

Visual Comfort & Co.

TEST REPORT

SCOPE OF WORK

LM-79 testing report

REPORT NUMBER

240428155GZU-009

ISSUE DATE

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REVISION DATE

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12

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Report format for LM-79_G

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Report No.: 240428155GZU-009
Modification 1: 01 November 2024

TEST REPORT

TEST OF ONE LED LUMINAIRE

MODEL NO. SLOWS30527B

RENDERED TO

Visual Comfort & Co.

Contact Name: Adam Same

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Email: asame@visualcomfort.com
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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 SLOWS30527B. The sample was received by Intertek in undamaged condition and tested as received. The sample designation was S240428155-001.

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: 25 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

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TEST REPORT

SUMMARY

Model Number:	SLOWS30527B
Description:	LED Luminaries
Brand Name:	--

Test Condition: 120V, 60Hz For SLOWS30527B

Criteria	Result
Total Lumen Output	215.4 lm
Total Power	15.5 W
Luminaire Efficacy	13.9 lm/W
S/MH(C0/180)	1.27
S/MH(C90/270)	2.51
Correlated Color Temperature (CCT)	2671 K
Color Rendering Index (CRI)	93
R9	65
Chromaticity Coordinate (x)	0.4607
Chromaticity Coordinate (y)	0.4084
Chromaticity Coordinate (u')	0.2640
Chromaticity Coordinate (v')	0.5266

Remark:

Revision history:

Modification 1: Based on and superseded the previous report 240428155GZU-009 issued on 12 July 2024, correct the applicant name on page 1 and 2 of the report.

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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	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

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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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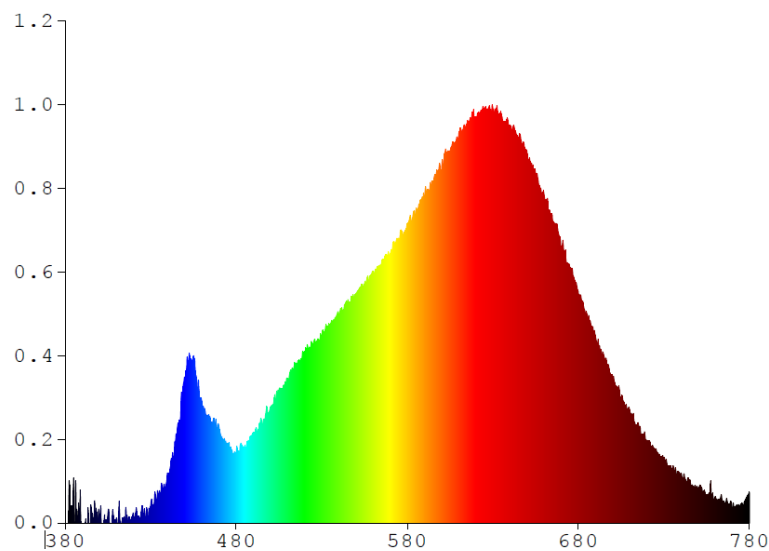
TEST REPORT

RESULTS OF TESTS

Test Condition: 120V, 60Hz For SLOWS30527B

Spectral Distribution over Visible Wavelengths

nm	mW/nm	nm	mW/nm	nm	mW/nm	nm	mW/nm	nm	mW/nm
380	0.0000	480	0.0090	580	0.0381	680	0.0290	780	0.0040
385	0.0044	485	0.0099	585	0.0398	685	0.0265		
390	0.0000	490	0.0115	590	0.0414	690	0.0237		
395	0.0023	495	0.0127	595	0.0436	695	0.0211		
400	0.0010	500	0.0147	600	0.0450	700	0.0185		
405	0.0011	505	0.0168	605	0.0471	705	0.0160		
410	0.0007	510	0.0180	610	0.0495	710	0.0142		
415	0.0000	515	0.0202	615	0.0510	715	0.0126		
420	0.0010	520	0.0218	620	0.0517	720	0.0104		
425	0.0023	525	0.0228	625	0.0520	725	0.0094		
430	0.0023	530	0.0237	630	0.0527	730	0.0084		
435	0.0039	535	0.0254	635	0.0519	735	0.0069		
440	0.0059	540	0.0266	640	0.0506	740	0.0063		
445	0.0111	545	0.0281	645	0.0486	745	0.0051		
450	0.0183	550	0.0292	650	0.0472	750	0.0043		
455	0.0212	555	0.0305	655	0.0444	755	0.0031		
460	0.0152	560	0.0321	660	0.0417	760	0.0034		
465	0.0123	565	0.0331	665	0.0383	765	0.0027		
470	0.0120	570	0.0342	670	0.0352	770	0.0019		
475	0.0102	575	0.0361	675	0.0317	775	0.0023		



