

Visual Comfort & Co.

TEST REPORT

SCOPE OF WORK

LM-79 testing report

REPORT NUMBER

250623168GZU-029

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None

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Report format for LM-79_G

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Report No.: 250623168GZU-029

TEST REPORT

TEST OF ONE LED LUMINAIRE

MODEL NO. KWTB61927XXX

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

RENDERED TO

Visual Comfort & Co.

Contact Name: Javan Rivero

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<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 KWTB61927XXX. The sample was received by Intertek in undamaged condition and tested as received. The sample designation was S250623168-031.
<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>	24 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:	KWTB61927XXX
Description:	LED Luminaries
Brand Name:	--

Test Condition: 120V, 60Hz For KWTB61927XXX

Criteria	Result
Total Lumen Output	105.1 lm
Total Power	9.1 W
Luminaire Efficacy	11.6 lm/W
S/MH(C0/180)	2.20
S/MH(C90/270)	1.62
Correlated Color Temperature (CCT)	2998 K
Color Rendering Index (CRI)	88
R9	51
Chromaticity Coordinate (x)	0.4390
Chromaticity Coordinate (y)	0.4081
Chromaticity Coordinate (u')	0.2502
Chromaticity Coordinate (v')	0.5233

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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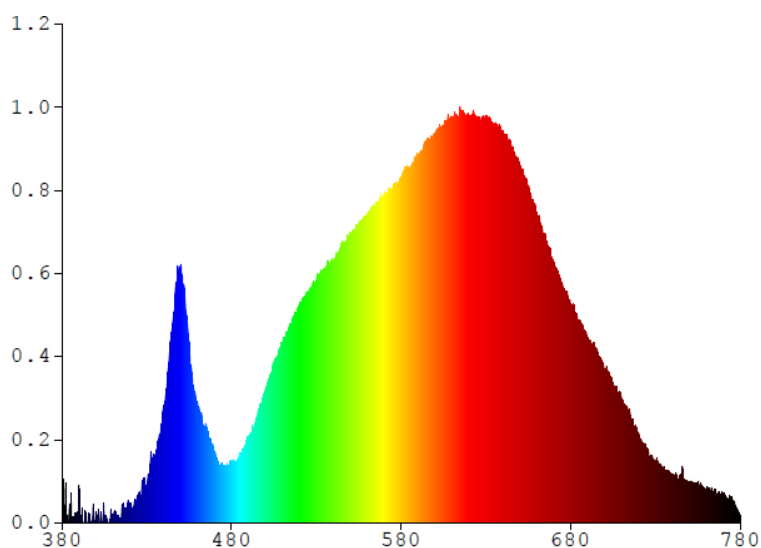
TEST REPORT

RESULTS OF TESTS

Test Condition: 120V, 60Hz For KWTB61927XXX

Spectral Distribution over Visible Wavelengths

nm	mW/nm	nm	mW/nm	nm	mW/nm	nm	mW/nm	nm	mW/nm
380	0.0000	480	0.0582	580	0.3370	680	0.2132	780	0.0072
385	0.0052	485	0.0683	585	0.3466	685	0.1985		
390	0.0370	490	0.0843	590	0.3614	690	0.1815		
395	0.0000	495	0.1022	595	0.3734	695	0.1692		
400	0.0108	500	0.1309	600	0.3826	700	0.1508		
405	0.0032	505	0.1569	605	0.3893	705	0.1376		
410	0.0055	510	0.1759	610	0.3969	710	0.1219		
415	0.0011	515	0.1957	615	0.4056	715	0.1085		
420	0.0135	520	0.2163	620	0.4013	720	0.0888		
425	0.0173	525	0.2274	625	0.3984	725	0.0736		
430	0.0371	530	0.2378	630	0.4006	730	0.0601		
435	0.0661	535	0.2468	635	0.3916	735	0.0549		
440	0.1151	540	0.2577	640	0.3848	740	0.0456		
445	0.1911	545	0.2728	645	0.3701	745	0.0471		
450	0.2528	550	0.2849	650	0.3515	750	0.0398		
455	0.1756	555	0.2918	655	0.3289	755	0.0387		
460	0.1170	560	0.2997	660	0.3038	760	0.0315		
465	0.0968	565	0.3084	665	0.2846	765	0.0317		
470	0.0704	570	0.3219	670	0.2559	770	0.0273		
475	0.0564	575	0.3284	675	0.2301	775	0.0252		



