

Visual Comfort & Co.

TEST REPORT

SCOPE OF WORK

LM-79 testing report

REPORT NUMBER

240729032GZU-004

ISSUE DATE

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REVISION DATE

None

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Report format for LM-79_G

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Report No.: 240729032GZU-004

TEST REPORT

TEST OF ONE LED LUMINAIRE

MODEL NO. SLCH55827XX

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: QGZ240726006.
<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 SLCH55827XX. The sample was received by Intertek in undamaged condition and tested as received. The sample designation was S240729032-004.
<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>	05 August 2024, 29 August 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:	SLCH55827XX
Description:	LED Luminaries
Brand Name:	--

Test Condition: 120V, 60Hz For SLCH55827XX

Criteria	Result
Total Lumen Output	4259.6 lm
Total Power	82.3 W
Luminaire Efficacy	51.8 lm/W
S/MH(C0/180)	1.12
S/MH(C90/270)	1.23
Correlated Color Temperature (CCT)	2703 K
Color Rendering Index (CRI)	92
R9	50
Chromaticity Coordinate (x)	0.4592
Chromaticity Coordinate (y)	0.4099
Chromaticity Coordinate (u')	0.2624
Chromaticity Coordinate (v')	0.5270

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
Two Meter Integrating Sphere System	Sensing – 2M	SA063-12
Integration Sphere	Φ2m	SA063-12-01
Frequency power supply	APW-105N	SA063-12-05
High Accuracy Plant Spectroradiometer	PMS-2000P	SA063-12-25
Standard Lamp	D204	SA063-12-27
Power Meter	WT-310E	SA011-234
Temperature Meter	S500-TH	SA047-230

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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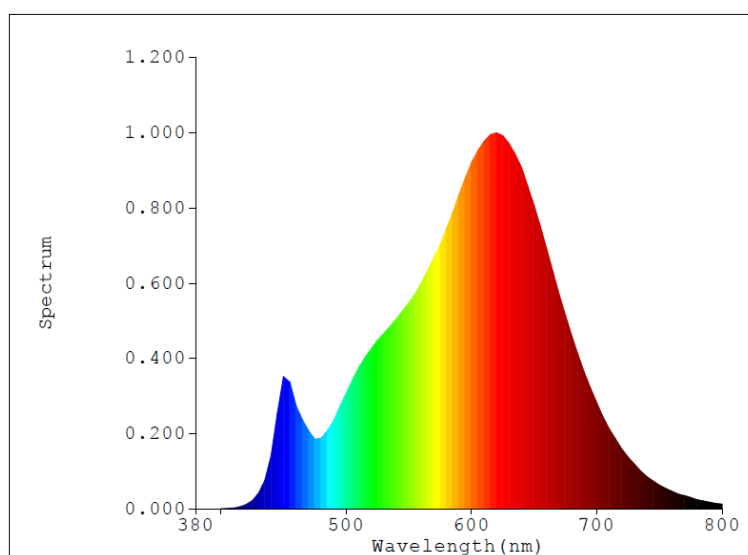
TEST REPORT

RESULTS OF TESTS

Test Condition: 120V, 60Hz For SLCH55827XX

Spectral Distribution over Visible Wavelengths

nm	mW/nm	nm	mW/nm	nm	mW/nm	nm	mW/nm	nm	mW/nm
380	0.0000	480	18.5540	580	73.8670	680	45.6710	780	2.3842
385	0.0000	485	20.6180	585	78.0890	685	40.7610		
390	0.0023	490	23.3350	590	82.8060	690	36.1070		
395	0.0070	495	27.0120	595	87.0780	695	31.7290		
400	0.0229	500	30.4260	600	91.1850	700	27.9800		
405	0.0678	505	33.9700	605	94.4440	705	24.1930		
410	0.1942	510	37.1640	610	96.9320	710	21.0010		
415	0.4750	515	39.9650	615	98.6480	715	18.4030		
420	1.0752	520	42.1650	620	99.0980	720	15.7690		
425	2.1321	525	44.4400	625	98.3980	725	13.5410		
430	4.0854	530	46.2170	630	96.2960	730	11.7590		
435	7.5050	535	48.0580	635	93.3540	735	9.9496		
440	13.8760	540	49.9640	640	89.9120	740	8.4791		
445	25.0110	545	52.1960	645	85.0010	745	7.3041		
450	34.8130	550	54.3350	650	80.0090	750	6.2569		
455	33.3450	555	56.7460	655	74.5440	755	5.3748		
460	27.1420	560	59.5130	660	68.6830	760	4.5695		
465	23.5150	565	62.7640	665	62.4580	765	3.8889		
470	20.6160	570	66.1950	670	56.4640	770	3.4294		
475	18.2870	575	69.7190	675	51.0020	775	2.9449		



