

Visual Comfort & Co.

TEST REPORT

SCOPE OF WORK

LM-79 testing report

REPORT NUMBER

240428155GZU-010

ISSUE DATE

12 July 2024

REVISION DATE

Modification 1: 01 November 2024

NUMBER OF PAGES

12

DOCUMENT CONTROL NUMBER

Report format for LM-79_G

© 2024 INTERTEK



Report No.: 240428155GZU-010
Modification 1: 01 November 2024

TEST REPORT

TEST OF ONE LED LUMINAIRE

MODEL NO. SLOWS30627B

RENDERED TO

Visual Comfort & Co.

Contact Name: Adam Same

7400 LINDER AVE. SKOKIE, IL, 60077

Email: asame@visualcomfort.com
Phone No.: 8474104402

TEST: Electrical and Photometric as required to the IES LM-79 test standard.

AUTHORIZATION: The testing performed was authorized by signed quote number: QGZ240425048

STANDARDS USED: 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

DESCRIPTION OF SAMPLE: The client submitted one sample of model SLOWS30627B. The sample was received by Intertek in undamaged condition and tested as received. The sample designation was S240428155-003.

MANUFACTURER /FACTORY & ADDRESS: Guangzhou Xiongyi Precision Metalworking Co., Ltd.
Hantang Industrial Zone, Langbian Village, Shiji Town, Panyu District, Guangzhou City, Guangdong Province, China 511450

DATES OF TESTS: 28 May 2024

ISSUED BY: Intertek Testing Services Shenzhen Ltd. Guangzhou Branch

TEST LOCATION: Room101/301/401/102/202/302/402/502/602/702/802, No. 7-2, Caipin Road, Huangpu District, Guangzhou, Guangdong, China

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

TEST REPORT

SUMMARY

Model Number:	SLOWS30627B
Description:	LED Luminaries
Brand Name:	--

Test Condition: 120V, 60Hz For SLOWS30627B

Criteria	Result
Total Lumen Output	291.1 lm
Total Power	21.1 W
Luminaire Efficacy	13.8 lm/W
S/MH(C0/180)	1.29
S/MH(C90/270)	2.36
Correlated Color Temperature (CCT)	2686 K
Color Rendering Index (CRI)	94
R9	67
Chromaticity Coordinate (x)	0.4584
Chromaticity Coordinate (y)	0.4062
Chromaticity Coordinate (u')	0.2636
Chromaticity Coordinate (v')	0.5254

Remark:

Revision history:

Modification 1: Based on and superseded the previous report 240428155GZU-010 issued on 12 July 2024, correct the applicant name on page 1 and 2 of the report.

***** 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	DS215S	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

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 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

