

Visual Comfort & Co.

TEST REPORT

SCOPE OF WORK

LM-79 testing report

REPORT NUMBER

240428155GZU-011

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-011
Modification 1: 01 November 2024

TEST REPORT

TEST OF ONE LED LUMINAIRE

MODEL NO. SLOWS30727B

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 SLOWS30727B. The sample was received by Intertek in undamaged condition and tested as received. The sample designation was S240428155-004.

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

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TEST REPORT

SUMMARY

Model Number:	SLOWS30727B
Description:	LED Luminaries
Brand Name:	--

Test Condition: 120V, 60Hz For SLOWS30727B

Criteria	Result
Total Lumen Output	315.2 lm
Total Power	24.2 W
Luminaire Efficacy	13.1 lm/W
S/MH(C0/180)	1.28
S/MH(C90/270)	2.33
Correlated Color Temperature (CCT)	2692 K
Color Rendering Index (CRI)	94
R9	68
Chromaticity Coordinate (x)	0.4580
Chromaticity Coordinate (y)	0.4063
Chromaticity Coordinate (u')	0.2632
Chromaticity Coordinate (v')	0.5254

Remark:

Revision history:

Modification 1: Based on and superseded the previous report 240428155GZU-011 issued on 12 July 2024, correct the applicant name on page 1 and 2 of the report.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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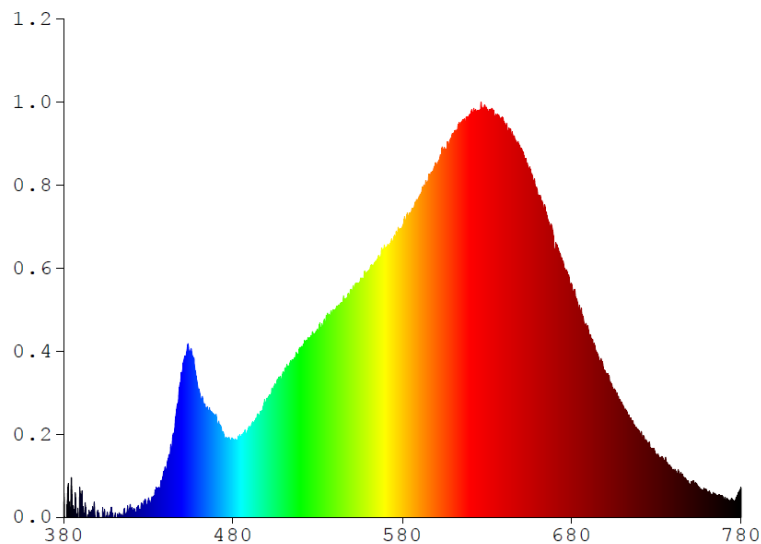
TEST REPORT

RESULTS OF TESTS

Test Condition: 120V, 60Hz For SLOWS30727B

Spectral Distribution over Visible Wavelengths

nm	mW/nm	nm	mW/nm	nm	mW/nm	nm	mW/nm	nm	mW/nm
380	0.0009	480	0.0145	580	0.0538	680	0.0430	780	0.0055
385	0.0016	485	0.0152	585	0.0564	685	0.0382		
390	0.0016	490	0.0167	590	0.0594	690	0.0342		
395	0.0013	495	0.0189	595	0.0622	695	0.0305		
400	0.0013	500	0.0219	600	0.0648	700	0.0267		
405	0.0003	505	0.0245	605	0.0682	705	0.0237		
410	0.0000	510	0.0265	610	0.0709	710	0.0208		
415	0.0000	515	0.0292	615	0.0733	715	0.0182		
420	0.0016	520	0.0309	620	0.0746	720	0.0158		
425	0.0014	525	0.0333	625	0.0753	725	0.0136		
430	0.0034	530	0.0346	630	0.0750	730	0.0115		
435	0.0054	535	0.0371	635	0.0745	735	0.0103		
440	0.0087	540	0.0383	640	0.0731	740	0.0087		
445	0.0154	545	0.0403	645	0.0710	745	0.0075		
450	0.0268	550	0.0419	650	0.0683	750	0.0060		
455	0.0310	555	0.0437	655	0.0648	755	0.0054		
460	0.0235	560	0.0456	660	0.0596	760	0.0045		
465	0.0201	565	0.0477	665	0.0565	765	0.0039		
470	0.0190	570	0.0497	670	0.0483	770	0.0033		
475	0.0146	575	0.0519	675	0.0459	775	0.0032		



