

Visual Comfort & Co.

TEST REPORT

SCOPE OF WORK

LM-79 testing report

REPORT NUMBER

241021199GZU-003

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REVISION DATE

None

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Report format for LM-79_G

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Report No.: 241021199GZU-003

TEST REPORT

TEST OF ONE LED LUMINAIRE

MODEL NO. SLLS57130X

Remark: "X" 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: 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 SLLS57130X. The sample was received by Intertek in undamaged condition and tested as received. The sample designation was S241021199-003.
<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>	28 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:	SLLS57130X
Description:	LED Luminaries
Brand Name:	--

Test Condition: 120V, 60Hz For SLLS57130X

Criteria	Result
Total Lumen Output	1978.3 lm
Total Power	35.2 W
Luminaire Efficacy	56.3 lm/W
S/MH(C0/180)	1.01
S/MH(C90/270)	0.59
Correlated Color Temperature (CCT)	2862 K
Color Rendering Index (CRI)	92
R9	74
Chromaticity Coordinate (x)	0.4454
Chromaticity Coordinate (y)	0.4040
Chromaticity Coordinate (u')	0.2561
Chromaticity Coordinate (v')	0.5226

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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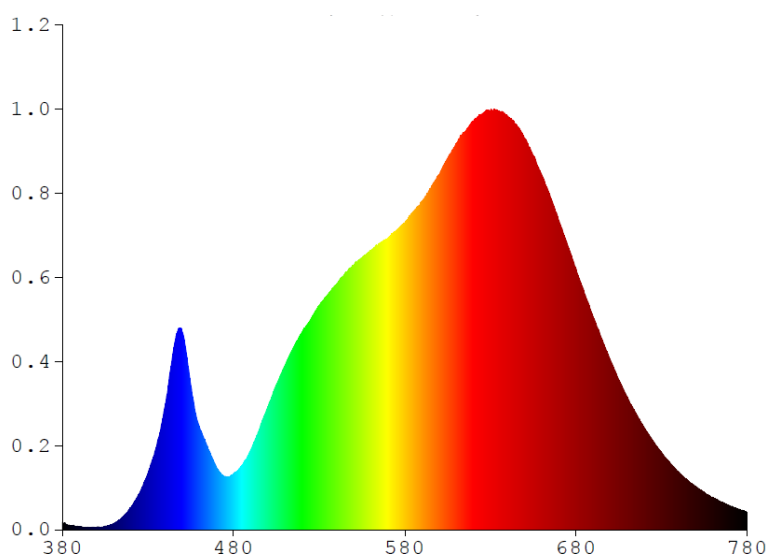
TEST REPORT

RESULTS OF TESTS

Test Condition: 120V, 60Hz For SLLS57130X

Spectral Distribution over Visible Wavelengths

nm	mW/nm	nm	mW/nm	nm	mW/nm	nm	mW/nm	nm	mW/nm
380	4.5244	480	34.5720	580	189.300	680	159.9300	780	10.8550
385	2.3563	485	39.7540	585	196.190	685	144.9100		
390	1.6375	490	49.1730	590	202.450	690	130.7200		
395	1.6445	495	61.6330	595	210.510	695	117.2200		
400	1.5175	500	75.6390	600	219.170	700	104.1500		
405	2.1261	505	89.2730	605	229.020	705	92.1260		
410	3.8506	510	101.300	610	238.250	710	80.8970		
415	7.5515	515	112.440	615	245.320	715	71.4780		
420	13.6790	520	121.860	620	251.970	720	62.2810		
425	22.4700	525	129.910	625	256.220	725	54.6110		
430	34.7600	530	138.160	630	258.270	730	47.2360		
435	51.1890	535	144.960	635	258.280	735	40.9230		
440	76.4020	540	151.240	640	254.970	740	35.3070		
445	111.490	545	158.160	645	249.840	745	30.3410		
450	121.680	550	163.170	650	241.220	750	26.4140		
455	88.0700	555	167.760	655	230.430	755	22.7740		
460	63.1230	560	171.750	660	218.260	760	19.6680		
465	49.7200	565	176.310	665	204.770	765	16.9840		
470	37.9960	570	179.380	670	189.830	770	14.5320		
475	32.8140	575	184.370	675	172.260	775	12.6120		



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TEST REPORT

RESULTS OF TESTS (cont'd)

