

Visual Comfort & Co.

TEST REPORT

SCOPE OF WORK

LM-79 testing report

REPORT NUMBER

241029179GZU-002

ISSUE DATE

03 December 2024

REVISION DATE

None

NUMBER OF PAGES

13

DOCUMENT CONTROL NUMBER

Report format for LM-79_G

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Report No.: 241029179GZU-002

TEST REPORT

TEST OF ONE LED LUMINAIRE

MODEL NO. SLPD62427XXXMG

Remark: "XXX" are denoted appearance color.

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: QGZ241021045.
<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 SLPD62427XXXMG. The sample was received by Intertek in undamaged condition and tested as received. The sample designation was S241029179-002.
<u>MANUFACTURER /FACTORY & ADDRESS:</u>	Union Star Collection-Dongguan Denghuang HomeFurnishing Co., Ltd. No.5, Central Road, Yayuan Industrial Zone, Nancheng District,Dongguan City, Guangdong Province, 523000
<u>DATES OF TESTS:</u>	13 November 2024
<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:	SLPD62427XXXMG
Description:	LED Luminaries
Brand Name:	--

Test Condition: 120V, 60Hz For SLPD62427XXXMG

Criteria	Result
Total Lumen Output	689.5 lm
Total Power	12.2 W
Luminaire Efficacy	56.7 lm/W
S/MH(C0/180)	0.79
S/MH(C90/270)	0.89
Correlated Color Temperature (CCT)	2708 K
Color Rendering Index (CRI)	93
R9	60
Chromaticity Coordinate (x)	0.4553
Chromaticity Coordinate (y)	0.4035
Chromaticity Coordinate (u')	0.2628
Chromaticity Coordinate (v')	0.5239

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: 3.948A DC

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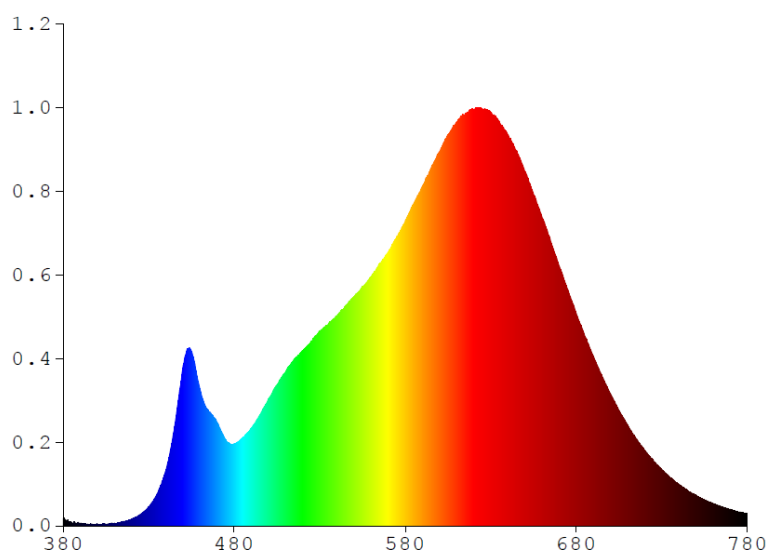
TEST REPORT

RESULTS OF TESTS

Test Condition: 120V, 60Hz For SLPD62427XXXMG

Spectral Distribution over Visible Wavelengths

nm	mW/nm	nm	mW/nm	nm	mW/nm	nm	mW/nm	nm	mW/nm
380	1.5426	480	18.0760	580	67.6250	680	46.8760	780	2.6752
385	0.5489	485	19.6200	585	71.5420	685	41.9550		
390	0.5058	490	21.6550	590	75.3340	690	37.4720		
395	0.4001	495	24.5710	595	79.3890	695	33.0900		
400	0.3675	500	28.0850	600	82.9970	700	29.1460		
405	0.3860	505	31.2480	605	86.7800	705	25.5040		
410	0.5912	510	34.1490	610	89.6390	710	22.2200		
415	0.9384	515	36.9150	615	91.3200	715	19.3240		
420	1.4895	520	38.9530	620	92.5060	720	16.6870		
425	2.4943	525	41.0150	625	92.5530	725	14.3840		
430	4.1963	530	43.0880	630	91.7990	730	12.4410		
435	7.0851	535	44.8080	635	89.5710	735	10.6830		
440	12.2850	540	46.6140	640	86.8460	740	9.1894		
445	21.7100	545	48.8580	645	83.2390	745	7.8360		
450	35.0290	550	50.7720	650	78.5950	750	6.7651		
455	38.5380	555	53.1420	655	73.4200	755	5.7694		
460	30.1720	560	55.1810	660	68.3000	760	4.9302		
465	25.2750	565	58.1340	665	63.0950	765	4.2236		
470	22.7890	570	60.6520	670	57.4960	770	3.6405		
475	19.1360	575	64.1490	675	51.0620	775	3.0626		