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TEST REPORT

RESULTS OF TESTS (cont'd)

Test Condition: 120V, 60Hz For SLOWS30727B

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

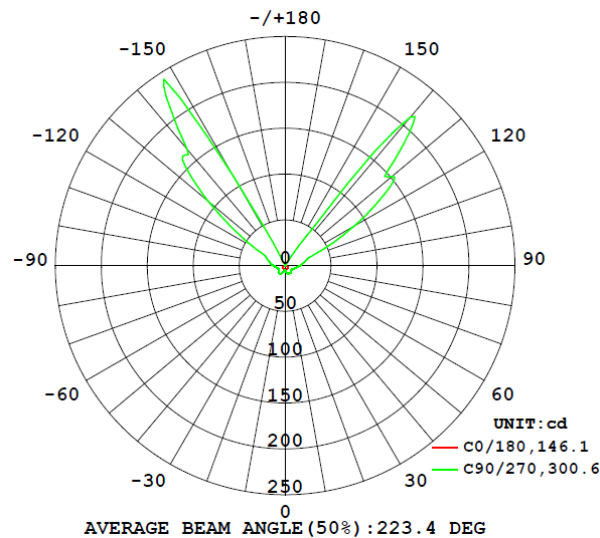
Photometric Measurements at 25°C – Distribution Method

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')
SLOWS30727B								
S2404281 55-004	base-up	2692	94	68	0.4580	0.4063	0.2632	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)
SLOWS30727B							
S2404281 55-004	base-up	120.1	205.4	24.2	0.979	315.2	13.1

Intensity (Candlepower) Summary at 25°C - Candelas



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TEST REPORT

RESULTS OF TESTS (cont'd)

Test Condition: 120V, 60Hz For SLOWS30727B

Intensity (Candlepower) Summary at 25°C - Candelas

V \ H(°)	0	22.5	45	67.5	90
0	1.1	1.2	1.2	1.2	1.2
5	1.1	1.2	1.2	1.3	1.3
10	1.1	1.2	1.4	1.6	1.6
15	1.1	1.3	1.7	1.9	2.0
20	1.1	1.4	1.9	2.2	2.2
25	1.0	1.5	2.1	2.3	2.3
30	1.0	1.6	2.2	2.3	2.4
35	1.0	1.7	2.2	2.3	2.5
40	0.9	1.8	2.2	2.3	2.3
45	0.9	1.9	2.3	2.1	2.1
50	0.8	2.0	2.1	2.0	2.0
55	0.8	2.0	1.9	1.9	2.0
60	0.7	2.1	1.8	1.9	2.0
65	0.7	1.9	1.7	2.0	2.2
70	0.6	1.7	1.7	2.2	2.3
75	0.5	1.5	1.8	2.4	2.6
80	0.4	1.3	2.0	2.7	2.9
85	0.2	1.2	2.2	3.0	3.3
90	0.0	1.1	2.5	3.4	3.7
95	0.0	1.4	2.9	4.0	4.3
100	0.0	6.3	3.4	4.5	4.9
105	0.0	17.9	5.6	5.2	5.6
110	0.0	23.9	12.9	7.8	6.9
115	0.0	23.2	23.3	14.4	12.6
120	0.0	1.4	32.4	23.4	20.4
125	0.0	0.7	37.9	33.3	30.0
130	0.0	0.1	44.5	34.8	36.3
135	0.0	0.0	6.6	47.5	41.8
140	0.0	0.0	0.0	33.6	50.6
145	0.0	0.0	0.0	0.1	8.8
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 SLOWS30727B

Zonal Lumen Summary and Percentages at 25°C

Zone	Lumens (lm)	% Luminaire (%)
SLOWS30727B		
0-30	5.6	1.8
0-40	10.8	3.4
0-60	24.3	7.7
0-90	48.4	15.4
60-90	24.1	7.7
0-180	315.2	100.0

