

# Visual Comfort & Co.

## TEST REPORT

**SCOPE OF WORK**

LM-79 testing report

**REPORT NUMBER**

241212122GZU-010

**ISSUE DATE**

10 January 2025

**REVISION DATE**

None

**NUMBER OF PAGES**

13

**DOCUMENT CONTROL NUMBER**

Report format for LM-79\_G

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## TEST REPORT

### TEST OF ONE LED LUMINAIRE

MODEL NO. SLPD58527XX

Remark: "XX" are denoted appearance color.

#### 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: QGZ241210128.
<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-79-19	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 SLPD58527XX. The sample was received by Intertek in undamaged condition and tested as received. The sample designation was S241212122-010.
<u>MANUFACTURER /FACTORY &amp; 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>	02 January 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:	SLPD58527XX
Description:	LED Luminaries
Brand Name:	--

### Test Condition: 120V, 60Hz For SLPD58527XX

Criteria	Result
Total Lumen Output	117.4 lm
Total Power	3.9 W
Luminaire Efficacy	29.8 lm/W
S/MH(C0/180)	1.55
S/MH(C90/270)	1.53
Correlated Color Temperature (CCT)	2606 K
Color Rendering Index (CRI)	92
R9	60
Chromaticity Coordinate (x)	0.4634
Chromaticity Coordinate (y)	0.4047
Chromaticity Coordinate (u')	0.2675
Chromaticity Coordinate (v')	0.5256

### 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 $\pi$  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: 3.948A DC

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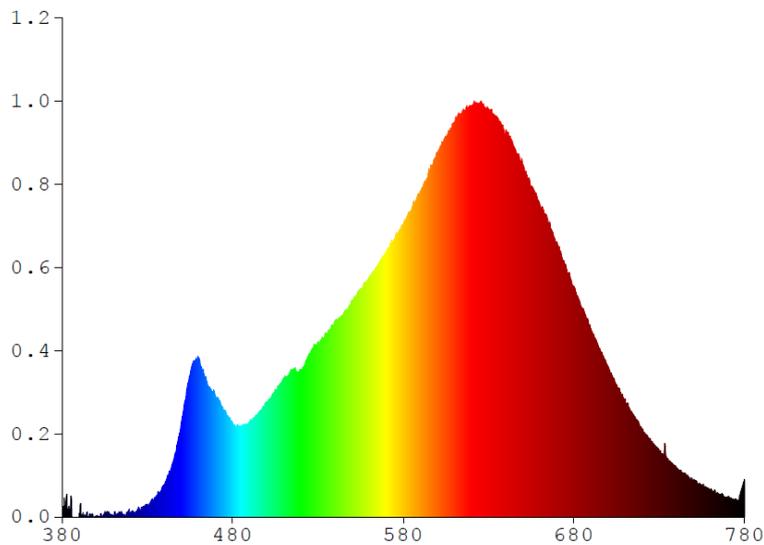
## TEST REPORT

### RESULTS OF TESTS

**Test Condition: 120V, 60Hz For SLPD58527XX**

Spectral Distribution over Visible Wavelengths

nm	mW/nm								
380	0.0000	480	0.9408	580	2.9503	680	2.3226	780	0.3828
385	0.1424	485	0.9064	585	3.1138	685	2.0973		
390	0.0000	490	0.9581	590	3.2864	690	1.8871		
395	0.0000	495	1.0412	595	3.5086	695	1.7028		
400	0.0140	500	1.1589	600	3.6662	700	1.5125		
405	0.0543	505	1.2807	605	3.8325	705	1.3325		
410	0.0188	510	1.3864	610	3.9728	710	1.1650		
415	0.0473	515	1.4840	615	4.1053	715	1.0232		
420	0.0459	520	1.4702	620	4.1366	720	0.8909		
425	0.0891	525	1.6514	625	4.1743	725	0.7535		
430	0.1258	530	1.7674	630	4.1153	730	0.6580		
435	0.1998	535	1.8466	635	4.0237	735	0.5828		
440	0.3272	540	1.9765	640	3.8961	740	0.4977		
445	0.5521	545	2.0520	645	3.7206	745	0.4344		
450	0.9524	550	2.1853	650	3.5548	750	0.3690		
455	1.4355	555	2.3009	655	3.3223	755	0.3163		
460	1.6019	560	2.4066	660	3.1493	760	0.2517		
465	1.3589	565	2.5338	665	2.9589	765	0.2310		
470	1.2069	570	2.6760	670	2.7728	770	0.1987		
475	1.0746	575	2.8049	675	2.4632	775	0.1763		



