

Visual Comfort and Company

TEST REPORT

SCOPE OF WORK

LM-79 testing report

REPORT NUMBER

221205125GZU-016

ISSUE DATE

29 January 2023

REVISION DATE

None

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13

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Report No.: 221205125GZU-016

TEST REPORT

TEST OF ONE LED LUMINAIRE

MODEL NO. SLPC11530B*

(Remark: "*" denote other appearance colors for the characters that change)

RENDERED TO

Visual Comfort and Company

Contact Name: Tess Gallagher

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<u>TEST:</u>	Electrical and Photometric as required to the IES LM-79 test standard.
<u>STATEMENT OF LIMITATION:</u>	The report must not be used by the client to claim product certification, approval, or endorsement by NVLAP, NIST, or any agency of the U.S. Government.
<u>AUTHORIZATION:</u>	The testing performed was authorized by signed quote number: QGZ221129088.
<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: 2008	Approved Method for the Electrical and Photometric Measurements of Solid-State Lighting Products
ANSI C78.377:2017	Specifications of the Chromaticity of Solid State Lighting Products
<u>DESCRIPTION OF SAMPLE:</u>	The client submitted one sample of model SLPC11530B*. The sample was received, in undamaged condition. The sample designation was S221205125-016.
<u>DATES OF TESTS:</u>	10 January 2023
<u>ISSUED BY:</u>	Intertek Testing Services Shenzhen Ltd. Guangzhou Branch
<u>TEST LOCATION:</u>	Room 02, & 101/E201/E301/E401/E501/E601/E701/E801 of Room 01 1-8/F., No. 7-2. Caipin Road, Science City, GETDD, Guangzhou, Guangdong, China

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TEST REPORT

SUMMARY

Model Number:	SLPC11530B*
Description:	LED Luminaries
Brand Name:	--

Test Condition: 120V, 60Hz For SLPC11530B*

Criteria	Result
Total Lumen Output	1006.9 lm
Total Power	15.7 W
Luminaire Efficacy	64.4 lm/W
S/MH(C0/180)	1.27
S/MH(C90/270)	1.18
Correlated Color Temperature (CCT)	2625 K
Color Rendering Index (CRI)	93
R9	63
Chromaticity Coordinate (x)	0.4636
Chromaticity Coordinate (y)	0.4075
Chromaticity Coordinate (u')	0.2663
Chromaticity Coordinate (v')	0.5267

Remark:

Measurement uncertainty for applicable tests has been established.

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

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	RC-HT601A	SA047-62

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 EVERFINE - Digital Power Meter., model PLM3000.

Correction factor (self-absorption) has been considered when doing measurement.

Standard lamp used for Goniophotometer method:

Model: D215S

Current: 4.809A

Standard lamp used for integrating sphere:

Model: S82134

Current: 1.830

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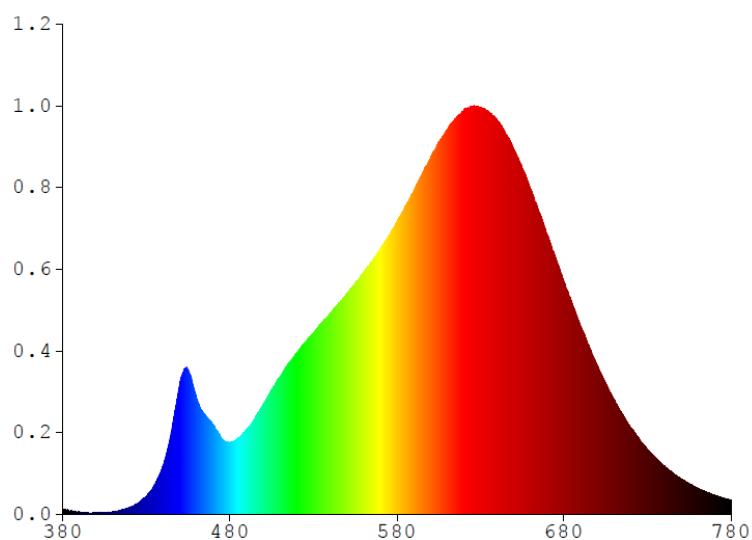
TEST REPORT

