color Temperature (K)	CRI	R9	CIE 31'	CIE 31'	CIE 76'	CIE 76'
					Chromaticit y	Chromaticit y	Chromaticit y	Chromaticit y
					Coordinate (x)	Coordinate (y)	Coordinate (u')	Coordinate (v')
KWTB61727XXXCG								
S2506231 68-018	base-up	2388	93	58	0.4842	0.4099	0.2786	0.5308

Photometric and Electrical Measurements at 25°C – Distribution Method

Intertek Sample No.	Base Orientation	Input Voltage (Vac)	Input Current (mA)	Input Power (Watts)	Input Power Factor	Absolute Luminous	Lumen
						Flux (Lumens)	Efficacy (Lumens Per Watt)
KWTB61727XXXCG							
S2506231 68-018	base-up	120.0	135.9	8.2	0.504	64.5	7.9

Intensity (Candlepower) Summary at 25°C - Candelas



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TEST REPORT

RESULTS OF TESTS (cont'd)

Test Condition: 120V, 60Hz For KWTB61727XXXCG

Intensity (Candlepower) Summary at 25°C - Candelas

V \ H(°)	0	22.5	45	67.5	90
0	0.0	0.0	0.0	0.0	0.0
5	0.0	0.1	0.1	0.2	0.2
10	0.2	0.3	0.6	0.9	1.1
15	0.5	1.2	1.8	2.7	3.8
20	0.8	3.8	4.7	5.9	8.0
25	1.0	6.5	8.0	8.9	11.6
30	1.3	7.4	9.6	10.5	13.3
35	1.5	8.0	10.0	11.7	14.1
40	1.6	9.5	10.5	12.8	14.3
45	1.9	9.8	11.2	12.8	14.2
50	1.9	9.2	10.2	12.1	13.2
55	1.8	9.1	10.2	11.0	12.0
60	1.6	7.7	9.6	10.2	10.9
65	1.5	6.5	8.6	9.0	9.6
70	1.3	5.3	7.6	7.7	8.0
75	1.1	4.5	6.2	6.2	6.4
80	0.9	3.6	4.8	5.0	4.8
85	0.7	2.7	3.3	3.5	3.5
90	0.6	1.8	2.3	2.3	2.4
95	0.5	2.0	2.6	2.6	2.9
100	0.6	2.1	2.8	3.0	3.0
105	0.6	2.2	3.0	3.1	3.3
110	0.6	2.3	3.2	3.5	3.5
115	0.6	2.5	3.5	3.9	4.0
120	0.6	2.8	3.9	4.3	4.6
125	0.7	3.0	4.2	4.7	4.9
130	0.7	3.1	4.4	4.9	5.4
135	0.8	3.1	4.7	5.2	5.7
140	0.9	2.9	4.6	5.3	6.0
145	1.0	2.9	4.3	5.1	5.9
150	0.9	2.7	3.5	4.6	5.7
155	0.7	1.9	2.6	3.5	4.2
160	0.5	1.0	1.3	1.9	2.4
165	0.3	0.4	0.6	0.8	1.0
170	0.1	0.1	0.2	0.2	0.3
175	0.0	0.0	0.0	0.0	0.0
180	0.0	0.0	0.0	0.0	0.0

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TEST REPORT

RESULTS OF TESTS (cont'd)

Test Condition: 120V, 60Hz For KWTB61727XXXCG

Zonal Lumen Summary and Percentages at 25°C

Zone	Lumens (lm)	% Luminaire (%)
KWTB61727XXXCG		
0-30	3.5	5.5
0-40	9.7	15.0
0-60	27.2	42.3
0-90	46.0	71.3
60-90	18.8	29.0
0-180	64.5	100.0

Beam Angle

Total Beam Angle(°)