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## TEST REPORT

### RESULTS OF TESTS (cont'd)

**Test Condition: 120V, 60Hz For SLPD58527XX**

Total operation burning time: 60 minutes

Stabilization time: 30 minutes

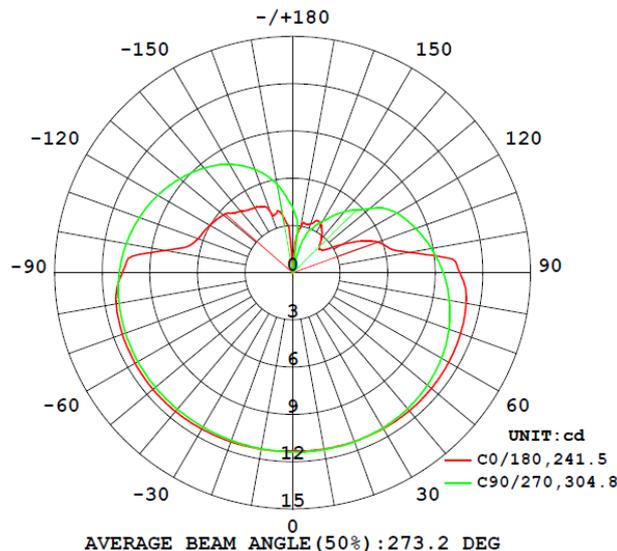
#### Photometric Measurements at 25°C – Distribution Method

Intertek Sample No.	Base Orientation	Correlated Color Temperature (K)	CRI	R9	CIE 31' Chromaticity Coordinate		CIE 76' Chromaticity Coordinate	
					(x)	(y)	(u')	(v')
SLPD58527XX								
S2412121 22-010	base-up	2606	92	60	0.4634	0.4047	0.2675	0.5256

#### 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)
SLPD58527XX							
S2412121 22-010	base-up	120.1	35.2	3.9	0.932	117.4	29.8

#### Intensity (Candlepower) Summary at 25°C - Candelas



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# TEST REPORT

## RESULTS OF TESTS (cont'd)

**Test Condition: 120V, 60Hz For SLPD58527XX**

Intensity (Candlepower) Summary at 25°C - Candelas

V \ H(°)	0	22.5	45	67.5	90
0	11.4	11.4	11.4	11.4	11.4
5	11.4	11.4	11.4	11.4	11.4
10	11.4	11.4	11.4	11.4	11.4
15	11.4	11.4	11.4	11.4	11.4
20	11.4	11.4	11.4	11.4	11.4
25	11.4	11.4	11.4	11.4	11.4
30	11.4	11.4	11.4	11.4	11.4
35	11.4	11.4	11.4	11.3	11.3
40	11.4	11.4	11.3	11.3	11.3
45	11.4	11.3	11.2	11.2	11.2
50	11.4	11.3	11.2	11.1	11.1
55	11.4	11.2	11.0	11.0	11.0
60	11.4	11.1	10.9	10.8	10.8
65	11.3	10.9	10.8	10.7	10.7
70	11.3	10.8	10.6	10.5	10.5
75	11.2	10.6	10.4	10.3	10.3
80	11.1	10.4	10.1	10.0	10.0
85	10.9	10.2	9.9	9.8	9.8
90	10.6	9.9	9.6	9.5	9.5
95	10.1	9.6	9.3	9.2	9.2
100	7.5	9.3	9.0	8.9	8.9
105	6.2	8.8	8.7	8.6	8.6
110	5.7	8.2	8.4	8.2	8.3
115	4.8	7.3	8.0	7.9	7.9
120	3.6	6.5	7.5	7.4	7.6
125	2.6	5.7	6.8	6.6	7.1
130	2.3	5.0	6.1	5.5	6.4
135	2.4	4.2	5.4	4.8	5.7
140	2.8	3.4	4.5	4.6	5.0
145	3.2	2.9	3.7	4.2	4.4
150	3.6	3.1	2.9	3.4	3.8
155	3.7	2.7	2.8	2.9	3.2
160	3.3	2.6	2.5	2.4	2.7
165	3.2	2.4	1.0	1.4	1.5
170	2.9	0.0	0.0	0.0	0.0
175	1.9	2.1	3.5	3.4	3.4
180	0.0	4.0	4.2	4.2	4.1

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## TEST REPORT RESULTS OF TESTS (cont'd)