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TEST REPORT

RESULTS OF TESTS (cont'd)

Test Condition: 120V, 60Hz For SLOWS30527B

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

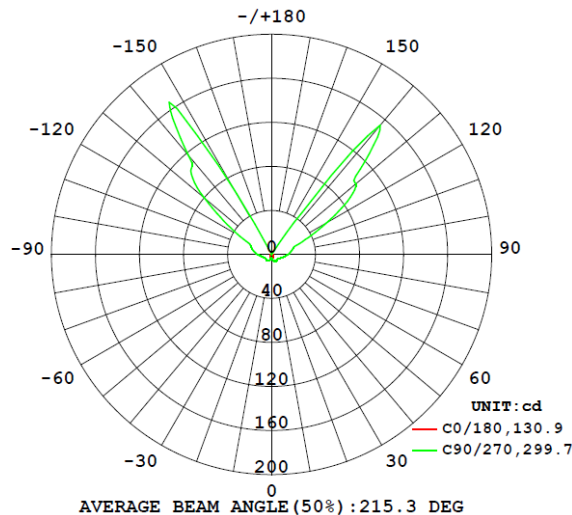
Photometric Measurements at 25°C – Distribution Method

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')
SLOWS30527B								
S2404281 55-001	base-up	2671	93	65	0.4607	0.4084	0.2640	0.5266

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)
SLOWS30527B							
S2404281 55-001	base-up	120.0	130.8	15.5	0.988	215.4	13.9

Intensity (Candlepower) Summary at 25°C - Candelas



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TEST REPORT

RESULTS OF TESTS (cont'd)

Test Condition: 120V, 60Hz For SLOWS30527B

Intensity (Candlepower) Summary at 25°C - Candelas

V \ H(°)	0	22.5	45	67.5	90
0	0.8	0.8	0.8	0.8	0.8
5	0.8	0.8	0.8	0.8	0.9
10	0.8	0.8	0.9	1.0	1.1
15	0.8	0.8	1.0	1.2	1.3
20	0.7	0.8	1.2	1.4	1.5
25	0.7	0.8	1.3	1.6	1.7
30	0.6	0.9	1.4	1.6	1.8
35	0.6	0.9	1.5	1.8	1.8
40	0.6	1.0	1.5	1.6	1.7
45	0.5	1.1	1.5	1.5	1.6
50	0.5	1.1	1.4	1.5	1.6
55	0.5	1.2	1.3	1.5	1.7
60	0.4	1.2	1.2	1.5	1.8
65	0.4	1.1	1.2	1.6	2.0
70	0.3	1.0	1.2	1.8	2.2
75	0.3	0.9	1.3	2.0	2.5
80	0.2	0.7	1.4	2.3	2.8
85	0.1	0.7	1.5	2.5	3.2
90	0.1	0.7	1.7	2.8	3.5
95	0.0	1.0	2.0	3.2	3.9
100	0.0	4.1	2.4	3.6	4.3
105	0.0	9.7	4.1	4.0	4.8
110	0.0	13.5	8.4	5.6	5.4
115	0.0	15.4	14.6	9.7	8.9
120	0.0	1.8	19.1	15.3	13.7
125	0.0	1.3	23.8	21.2	20.0
130	0.0	0.7	29.4	23.1	23.8
135	0.0	0.2	2.0	31.7	28.7
140	0.0	0.0	0.0	25.5	36.6
145	0.0	0.0	0.0	0.0	8.5
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

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TEST REPORT

RESULTS OF TESTS (cont'd)

Test Condition: 120V, 60Hz For SLOWS30527B

Zonal Lumen Summary and Percentages at 25°C

Zone	Lumens (lm)	% Luminaire (%)
SLOWS30527B		
0-30	3.8	1.8
0-40	7.3	3.4
0-60	16.8	7.8
0-90	36.6	17.0
60-90	19.8	9.2
0-180	215.4	100.0

