

VC BRANDS LLC

TEST REPORT

SCOPE OF WORK

LM-79 testing report

REPORT NUMBER

211208061GZU-006

ISSUE DATE

10 January 2022

REVISION DATE

None

NUMBER OF PAGES

13

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Report No.: 211208061GZU-006

TEST REPORT

TEST OF ONE LED LUMINAIRE

MODEL NO. 700WSEBL16XX-LED927

RENDERED TO

VC BRANDS LLC

Contact Name: Tess Gallagher

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

STATEMENT OF LIMITATION: 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.

AUTHORIZATION: The testing performed was authorized by signed quote number: QGZ211208009.

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: 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

DESCRIPTION OF SAMPLE: The client submitted one sample of model 700WSEBL16XX-LED927. The sample was received, in undamaged condition. The sample designation was S211208061-006.

DATES OF TESTS: 8 December 2021 to 10 January 2022

ISSUED BY: Intertek Testing Services Shenzhen Ltd. Guangzhou Branch

TEST LOCATION: 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:	700WSEBL16XX-LED927 (Remark: "XX" denote other appearance colors for the characters that change)
Description:	LED Luminaries
Brand Name:	--

Test Condition: 120V, 60Hz For 700WSEBL16XX-LED927

Criteria	Result
Total Lumen Output	757.0 lm
Total Power	14.4 W
Luminaire Efficacy	52.61 lm/W
S/MH(C0/180)	6.49
S/MH(C90/270)	1.44
Correlated Color Temperature (CCT)	2662 K
Color Rendering Index (CRI)	92
R9	72
Chromaticity Coordinate (x)	0.4619
Chromaticity Coordinate (y)	0.4093
Chromaticity Coordinate (u')	0.2644
Chromaticity Coordinate (v')	0.5272

Remark:

Measurement uncertainty for applicable tests has been established.

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TEST REPORT

EQUIPMENT LIST

Equipment Used	Model Number	Control Number
Temperature Meter	RS210	SA047-126
Sensing - DC Power Supply	IT6122	SA063-12-09
Sensing- AC power source for Integrating Sphere System	APW-105N	SA063-12-05
Everfine - AC power source for Goniophotometer System	DPS1060	SA063-16-03
Two meter integrating sphere unit	Sensing – 2M	SA063-12-01
YOKOGAWA – Digital Power Meter	WT-210	SA011-122
Everfine – Goniophotometer	Go-R5000	SA063-16
KONICA MINOLTA - Illuminance meter	CX-2B_WL	SA063-16-01
Standard lamp	S82134	SA063-12-13
Standard lamp	S1320039	SA063-12-24
Standard lamp	D908S	SA063-16-05
Standard lamp	D215S	SA063-16-06

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 WT210.

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

Standard lamp used for Goniophotometer method:

Model: D908S

Current: 7.255A

Standard lamp used for integrating sphere:

Model: S82134

Current: 1.830

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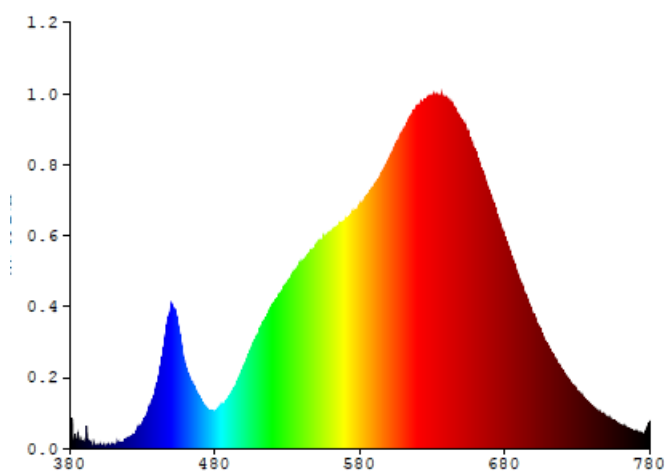
TEST REPORT

