

Visual Comfort & Co.

TEST REPORT

SCOPE OF WORK

LM-79 testing report

REPORT NUMBER

250623168GZU-037

ISSUE DATE

12 August 2025

REVISION DATE

None

NUMBER OF PAGES

13

DOCUMENT CONTROL NUMBER

Report format for LM-79_G

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Report No.: 250623168GZU-037

TEST REPORT

TEST OF ONE LED LUMINAIRE

MODEL NO. KWFL61827XXXCG

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

RENDERED TO

Visual Comfort & Co.

Contact Name: Javan Rivero

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TEST: Electrical and Photometric as required to the IES LM-79 test standard.

AUTHORIZATION: The testing performed was authorized by signed quote number: QGZ250619128.

STANDARDS USED: 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

DESCRIPTION OF SAMPLE: The client submitted one sample of model KWFL61827XXXCG. The sample was received by Intertek in undamaged condition and tested as received. The sample designation was S250623168-039.

MANUFACTURER /FACTORY & ADDRESS: Guangzhou Xiongyi Precision Metalworking Co., Ltd
Hantang Industrial Zone, Langbian Village, Shiji Town, Panyu District, Guangzhou City, Guangdong Province, China 511450

DATES OF TESTS: 28 July 2025

ISSUED BY: Intertek Testing Services Shenzhen Ltd. Guangzhou Branch

TEST LOCATION: 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:	KWFL61827XXXCG
Description:	LED Luminaries
Brand Name:	--

Test Condition: 120V, 60Hz For KWFL61827XXXCG

Criteria	Result
Total Lumen Output	95.2 lm
Total Power	14.6 W
Luminaire Efficacy	6.5 lm/W
S/MH(C0/180)	9.24
S/MH(C90/270)	0.14
Correlated Color Temperature (CCT)	2656 K
Color Rendering Index (CRI)	95
R9	70
Chromaticity Coordinate (x)	0.4635
Chromaticity Coordinate (y)	0.4114
Chromaticity Coordinate (u')	0.2645
Chromaticity Coordinate (v')	0.5282

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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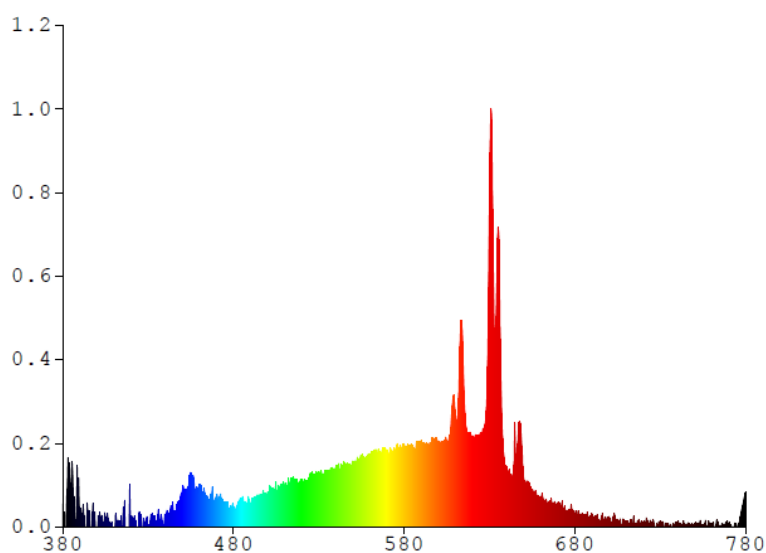
TEST REPORT

RESULTS OF TESTS

Test Condition: 120V, 60Hz For KWFL61827XXXCG

Spectral Distribution over Visible Wavelengths

nm	mW/nm	nm	mW/nm	nm	mW/nm	nm	mW/nm	nm	mW/nm
380	0.0191	480	0.0101	580	0.0448	680	0.0073	780	0.0195
385	0.0269	485	0.0154	585	0.0445	685	0.0056		
390	0.0000	490	0.0131	590	0.0469	690	0.0071		
395	0.0067	495	0.0163	595	0.0463	695	0.0021		
400	0.0000	500	0.0188	600	0.0437	700	0.0055		
405	0.0001	505	0.0201	605	0.0456	705	0.0033		
410	0.0000	510	0.0223	610	0.0618	710	0.0022		
415	0.0000	515	0.0274	615	0.0748	715	0.0019		
420	0.0000	520	0.0245	620	0.0497	720	0.0020		
425	0.0000	525	0.0298	625	0.0508	725	0.0024		
430	0.0007	530	0.0302	630	0.1794	730	0.0006		
435	0.0036	535	0.0305	635	0.1643	735	0.0005		
440	0.0044	540	0.0332	640	0.0329	740	0.0016		
445	0.0079	545	0.0347	645	0.0482	745	0.0000		
450	0.0197	550	0.0360	650	0.0275	750	0.0000		
455	0.0279	555	0.0375	655	0.0197	755	0.0006		
460	0.0233	560	0.0399	660	0.0161	760	0.0000		
465	0.0152	565	0.0429	665	0.0131	765	0.0007		
470	0.0167	570	0.0421	670	0.0131	770	0.0000		
475	0.0120	575	0.0422	675	0.0089	775	0.0000		