Test Condition: 120V, 60Hz For SLLS57130X

Total operation burning time: 60 minutes

Stabilization time: 30 minutes

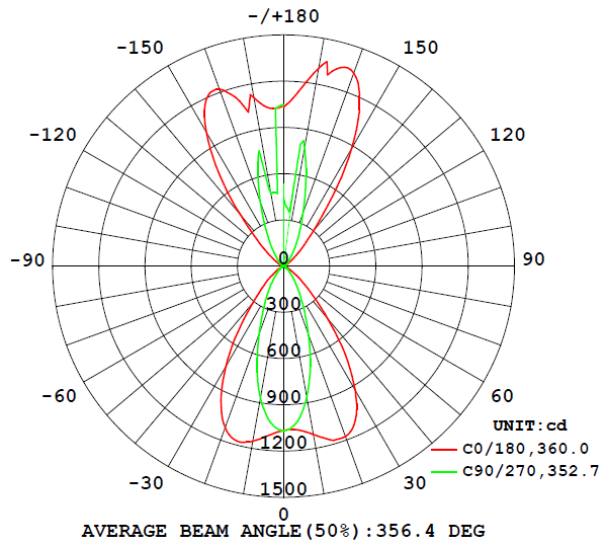
Photometric Measurements at 25°C – Distribution Method

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')
SLLS57130X								
S2410211 99-003	base-up	2862	92	74	0.4454	0.4040	0.2561	0.5226

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
						Flux (Lumens)	Efficacy (Lumens Per Watt)
SLLS57130X							
S2410211 99-003	base-up	120.1	294.6	35.2	0.994	1978.3	53.2

Intensity (Candlepower) Summary at 25°C - Candelas



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

TEST REPORT

RESULTS OF TESTS (cont'd)

Test Condition: 120V, 60Hz For SLLS57130X

Intensity (Candlepower) Summary at 25°C - Candelas

V \ H(°)	0	22.5	45	67.5	90
0	1065.1	1065.2	1065.7	1065.7	1067.4
5	1065.5	1047.4	1023.0	1007.7	1013.6
10	1107.6	1032.8	931.0	866.8	865.6
15	1165.9	1010.2	803.3	671.7	670.8
20	1175.7	948.8	656.5	476.4	476.0
25	1103.2	822.3	496.3	325.9	320.1
30	930.2	641.9	339.2	222.9	212.2
35	695.7	436.9	224.3	148.5	140.6
40	448.6	272.9	148.3	95.4	90.2
45	267.2	173.8	93.3	60.0	58.0
50	165.0	106.0	57.6	38.1	37.1
55	95.8	61.0	34.6	24.9	23.9
60	53.7	35.2	21.6	15.2	15.0
65	30.4	21.3	13.1	9.9	9.6
70	16.4	11.8	8.4	6.7	6.5
75	9.4	7.3	5.2	4.1	3.9
80	4.9	3.9	2.8	2.2	2.1
85	2.0	1.6	1.2	1.0	0.9
90	0.3	0.2	0.2	0.2	0.2
95	0.1	0.1	0.2	0.2	0.2
100	1.3	1.2	1.0	0.8	0.8
105	3.6	3.2	2.4	2.0	1.8
110	7.4	6.8	5.0	3.7	3.3
115	14.0	12.3	8.4	6.3	5.6
120	26.5	22.6	15.2	10.4	8.7
125	48.7	39.1	25.1	16.9	14.0
130	93.9	73.6	43.3	26.8	22.9
135	173.0	136.2	77.4	46.1	36.4
140	300.7	234.8	135.9	77.7	60.1
145	555.0	410.4	221.5	130.2	98.8
150	885.7	692.7	365.8	204.9	159.2
155	1169.4	980.8	585.5	323.9	247.5
160	1334.2	1187.4	808.4	505.3	374.7
165	1325.0	1263.5	955.8	706.3	562.9
170	1302.8	1223.5	1057.3	698.0	783.6
175	1140.6	1113.5	1065.6	1005.7	366.2
180	1032.1	1031.8	1046.7	1049.9	443.8

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TEST REPORT

RESULTS OF TESTS (cont'd)

Test Condition: 120V, 60Hz For SLLS57130X

Zonal Lumen Summary and Percentages at 25°C

Zone	Lumens (lm)	% Luminaire (%)
SLLS57130X		
0-30	643.1	32.5
0-40	848.5	42.9
0-60	995.5	50.3
0-90	1020.2	51.6
60-90	24.7	1.3
0-180	1978.3	100.0

Beam Angle

Total Beam Angle(°)