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

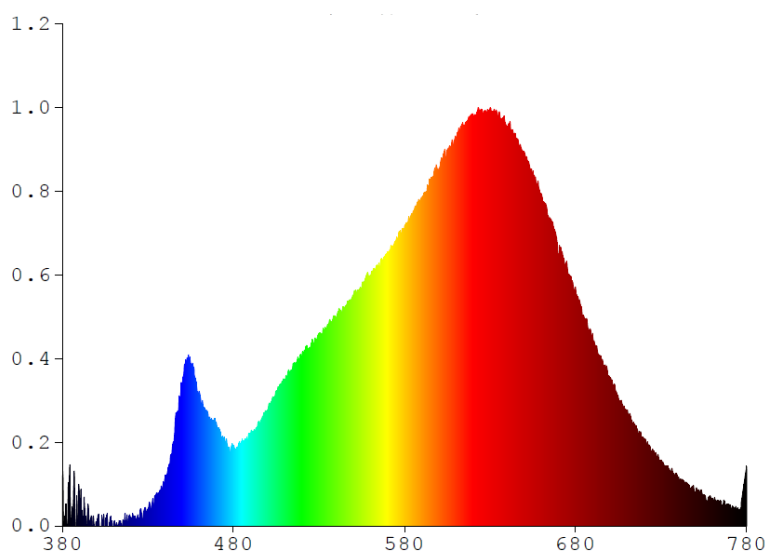
TEST REPORT

RESULTS OF TESTS

Test Condition: 120V, 60Hz For SLOWS30627B

Spectral Distribution over Visible Wavelengths

nm	mW/nm	nm	mW/nm	nm	mW/nm	nm	mW/nm	nm	mW/nm
380	0.0075	480	0.0134	580	0.0496	680	0.0391	780	0.0100
385	0.0000	485	0.0144	585	0.0522	685	0.0345		
390	0.0024	490	0.0152	590	0.0546	690	0.0318		
395	0.0036	495	0.0173	595	0.0574	695	0.0276		
400	0.0004	500	0.0193	600	0.0594	700	0.0243		
405	0.0009	505	0.0224	605	0.0619	705	0.0211		
410	0.0004	510	0.0240	610	0.0644	710	0.0191		
415	0.0000	515	0.0270	615	0.0665	715	0.0166		
420	0.0015	520	0.0281	620	0.0684	720	0.0144		
425	0.0013	525	0.0294	625	0.0693	725	0.0127		
430	0.0028	530	0.0322	630	0.0695	730	0.0110		
435	0.0054	535	0.0334	635	0.0686	735	0.0092		
440	0.0081	540	0.0346	640	0.0664	740	0.0081		
445	0.0139	545	0.0363	645	0.0645	745	0.0071		
450	0.0235	550	0.0382	650	0.0621	750	0.0057		
455	0.0268	555	0.0397	655	0.0588	755	0.0051		
460	0.0222	560	0.0416	660	0.0551	760	0.0046		
465	0.0188	565	0.0437	665	0.0512	765	0.0036		
470	0.0170	570	0.0454	670	0.0438	770	0.0033		
475	0.0133	575	0.0474	675	0.0419	775	0.0028		



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

TEST REPORT

RESULTS OF TESTS (cont'd)

Test Condition: 120V, 60Hz For SLOWS30627B

Total operation burning time: 60 minutes
Stabilization time: 30 minutes

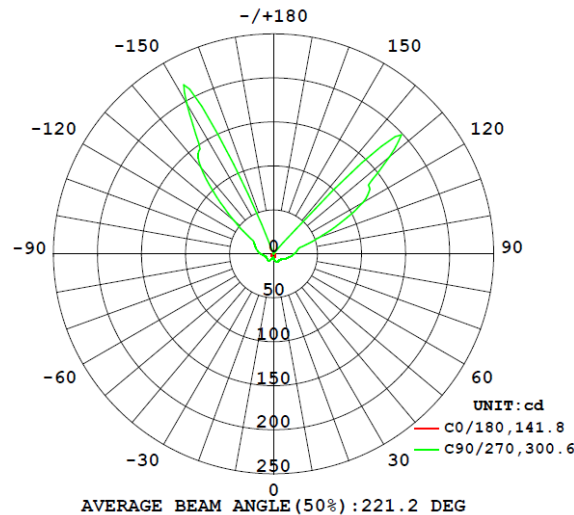
Photometric Measurements at 25°C – Distribution Method

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')
SLOWS30627B								
S2404281 55-003	base-up	2686	94	67	0.4584	0.4062	0.2636	0.5254

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)
SLOWS30627B							
S2404281 55-003	base-up	120.0	178.4	21.1	0.987	291.1	13.8

Intensity (Candlepower) Summary at 25°C - Candelas



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

TEST REPORT

RESULTS OF TESTS (cont'd)

