

Visual Comfort and Company

TEST REPORT

SCOPE OF WORK

LM-79 testing report

REPORT NUMBER

221205125GZU-015

ISSUE DATE

29 January 2023

REVISION DATE

None

NUMBER OF PAGES

13

DOCUMENT CONTROL NUMBER

Report format for LM-79:2008_F
© 2021 INTERTEK



Report No.: 221205125GZU-015

TEST REPORT

TEST OF ONE LED LUMINAIRE

MODEL NO. SLPC11430*

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

RENDERED TO

Visual Comfort and Company

Contact Name: Tess Gallagher

7400 LINDER AVE. SKOKIE, IL, 60077

Email: Tgallagher@visualcomfortco.com
Phone No.: 8474104774

<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 SLPC11430*. The sample was received, in undamaged condition. The sample designation was S221205125-015.
<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

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

TEST REPORT

SUMMARY

Model Number:	SLPC11430*
Description:	LED Luminaries
Brand Name:	--

Test Condition: 120V, 60Hz For SLPC11430*

Criteria	Result
Total Lumen Output	734.0 lm
Total Power	11.5 W
Luminaire Efficacy	63.7 lm/W
S/MH(C0/180)	1.27
S/MH(C90/270)	1.26
Correlated Color Temperature (CCT)	2898 K
Color Rendering Index (CRI)	93
R9	65
Chromaticity Coordinate (x)	0.4428
Chromaticity Coordinate (y)	0.4035
Chromaticity Coordinate (u')	0.2547
Chromaticity Coordinate (v')	0.5220

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

This report is for the exclusive use of Intertek's Client and is provided pursuant to the agreement between Intertek and its Client. Intertek's responsibility and liability are limited to the terms and conditions of the agreement. Intertek assumes no liability to any party, other than to the Client in accordance with the agreement, for any loss, expense or damage occasioned by the use of this report. Only the Client is authorized to permit copying or distribution of this report and then only in its entirety. Any use of the Intertek name or one of its marks for the sale or advertisement of the tested material, product or service must first be approved in writing by Intertek. The observations and test results in this report are relevant only to the sample tested. This report by itself does not imply that the material, product, or service is or has ever been under an Intertek certification program.

When determining for test conclusion, measurement uncertainty of tests has been considered.

Throughout this report a ☐ comma ☒ point is used as the decimal separator.

