

Visual Comfort & Co.

TEST REPORT

SCOPE OF WORK

LM-79 testing report

REPORT NUMBER

241021199GZU-002

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REVISION DATE

None

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Report format for LM-79_G

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Report No.: 241021199GZU-002

TEST REPORT

TEST OF ONE LED LUMINAIRE

MODEL NO. SLFL57230X

Remark: "X" are denoted appearance color.

RENDERED TO

Visual Comfort & Co.

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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: QGZ240930087.
<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 SLFL57230X. The sample was received by Intertek in undamaged condition and tested as received. The sample designation was S241021199-002.
<u>MANUFACTURER /FACTORY & ADDRESS:</u>	GuangZhou Pan Yu Target Casting and Lighting Corporation No. 1 Industrial Zone, Zhongcun, Panyu, Guangzhou CHINA 511495
<u>DATES OF TESTS:</u>	31 October 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:	SLFL57230X
Description:	LED Luminaries
Brand Name:	--

Test Condition: 120V, 60Hz For SLFL57230X

Criteria	Result
Total Lumen Output	339.0 lm
Total Power	6.1 W
Luminaire Efficacy	55.7 lm/W
S/MH(C0/180)	0.65
S/MH(C90/270)	0.69
Correlated Color Temperature (CCT)	2802 K
Color Rendering Index (CRI)	94
R9	81
Chromaticity Coordinate (x)	0.4509
Chromaticity Coordinate (y)	0.4070
Chromaticity Coordinate (u')	0.2583
Chromaticity Coordinate (v')	0.5246

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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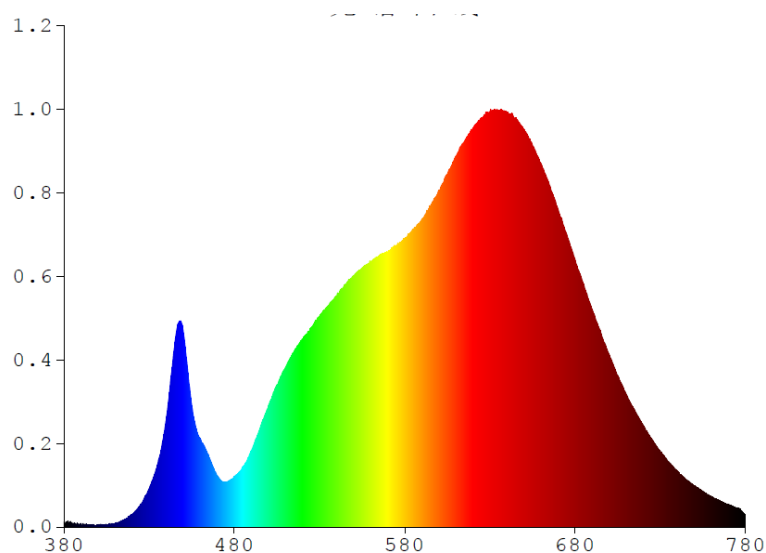
TEST REPORT

RESULTS OF TESTS

Test Condition: 120V, 60Hz For SLFL57230X

Spectral Distribution over Visible Wavelengths

nm	mW/nm	nm	mW/nm	nm	mW/nm	nm	mW/nm	nm	mW/nm
380	0.2701	480	2.5390	580	14.5950	680	13.4760	780	0.5626
385	0.1538	485	3.0499	585	15.0890	685	12.2510		
390	0.1701	490	3.8623	590	15.5720	690	11.0050		
395	0.0967	495	4.9739	595	16.2440	695	9.8152		
400	0.0732	500	6.1385	600	17.0560	700	8.7013		
405	0.1166	505	7.1883	605	17.8640	705	7.6386		
410	0.1786	510	8.0894	610	18.7870	710	6.6907		
415	0.3485	515	8.8614	615	19.5170	715	5.8967		
420	0.6273	520	9.5282	620	20.1800	720	5.1126		
425	1.1326	525	10.1080	625	20.7300	725	4.4419		
430	1.9392	530	10.6960	630	21.0300	730	3.8010		
435	3.1782	535	11.2050	635	21.0870	735	3.2644		
440	5.4735	540	11.7030	640	21.0140	740	2.8033		
445	9.2719	545	12.2810	645	20.7360	745	2.4084		
450	9.8727	550	12.7150	650	20.1210	750	2.0997		
455	6.0609	555	13.1040	655	19.2860	755	1.7947		
460	4.4457	560	13.3720	660	18.3980	760	1.5345		
465	3.5504	565	13.7570	665	17.3070	765	1.3075		
470	2.5871	570	13.9120	670	16.0360	770	1.1340		
475	2.2607	575	14.2500	675	14.5330	775	0.9662		