Beam Angle

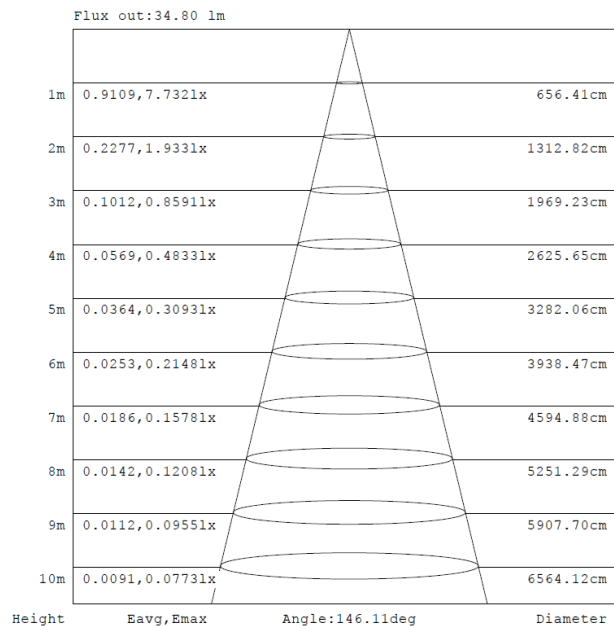
Total Beam Angle(°)
223.4

Illumination Plots

Model No.: SLOWS30727B

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

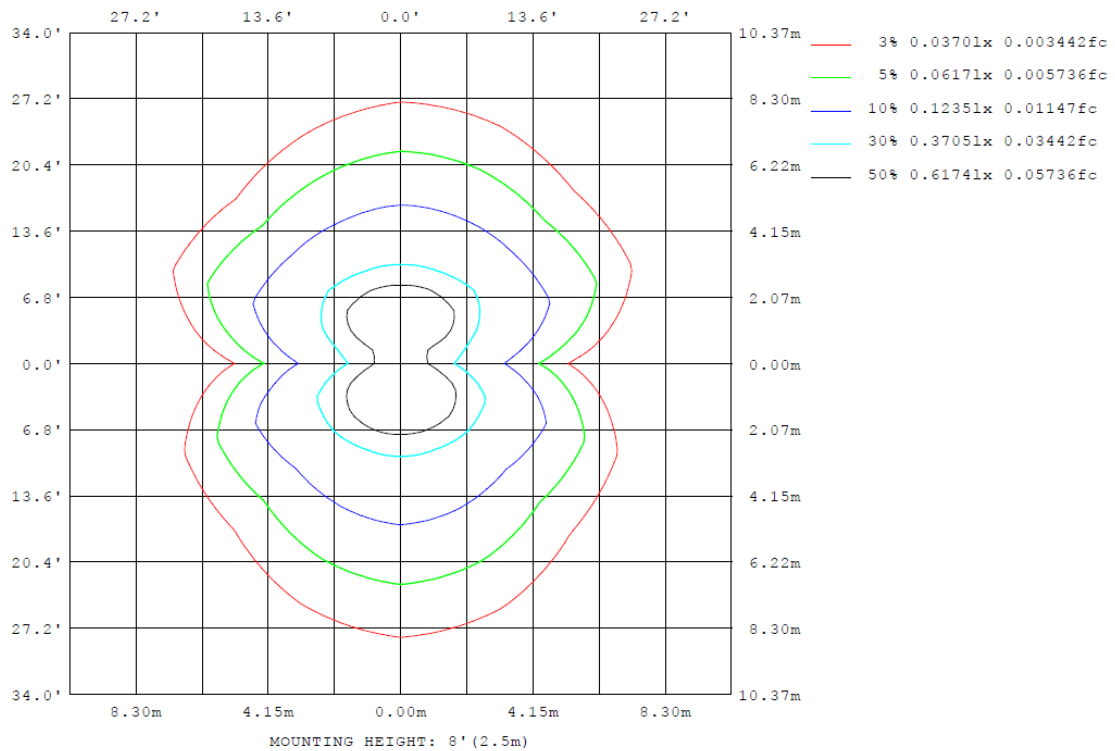
RESULTS OF TESTS (cont'd)

Test Condition: 120V, 60Hz For SLOWS30727B

Model No.: SLOWS30727B

Mount Height: 2.5 m

Isoillumination Plot



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TEST REPORT

RESULTS OF TESTS (cont'd)