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

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

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

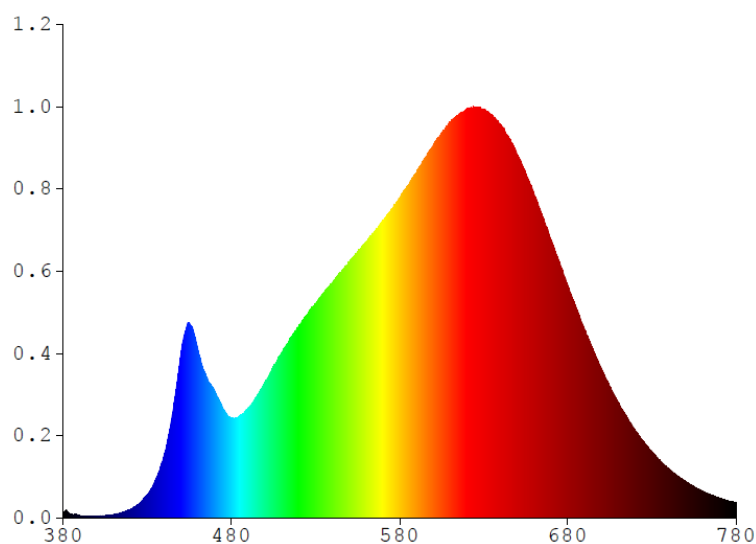
TEST REPORT

RESULTS OF TESTS

Test Condition: 120V, 60Hz For SLPC11430*

Spectral Distribution over Visible Wavelengths

nm	mW/nm	nm	mW/nm	nm	mW/nm	nm	mW/nm	nm	mW/nm
380	0.0081	480	0.1492	580	0.4779	680	0.3472	780	0.0236
385	0.0057	485	0.1529	585	0.4969	685	0.3134		
390	0.0032	490	0.1652	590	0.5156	690	0.2817		
395	0.0029	495	0.1811	595	0.5359	695	0.2513		
400	0.0031	500	0.2033	600	0.5564	700	0.2238		
405	0.0038	505	0.2263	605	0.5755	705	0.1963		
410	0.0056	510	0.2476	610	0.5908	710	0.1727		
415	0.0084	515	0.2687	615	0.6022	715	0.1506		
420	0.0136	520	0.2861	620	0.6114	720	0.1316		
425	0.0217	525	0.3037	625	0.6142	725	0.1140		
430	0.0354	530	0.3204	630	0.6102	730	0.0993		
435	0.0576	535	0.3368	635	0.6005	735	0.0855		
440	0.0946	540	0.3519	640	0.5878	740	0.0739		
445	0.1565	545	0.3675	645	0.5674	745	0.0636		
450	0.2454	550	0.3830	650	0.5423	750	0.0549		
455	0.2911	555	0.3979	655	0.5142	755	0.0470		
460	0.2522	560	0.4126	660	0.4832	760	0.0406		
465	0.2118	565	0.4277	665	0.4500	765	0.0350		
470	0.1902	570	0.4445	670	0.4158	770	0.0300		
475	0.1632	575	0.4613	675	0.3748	775	0.0259		



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

TEST REPORT

RESULTS OF TESTS (cont'd)

Test Condition: 120V, 60Hz For SLPC11430*

Total operation burning time: 60 minutes

Stabilization time: 45 minutes

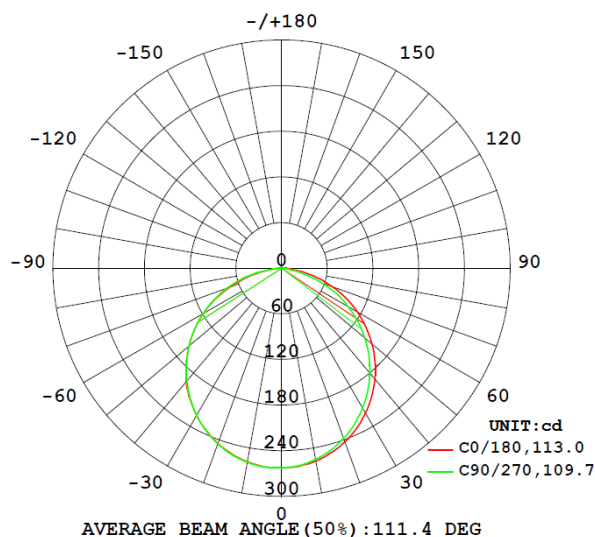
Photometric Measurements at 25°C – Integrating Sphere Method

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')
SLPC11430*								
S2212051 25-015	--	2898	93	65	0.4428	0.4035	0.2547	0.5220

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	Lumen
						Luminous Flux (Lumens)	Efficacy (Lumens Per Watt)
SLPC11430*							
S2212051 25-015	--	120.2	96.7	11.5	0.991	734.0	63.7

Intensity (Candlepower) Summary at 25°C – Candelas



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

TEST REPORT

RESULTS OF TESTS (cont'd)

Test Condition: 120V, 60Hz For SLPC11430*

Intensity (Candlepower) Summary at 25°C - Candelas

V \ H(°)	0	22.5	45	67.5	90
0	262.5	262.5	262.5	262.5	262.5
5	261.1	260.4	260.3	260.2	260.3
10	257.3	255.8	255.4	255.1	255.4
15	251.1	248.9	248.1	247.6	247.9
20	242.8	239.9	238.8	237.8	238.0
25	232.5	228.6	227.3	226.0	226.2
30	220.1	215.8	213.9	212.3	212.4
35	206.0	201.1	198.9	197.0	196.9
40	190.4	184.8	182.2	180.2	180.0
45	173.2	167.3	164.3	162.1	161.8
50	154.9	148.4	145.2	142.7	142.5
55	135.3	128.4	125.1	122.2	122.0
60	114.6	107.2	103.7	100.9	100.5
65	92.9	85.2	81.7	80.2	80.4
70	70.5	62.6	60.2	56.5	55.3
75	48.3	40.6	37.0	33.2	32.0
80	26.7	20.2	15.5	11.7	10.9
85	8.8	4.1	2.7	2.7	2.5
90	0.1	0.1	0.3	0.4	0.4
95	0.1	0.1	0.2	0.2	0.2
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	0.1	0.1	0.2	0.2	0.2
125	0.2	0.2	0.2	0.2	0.2
130	0.2	0.2	0.2	0.2	0.2
135	0.3	0.3	0.3	0.3	0.3
140	0.3	0.3	0.3	0.3	0.3
145	0.3	0.3	0.3	0.4	0.4
150	0.4	0.4	0.4	0.4	0.4
155	0.4	0.4	0.4	0.4	0.4
160	0.4	0.4	0.4	0.4	0.4
165	0.4	0.4	0.4	0.4	0.4
170	0.4	0.4	0.4	0.4	0.4
175	0.4	0.4	0.4	0.4	0.4
180	0.4	0.4	0.4	0.4	0.4