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TEST REPORT

RESULTS OF TESTS (cont'd)

Test Condition: 120V, 60Hz For SLPD62427XXXMG

Total operation burning time: 60 minutes

Stabilization time: 30 minutes

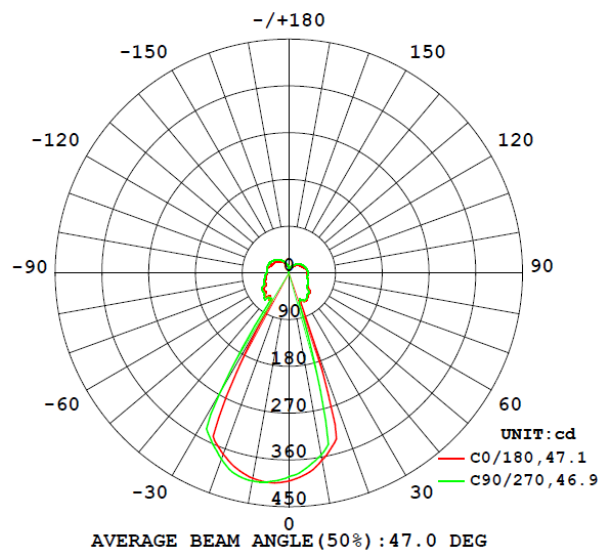
Photometric Measurements at 25°C – Distribution Method

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')
SLPD62427XXXMG								
S2410291 79-002	base-up	2708	93	60	0.4553	0.4035	0.2628	0.5239

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)
SLPD62427XXXMG							
S2410291 79-002	base-up	120.1	102.1	12.2	0.991	689.5	56.7

Intensity (Candlepower) Summary at 25°C - Candelas



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TEST REPORT

RESULTS OF TESTS (cont'd)

Test Condition: 120V, 60Hz For SLPD62427XXXMG

Intensity (Candlepower) Summary at 25°C - Candelas

V \ H(°)	0	22.5	45	67.5	90
0	400.4	397.7	397.2	397.2	392.1
5	388.2	381.7	380.5	381.7	377.0
10	366.1	358.1	357.8	360.1	355.7
15	338.3	300.3	278.0	296.1	234.1
20	140.7	58.4	67.3	58.9	58.5
25	56.8	58.8	55.8	55.9	58.9
30	62.8	62.5	61.7	61.3	61.3
35	61.0	58.8	59.7	59.8	59.5
40	58.8	54.7	53.8	54.0	54.8
45	55.6	55.0	53.8	53.8	53.6
50	53.3	47.6	46.3	47.4	45.5
55	44.7	43.2	42.9	43.3	43.7
60	43.1	41.3	41.0	41.6	42.2
65	41.2	39.4	39.0	39.7	40.5
70	39.4	37.4	37.1	37.9	38.8
75	37.6	35.5	35.1	36.1	37.1
80	35.7	34.1	34.0	34.8	36.2
85	35.7	34.4	34.3	35.3	36.6
90	35.8	34.5	34.3	35.3	36.7
95	35.6	34.3	34.1	35.0	36.5
100	35.2	33.8	33.6	34.5	36.0
105	33.1	33.1	32.9	33.7	35.2
110	30.4	32.0	31.8	32.7	34.0
115	28.5	30.7	30.5	31.4	32.6
120	27.3	28.7	29.0	29.9	31.0
125	25.7	26.4	27.4	28.2	29.2
130	23.9	23.7	25.2	26.4	27.1
135	21.8	21.1	23.0	24.2	25.0
140	19.5	18.6	20.6	21.9	22.7
145	17.1	16.2	17.9	19.4	20.2
150	14.6	14.1	15.2	16.7	17.9
155	12.6	12.7	13.3	14.4	15.6
160	12.0	11.7	12.1	12.7	13.8
165	11.9	11.3	11.3	11.9	12.5
170	11.9	11.1	11.0	11.0	9.7
175	7.0	5.4	5.6	6.4	4.8
180	0.5	0.0	0.0	4.7	10.0

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TEST REPORT

RESULTS OF TESTS (cont'd)

Test Condition: 120V, 60Hz For SLPD62427XXXMG

Zonal Lumen Summary and Percentages at 25°C

Zone	Lumens (lm)	% Luminaire (%)
SLPD62427XXXMG		
0-30	215.1	31.2
0-40	285.8	37.5
0-60	351.1	50.9
0-90	486.5	70.6
60-90	135.4	19.7
0-180	689.5	100.0