Test Condition: 120V, 60Hz For SLOWS30627B

Intensity (Candlepower) Summary at 25°C - Candelas

V \ H(°)	0	22.5	45	67.5	90
0	1.0	1.1	1.1	1.2	1.2
5	1.0	1.1	1.3	1.5	1.5
10	1.0	1.2	1.5	1.8	1.9
15	1.0	1.3	1.7	2.0	2.1
20	1.0	1.4	1.9	2.2	2.2
25	0.9	1.4	2.0	2.2	2.3
30	0.9	1.5	2.1	2.3	2.4
35	0.9	1.6	2.1	2.3	2.4
40	0.8	1.7	2.2	2.2	2.3
45	0.8	1.7	2.0	2.1	2.3
50	0.7	1.7	1.9	2.2	2.4
55	0.7	1.8	1.9	2.3	2.6
60	0.6	1.7	1.8	2.5	2.9
65	0.6	1.6	1.9	2.7	3.3
70	0.5	1.4	2.0	3.0	3.7
75	0.5	1.2	2.2	3.4	4.1
80	0.4	1.1	2.4	3.8	4.6
85	0.2	1.1	2.6	4.2	5.1
90	0.1	1.5	3.0	4.6	5.6
95	0.0	5.5	3.5	5.1	6.1
100	0.0	13.7	5.9	5.7	6.6
105	0.0	19.5	12.0	8.6	8.2
110	0.0	12.9	20.5	14.3	13.2
115	0.0	2.2	26.3	22.1	19.9
120	0.0	1.6	34.1	29.3	27.9
125	0.0	0.5	32.9	33.2	31.7
130	0.0	0.0	0.1	44.6	41.0
135	0.0	0.0	0.0	17.1	41.3
140	0.0	0.0	0.0	0.0	4.2
145	0.0	0.0	0.0	0.0	0.0
150	0.0	0.0	0.0	0.0	0.0
155	0.0	0.0	0.0	0.0	0.0
160	0.0	0.0	0.0	0.0	0.0
165	0.0	0.0	0.0	0.0	0.0
170	0.0	0.0	0.0	0.0	0.0
175	0.0	0.0	0.0	0.0	0.0
180	0.0	0.0	0.0	0.0	0.0

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

TEST REPORT

RESULTS OF TESTS (cont'd)

Test Condition: 120V, 60Hz For SLOWS30627B

Zonal Lumen Summary and Percentages at 25°C

Zone	Lumens (lm)	% Luminaire (%)
SLOWS30627B		
0-30	5.2	1.8
0-40	9.9	3.4
0-60	23.3	8.0
0-90	52.5	18.0
60-90	29.2	9.0
0-180	291.1	100.0

Beam Angle

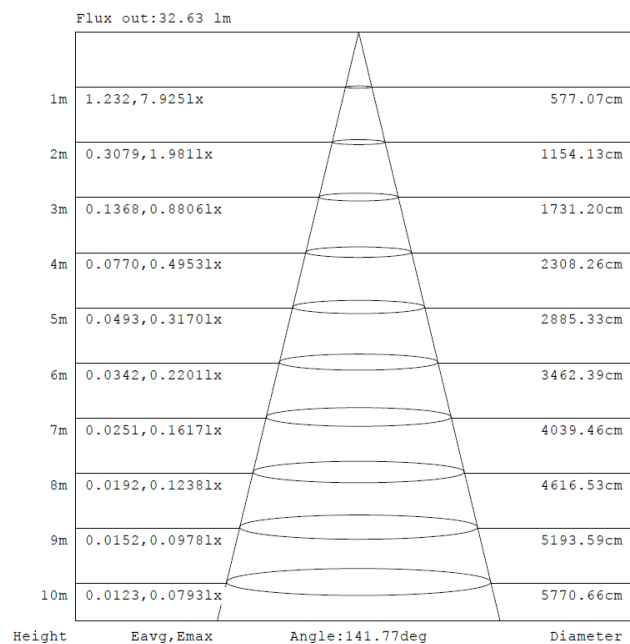
Total Beam Angle(°)
221.2

Illumination Plots

Model No.: SLOWS30627B

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.