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

TEST REPORT

RESULTS OF TESTS (cont'd)

Test Condition: 120V, 60Hz For SLPC11430*

Zonal Lumen Summary and Percentages at 25°C

Zone	Lumens (lm)	% Luminaire (%)
SLPC11430*		
0-30	202.7	27.6
0-40	330.9	45.1
0-60	583.3	79.5
0-90	732.9	99.9
60-90	149.6	20.4
0-180	734.0	100.0

Beam Angle

Total Beam Angle (°)

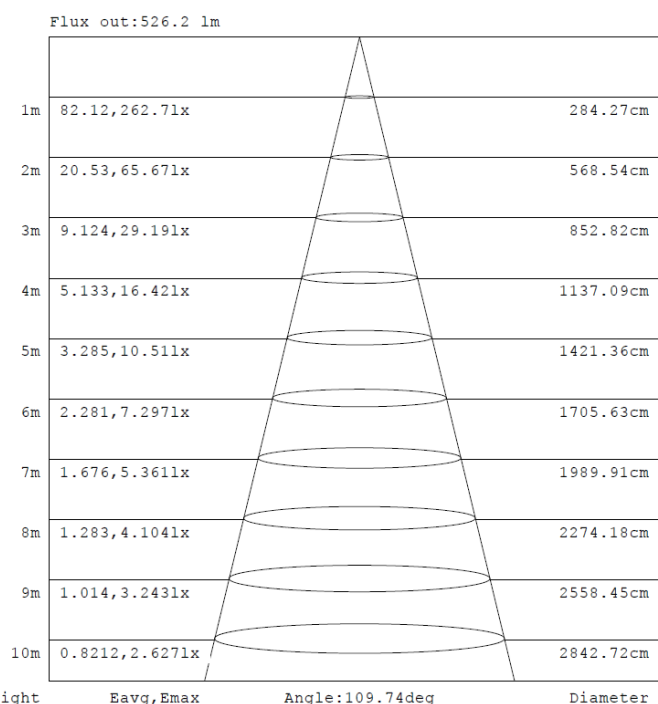
111.4

Illumination Plots

Model No.: SLPC11430*

Mount Height: 2.5 m

Illuminance - Cone of Light



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

TEST REPORT