Beam Angle

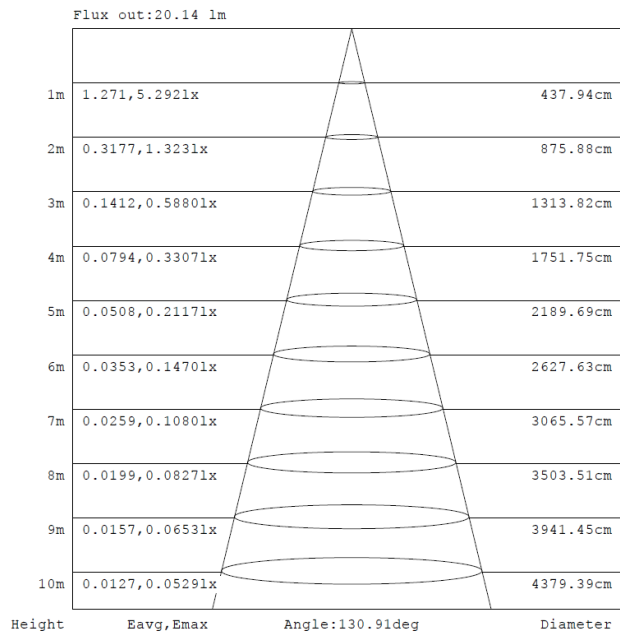
Total Beam Angle(°)
215.3

Illumination Plots

Model No.: SLOWS30527B

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

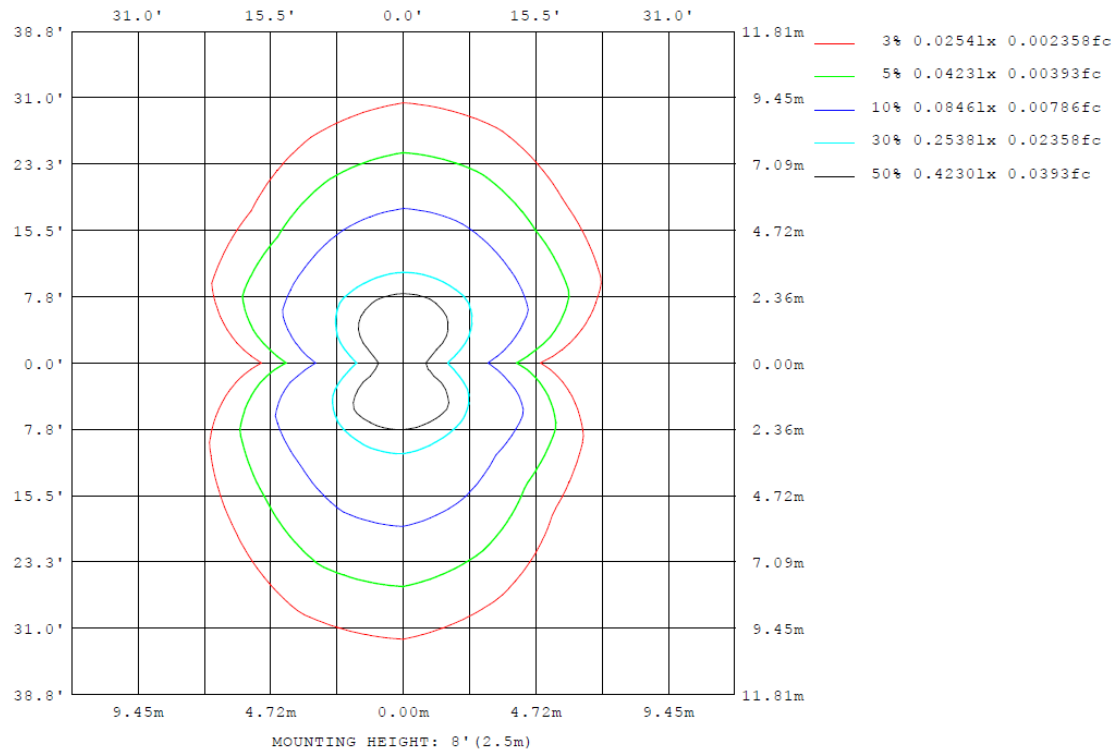
RESULTS OF TESTS (cont'd)

Test Condition: 120V, 60Hz For SLOWS30527B

Model No.: SLOWS30527B

Mount Height: 2.5 m

Isoillumination Plot



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TEST REPORT

RESULTS OF TESTS (cont'd)