RESULTS OF TESTS

Test Condition: 120V, 60Hz For 700WSEBL16XX-LED927

Spectral Distribution over Visible Wavelengths

nm	mW/nm	nm	mW/nm	nm	mW/nm	nm	mW/nm	nm	mW/nm
380	0.0014	480	0.0252	580	0.1673	680	0.1454	780	0.0183
385	0.0080	485	0.0294	585	0.1741	685	0.1313		
390	0.0040	490	0.0359	590	0.1816	690	0.1168		
395	0.0006	495	0.0446	595	0.1906	695	0.1042		
400	0.0000	500	0.0572	600	0.1996	700	0.0923		
405	0.0019	505	0.0689	605	0.2101	705	0.0804		
410	0.0024	510	0.0791	610	0.2195	710	0.0702		
415	0.0035	515	0.0900	615	0.2290	715	0.0617		
420	0.0069	520	0.0997	620	0.2357	720	0.0534		
425	0.0095	525	0.1070	625	0.2406	725	0.0462		
430	0.0165	530	0.1146	630	0.2430	730	0.0398		
435	0.0271	535	0.1222	635	0.2439	735	0.0341		
440	0.0436	540	0.1283	640	0.2401	740	0.0286		
445	0.0706	545	0.1341	645	0.2355	745	0.0244		
450	0.0987	550	0.1396	650	0.2272	750	0.0220		
455	0.0827	555	0.1464	655	0.2178	755	0.0188		
460	0.0555	560	0.1497	660	0.2038	760	0.0153		
465	0.0419	565	0.1521	665	0.1896	765	0.0138		
470	0.0555	570	0.1497	670	0.1742	770	0.0117		
475	0.0266	575	0.1632	675	0.1602	775	0.0102		



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TEST REPORT

RESULTS OF TESTS (cont'd)

Test Condition: 120V, 60Hz For 700WSEBL16XX-LED927

Total operation burning time: 60 minutes

Stabilization time: 45 minutes

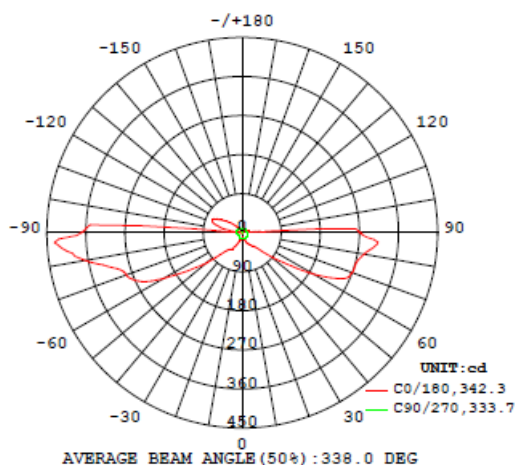
Photometric Measurements at 25°C – Integrating Sphere Method

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')
700WSEBL16XX-LED927								
S2112080 61-006	--	2662	92	72	0.4619	0.4093	0.2644	0.5272

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)
700WSEBL16XX-LED927							
S2112080 61-006	--	120.0	121.8	14.4	0.985	757	52.61

Intensity (Candlepower) Summary at 25°C - Candelas



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TEST REPORT

RESULTS OF TESTS (cont'd)

