

Visual Comfort & Co.

TEST REPORT

SCOPE OF WORK

LM-79 testing report

REPORT NUMBER

240729032GZU-005

ISSUE DATE

28 November 2024

REVISION DATE

None

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13

DOCUMENT CONTROL NUMBER

Report format for LM-79_G

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Report No.: 240729032GZU-005

TEST REPORT

TEST OF ONE LED LUMINAIRE

MODEL NO. SLCH55927XX

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 SLCH55927XX. The sample was received by Intertek in undamaged condition and tested as received. The sample designation was S240729032-005.
<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, 28 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:	SLCH55927XX
Description:	LED Luminaries
Brand Name:	--

Test Condition: 120V, 60Hz For SLCH55927XX

Criteria	Result
Total Lumen Output	2752.7 lm
Total Power	52.7 W
Luminaire Efficacy	52.2 lm/W
S/MH(C0/180)	1.17
S/MH(C90/270)	1.20
Correlated Color Temperature (CCT)	2675 K
Color Rendering Index (CRI)	92
R9	50
Chromaticity Coordinate (x)	0.4622
Chromaticity Coordinate (y)	0.4115
Chromaticity Coordinate (u')	0.2636
Chromaticity Coordinate (v')	0.5281

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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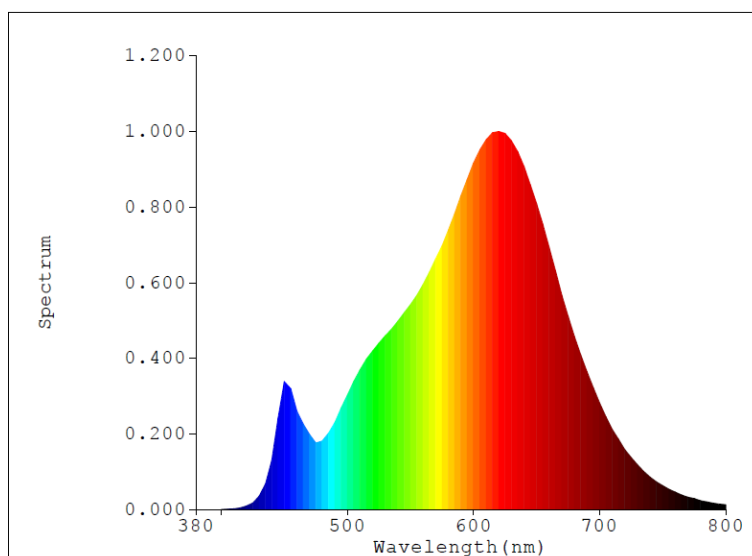
TEST REPORT

RESULTS OF TESTS

Test Condition: 120V, 60Hz For SLCH55927XX

Spectral Distribution over Visible Wavelengths

nm	mW/nm	nm	mW/nm	nm	mW/nm	nm	mW/nm	nm	mW/nm
380	0.0000	480	11.8630	580	48.5340	680	30.0540	780	1.5382
385	0.0005	485	13.2790	585	51.3500	685	26.9010		
390	0.0009	490	15.1230	590	54.4660	690	23.9440		
395	0.0026	495	17.6080	595	57.2670	695	21.0460		
400	0.0097	500	19.8450	600	60.0960	700	18.4440		
405	0.0366	505	22.1840	605	62.4680	705	16.0310		
410	0.1010	510	24.2150	610	64.2250	710	13.8470		
415	0.2584	515	26.1250	615	65.4160	715	12.1660		
420	0.5861	520	27.5330	620	65.6060	720	10.4150		
425	1.1685	525	28.9110	625	65.2670	725	8.9584		
430	2.3269	530	30.1200	630	64.0640	730	7.7316		
435	4.4430	535	31.2910	635	62.0520	735	6.5999		
440	8.5267	540	32.6200	640	59.5190	740	5.6262		
445	15.8420	545	34.1790	645	56.3650	745	4.7968		
450	22.1930	550	35.5860	650	53.0840	750	4.1080		
455	20.9370	555	37.1800	655	49.4860	755	3.4568		
460	16.9500	560	39.0590	660	45.5420	760	2.9889		
465	14.7870	565	41.2130	665	41.3420	765	2.4970		
470	13.0060	570	43.4600	670	37.1870	770	2.1213		
475	11.5310	575	45.8240	675	33.5010	775	1.8966		



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TEST REPORT

RESULTS OF TESTS (cont'd)