Test Condition: 120V, 60Hz For SLPD58527XX

Zonal Lumen Summary and Percentages at 25°C

Zone	Lumens (lm)	% Luminaire (%)
SLPD58527XX		
0-30	9.6	8.2
0-40	16.7	14.3
0-60	35.6	30.3
0-90	69.6	59.3
60-90	34.0	29.0
0-180	117.4	100.0

### Beam Angle

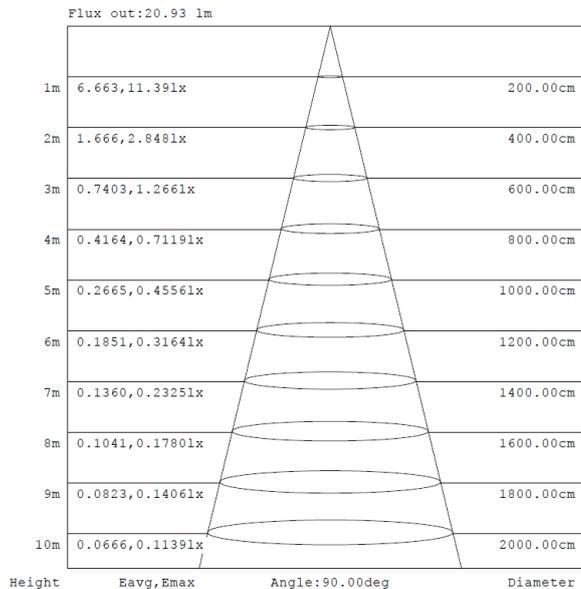
**Total Beam Angle(°)**  
273.2

### Illumination Plots

Model No.: SLPD58527XX

Mount Height: 2.5 m

#### Illuminance - Cone of Light



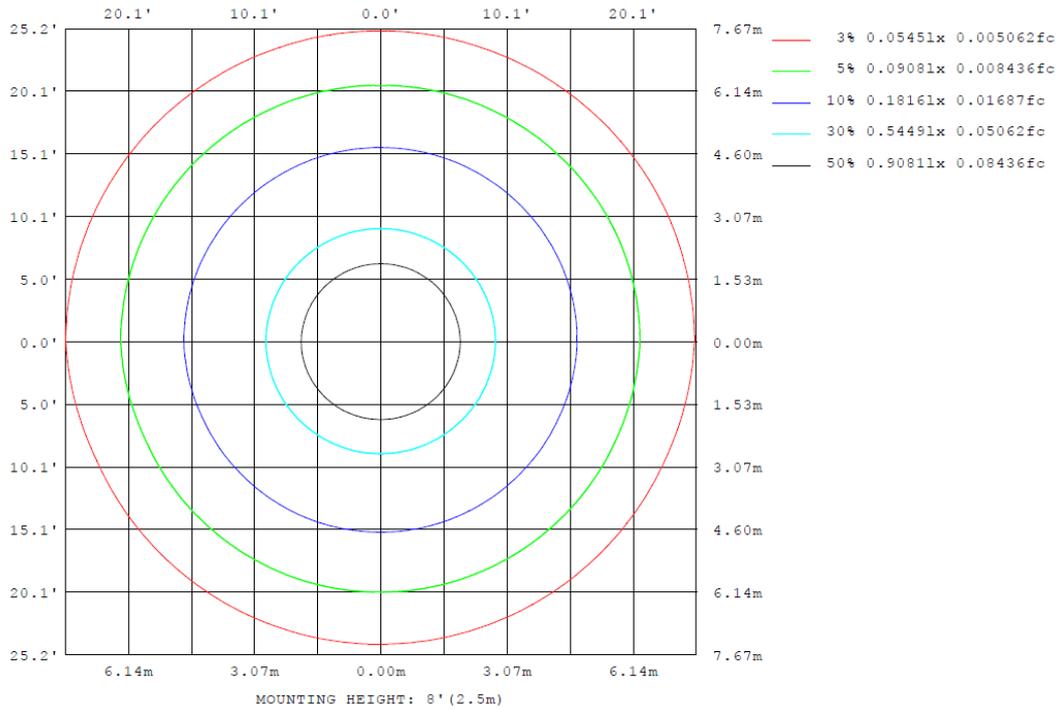
Note: The Curves indicate the illuminated area and the average illumination when the luminaire is at different distance.

