

VC BRANDS LLC

TEST REPORT

SCOPE OF WORK

LM-79 testing report

REPORT NUMBER

211208061GZU-010

ISSUE DATE

7 January 2022

REVISION DATE

None

NUMBER OF PAGES

13

DOCUMENT CONTROL NUMBER

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Report No.: 211208061GZU-010

TEST REPORT

TEST OF ONE LED LUMINAIRE

MODEL NO. 700WYT6XX-LED927

RENDERED TO

VC BRANDS LLC

Contact Name: Tess Gallagher

7400 LINDER AVE. SKOKIE, IL USA 60077

Email:
TGALLAGHER@VISUALCOMFORTCO.CO
Phone No.: 8474104774

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 700WYT6XX-LED927. The sample was received, in undamaged condition. The sample designation was S211208061-010.

DATES OF TESTS: 8 December 2021 to 7 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:	700WYT6XX-LED927 (Remark: "XX" denote other appearance colors for the characters that change)
Description:	LED Luminaries
Brand Name:	--

Test Condition: 120V, 60Hz For 700WYT6XX-LED927

Criteria	Result
Total Lumen Output	1513.3 lm
Total Power	30.8W
Luminaire Efficacy	49.18 lm/W
S/MH(C0/180)	2.66
S/MH(C90/270)	2.64
Correlated Color Temperature (CCT)	2612 K
Color Rendering Index (CRI)	93.0
R9	73
Chromaticity Coordinate (x)	0.4657
Chromaticity Coordinate (y)	0.4096
Chromaticity Coordinate (u')	0.2668
Chromaticity Coordinate (v')	0.5278

Remark:

Measurement uncertainty for applicable tests has been established.

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

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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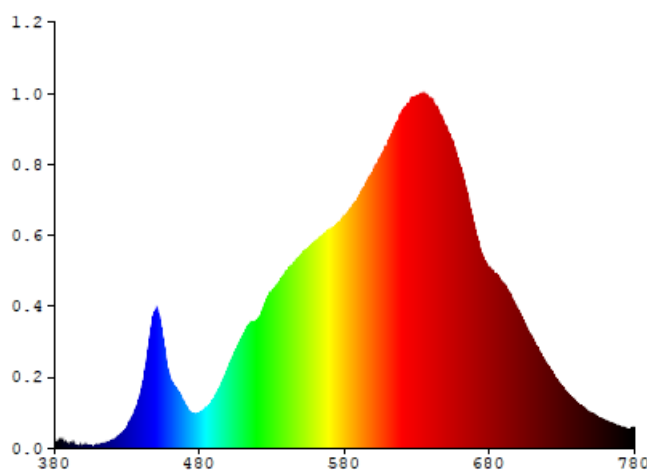
TEST REPORT

RESULTS OF TESTS

Test Condition: 120V, 60Hz For 700WYT6XX-LED927

Spectral Distribution over Visible Wavelengths

nm	mW/nm	nm	mW/nm	nm	mW/nm	nm	mW/nm	nm	mW/nm
380	0.0064	480	0.0440	580	0.2892	680	0.2230	780	0.0259
385	0.0014	485	0.0502	585	0.3004	685	0.2166		
390	0.0023	490	0.0611	590	0.3141	690	0.2041		
395	0.0005	495	0.0000	595	0.3310	695	0.1893		
400	0.0016	500	0.1011	600	0.3467	700	0.1720		
405	0.0031	505	0.1214	605	0.3633	705	0.1534		
410	0.0028	510	0.1404	610	0.3811	710	0.1358		
415	0.0048	515	0.1562	615	0.4006	715	0.1191		
420	0.0094	520	0.1586	620	0.4194	720	0.1030		
425	0.0158	525	0.1796	625	0.4317	725	0.0884		
430	0.0260	530	0.1953	630	0.4402	730	0.0769		
435	0.0438	535	0.2076	635	0.4422	735	0.0657		
440	0.0726	540	0.2193	640	0.4334	740	0.0572		
445	0.1264	545	0.2299	645	0.4210	745	0.0499		
450	0.1722	550	0.2412	650	0.4020	750	0.0432		
455	0.1320	555	0.2499	655	0.3800	755	0.0386		
460	0.0853	560	0.2576	660	0.3506	760	0.0339		
465	0.0709	565	0.2638	665	0.3172	765	0.0291		
470	0.0537	570	0.2714	670	0.2732	770	0.0265		
475	0.0423	575	0.2795	675	0.2414	775	0.0234		



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TEST REPORT

RESULTS OF TESTS (cont'd)