Beam Angle

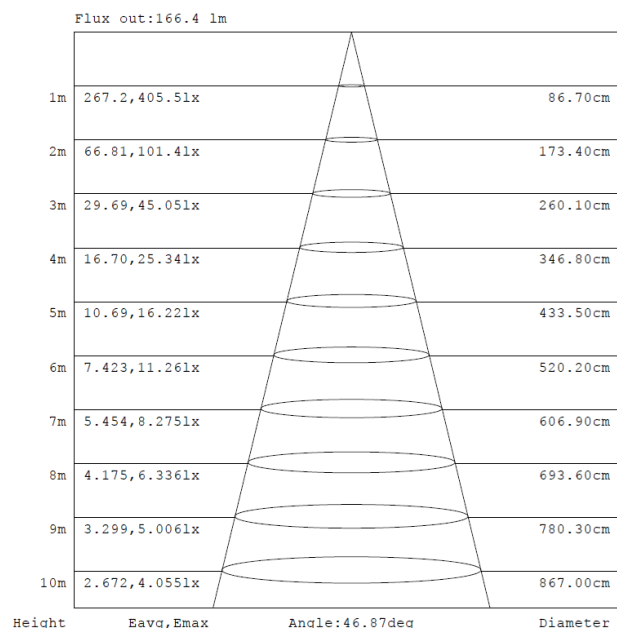
Total Beam Angle(°)
47.0

Illumination Plots

Model No.: SLPD62427XXXMG

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

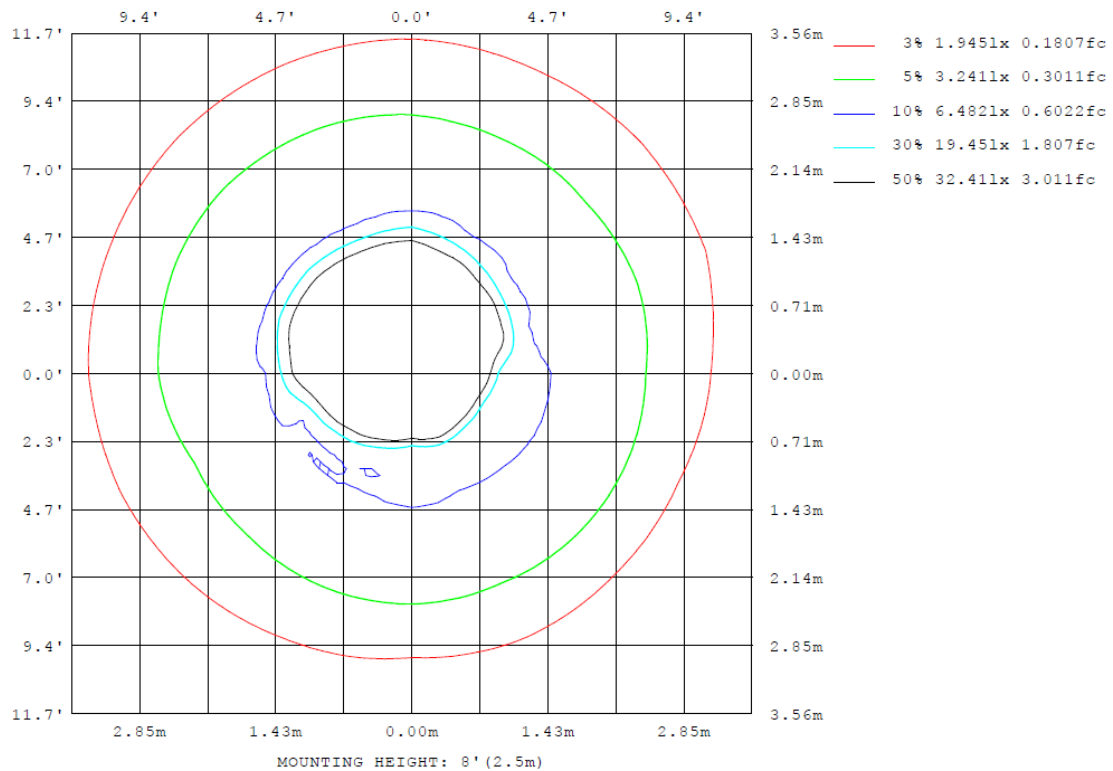
RESULTS OF TESTS (cont'd)

Test Condition: 120V, 60Hz For SLPD62427XXXMG

Model No.: SLPD62427XXXMG

Mount Height: 2.5 m

Isoillumination Plot



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TEST REPORT

RESULTS OF TESTS (cont'd)