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TEST REPORT

RESULTS OF TESTS (cont'd)

Test Condition: 120V, 60Hz For KWTB61927XXX

Total operation burning time: 60 minutes

Stabilization time: 30 minutes

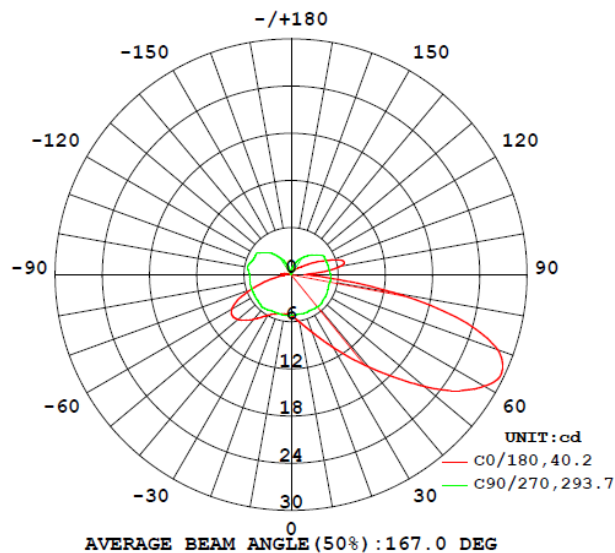
Photometric Measurements at 25°C – Distribution Method

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')
KWTB61927XXX								
S2506231 68-031	base-up	2998	88	51	0.4390	0.4081	0.2502	0.5233

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)
KWTB61927XXX							
S2506231 68-031	base-up	120.0	146.6	9.1	0.515	105.1	11.6

Intensity (Candlepower) Summary at 25°C - Candelas



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TEST REPORT

RESULTS OF TESTS (cont'd)

Test Condition: 120V, 60Hz For KWTB61927XXX

Intensity (Candlepower) Summary at 25°C - Candelas

V \ H(°)	0	22.5	45	67.5	90
0	5.3	5.3	5.4	5.3	5.2
5	5.6	5.6	5.6	5.3	5.1
10	6.1	6.1	6.0	5.5	5.1
15	6.8	6.7	6.4	5.6	5.1
20	7.8	7.6	7.0	5.8	5.2
25	9.0	8.7	7.6	6.0	5.2
30	10.7	10.0	8.4	6.2	5.2
35	12.8	11.7	9.2	6.4	5.3
40	15.3	13.6	9.9	6.6	5.3
45	18.4	15.8	10.8	6.8	5.3
50	22.1	18.3	11.8	6.9	5.2
55	25.8	20.8	12.8	7.0	5.2
60	28.4	22.9	13.4	7.2	5.2
65	29.5	24.7	14.0	7.2	5.1
70	27.9	26.3	14.7	7.1	5.0
75	22.5	27.8	15.1	7.2	5.0
80	13.3	28.2	15.3	7.3	5.0
85	4.9	28.0	15.3	7.3	5.1
90	1.7	27.9	15.2	7.2	5.0
95	3.6	27.4	14.9	7.1	4.9
100	6.4	27.1	14.3	7.0	4.9
105	6.8	26.3	13.7	6.9	4.8
110	5.7	23.2	12.9	6.7	4.8
115	4.1	18.8	11.9	6.6	4.8
120	3.0	14.7	10.1	6.4	4.8
125	2.1	11.1	8.4	5.7	4.4
130	1.5	7.7	6.9	5.0	3.9
135	1.2	5.7	5.5	4.4	3.6
140	1.0	4.2	4.2	3.7	3.2
145	0.6	3.1	3.3	3.0	2.7
150	0.3	2.3	2.5	2.5	2.4
155	0.1	1.8	2.0	2.1	2.0
160	0.1	1.4	1.5	1.7	1.6
165	0.1	1.0	1.2	1.3	1.3
170	0.0	0.3	0.3	0.7	0.8
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 KWTB61927XXX