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TEST REPORT

RESULTS OF TESTS (cont'd)

Test Condition: 120V, 60Hz For KWFL61827XXXCG

Total operation burning time: 60 minutes

Stabilization time: 30 minutes

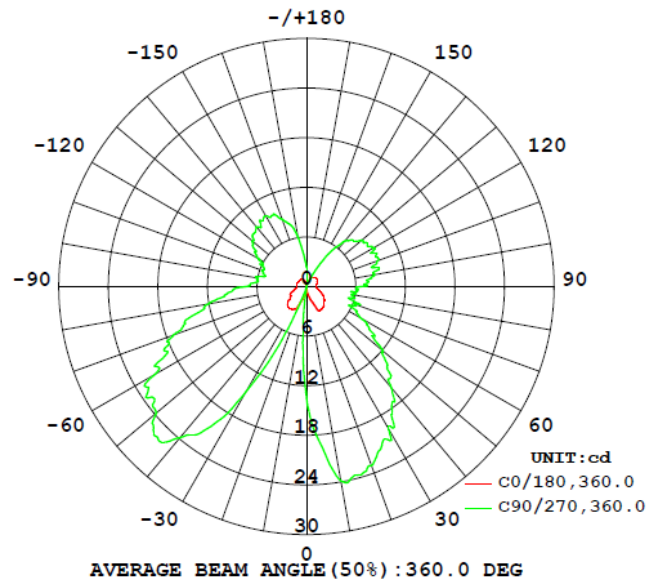
Photometric Measurements at 25°C – Distribution Method

Intertek Sample No.	Base Orientation	Correlated Color Temperature (K)	CRI	R9	CIE 31'	CIE 31'	CIE 76'	CIE 76'
					Chromaticit	Chromaticit	Chromaticit	Chromaticit
					y	y	y	y
					Coordinate	Coordinate	Coordinate	Coordinate
					(x)	(y)	(u')	(v')
KWFL61827XXXCG								
S2506231 68-039	base-up	2656	95	70	0.4635	0.4114	0.2645	0.5282

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 Flux (Lumens)	Lumen Efficacy (Lumens Per Watt)
KWFL61827XXXCG							
S2506231 68-039	base-up	120.1	216.5	14.6	0.561	95.2	6.5

Intensity (Candlepower) Summary at 25°C - Candelas



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TEST REPORT

RESULTS OF TESTS (cont'd)

Test Condition: 120V, 60Hz For KWFL61827XXXCG

Intensity (Candlepower) Summary at 25°C - Candelas

V \ H(°)	0	22.5	45	67.5	90
0	0.0	2.9	9.2	9.6	13.5
5	0.1	7.8	16.3	15.5	19.0
10	0.7	12.0	19.5	20.4	23.8
15	1.4	13.8	21.5	21.7	23.6
20	2.0	13.2	19.8	20.8	23.0
25	2.9	13.3	18.8	20.4	21.5
30	3.3	12.5	17.5	18.9	19.9
35	3.3	11.7	16.2	17.3	18.0
40	3.2	10.4	14.6	15.6	16.0
45	3.0	9.8	12.9	13.7	13.9
50	2.8	8.8	11.6	11.9	12.1
55	2.5	7.5	9.4	9.6	9.9
60	2.4	6.1	7.6	7.6	7.5
65	2.1	4.8	6.3	6.5	6.2
70	1.8	4.7	6.6	6.3	6.0
75	1.5	4.6	6.0	5.6	5.2
80	1.3	4.3	5.5	5.4	5.6
85	1.2	4.6	6.3	6.0	6.3
90	1.2	4.3	6.5	6.5	6.5
95	1.2	5.1	7.1	7.3	7.6
100	1.2	5.2	7.7	7.4	8.3
105	1.3	5.4	8.3	8.0	9.1
110	1.4	5.7	7.6	8.6	9.1
115	1.4	5.9	7.9	9.0	9.4
120	1.5	6.3	7.8	8.4	9.3
125	1.5	5.6	7.7	8.1	9.0
130	1.6	5.9	7.0	7.8	8.8
135	1.6	5.0	6.1	7.1	8.0
140	1.5	4.5	4.9	5.9	7.2
145	1.4	3.3	3.5	4.3	5.2
150	1.2	1.9	1.7	2.3	2.8
155	1.0	0.7	0.6	0.9	1.0
160	0.8	0.1	0.1	0.1	0.2
165	0.5	0.0	0.0	0.0	0.0
170	0.2	0.0	0.1	0.1	0.1
175	0.0	0.2	0.5	0.8	0.8
180	0.0	0.7	1.3	2.0	2.3