RESULTS OF TESTS

Test Condition: 120V, 60Hz For SLPC11530B*

Spectral Distribution over Visible Wavelengths

nm	mW/nm	nm	mW/nm	nm	mW/nm	nm	mW/nm	nm	mW/nm
380	0.0115	480	0.1608	580	0.6563	680	0.5222	780	0.0325
385	0.0081	485	0.1724	585	0.6918	685	0.4729		
390	0.0057	490	0.1913	590	0.7252	690	0.4231		
395	0.0036	495	0.2152	595	0.7630	695	0.3770		
400	0.0045	500	0.2481	600	0.7984	700	0.3347		
405	0.0045	505	0.2806	605	0.8371	705	0.2942		
410	0.0061	510	0.3104	610	0.8637	710	0.2581		
415	0.0100	515	0.3387	615	0.8884	715	0.2244		
420	0.0160	520	0.3625	620	0.9070	720	0.1949		
425	0.0260	525	0.3865	625	0.9165	725	0.1703		
430	0.0414	530	0.4073	630	0.9138	730	0.1462		
435	0.0673	535	0.4309	635	0.9022	735	0.1265		
440	0.1107	540	0.4509	640	0.8836	740	0.1092		
445	0.1871	545	0.4742	645	0.8556	745	0.0934		
450	0.2933	550	0.4960	650	0.8204	750	0.0802		
455	0.3243	555	0.5198	655	0.7776	755	0.0694		
460	0.2620	560	0.5433	660	0.7308	760	0.0597		
465	0.2231	565	0.5678	665	0.6802	765	0.0508		
470	0.2014	570	0.5959	670	0.6280	770	0.0436		
475	0.1718	575	0.6259	675	0.5657	775	0.0374		



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TEST REPORT

RESULTS OF TESTS (cont'd)

Test Condition: 120V, 60Hz For SLPC11530B*

Total operation burning time: 60 minutes

Stabilization time: 45 minutes

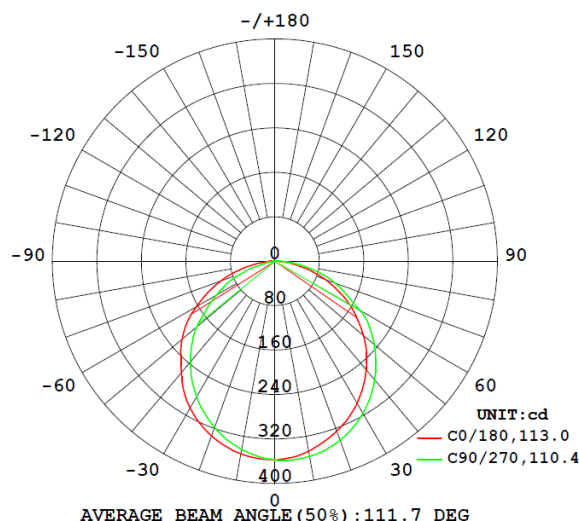
Photometric Measurements at 25°C – Integrating Sphere Method

Intertek Sample No.	Base Orientation	Correlated Color Temperatur e (K)	CRI	R9	CIE 31'	CIE 31'	CIE 76'	CIE 76'
					Chromaticit y	Chromaticit y	Chromaticit y	Chromaticit y
					Coordinate (x)	Coordinate (y)	Coordinate (u')	Coordinate (v')
SLPC11530B*								
S2212051 25-016	--	2625	93	63	0.4636	0.4075	0.2663	0.5267

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)
SLPC11530B*							
S2212051 25-016	--	120.2	131.4	15.7	0.990	1006.9	64.4

Intensity (Candlepower) Summary at 25°C – Candelas



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TEST REPORT

RESULTS OF TESTS (cont'd)