Zonal Lumen Summary and Percentages at 25°C

Zone	Lumens (lm)	% Luminaire (%)
KWTB61927XXX		
0-30	5.0	4.8
0-40	9.7	9.2
0-60	26.6	25.3
0-90	63.5	60.4
60-90	36.9	35.1
0-180	105.1	100.0

Beam Angle

Total Beam Angle(°)

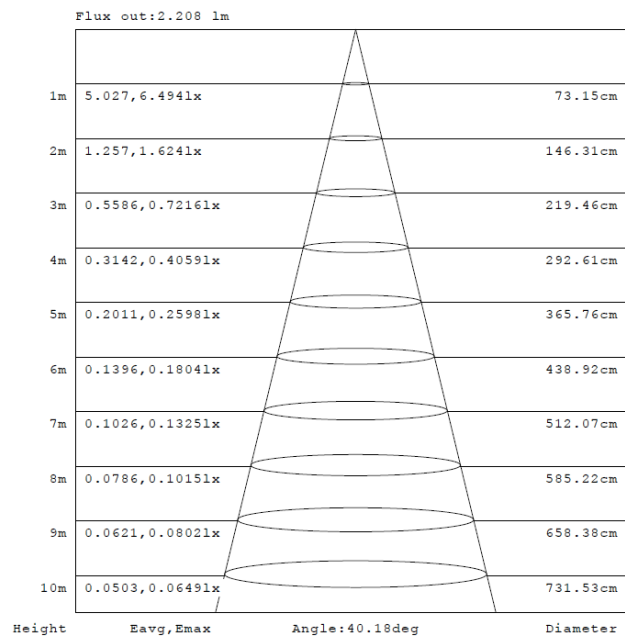
167.0

Illumination Plots

Model No.: KWTB61927XXX

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

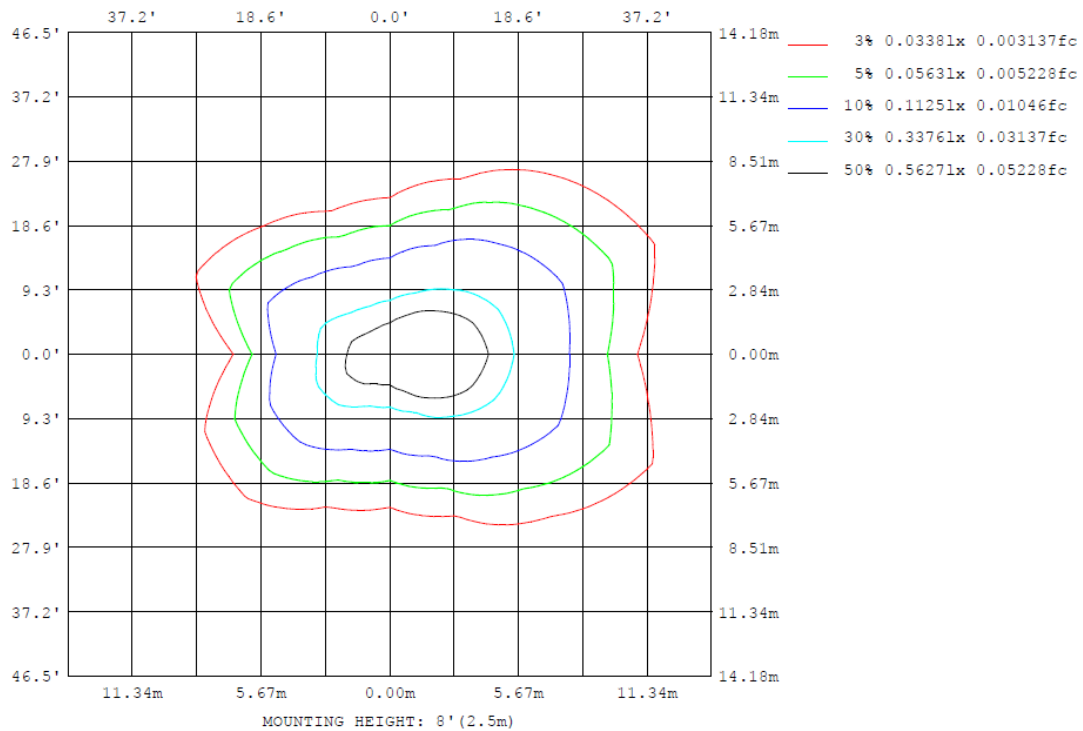
RESULTS OF TESTS (cont'd)