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TEST REPORT

RESULTS OF TESTS (cont'd)

Test Condition: 120V, 60Hz For SLCH55827XX

Total operation burning time: 60 minutes

Stabilization time: 30 minutes

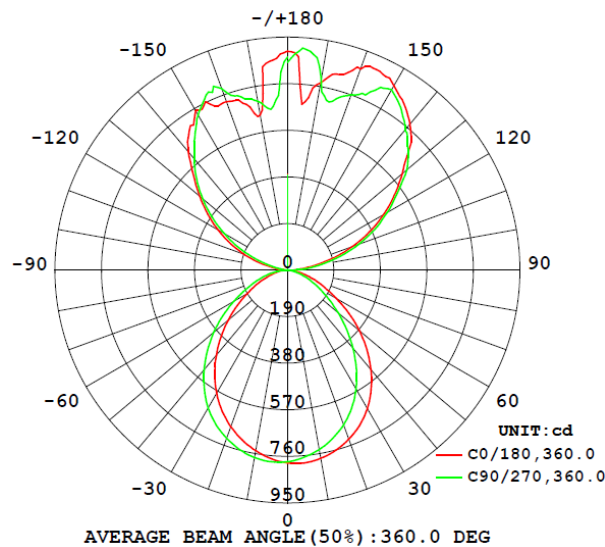
Photometric Measurements at 25°C –Integral Sphere Method

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')
SLCH55827XX								
S2407290 32-004	base-up	2703	92	50	0.4592	0.4099	0.2624	0.5270

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)
SLCH55827XX							
S2407290 32-004	base-up	120.0	694.1	82.3	0.988	4259.6	51.8

Intensity (Candlepower) Summary at 25°C - Candelas



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TEST REPORT

RESULTS OF TESTS (cont'd)

Test Condition: 120V, 60Hz For SLCH55827XX

Intensity (Candlepower) Summary at 25°C - Candelas

V \ H(°)	0	22.5	45	67.5	90
0	786.2	788.1	786.1	783.1	781.5
5	788.9	778.5	774.9	769.2	766.8
10	779.6	759.4	754.3	746.4	743.1
15	760.7	731.8	725.2	715.4	711.3
20	733.5	696.0	688.0	676.0	671.3
25	697.9	650.3	640.8	626.3	621.1
30	652.4	593.7	582.9	566.4	560.8
35	596.1	528.2	516.2	497.5	491.7
40	530.8	456.4	442.8	422.1	417.1
45	459.0	381.6	367.1	345.4	342.4
50	383.2	305.4	290.1	270.4	270.0
55	305.4	230.4	218.2	203.9	205.0
60	228.8	169.5	161.3	151.3	151.2
65	168.5	119.6	113.5	106.5	107.7
70	118.8	78.3	74.0	68.9	71.8
75	76.8	45.9	43.5	39.7	42.6
80	44.1	21.9	20.8	18.4	20.0
85	20.5	10.4	10.1	8.0	7.4
90	8.8	40.4	38.8	34.2	22.0
95	43.0	111.7	104.3	91.2	72.3
100	108.8	195.1	185.9	170.3	143.4
105	193.4	282.4	271.7	254.1	224.4
110	282.3	368.6	358.5	336.3	308.7
115	369.7	452.6	442.8	417.2	391.5
120	453.8	534.9	523.5	497.9	469.4
125	533.4	619.1	615.1	579.8	547.2
130	611.3	716.3	706.7	672.6	636.4
135	705.7	776.9	768.8	737.6	698.0
140	778.2	827.1	816.1	792.8	745.8
145	829.9	866.6	857.8	835.9	807.0
150	869.1	894.3	884.5	874.2	849.6
155	895.1	879.4	881.6	824.4	803.0
160	873.3	833.5	795.3	777.9	761.6
165	825.4	768.8	744.5	726.1	712.4
170	775.5	701.1	738.8	807.8	795.1
175	678.9	894.0	895.4	901.5	903.2
180	892.6	856.1	860.9	855.8	848.1

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Test Condition: 120V, 60Hz For SLCH55827XX

Zonal Lumen Summary and Percentages at 25°C

Zone	Lumens (lm)	% Luminaire (%)
SLCH55827XX		
0-30	584.0	13.7
0-40	926.5	21.8
0-60	1486.1	34.9
0-90	1742.4	40.9
60-90	256.3	6.0
0-180	4259.6	100.0