Test Condition: 120V, 60Hz For SLPC11530B*

Intensity (Candlepower) Summary at 25°C - Candelas

V \ H(°)	0	22.5	45	67.5	90
0	357.4	357.4	357.4	357.4	357.4
5	354.4	355.7	357.1	358.1	358.8
10	347.1	350.0	353.1	355.3	356.8
15	336.9	341.0	345.3	349.2	351.5
20	325.2	329.7	334.1	339.5	342.8
25	311.6	316.8	321.2	326.6	331.0
30	295.2	301.3	305.9	310.8	316.0
35	276.1	283.0	288.6	292.2	298.7
40	255.3	262.4	268.5	271.9	278.5
45	232.9	240.2	246.0	250.0	256.4
50	207.5	216.4	222.1	226.7	232.8
55	180.6	189.6	196.8	202.7	208.2
60	154.7	162.2	171.2	175.9	176.6
65	124.7	134.4	142.8	140.2	142.0
70	96.1	104.4	108.7	112.6	114.7
75	66.9	74.4	80.1	83.5	85.6
80	38.5	45.8	51.1	53.1	54.8
85	14.2	20.1	23.3	24.4	25.8
90	0.2	2.4	6.0	7.8	7.0
95	0.1	0.1	0.4	0.8	0.9
100	0.1	0.1	0.1	0.1	0.1
105	0.1	0.1	0.1	0.1	0.1
110	0.1	0.1	0.1	0.1	0.1
115	0.1	0.1	0.1	0.1	0.1
120	0.2	0.2	0.2	0.2	0.1
125	0.2	0.2	0.2	0.2	0.2
130	0.3	0.3	0.3	0.3	0.3
135	0.3	0.3	0.3	0.3	0.3
140	0.4	0.4	0.4	0.4	0.4
145	0.5	0.4	0.4	0.4	0.4
150	0.5	0.5	0.5	0.5	0.5
155	0.5	0.5	0.5	0.5	0.5
160	0.5	0.5	0.5	0.6	0.5
165	0.5	0.6	0.6	0.6	0.6
170	0.5	0.5	0.6	0.6	0.5
175	0.5	0.5	0.5	0.5	0.5
180	0.5	0.5	0.5	0.5	0.5

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

TEST REPORT

RESULTS OF TESTS (cont'd)

Test Condition: 120V, 60Hz For SLPC11530B*

Zonal Lumen Summary and Percentages at 25°C

Zone	Lumens (lm)	% Luminaire (%)
SLPC11530B*		
0-30	275.5	27.4
0-40	450.6	44.8
0-60	795.4	79.0
0-90	1004.8	99.8
60-90	209.4	20.8
0-180	1006.9	100.0

Beam Angle

Total Beam Angle (°)