Test Condition: 120V, 60Hz For 700WYT6XX-LED927

Total operation burning time: 60 minutes
Stabilization time: 45 minutes

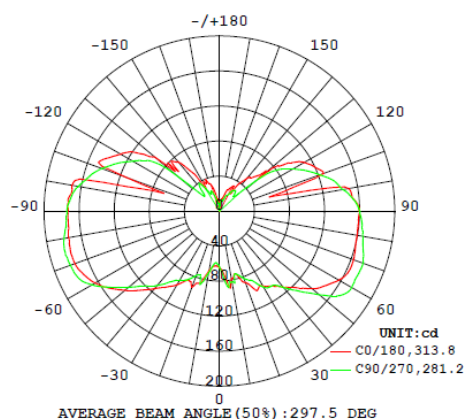
Photometric Measurements at 25°C – Integrating Sphere Method

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')
700WYT6XX-LED927								
S2112080 61-010	--	2612	93.0	73	0.4657	0.4096	0.2668	0.5278

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)
700WYT6XX-LED927							
S2112080 61-010	--	120.0	258.4	30.8	0.992	1513.3	49.18

Intensity (Candlepower) Summary at 25°C - Candelas



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TEST REPORT

RESULTS OF TESTS (cont'd)

Test Condition: 120V, 60Hz For 700WYT6XX-LED927

Intensity (Candlepower) Summary at 25°C - Candelas

V \ H(°)	0	22.5	45	67.5	90
0	64.3	64.1	64.0	63.8	63.7
5	75.9	79.0	82.0	82.5	81.9
10	78.3	70.0	79.8	84.5	82.2
15	75.3	68.2	76.3	98.0	74.3
20	86.9	78.0	82.9	99.7	81.7
25	100.4	90.8	89.0	99.0	87.6
30	98.8	101.1	96.5	99.5	100.3
35	104.3	109.0	103.6	103.3	104.0
40	113.2	122.8	114.6	112.8	114.1
45	123.7	138.1	125.8	125.6	129.5
50	137.9	153.7	141.1	136.6	148.4
55	148.2	167.5	156.9	146.2	168.0
60	157.6	177.8	163.6	153.3	174.3
65	162.9	181.6	167.3	156.9	173.8
70	162.8	180.4	166.8	157.6	174.2
75	160.6	178.3	166.4	158.9	169.6
80	159.4	175.3	165.6	158.6	166.0
85	159.0	172.2	164.4	157.8	163.1
90	159.3	168.5	161.7	155.9	159.7
95	154.0	160.3	155.2	151.7	153.5
100	149.7	150.4	148.6	143.7	142.8
105	71.2	62.4	134.4	133.7	135.0
110	126.1	87.6	87.8	116.2	121.9
115	119.7	100.2	90.6	98.5	109.5
120	111.7	100.7	84.5	91.4	95.7
125	96.6	85.2	57.3	84.5	82.9
130	57.5	72.7	56.3	46.4	53.7
135	55.4	66.4	62.9	37.6	24.4
140	49.2	46.7	55.9	41.5	28.4
145	37.6	33.9	49.3	40.1	29.0
150	33.5	28.9	46.3	32.7	24.2
155	29.2	32.4	27.9	26.4	20.3
160	25.6	26.9	24.7	15.9	15.1
165	16.4	20.1	19.9	15.2	12.7
170	14.1	18.2	14.5	11.7	11.8
175	6.3	6.6	7.4	9.7	8.0
180	1.5	1.8	0.3	0.0	1.6

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TEST REPORT

RESULTS OF TESTS (cont'd)

Test Condition: 120V, 60Hz For 700WYT6XX-LED927

Zonal Lumen Summary and Percentages at 25°C

Zone	Lumens (lm)	% Luminaire (%)
700WYT6XX-LED927		
0-30	23.6	4.7
0-40	137.0	9.1
0-60	370.0	24.5
0-90	909.5	60.1
60-90	539.5	35.6
0-180	1513.33	100.0

Beam Angle

Total Beam Angle(°)