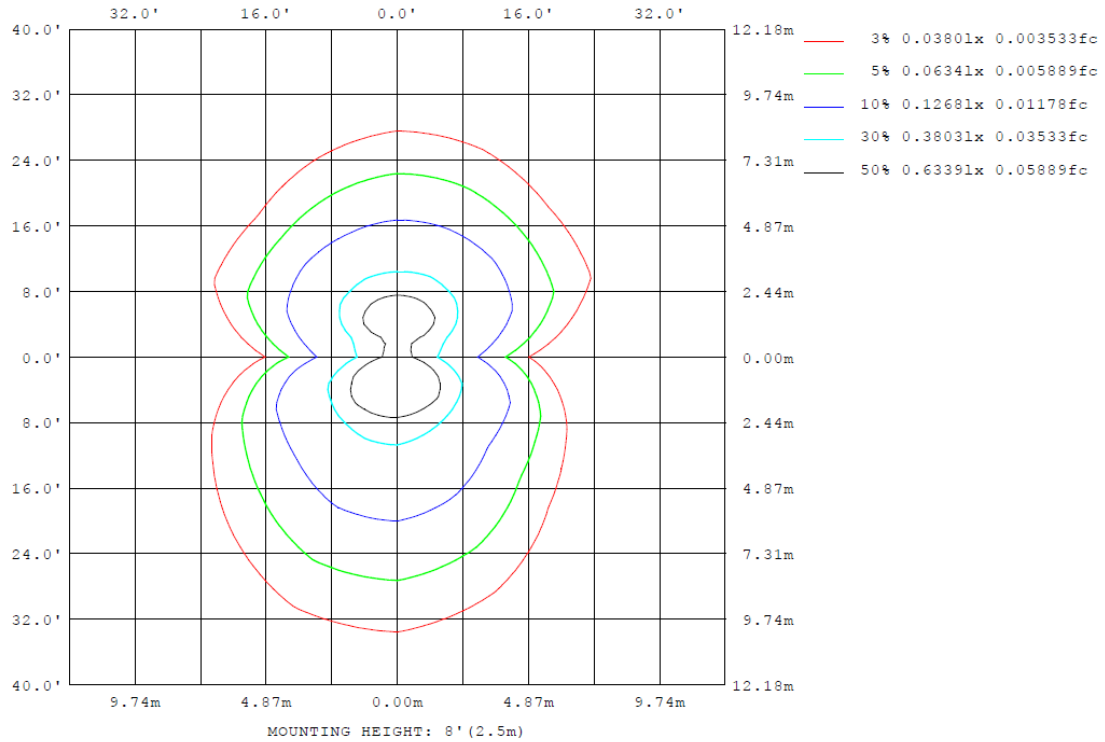
***** End of Page *****

TEST REPORT

RESULTS OF TESTS (cont'd)

Test Condition: 120V, 60Hz For SLOWS30627B

Model No.: SLOWS30627B
Mount Height: 2.5 m
Isoillumination Plot



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

TEST REPORT

RESULTS OF TESTS (cont'd)