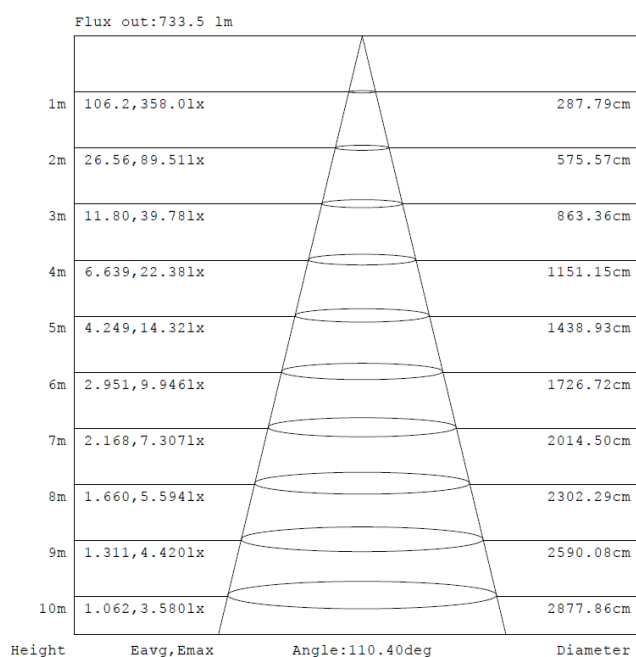
111.7

Illumination Plots

Model No.: SLPC11530B*

Mount Height: 2.5 m

Illuminance - Cone of Light



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TEST REPORT

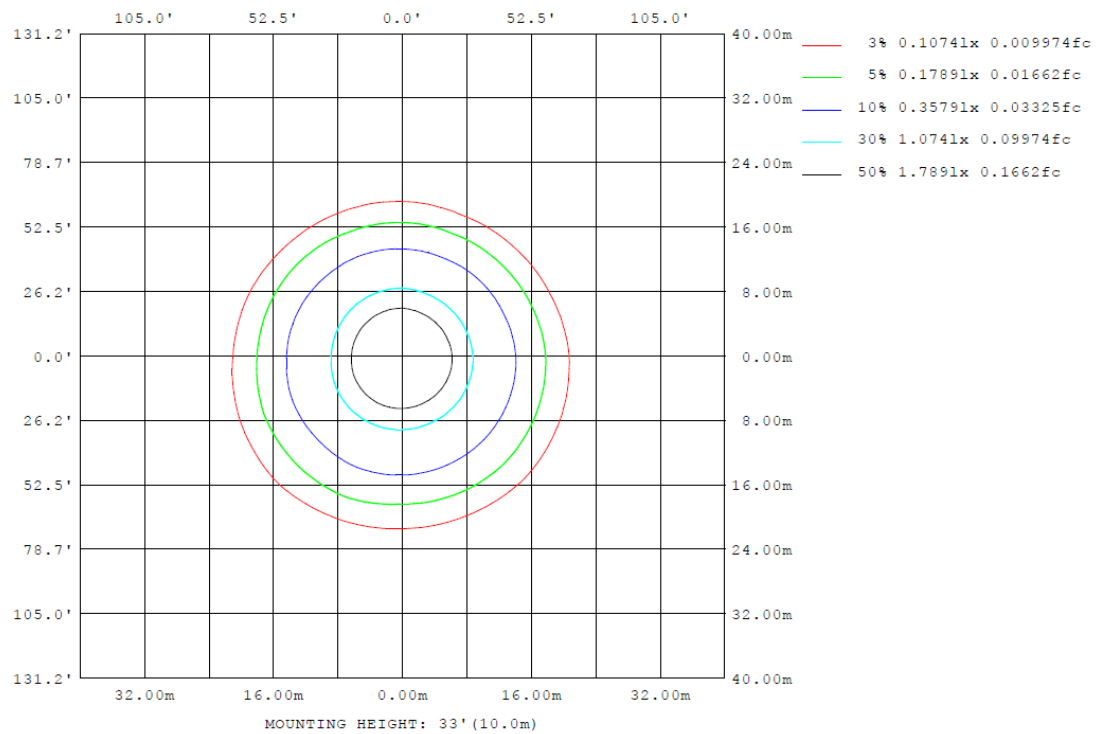
RESULTS OF TESTS (cont'd)

Test Condition: 120V, 60Hz For SLPC11530B*

Model No.: SLPC11530B*

Mount Height: 2.5 m

Isoillumination Plot



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TEST REPORT

RESULTS OF TESTS (cont'd)