Test Condition: 120V, 60Hz For SLCH55927XX

Total operation burning time: 60 minutes

Stabilization time: 30 minutes

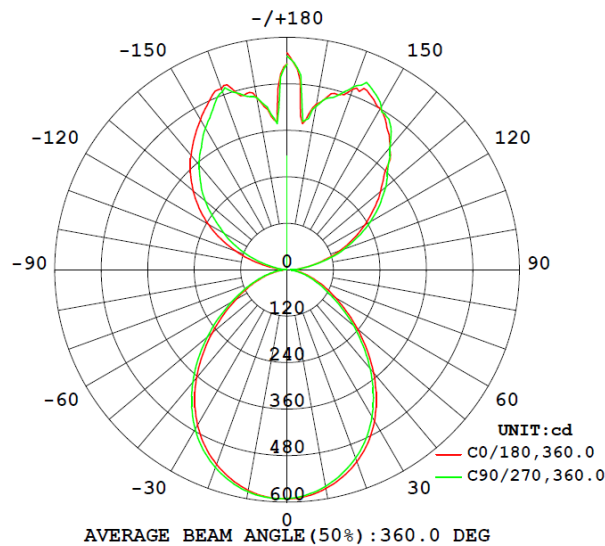
Photometric Measurements at 25°C – Integral Sphere Method

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')
SLCH55927XX								
S2407290 32-005	base-up	2675	92	50	0.4622	0.4115	0.2636	0.5281

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)
SLCH55927XX							
S2407290 32-005	base-up	120.1	444.4	52.7	0.988	2752.7	52.2

Intensity (Candlepower) Summary at 25°C - Candelas



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TEST REPORT

RESULTS OF TESTS (cont'd)

Test Condition: 120V, 60Hz For SLCH55927XX

Intensity (Candlepower) Summary at 25°C - Candelas

V \ H(°)	0	22.5	45	67.5	90
0	591.2	591.3	590.5	590.4	590.2
5	586.4	587.5	583.2	583.1	583.3
10	573.4	575.4	567.8	567.4	567.8
15	553.4	556.3	545.8	545.2	545.5
20	527.1	530.8	517.7	517.0	517.1
25	493.5	498.6	482.6	481.7	481.6
30	451.0	457.8	439.1	438.6	438.3
35	401.4	409.4	388.7	388.5	388.5
40	347.2	356.3	334.3	334.2	333.9
45	291.3	301.4	278.9	278.4	277.8
50	237.2	247.3	225.7	224.3	223.8
55	186.9	195.5	175.2	173.0	172.1
60	144.6	152.3	134.3	130.4	129.3
65	108.6	116.0	100.8	97.1	95.3
70	78.2	84.8	72.4	69.2	67.4
75	52.9	58.7	49.2	46.7	44.8
80	32.3	38.1	30.5	28.4	26.0
85	18.1	22.6	18.2	16.0	12.9
90	11.9	14.7	16.0	14.2	10.6
95	28.0	23.8	34.6	31.5	29.4
100	60.4	56.2	72.1	68.1	65.1
105	100.2	96.5	111.8	109.5	108.6
110	144.8	139.3	153.1	152.6	156.2
115	188.2	182.0	194.5	197.3	201.3
120	230.8	224.0	235.2	239.3	247.7
125	273.0	266.3	277.3	280.4	291.2
130	315.2	310.7	331.6	323.3	333.1
135	356.8	371.6	389.8	367.6	367.7
140	413.5	411.1	423.7	425.6	414.2
145	448.7	442.6	454.9	455.7	463.2
150	481.7	478.2	486.4	486.1	486.0
155	501.8	497.6	510.4	513.3	516.8
160	496.4	504.9	492.3	494.2	504.2
165	471.2	470.4	463.3	458.6	460.8
170	433.8	441.7	422.4	427.9	428.1
175	398.5	383.5	471.0	465.8	441.1
180	560.4	529.3	530.1	541.5	551.7

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TEST REPORT

RESULTS OF TESTS (cont'd)

Test Condition: 120V, 60Hz For SLCH55927XX

Zonal Lumen Summary and Percentages at 25°C

Zone	Lumens (lm)	% Luminaire (%)
SLCH55927XX		
0-30	440.8	16.0
0-40	696.0	25.3
0-60	1101.0	40.0
0-90	1284.8	46.7
60-90	183.8	6.7
0-180	2752.7	100.0