Beam Angle

Total Beam Angle(°)

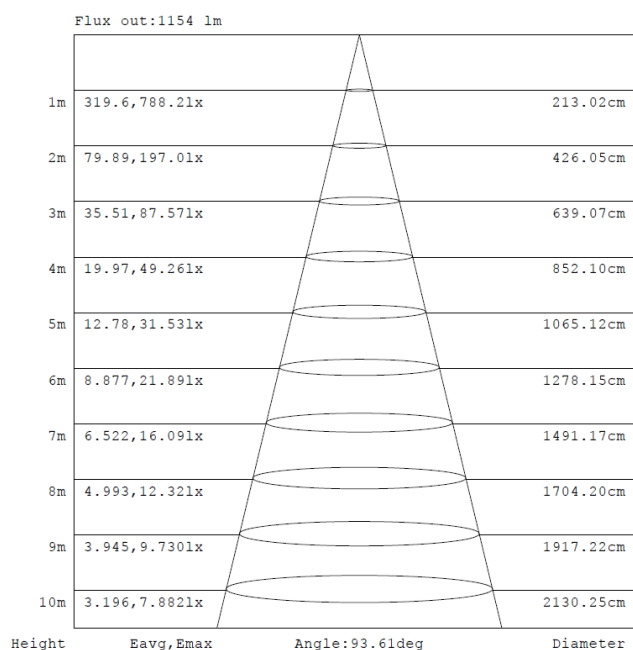
360.0

Illumination Plots

Model No.: SLCH55827XX

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

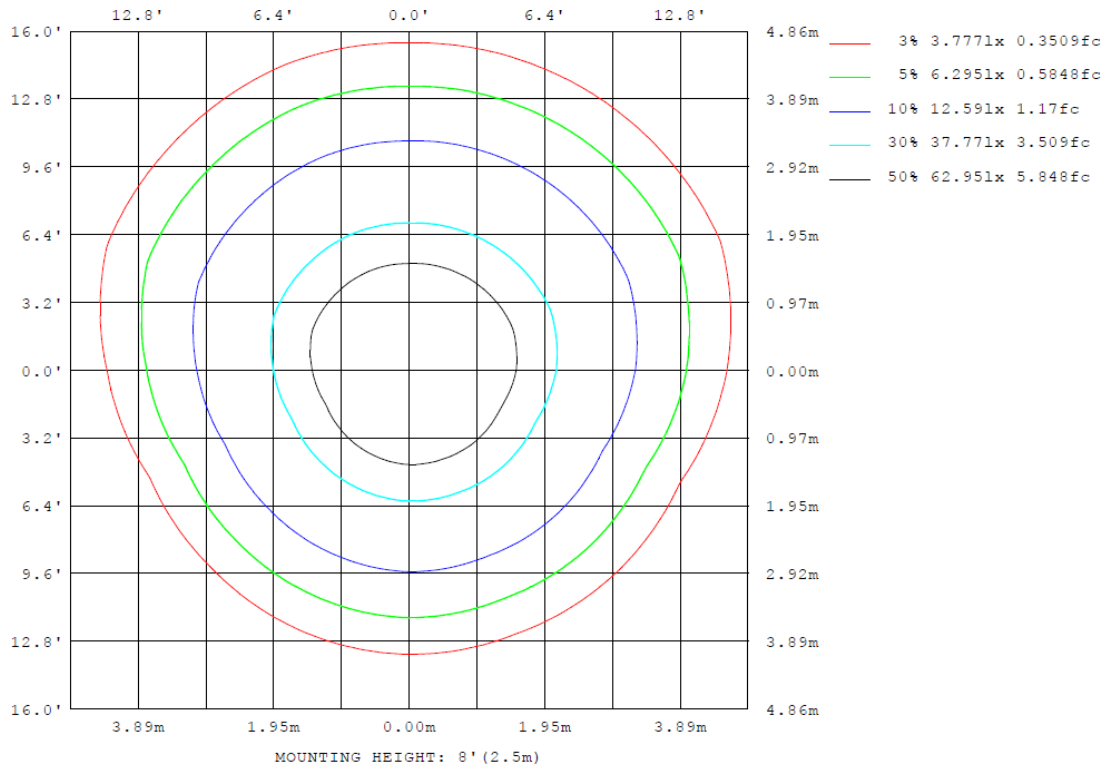
RESULTS OF TESTS (cont'd)