Test Condition: 120V, 60Hz For 700WSEBL16XX-LED927

Intensity (Candlepower) Summary at 25°C - Candelas

V \ H(°)	0	22.5	45	67.5	90
0	13.3	13.3	13.3	13.4	13.3
5	11.7	11.8	12.0	12.7	13.5
10	11.4	11.3	11.5	12.3	14.1
15	13.1	12.6	11.7	12.0	14.6
20	18.1	15.9	12.9	11.8	15.0
25	25.6	21.4	15.1	11.9	14.9
30	30.9	28.5	17.7	12.2	14.5
35	36.0	37.1	22.7	12.8	14.1
40	40.6	42.2	27.2	13.3	14.1
45	53.4	46.0	32.0	13.8	14.2
50	83.2	54.7	38.1	14.3	14.0
55	125.1	81.4	39.5	15.4	13.7
60	191.0	109.0	41.9	16.6	13.7
65	250.1	144.9	43.4	17.3	13.6
70	269.1	181.3	43.5	17.8	13.1
75	271.6	211.3	44.6	17.9	12.4
80	284.7	229.8	45.7	18.2	12.1
85	311.0	231.4	45.9	18.1	11.9
90	272.2	222.4	45.8	18.0	11.8
95	41.5	207.6	44.5	18.0	11.7
100	15.9	187.8	41.7	17.7	11.5
105	16.1	158.9	38.9	17.2	11.3
110	15.4	130.6	36.3	16.3	11.1
115	14.0	106.2	34.0	15.2	10.7
120	12.7	82.1	32.3	13.9	10.1
125	10.6	59.7	28.4	12.9	9.9
130	8.8	37.9	26.6	12.4	10.2
135	7.7	28.1	25.2	12.2	10.8
140	6.6	22.7	22.7	11.9	11.0
145	5.9	18.0	18.1	11.3	11.2
150	4.0	12.8	13.9	10.9	11.5
155	3.7	8.3	10.5	10.3	11.4
160	2.6	5.3	8.1	9.8	11.0
165	1.6	4.1	6.3	8.6	9.5
170	1.1	0.8	5.3	6.8	7.5
175	0.8	0.6	0.7	5.0	5.2
180	8.0	3.8	0.6	0.0	2.7

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TEST REPORT

RESULTS OF TESTS (cont'd)

Test Condition: 120V, 60Hz For 700WSEBL16XX-LED927

Zonal Lumen Summary and Percentages at 25°C

Zone	Lumens (lm)	% Luminaire (%)
700WSEBL16XX-LED927		
0-30	14.0	1.8
0-40	30.6	4.0
0-60	109.4	14.5
0-90	448.9	59.3
60-90	339.5	44.8
0-180	757.0	100.0