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TEST REPORT

RESULTS OF TESTS (cont'd)

Test Condition: 120V, 60Hz For SLFL57230X

Total operation burning time: 60 minutes

Stabilization time: 30 minutes

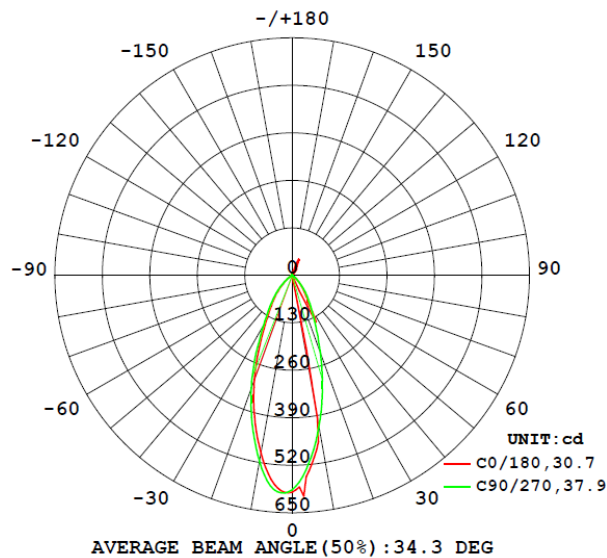
Photometric Measurements at 25°C – Distribution Method

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')
SLFL57230X								
S2410211 99-002	base-up	2802	94	81	0.4509	0.4070	0.2583	0.5246

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	Lumen Efficacy
						Flux (Lumens)	(Lumens Per Watt)
SLFL57230X							
S2410211 99-002	base-up	120.1	66.4	6.1	0.763	339.0	55.7

Intensity (Candlepower) Summary at 25°C - Candelas



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TEST REPORT

RESULTS OF TESTS (cont'd)

Test Condition: 120V, 60Hz For SLFL57230X

Intensity (Candlepower) Summary at 25°C - Candelas

V \ H(°)	0	22.5	45	67.5	90
0	592.7	565.4	581.2	578.8	586.2
5	535.8	473.6	490.4	505.1	517.3
10	396.7	246.6	391.8	407.7	421.4
15	0.0	276.6	292.8	308.6	321.9
20	0.0	190.5	202.7	215.2	226.2
25	47.7	131.1	138.2	145.7	152.2
30	85.3	91.2	96.2	101.0	105.2
35	62.1	61.7	65.8	70.0	73.6
40	43.3	38.6	41.5	44.8	47.8
45	25.8	22.2	24.2	26.5	28.4
50	14.4	11.2	12.5	14.0	15.4
55	6.5	4.0	5.1	6.1	6.8
60	2.2	1.1	1.4	1.7	2.0
65	0.6	0.3	0.4	0.5	0.6
70	0.1	0.0	0.1	0.1	0.1
75	0.0	0.0	0.0	0.0	0.0
80	0.0	0.0	0.0	0.0	0.0
85	0.0	0.0	0.0	0.0	0.0
90	0.0	0.0	0.0	0.0	0.0
95	0.0	0.0	0.0	0.0	0.0
100	0.0	0.0	0.0	0.0	0.0
105	0.0	0.0	0.0	0.0	0.1
110	0.0	0.0	0.0	0.0	0.1
115	0.0	0.0	0.0	0.1	0.1
120	0.1	0.1	0.1	0.1	0.1
125	0.1	0.1	0.2	0.2	0.2
130	0.2	0.2	0.3	0.3	0.2
135	0.3	0.6	0.4	0.3	0.3
140	1.4	1.6	0.7	0.6	0.4
145	21.6	1.7	1.1	0.7	0.7
150	16.5	17.4	1.5	0.8	0.6
155	41.1	52.6	3.4	1.0	1.0
160	41.0	74.9	22.2	0.9	1.0
165	13.0	55.9	5.8	4.0	2.6
170	1.3	5.1	3.5	2.5	2.1
175	2.4	1.5	0.5	0.4	0.4
180	0.5	0.3	0.3	2.7	5.2

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TEST REPORT

RESULTS OF TESTS (cont'd)

Test Condition: 120V, 60Hz For SLFL57230X

Zonal Lumen Summary and Percentages at 25°C

Zone	Lumens (lm)	% Luminaire (%)
SLFL57230X		
0-30	231.7	68.3
0-40	289.0	85.2
0-60	331.1	97.7
0-90	333.1	98.2
60-90	2.0	0.5
0-180	339.0	100.0