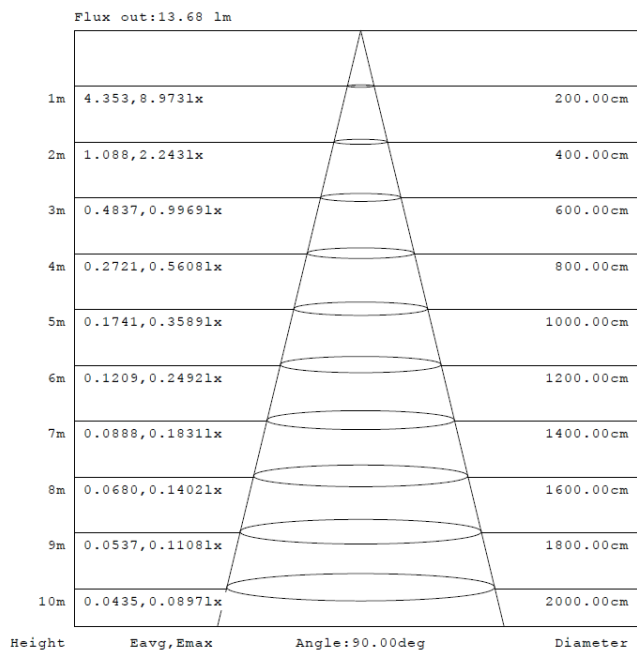
335.9

Illumination Plots

Model No.: KWTB61727XXXCG

Mount Height: 2.5 m

Illuminance - Cone of Light



Note: The Curves indicate the illuminated area and the average illumination when the luminaire is at different distance.

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TEST REPORT

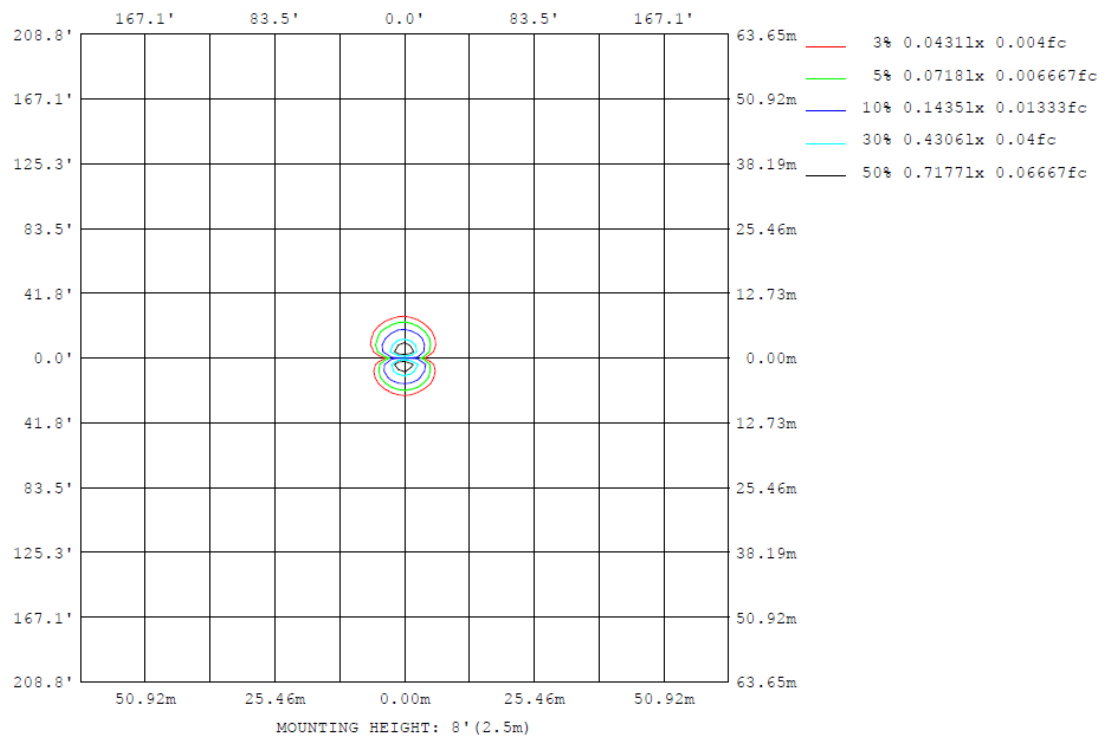
RESULTS OF TESTS (cont'd)