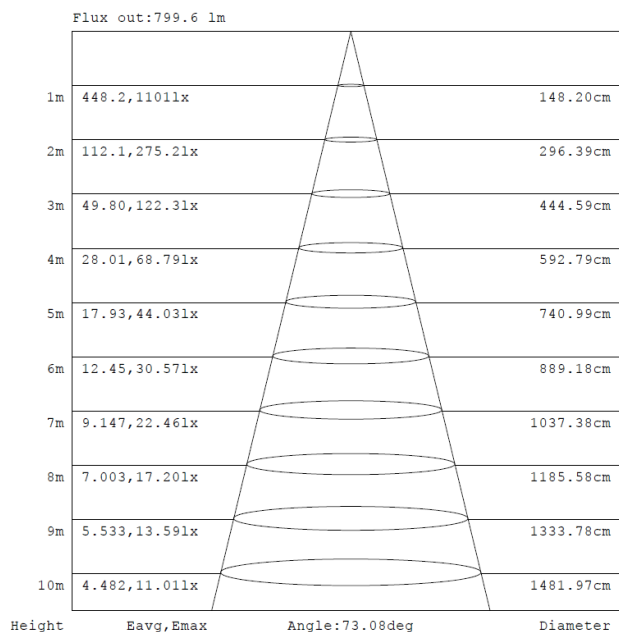
356.4

Illumination Plots

Model No.: SLLS57130X

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

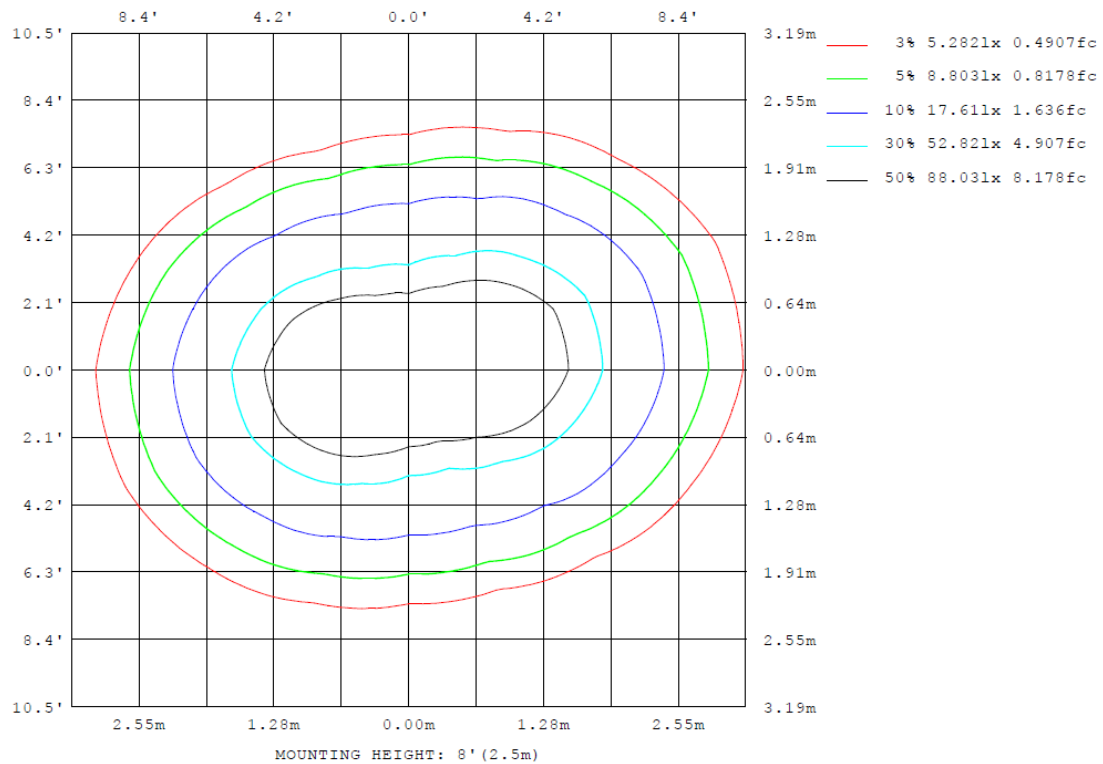
RESULTS OF TESTS (cont'd)

Test Condition: 120V, 60Hz For SLLS57130X

Model No.: SLLS57130X

Mount Height: 2.5 m

Isoillumination Plot



TEST REPORT

RESULTS OF TESTS (cont'd)