Beam Angle

Total Beam Angle(°)

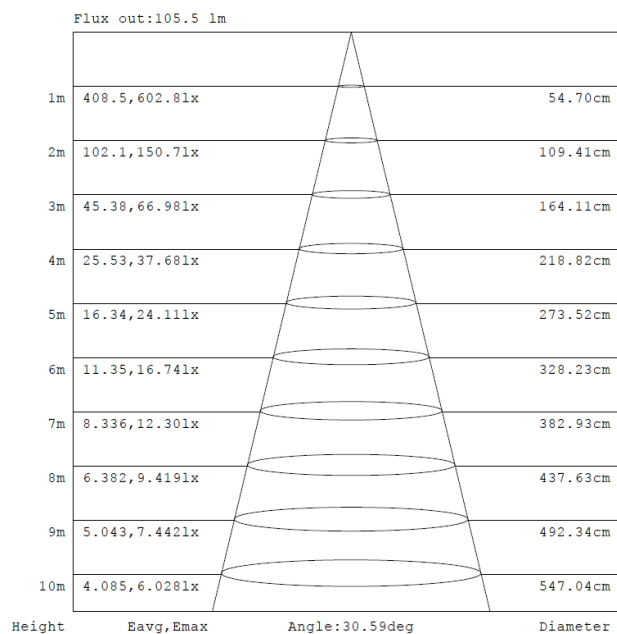
34.3

Illumination Plots

Model No.: SLFL57230X

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

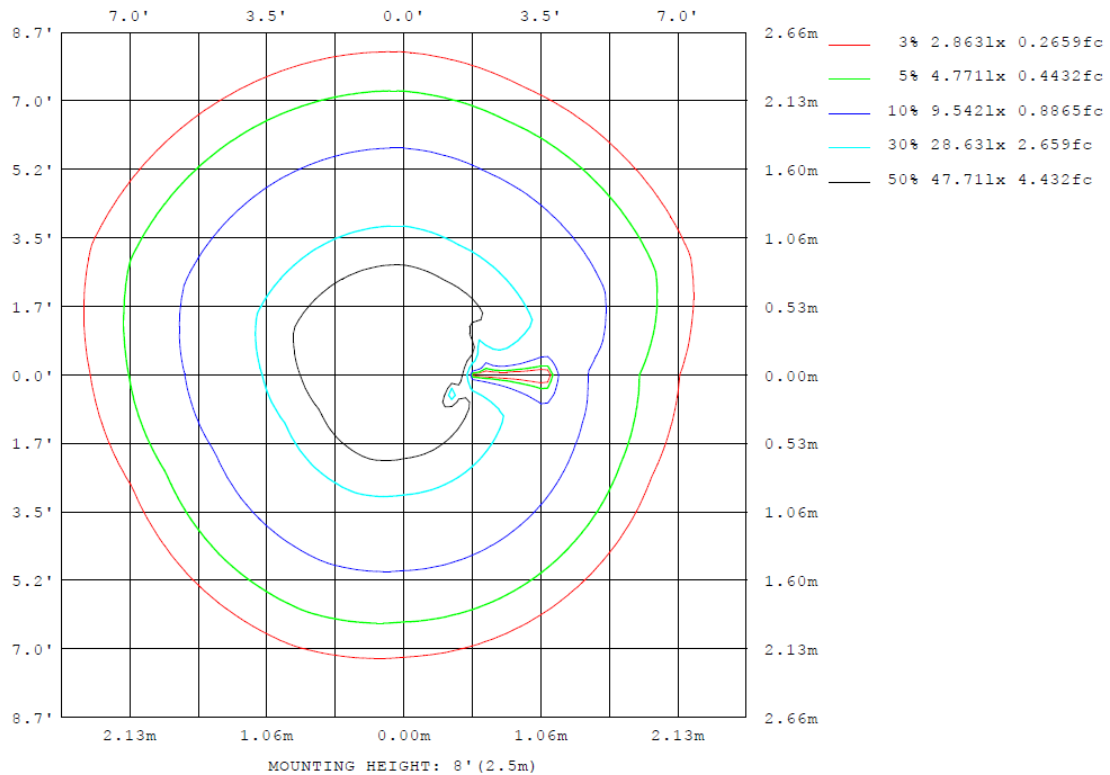
RESULTS OF TESTS (cont'd)