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TEST REPORT

RESULTS OF TESTS (cont'd)

Test Condition: 120V, 60Hz For KWFL61827XXXCG

Zonal Lumen Summary and Percentages at 25°C

Zone	Lumens (lm)	% Luminaire (%)
KWFL61827XXXCG		
0-30	7.7	8.1
0-40	16.2	17.0
0-60	37.6	39.6
0-90	62.3	65.5
60-90	24.7	25.9
0-180	95.2	100.0

Beam Angle

Total Beam Angle(°)

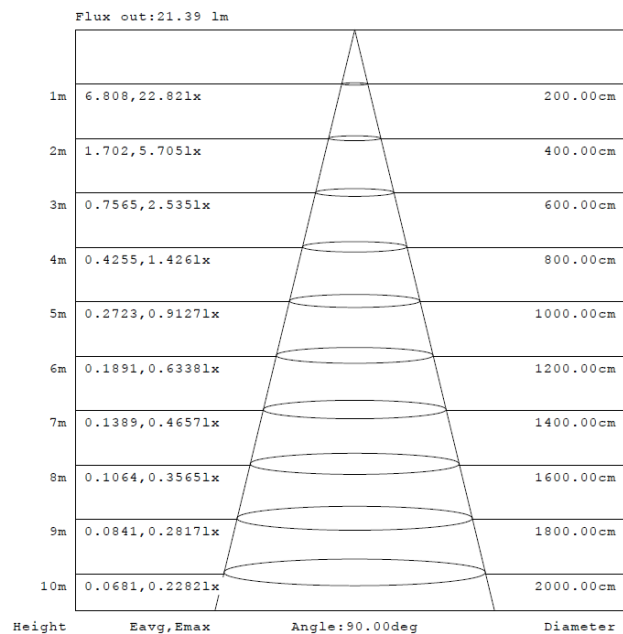
360.0

Illumination Plots

Model No.: KWFL61827XXXCG

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

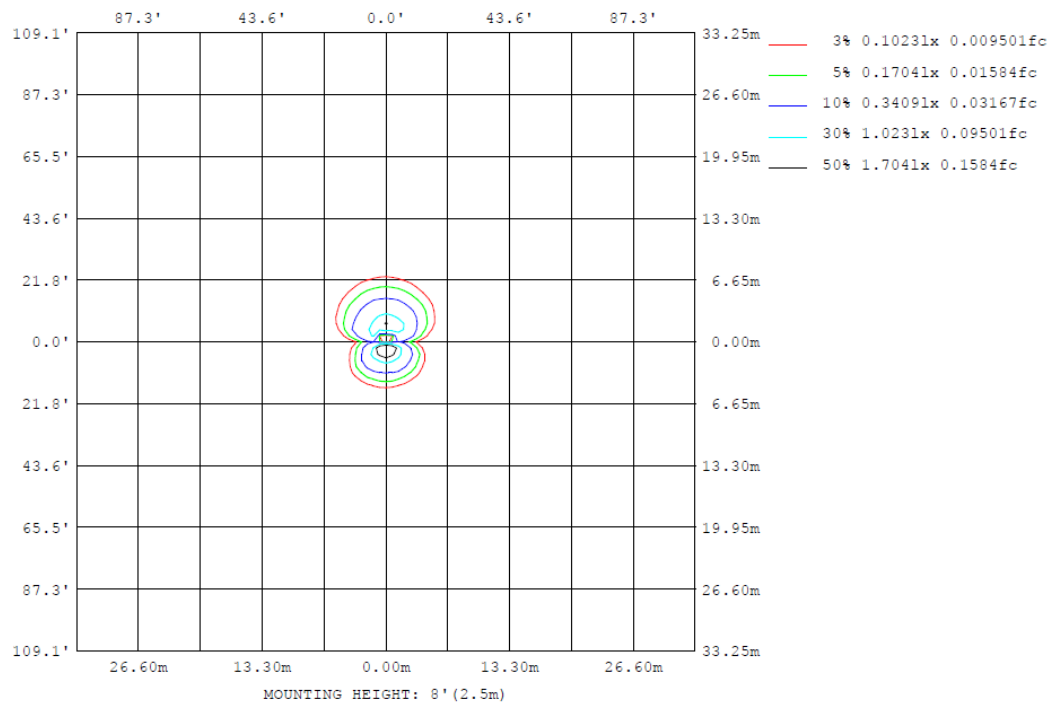
RESULTS OF TESTS (cont'd)