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**TEST REPORT**  
**RESULTS OF TESTS (cont'd)**

**Test Condition: 120V, 60Hz For SLPD58527XX**

Model No.: SLPD58527XX  
Mount Height: 2.5 m  
Isoillumination Plot



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## TEST REPORT

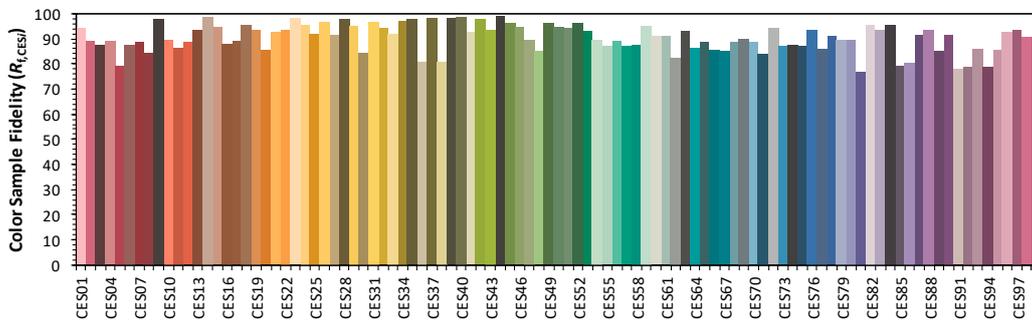
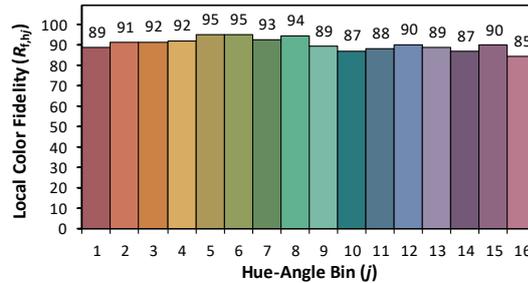
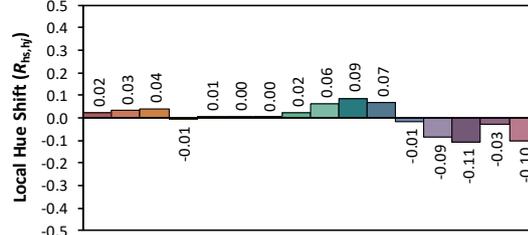
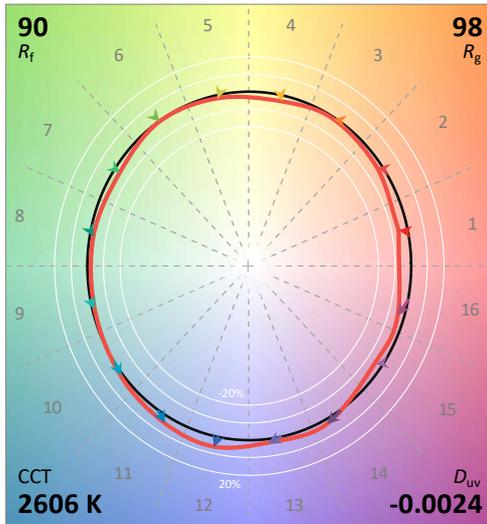
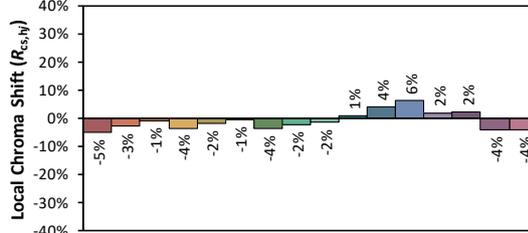
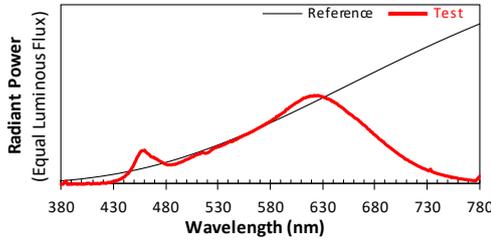
### RESULTS OF TESTS (cont'd)

Test Condition: 120V, 60Hz For SLPD58527XX

### ANSI/IES TM-30-18 Color Rendition Report

Source: User SPD  
Date: 2025/1/2

Manufacturer: Visual Comfort & Co.  
Model: SLPD58527XX



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

$x$  0.4634  
 $y$  0.4047  
 $u'$  0.2675  
 $v'$  0.5256

CIE 13.3-1995 (CRI)	
$R_a$	92
$R_g$	60

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 SLPD58527XX



View of LED driver DS12W24VMB1UD-0000

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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 \*\*\*\*\*