Test Condition: 120V, 60Hz For SLOWS30527B

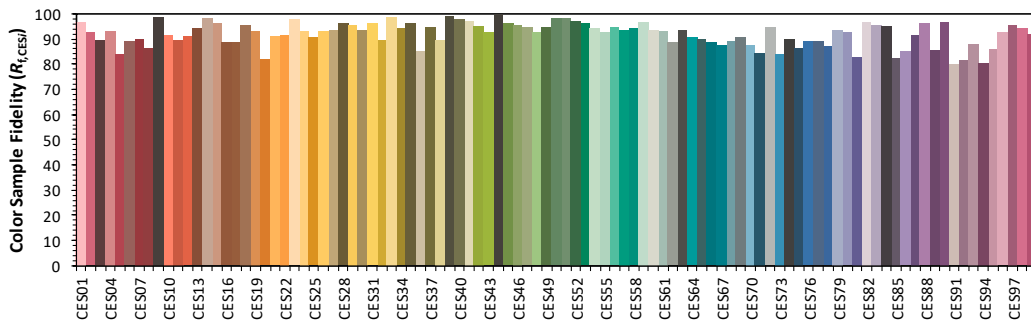
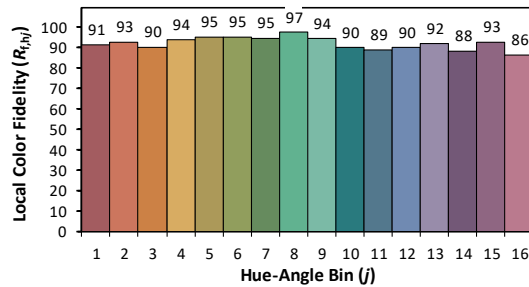
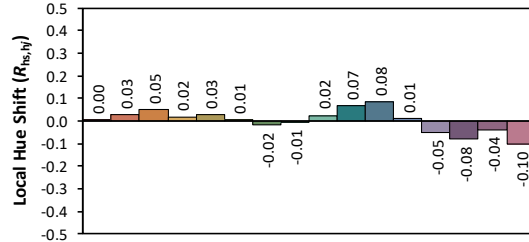
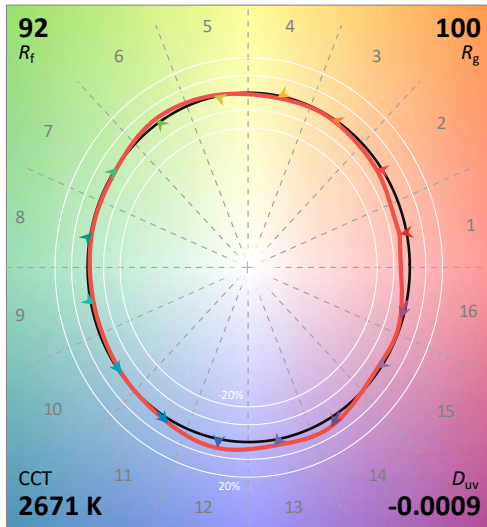
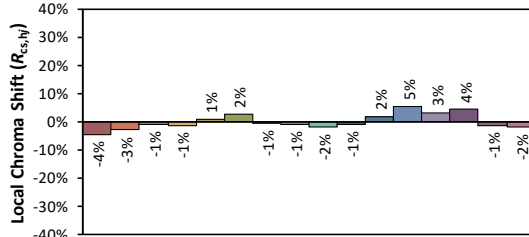
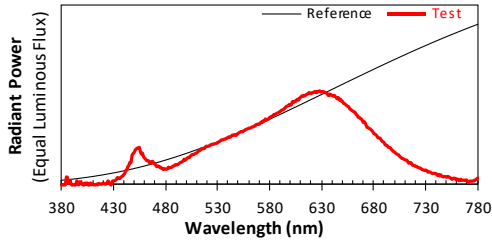
ANSI/IES +B3:X17TM-30-18 Color Rendition Report

Source: User SPD

Manufacturer: Visual Comfort and Company

Date: 2024/5/25

Model: SLOWS30527B



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

x 0.4607
 y 0.4084
 u' 0.2640
 v' 0.5266

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.

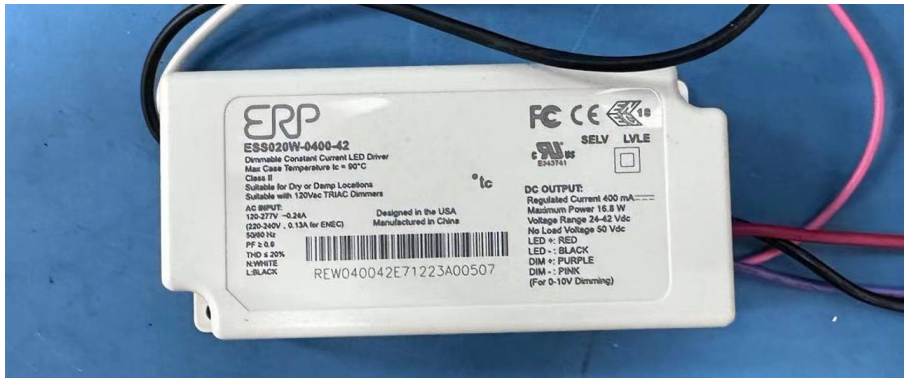
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TEST REPORT

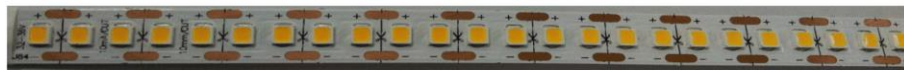
PRODUCT PICTURE (not to scale)



External view of SLOWS30527B



View of LED driver ESS020W-0400-42



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 *****