Beam Angle

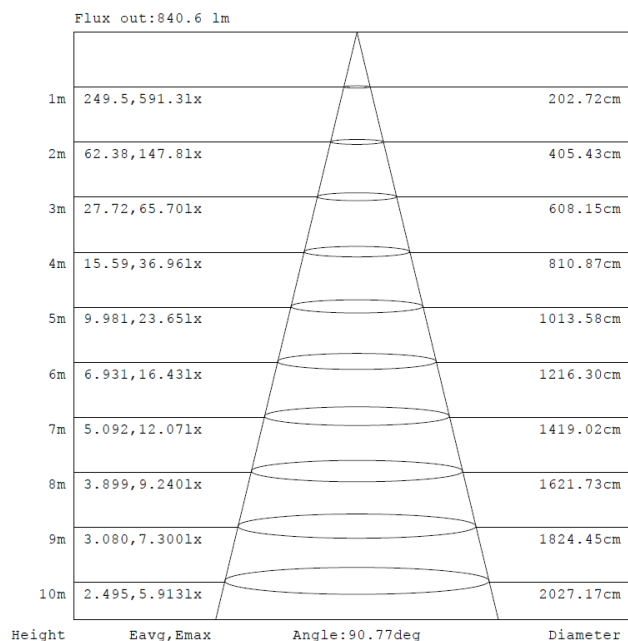
Total Beam Angle(°)
360.0

Illumination Plots

Model No.: SLCH55927XX

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

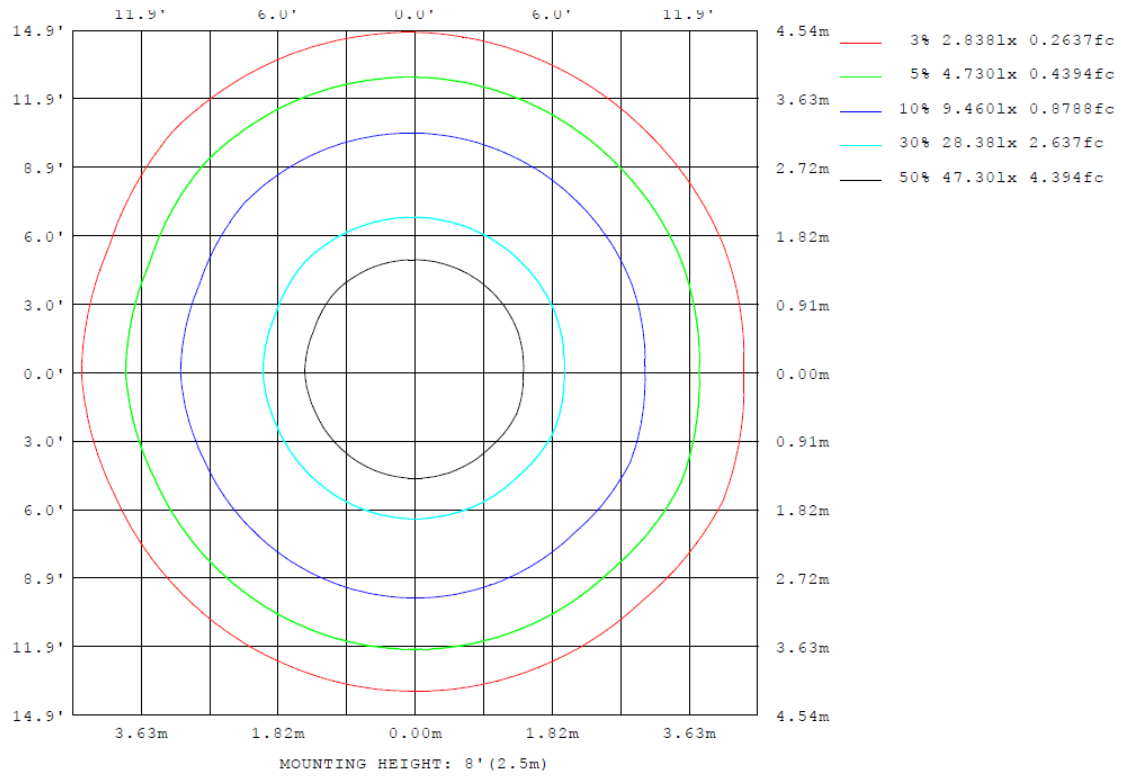
RESULTS OF TESTS (cont'd)