Test Condition: 120V, 60Hz For KWFL61827XXXCG

Model No.: KWFL61827XXXCG

Mount Height: 2.5 m

Isoillumination Plot



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TEST REPORT

RESULTS OF TESTS (cont'd)

Test Condition: 120V, 60Hz For KWFL61827XXXCG

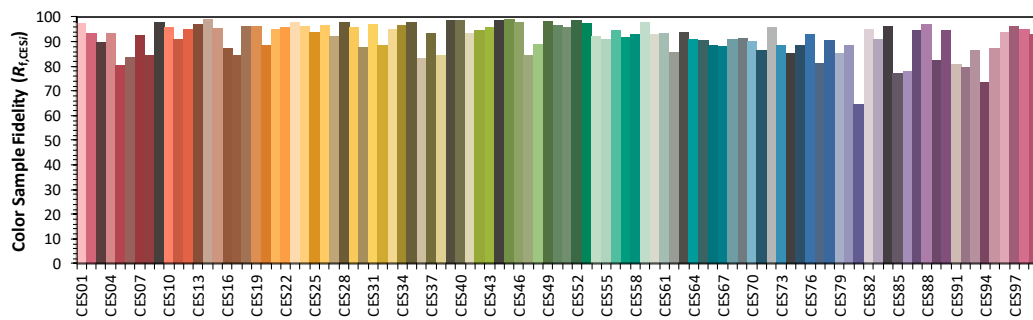
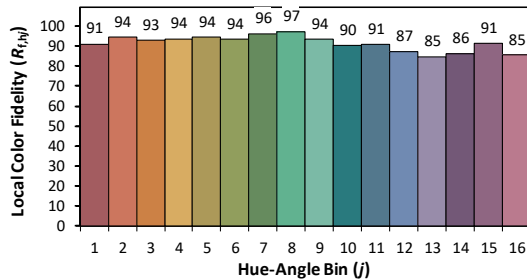
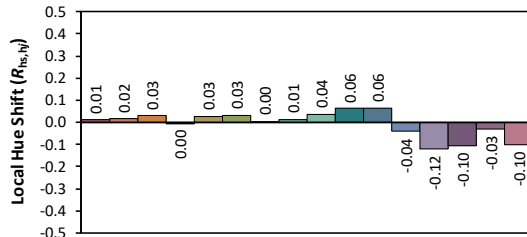
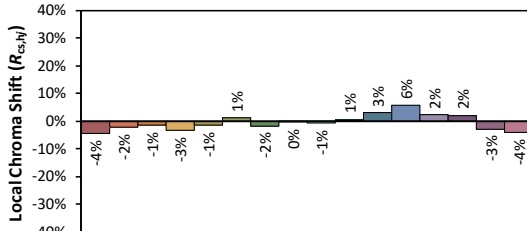
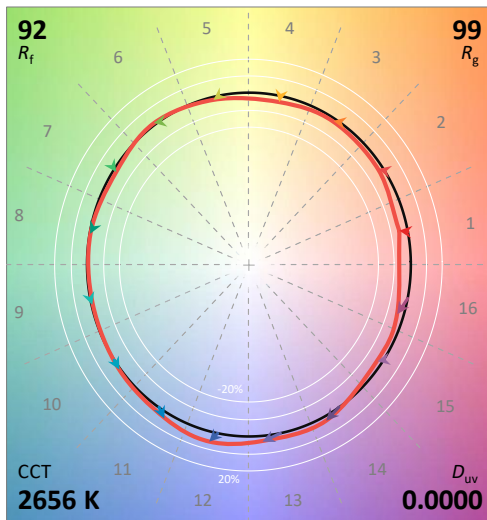
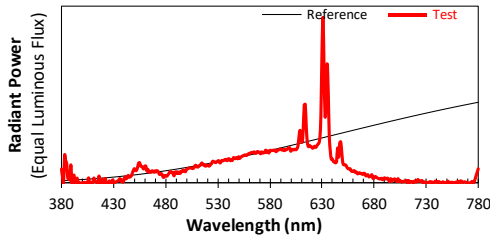
ANSI/IES TM-30-18 Color Rendition Report

Source: User SPD

Manufacturer: Visual Comfort & Co.