Test Condition: 120V, 60Hz For KWTB61927XXX

Model No.: KWTB61927XXX

Mount Height: 2.5 m

Isoillumination Plot



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TEST REPORT

RESULTS OF TESTS (cont'd)

Test Condition: 120V, 60Hz For KWTB61927XXX

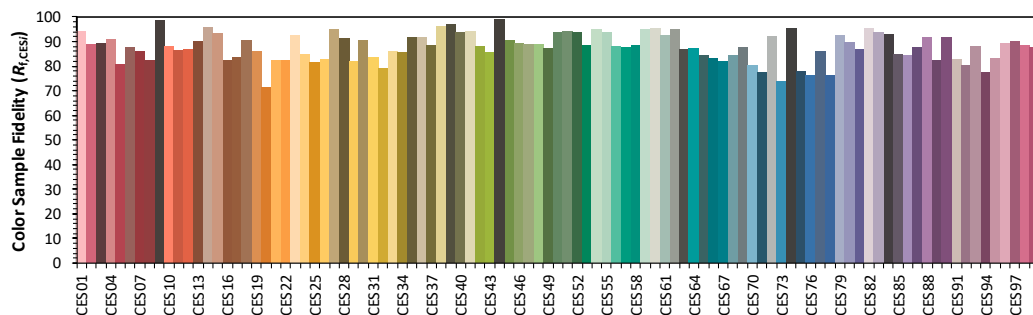
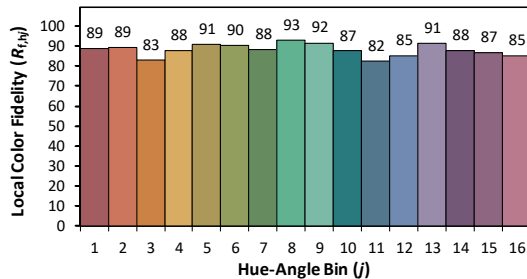
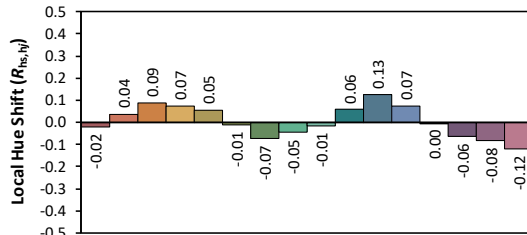
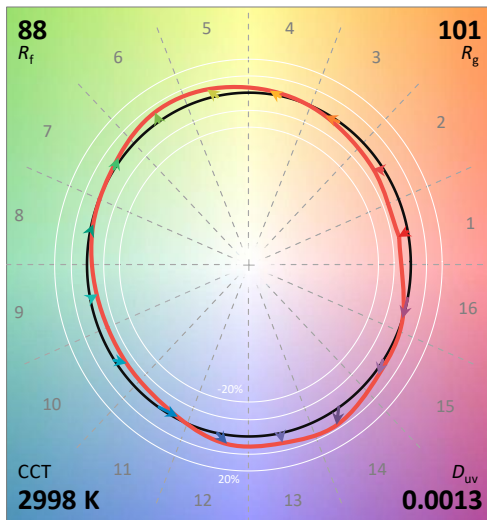
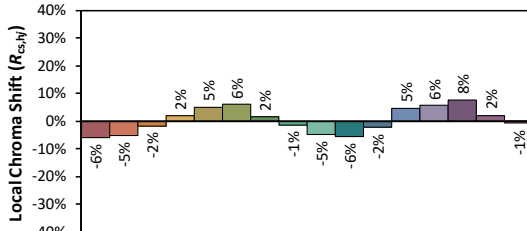
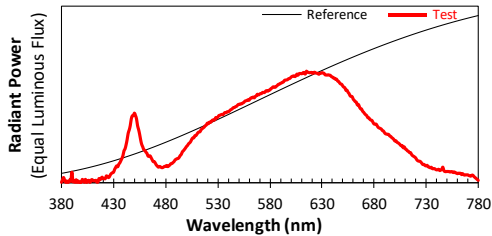
ANSI/IES +B3:X8TM-30-18 Color Rendition Report