Test Condition: 120V, 60Hz For SLOWS30727B

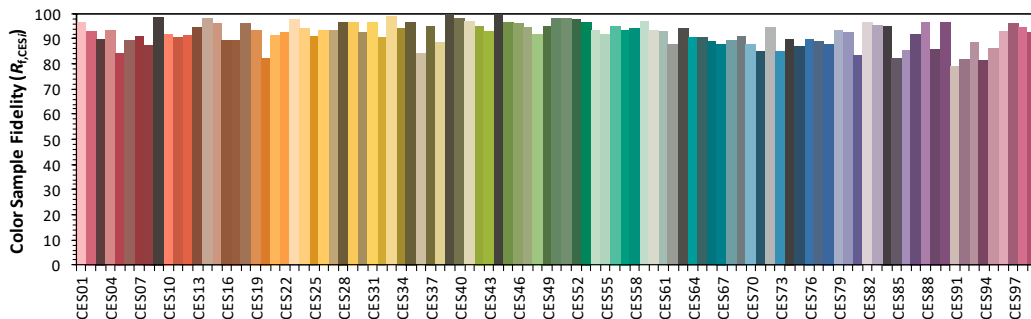
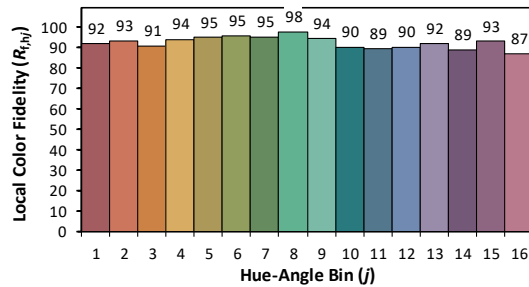
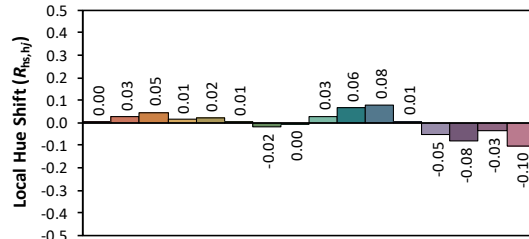
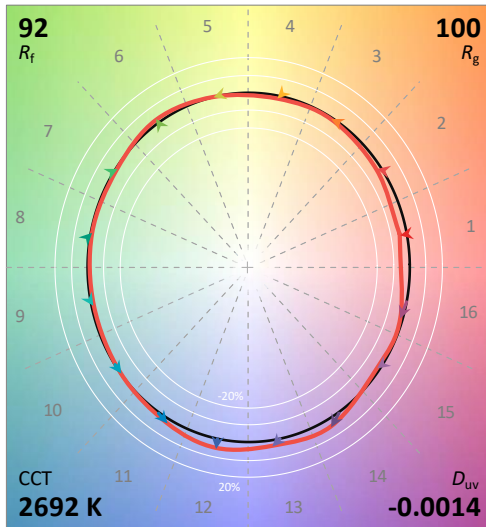
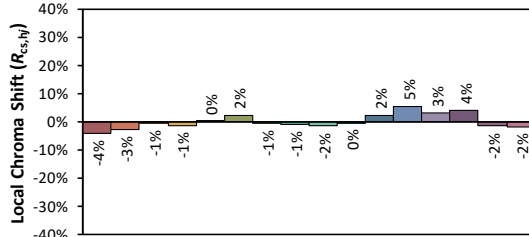
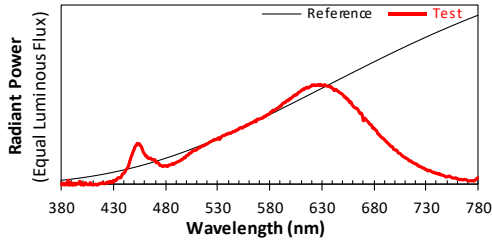
ANSI/IES +B3:X17TM-30-18 Color Rendition Report

Source: User SPD

Manufacturer: Visual Comfort and Company

Date: 2024/5/28

Model: SLOWS30727B



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

x 0.4580
 y 0.4063
 u' 0.2632
 v' 0.5254

CIE 13.3-1995
(CRI)

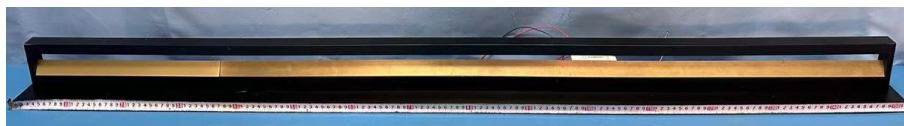
R_a 94
 R_g 68

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 SLOWS30727B



View of LED driver ESS030W-0620-42



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 *****