Test Condition: 120V, 60Hz For KWTB61727XXXCG

Model No.: KWTB61727XXXCG

Mount Height: 2.5 m

Isoillumination Plot



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TEST REPORT

RESULTS OF TESTS (cont'd)

Test Condition: 120V, 60Hz For KWTB61727XXXCG

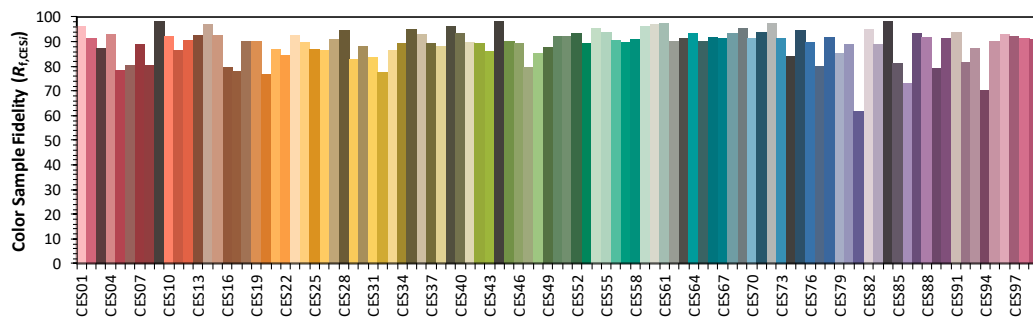
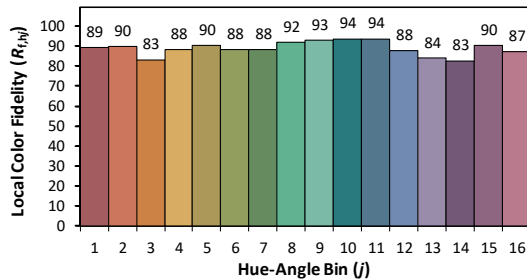
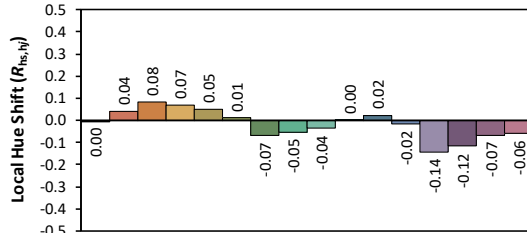
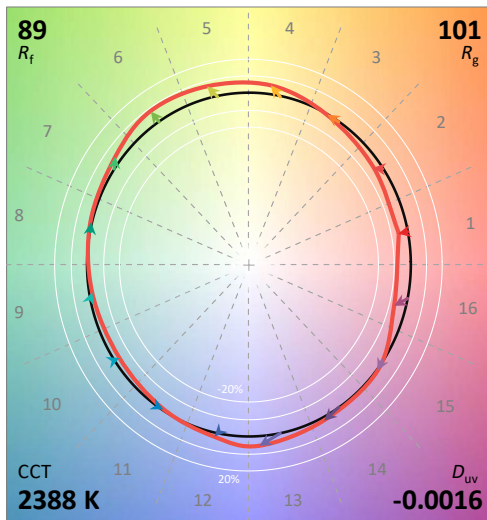
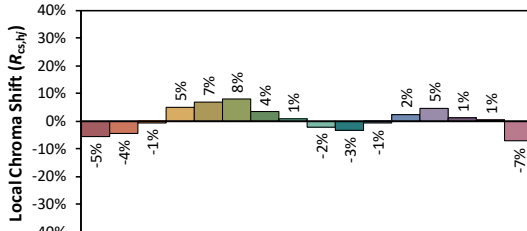
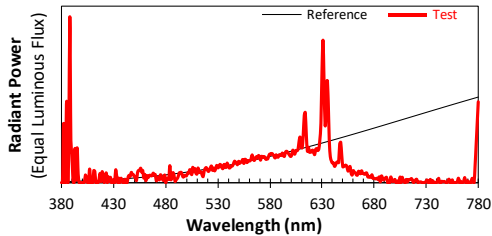
ANSI/IES TM-30-18 Color Rendition Report

Source: User SPD

Manufacturer: Visual Comfort & Co.