Test Condition: 120V, 60Hz For SLLS57130X

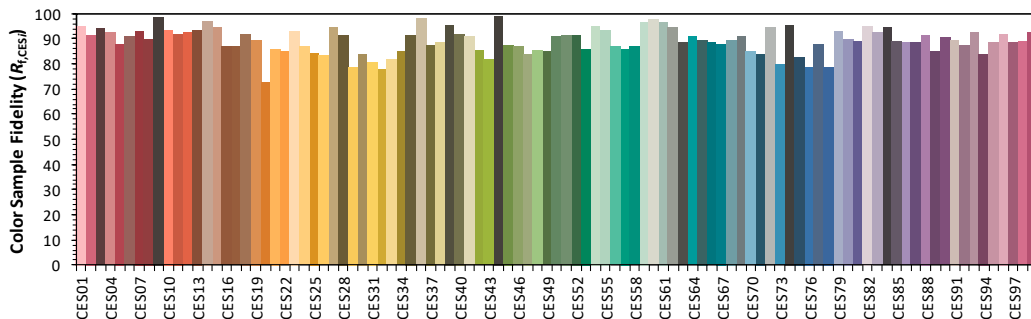
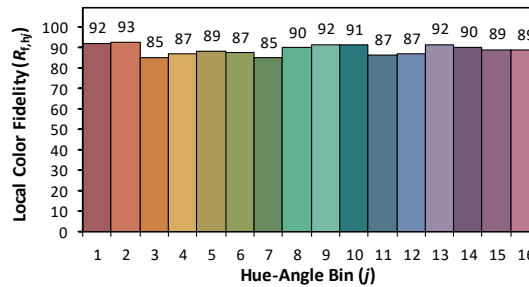
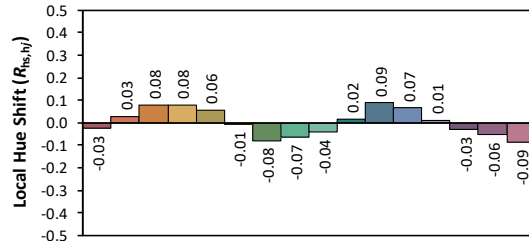
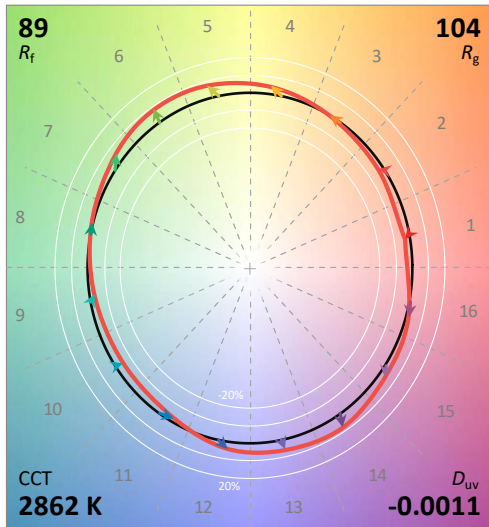
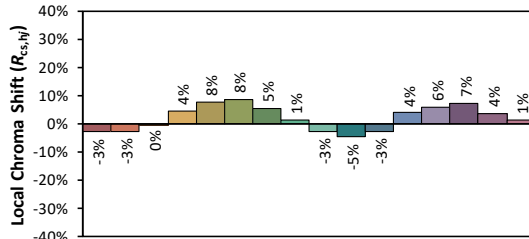
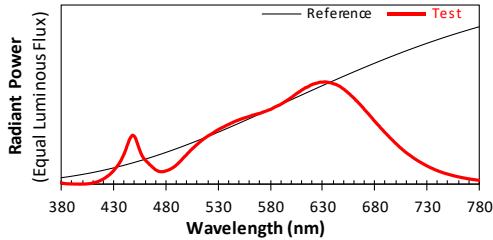
ANSI/IES TM-30-18 Color Rendition Report

Source: User SPD

Manufacturer: Visual Comfort and Company

Date: 2024/10/28

Model: SLLS57130X



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

x 0.4454
 y 0.4040
 u' 0.2561
 v' 0.5226

CIE 13.3-1995
(CRI)

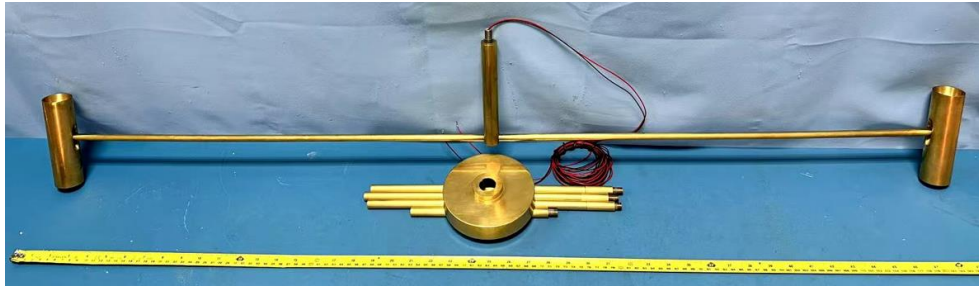
R_a 92
 R_g 74

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 SLLS57130X



View of LED driver PVD36-C090V40-UNV3-HE-P

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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 *****