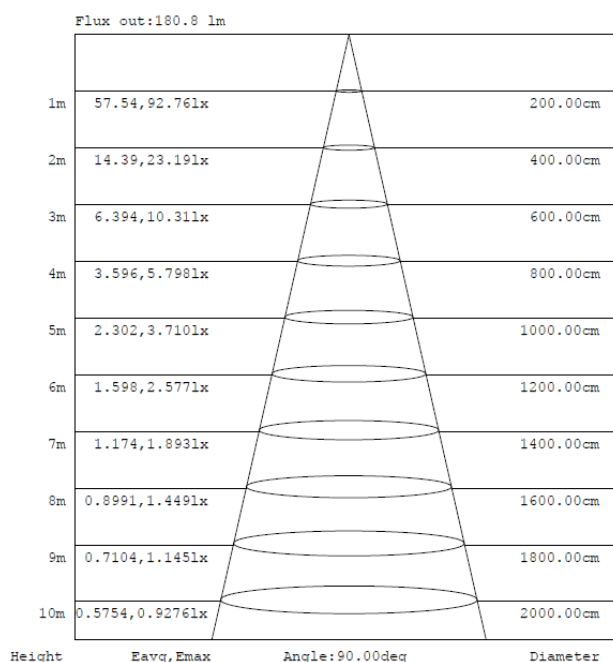
297.5

Illumination Plots

Model No.: 700WYT6XX-LED927

Mount Height: 2.5 m

Illuminance - Cone of Light



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TEST REPORT

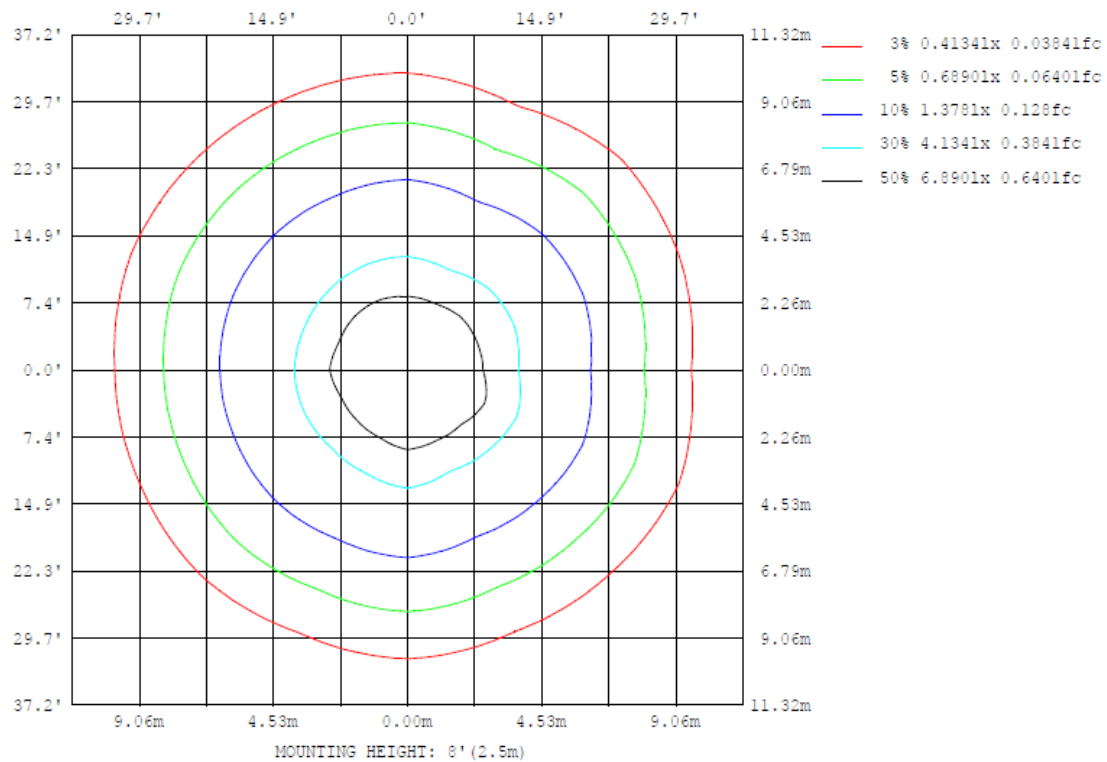
RESULTS OF TESTS (cont'd)

Test Condition: 120V, 60Hz For 700WYT6XX-LED927

Model No.: 700WYT6XX-LED927

Mount Height: 2.5 m

Isoillumination Plot



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TEST REPORT

RESULTS OF TESTS (cont'd)