Beam Angle

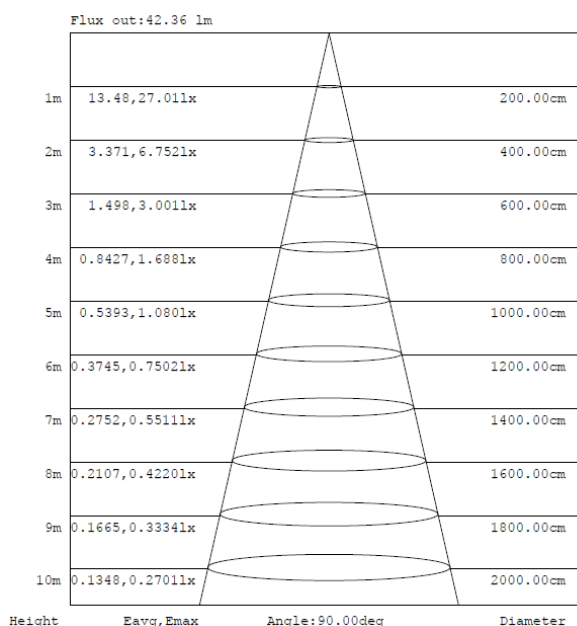
Total Beam Angle(°)
338.0

Illumination Plots

Model No.: 700WSEBL16XX-LED927

Mount Height: 2.5 m

Illuminance - Cone of Light



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TEST REPORT

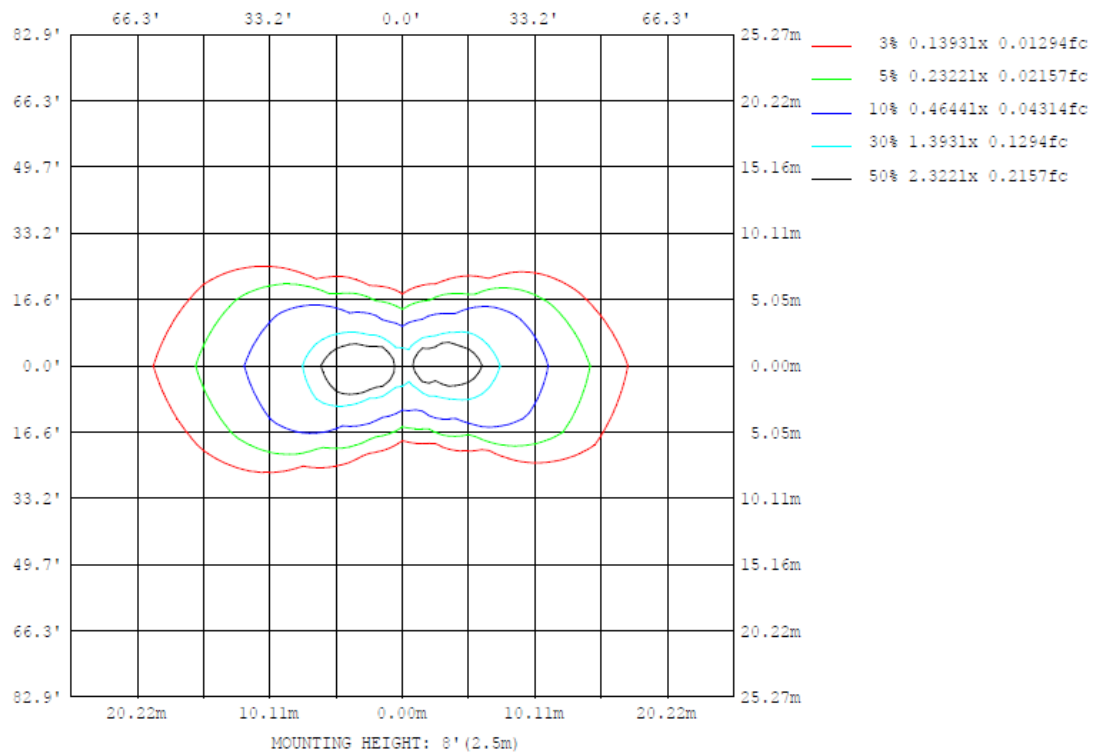
RESULTS OF TESTS (cont'd)

Test Condition: 120V, 60Hz For 700WSEBL16XX-LED927

Model No.: 700WSEBL16XX-LED927

Mount Height: 2.5 m

Isoillumination Plot



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TEST REPORT

RESULTS OF TESTS (cont'd)