Test Condition: 120V, 60Hz For SLPD62427XXXMG

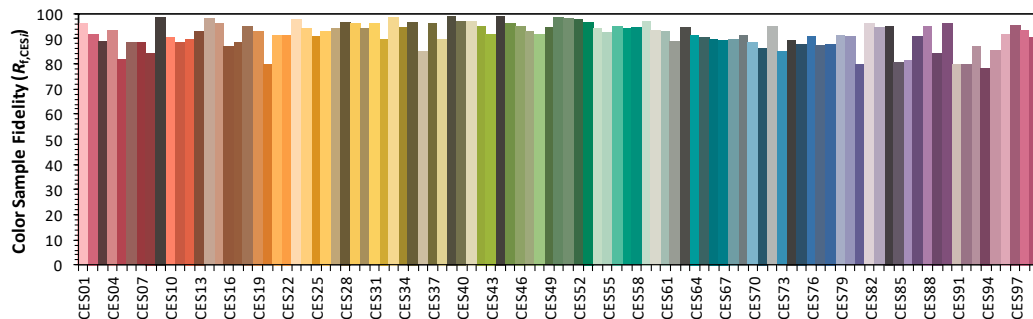
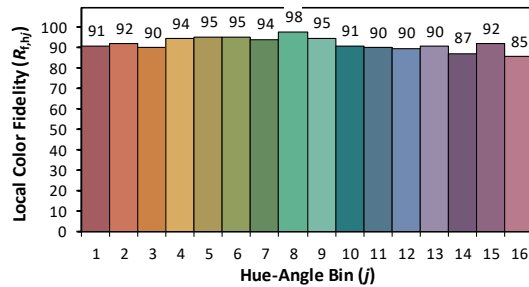
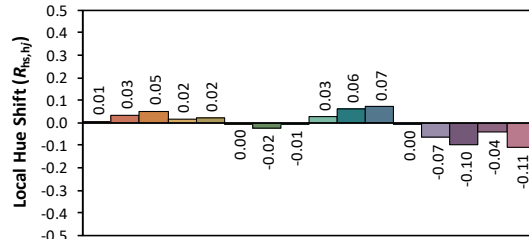
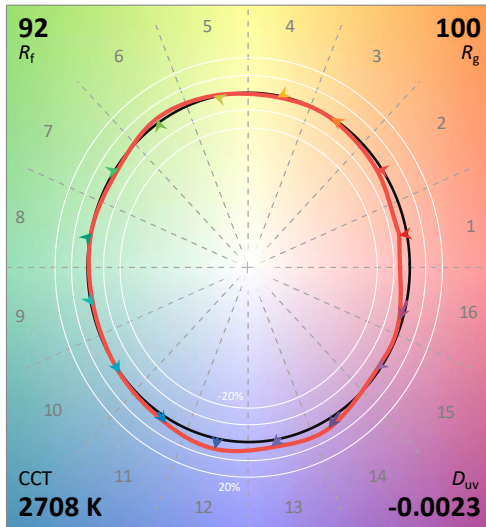
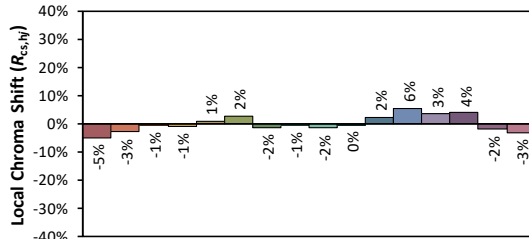
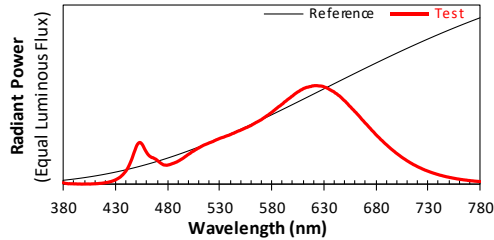
ANSI/IES TM-30-18 Color Rendition Report

Source: User SPD

Manufacturer: Visual Comfort & Co.

Date: 2024/11/13

Model: SLPD62427XXXMG



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

x 0.4553
 y 0.4035
 u' 0.2628
 v' 0.5239

CIE 13.3-1995
(CRI)

R_a 93

R_g 60

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

***** End of Page *****

TEST REPORT

PRODUCT PICTURE (not to scale)



External view of SLPD62427XXXMG



External view of SLPD62427XXXMG

***** End of Page *****

TEST REPORT

PRODUCT PICTURE (not to scale)



View of LED driver PTB15W-0300-38-VCC1 (AB0257)



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 *****