Test Condition: 120V, 60Hz For SLOWS30627B

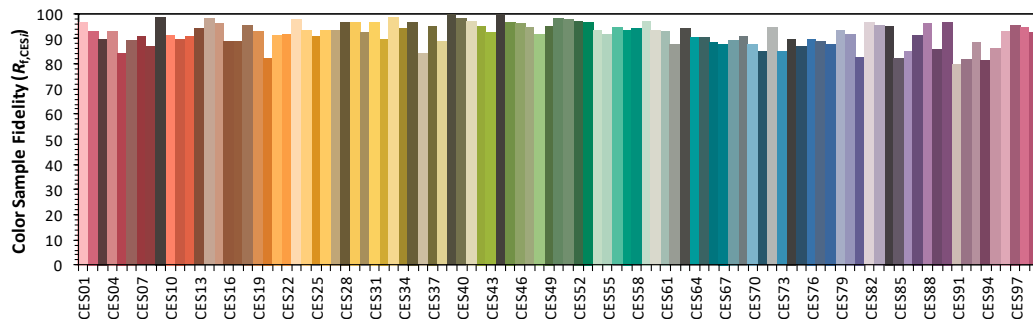
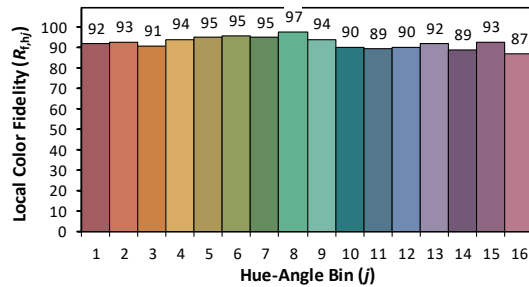
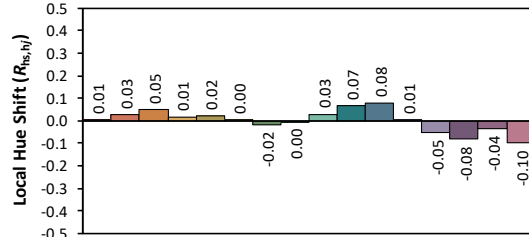
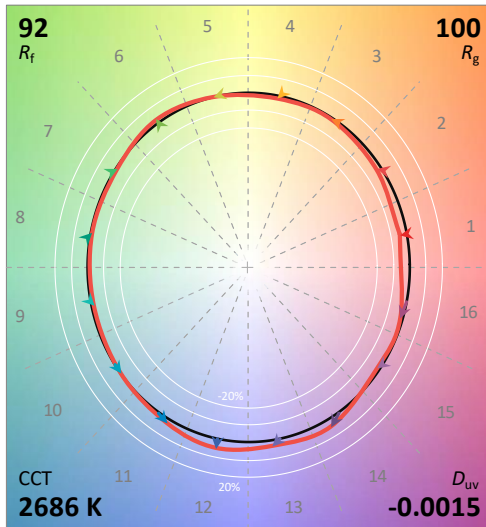
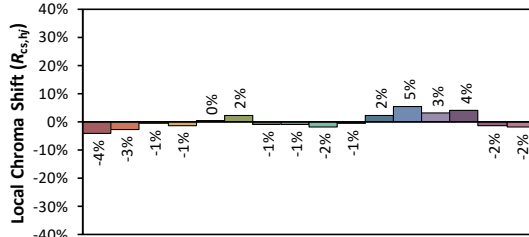
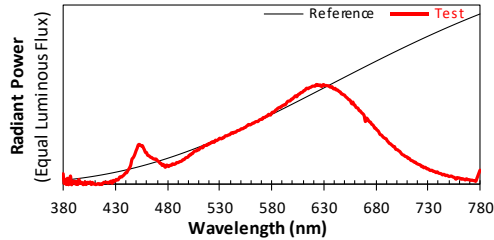
ANSI/IES +B3:X17TM-30-18 Color Rendition Report

Source: User SPD

Manufacturer: Visual Comfort and Company

Date: 2024/5/28

Model: SLOWS30627B



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

x 0.4584
 y 0.4062
 u' 0.2636
 v' 0.5254

CIE 13.3-1995
(CRI)

R_a 94
 R_g 67

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

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

TEST REPORT

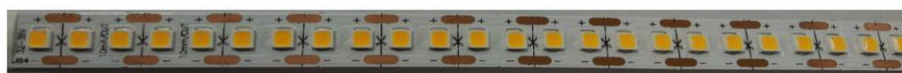
PRODUCT PICTURE (not to scale)



External view of SLOWS30627B



View of LED driver ESS030W-0550-42



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 *****