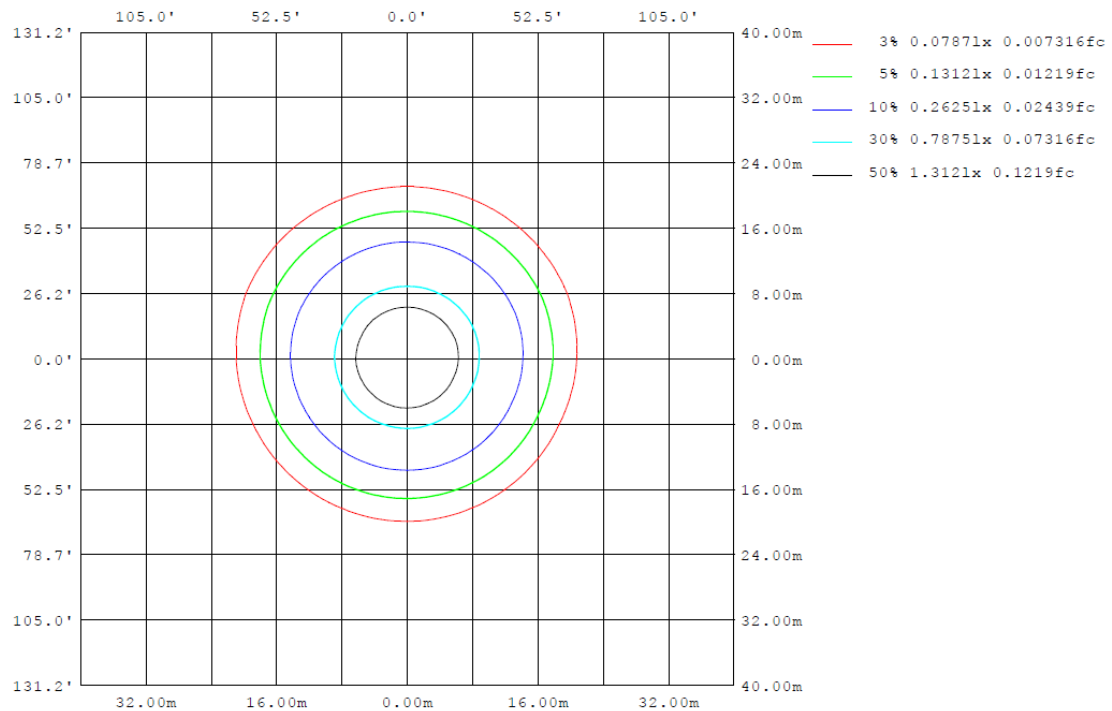
RESULTS OF TESTS (cont'd)

Test Condition: 120V, 60Hz For SLPC11430*

Model No.: SLPC11430*

Mount Height: 2.5 m

Isoillumination Plot



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

TEST REPORT

RESULTS OF TESTS (cont'd)

Test Condition: 120V, 60Hz For SLPC11430*

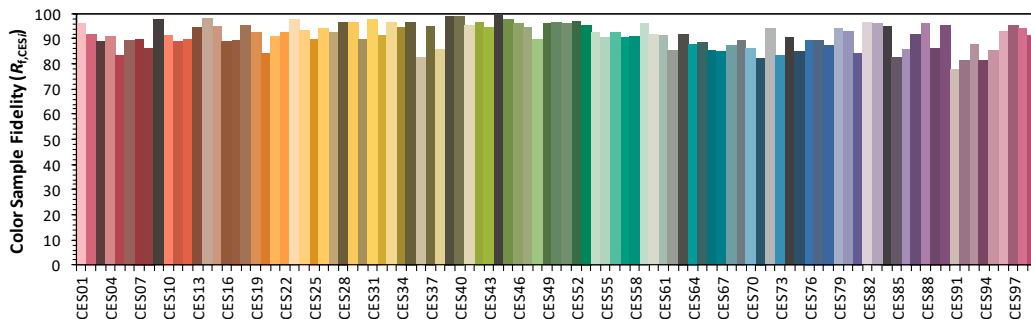
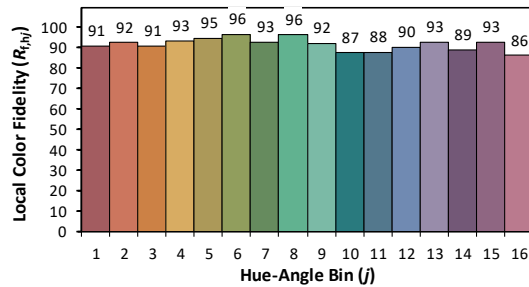
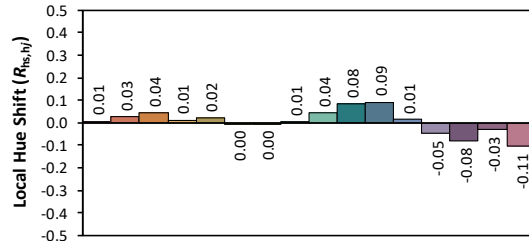
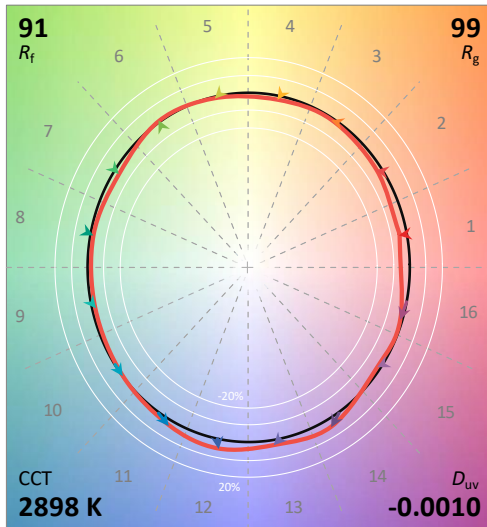
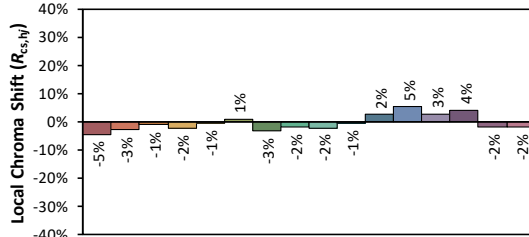
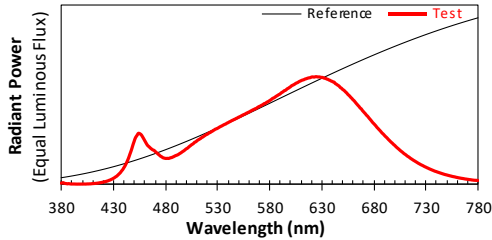
ANSI/IES TM-30-18 Color Rendition Report