Date: 2025/7/28

Model: KWFL61827XXXCG



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

x 0.4635
 y 0.4114
 u' 0.2645
 v' 0.5282

CIE 13.3-1995
(CRI)
 R_a 95
 R_g 70

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

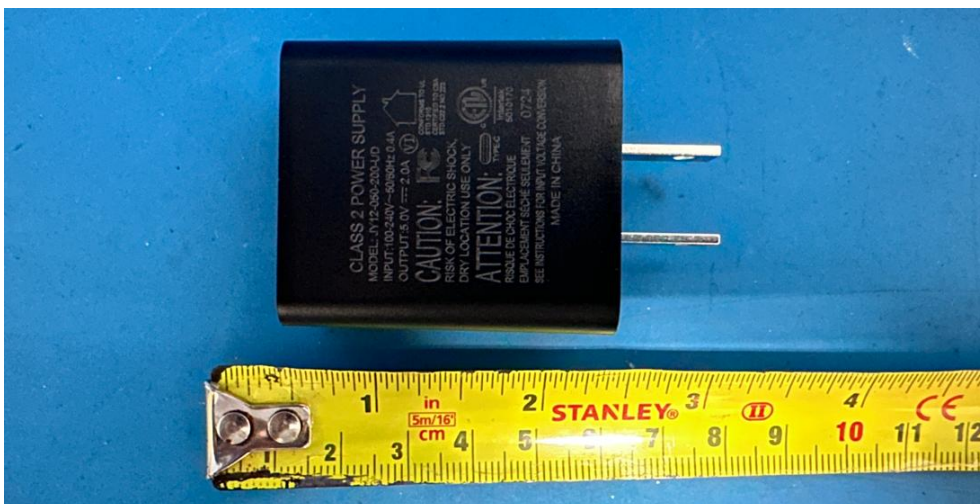
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TEST REPORT

PRODUCT PICTURE (not to scale)



External view of KWFL61827XXXCG

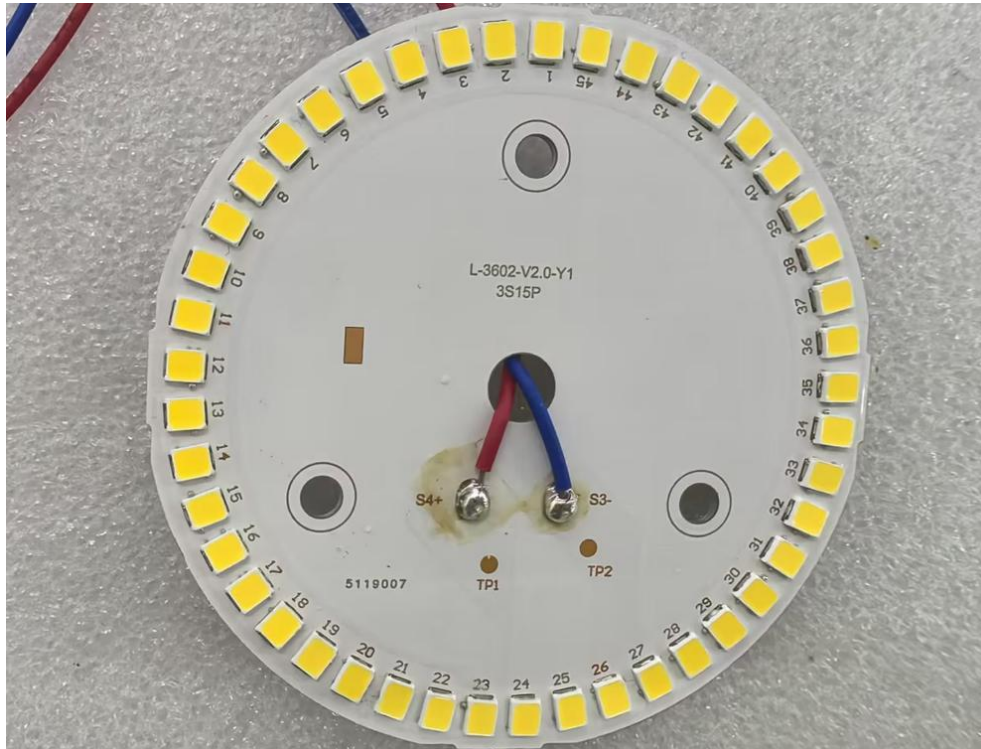


View of LED driver JY12-050-200-UD

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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 *****