Test Condition: 120V, 60Hz For SLPC11530B*

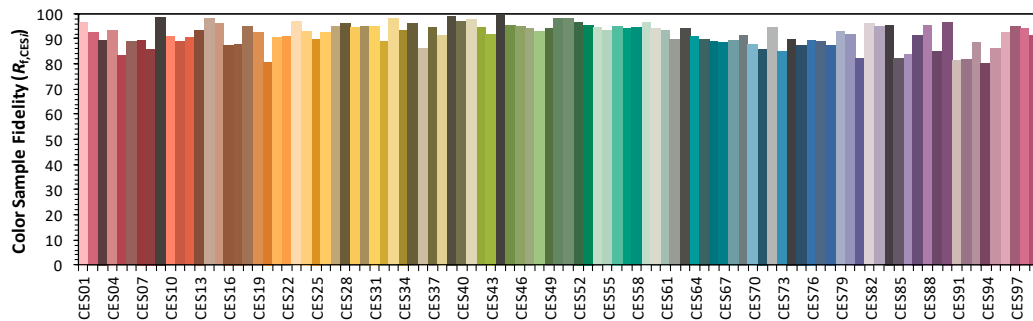
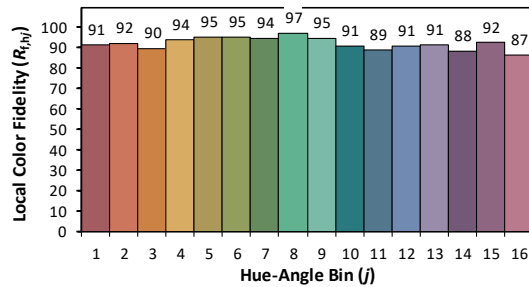
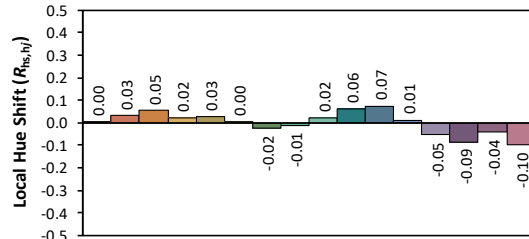
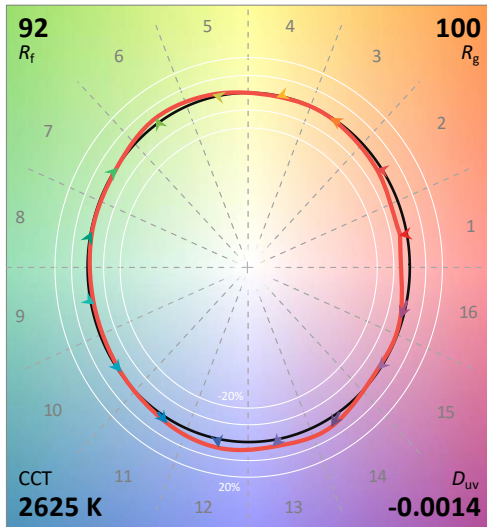
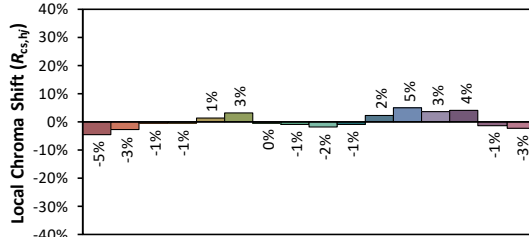
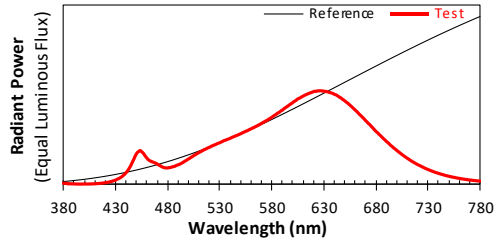
ANSI/IES TM-30-18 Color Rendition Report

Source: User SPD

Manufacturer: Visual Comfort and Company

Date: 2023/1/10

Model: SLPC11530B*



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

x 0.4636
 y 0.4075
 u' 0.2663
 v' 0.5267

CIE 13.3-1995
(CRI)

R_a 93

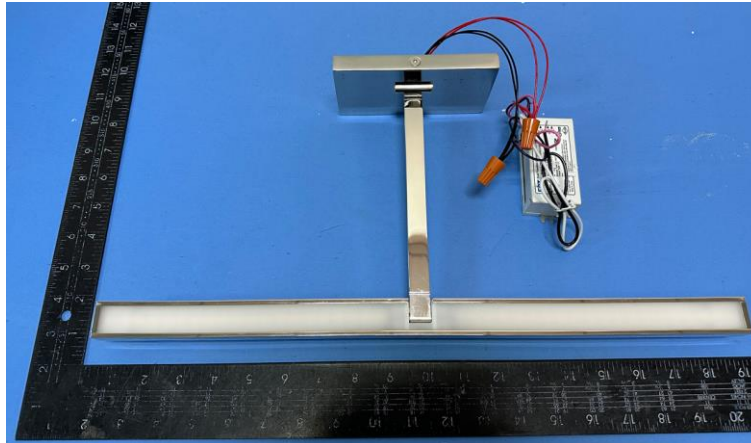
R_g 63

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 SLPC11530B*



View of LED Driver PVD11-C030V33-UNV3-HE-P

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

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 *****