Source: User SPD

Manufacturer: Visual Comfort & Co.

Date: 2025/7/24

Model: KWTB61927XXX



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

x 0.4390
 y 0.4081
 u' 0.2502
 v' 0.5233

CIE 13.3-1995
(CRI)
 R_a 88
 R_g 51

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 KWTB61927XXX

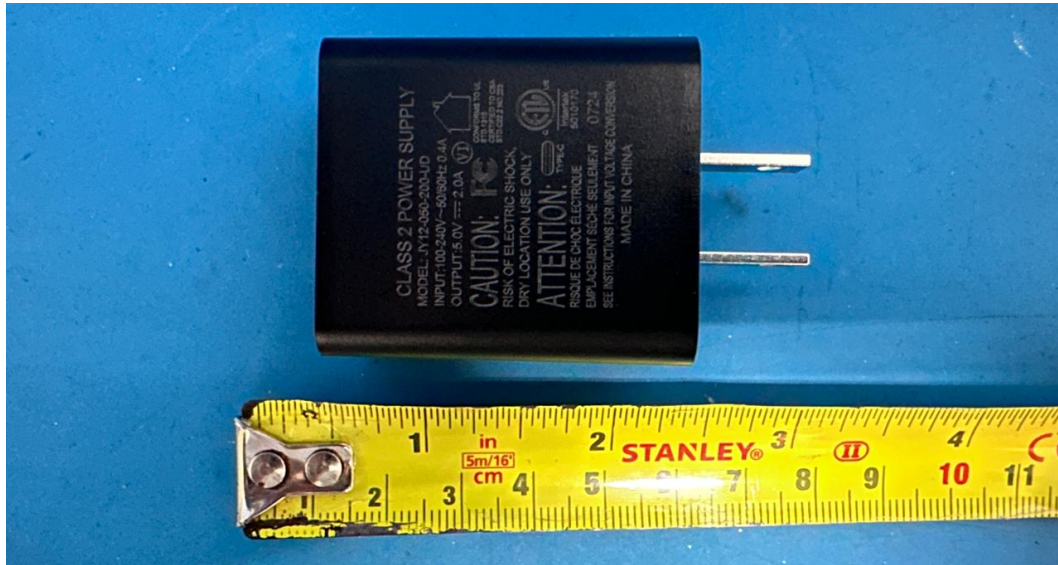


View of LED

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TEST REPORT

PRODUCT PICTURE (not to scale)



View of LED driver JY12-050-200-UD

In Charge Of Tests:

Done Ye

Done Ye
Engineer

Report Reviewed By

Shelley Ying

Shelley Ying
Reviewer

Attachment: None

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