Test Condition: 120V, 60Hz For SLFL57230X

Model No.: SLFL57230X

Mount Height: 2.5 m

Isoillumination Plot



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TEST REPORT

RESULTS OF TESTS (cont'd)

Test Condition: 120V, 60Hz For SLFL57230X

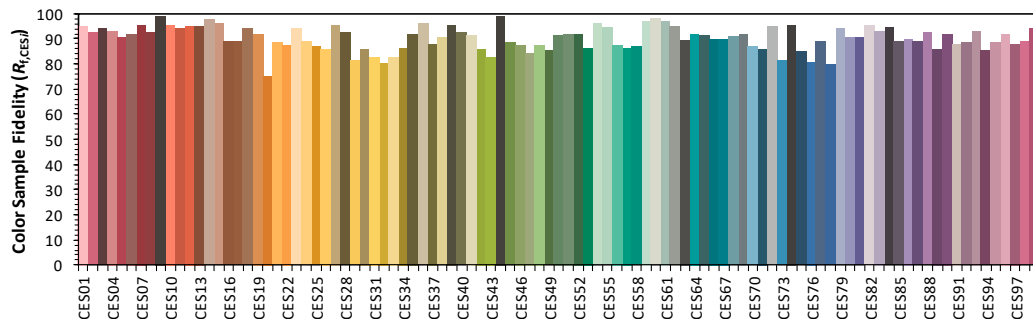
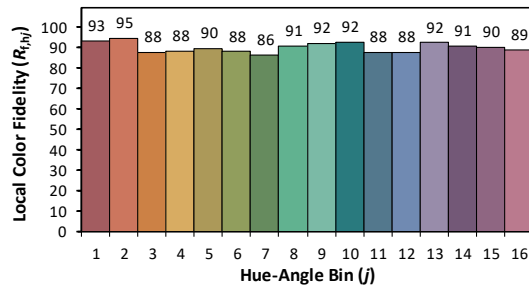
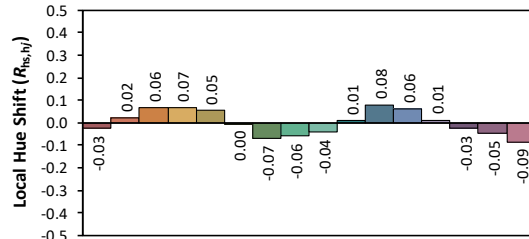
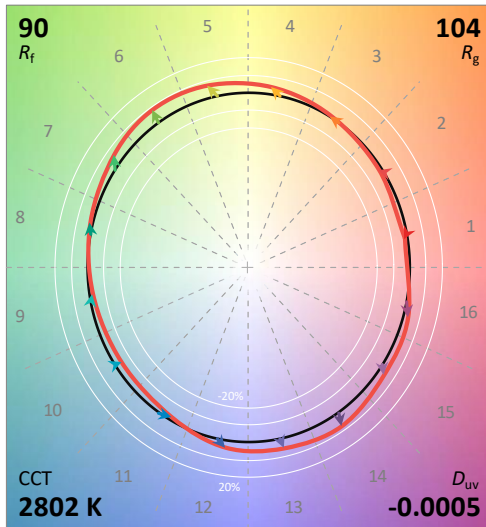
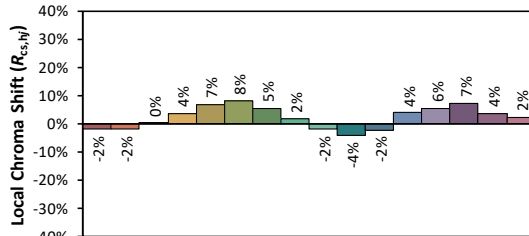
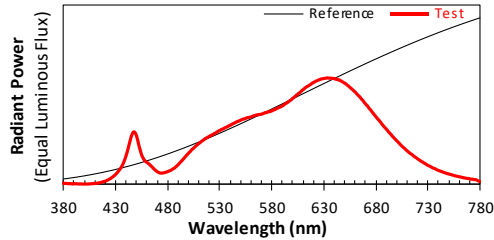
ANSI/IES TM-30-18 Color Rendition Report

Source: User SPD

Manufacturer: Visual Comfort and Company

Date: 2024/11/1

Model: SLFL57230X



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

x 0.4509
 y 0.4070
 u' 0.2583
 v' 0.5246

CIE 13.3-1995
(CRI)

R_a 94

R_g 81

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 SLFL57230X

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TEST REPORT

PRODUCT PICTURE (not to scale)



View of LED driver JY24-240-100-SPS



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 *****