Source: User SPD

Manufacturer: Visual Comfort and Company

Date: 2023/1/10

Model: SLPC11430*



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

x 0.4428
 y 0.4035
 u' 0.2547
 v' 0.5220

CIE 13.3-1995
(CRI)

R_a 93

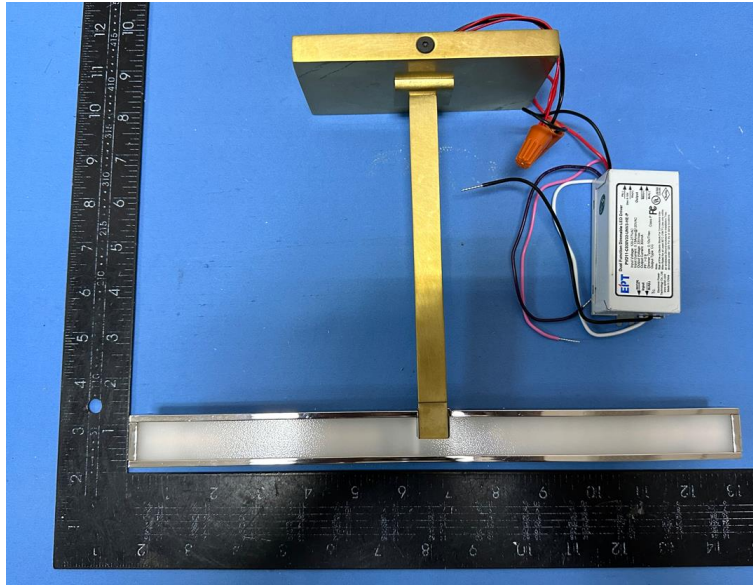
R_g 65

Colors are for visual orientation purposes only. Created with the ANSI/IES TM-30-18 Calculator Version 2.00.

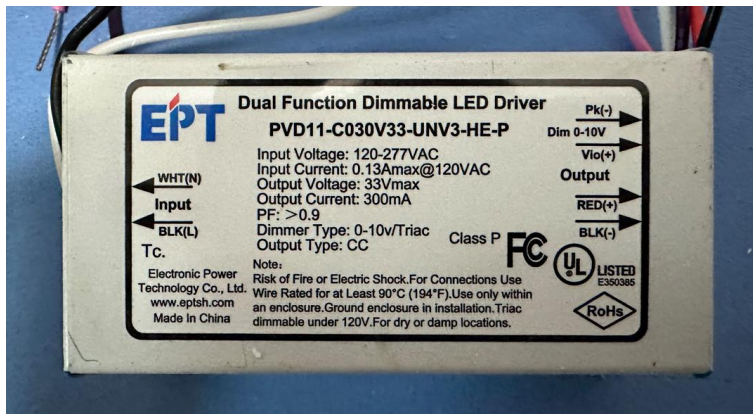
***** End of Page *****

TEST REPORT

PRODUCT PICTURE (not to scale)



External view of SLPC11430*



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 *****