Test Condition: 120V, 60Hz For SLCH55927XX

Model No.: SLCH55927XX

Mount Height: 2.5 m

Isoillumination Plot



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TEST REPORT

RESULTS OF TESTS (cont'd)

Test Condition: 120V, 60Hz For SLCH55927XX

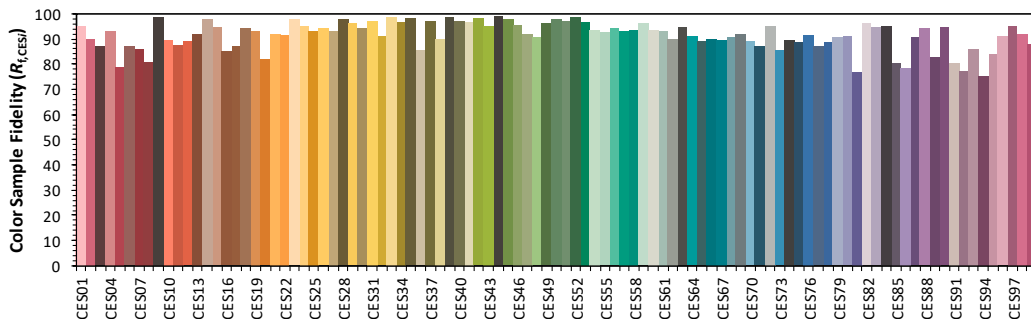
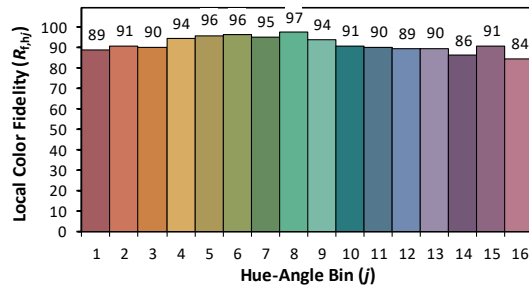
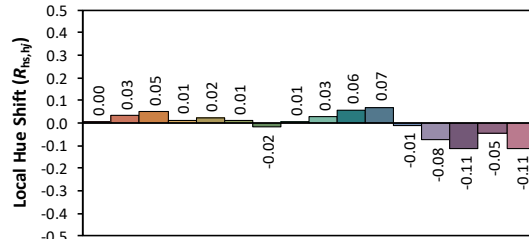
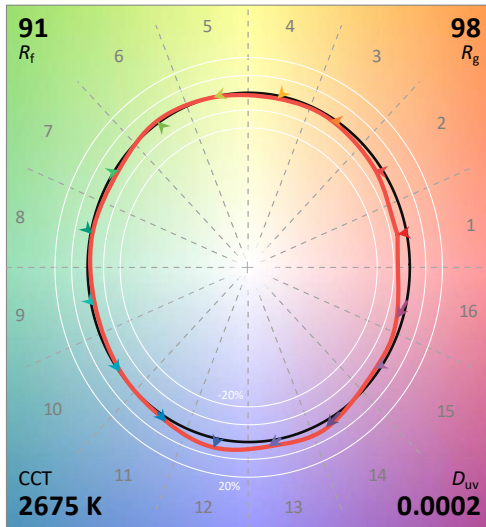
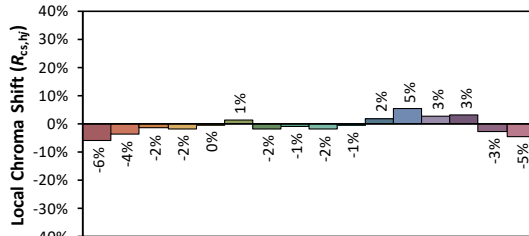
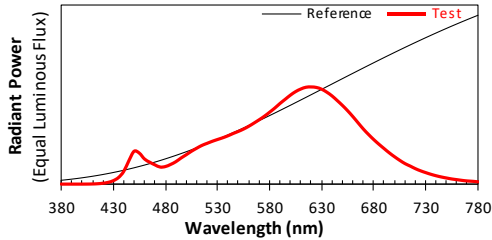
ANSI/IES TM-30-18 Color Rendition Report

Source: User SPD

Manufacturer: Visual Comfort & Co.

Date: 2024/8/28

Model: SLCH55927XX



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

x 0.4622
 y 0.4115
 u' 0.2636
 v' 0.5281

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 SLCH55927XX



External view of SLCH55927XX

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

TEST REPORT

PRODUCT PICTURE (not to scale)



View of LED driver DS50W1400C2036F5UD-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 *****