Test Condition: 120V, 60Hz For 700WYT6XX-LED927

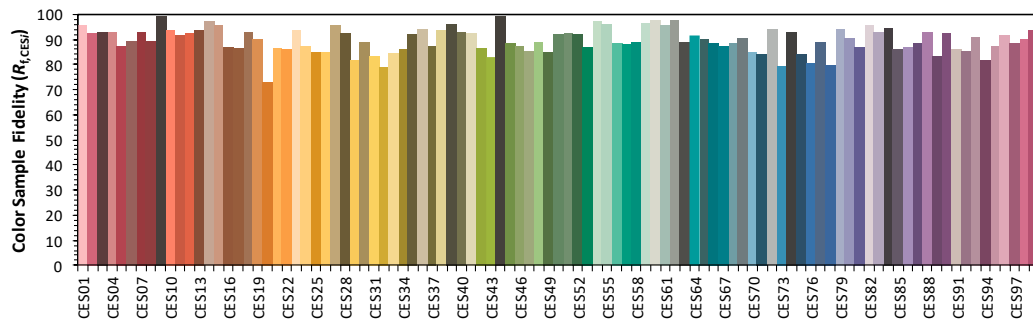
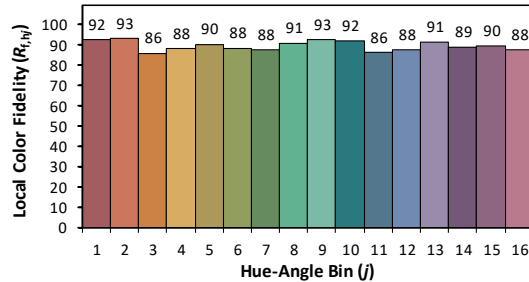
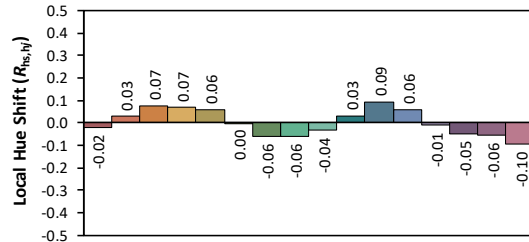
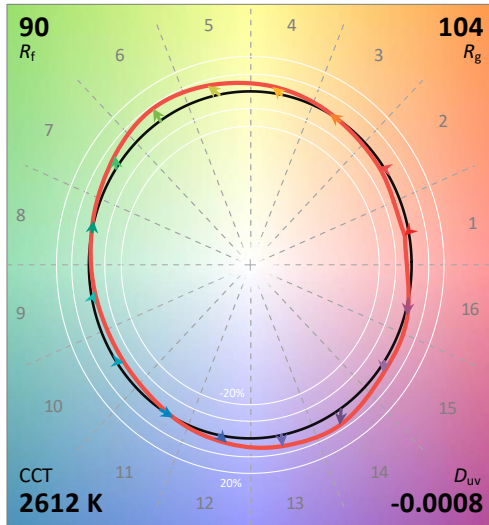
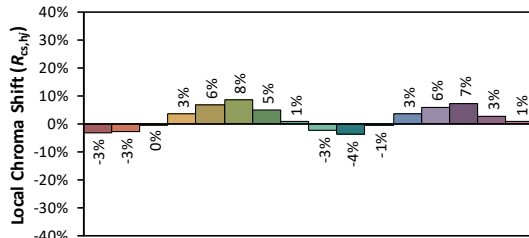
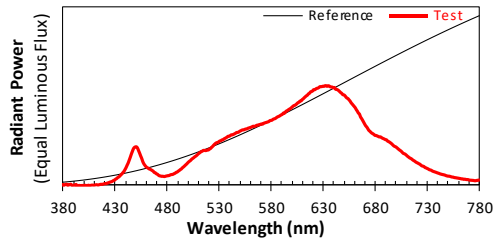
ANSI/IES TM-30-18 Color Rendition Report

Source: User SPD

Manufacturer: VC BRANDS LLC

Date: 2022/1/5

Model: 700WYT6XX-LED927



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

x 0.4657
 y 0.4096
 u' 0.2668
 v' 0.5278

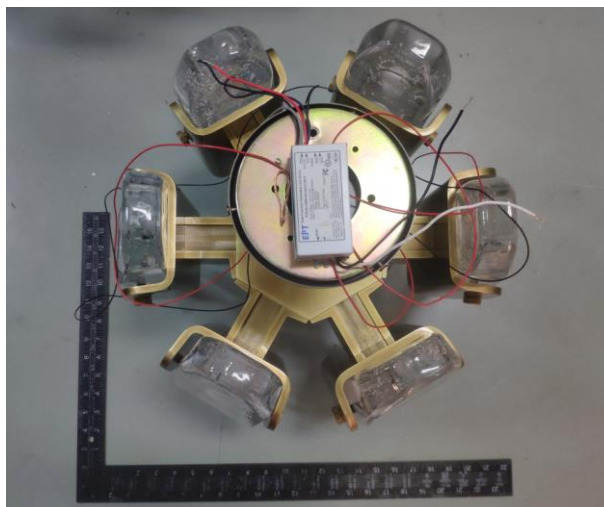
CIE 13.3-1995
(CRI)

R_a 93
 R_g 73

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TEST REPORT

PRODUCT PICTURE (not to scale)



External view of 700WYT6XX-LED927



External view of 700WYT6XX-LED927

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TEST REPORT

PRODUCT PICTURE (not to scale)



View of LED Driver PAD36-C090V40-UNV3-HE-P



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 *****