Test Condition: 120V, 60Hz For 700WSEBL16XX-LED927

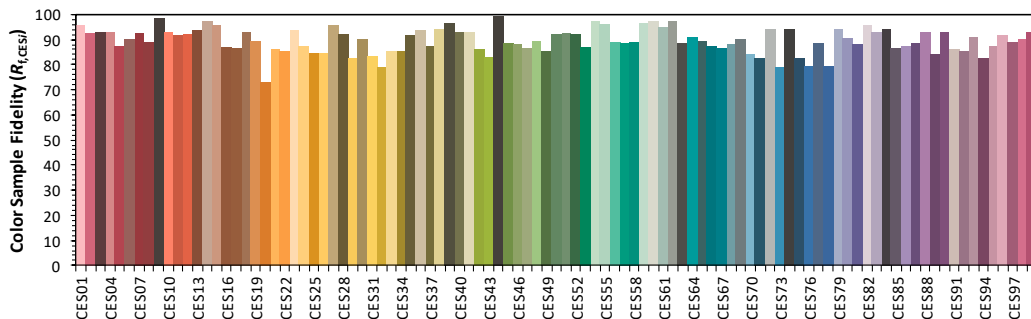
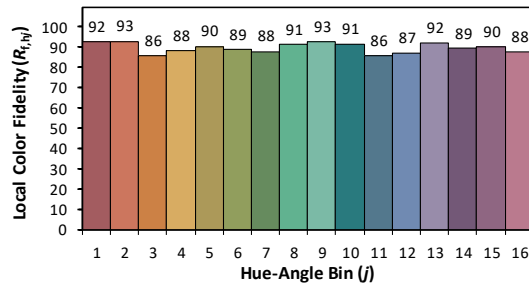
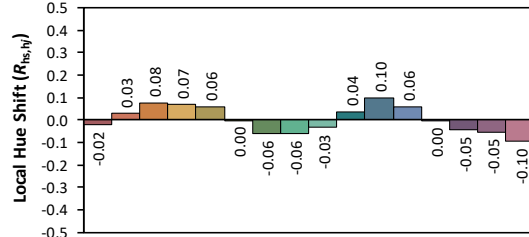
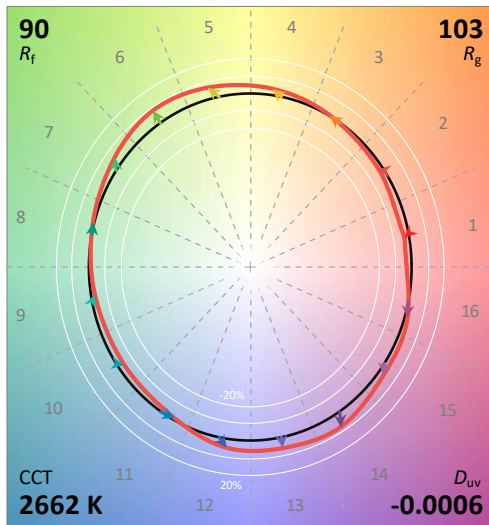
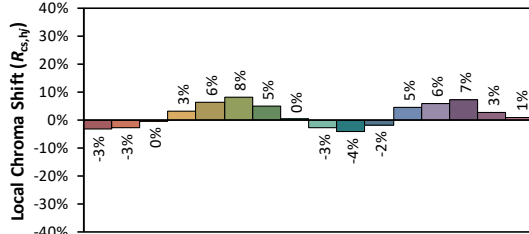
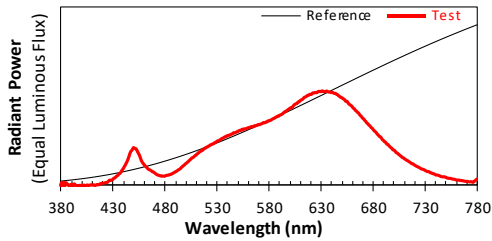
ANSI/IES TM-30-18 Color Rendition Report

Source: User SPD

Manufacturer: VC BRANDS LLC

Date: 2022/1/10

Model: 700WSEBL16XX-LED927



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

x 0.4619
 y 0.4093
 u' 0.2644
 v' 0.5272

CIE 13.3-1995
(CRI)
 R_a 92
 R_g 72

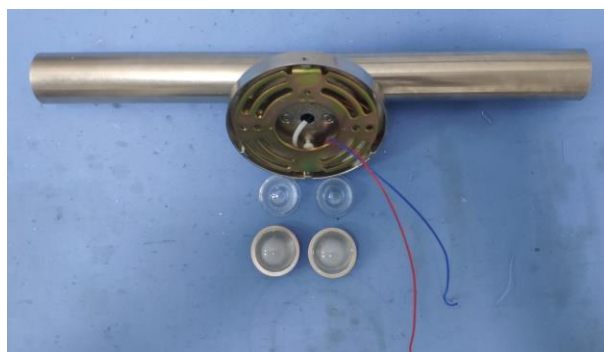
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TEST REPORT

PRODUCT PICTURE (not to scale)



External view of 700WSEBL16XX-LED927



External view of 700WSEBL16XX-LED927

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TEST REPORT

PRODUCT PICTURE (not to scale)



View of LED Driver PTB20W-0400-38-VCC



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 *****