Test Condition: 120V, 60Hz For SLCH55827XX

Model No.: SLCH55827XX

Mount Height: 2.5 m

Isoillumination Plot



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TEST REPORT

RESULTS OF TESTS (cont'd)

Test Condition: 120V, 60Hz For SLCH55827XX

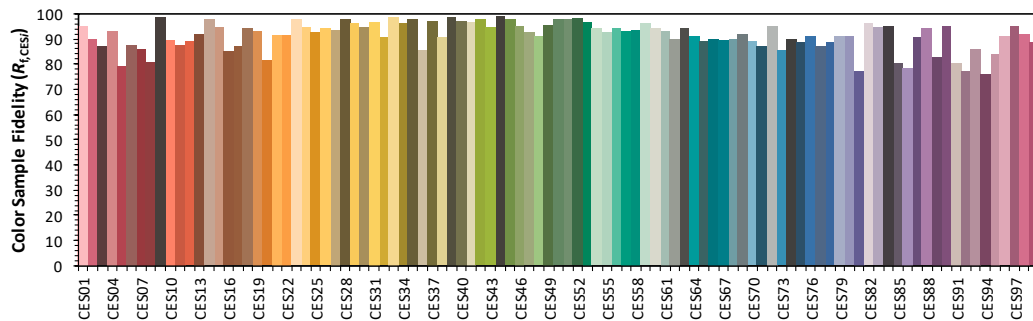
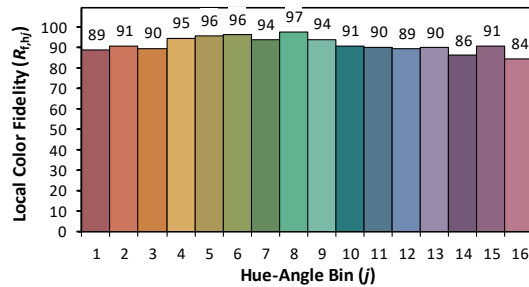
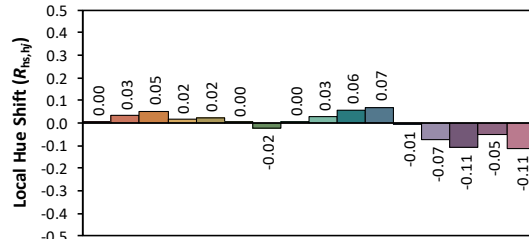
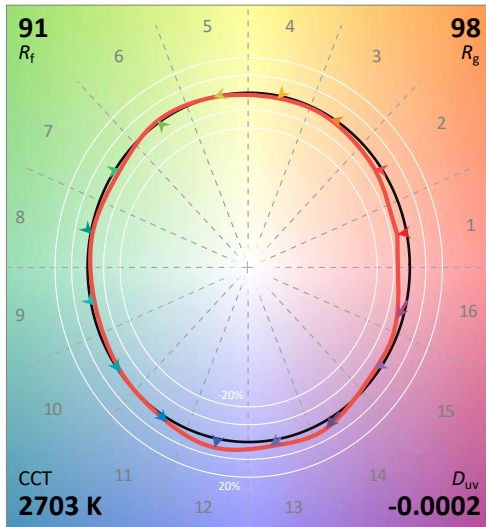
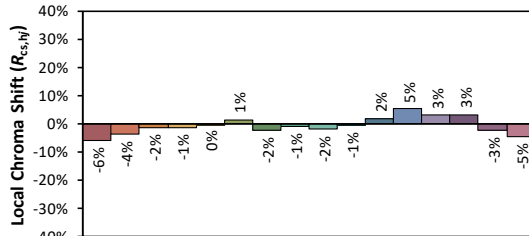
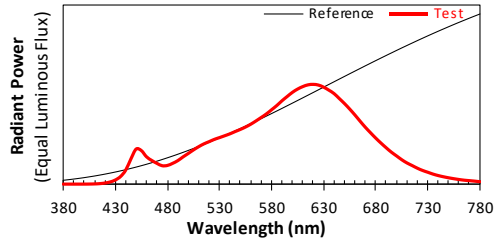
ANSI/IES TM-30-18 Color Rendition Report

Source: User SPD

Manufacturer: Visual Comfort & Co.

Date: 2024/8/29

Model: SLCH55827XX



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

x 0.4592
 y 0.4099
 u' 0.2624
 v' 0.5270

CIE 13.3-1995
(CRI)

R_a 92
 R_g 50

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 SLCH55827XX



External view of SLCH55827XX

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

TEST REPORT

PRODUCT PICTURE (not to scale)



View of LED driver DS45W1200C2036F5UD-0000



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 *****