Date: 2025/7/12

Model: KWTB61727XXXCG



Notes: This is a recommended method for displaying ANSI/IES TM-30-18 information.

x 0.4842
 y 0.4099
 u' 0.2786
 v' 0.5308

CIE 13.3-1995
(CRI)
 R_a 93
 R_g 58

Colors are for visual orientation purposes only. Created with the ANSI/IES TM-30-18 Calculator Version 2.00.

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TEST REPORT

PRODUCT PICTURE (not to scale)



External view of KWTB61727XXXCG

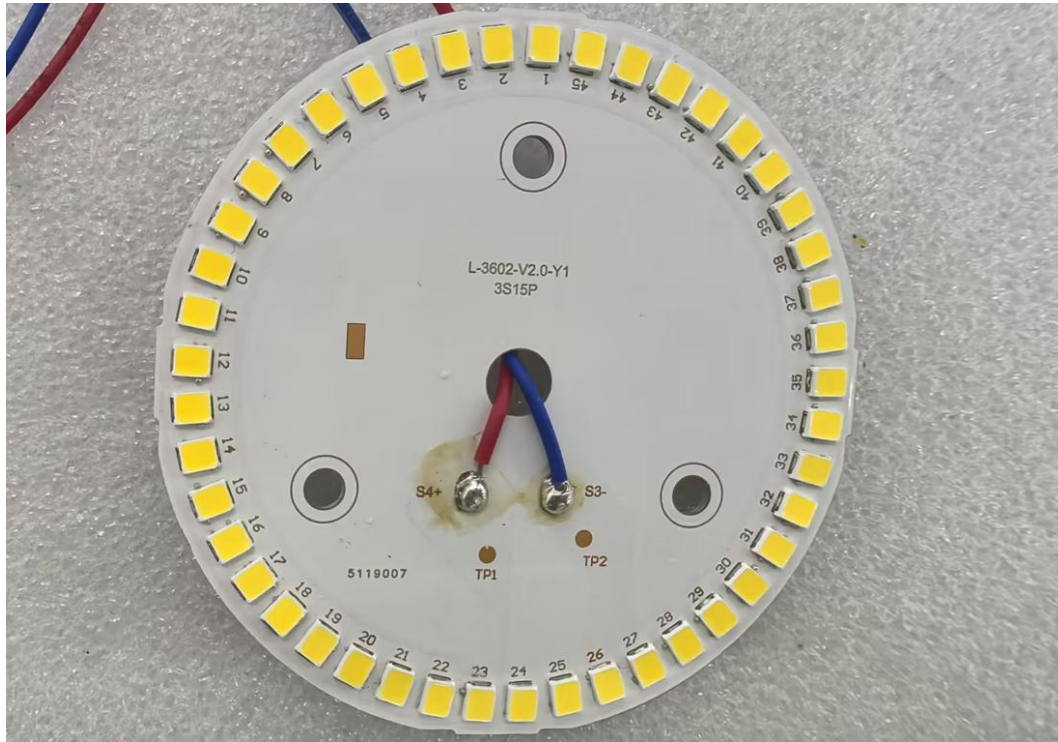


View of LED driver JY12-050-200-UD

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TEST REPORT

PRODUCT PICTURE (not to scale)



View of LED

In Charge Of Tests:

Done Ye

Done Ye
Engineer

Report Reviewed By

Shelley Ying

Shelley Ying
Reviewer

Attachment: None

***** End of Report *****