

VC BRANDS LLC

TEST REPORT

SCOPE OF WORK

LM-79 testing report

REPORT NUMBER

211208061GZU-016

ISSUE DATE

7 January 2022

REVISION DATE

None

NUMBER OF PAGES

13

DOCUMENT CONTROL NUMBER

Report format for LM-79:2008_F

© 2021 INTERTEK



Report No.: 211208061GZU-016

TEST REPORT

TEST OF ONE LED LUMINAIRE

MODEL NO. 700TDEBL16XX-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 700TDEBL16XX-LED927. The sample was received, in undamaged condition. The sample designation was S211208061-020.

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

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

TEST REPORT

SUMMARY

Model Number:	700TDEBL16XX-LED927 (Remark: "XX" denote other appearance colors for the characters that change)
Description:	LED Luminaries
Brand Name:	--

Test Condition: 120V, 60Hz For 700TDEBL16XX-LED927

Criteria	Result
Total Lumen Output	491.2 lm
Total Power	7.8 W
Luminaire Efficacy	63.06 lm/W
S/MH(C0/180)	1.04
S/MH(C90/270)	1.04
Correlated Color Temperature (CCT)	2610 K
Color Rendering Index (CRI)	92.0
R9	72
Chromaticity Coordinate (x)	0.4662
Chromaticity Coordinate (y)	0.4102
Chromaticity Coordinate (u')	0.2668
Chromaticity Coordinate (v')	0.5282

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

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 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

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

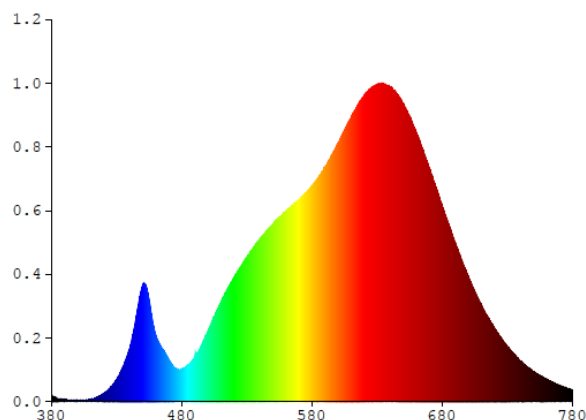
TEST REPORT

RESULTS OF TESTS

Test Condition: 120V, 60Hz For 700TDEBL16XX-LED927

Spectral Distribution over Visible Wavelengths

nm	mW/nm	nm	mW/nm	nm	mW/nm	nm	mW/nm	nm	mW/nm
380	0.1034	480	0.5763	580	3.7872	680	3.4266	780	0.2016
385	0.0403	485	0.6488	585	3.9455	685	3.1019		
390	0.0407	490	0.7891	590	4.1267	690	2.7883		
395	0.0243	495	0.0000	595	4.3398	695	2.4791		
400	0.0225	500	1.2440	600	4.5566	700	2.1937		
405	0.0251	505	1.5050	605	4.7785	705	1.9281		
410	0.0445	510	1.7486	610	5.0056	710	1.6951		
415	0.0798	515	1.9854	615	5.2081	715	1.4802		
420	0.1406	520	2.1837	620	5.3824	720	1.2907		
425	0.2436	525	2.3746	625	5.4977	725	1.1202		
430	0.3966	530	2.5455	630	5.5571	730	0.9623		
435	0.6213	535	2.7020	635	5.5872	735	0.8342		
440	0.9429	540	2.8582	640	5.5316	740	0.7178		
445	1.4883	545	2.9998	645	5.4215	745	0.6140		
450	2.0482	550	3.1260	650	5.2358	750	0.5302		
455	1.7737	555	3.2478	655	4.9976	755	0.4572		
460	1.1690	560	3.3543	660	4.7279	760	0.3901		
465	0.9340	565	3.4450	665	4.4319	765	0.3358		
470	0.7404	570	3.5552	670	4.1070	770	0.2863		
475	0.5870	575	3.6645	675	3.7634	775	0.2438		



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

TEST REPORT

RESULTS OF TESTS (cont'd)

Test Condition: 120V, 60Hz For 700TDEBL16XX-LED927

Total operation burning time: 60 minutes

Stabilization time: 45 minutes

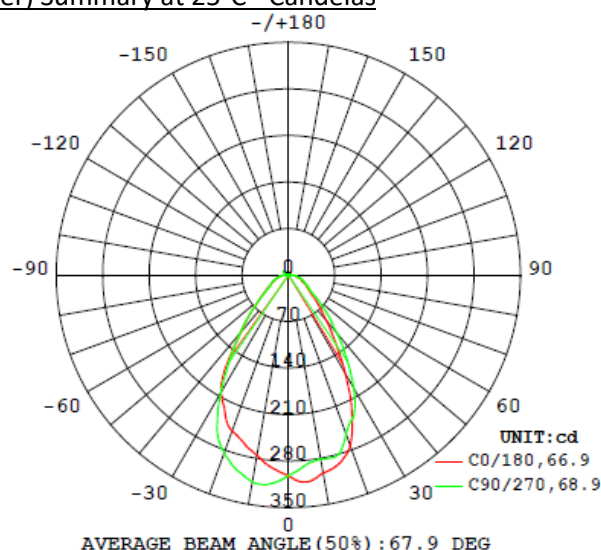
Photometric Measurements at 25°C – Integrating Sphere Method

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')
700TDEBL16XX-LED927								
S2112080 61-020	--	2610	92.0	72	0.4662	0.4102	0.2668	0.5282

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)
700TDEBL16XX-LED927							
S2112080 61-020	--	120.0	66.5	7.8	0.976	491.2	63.06

Intensity (Candlepower) Summary at 25°C - Candelas



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

TEST REPORT

RESULTS OF TESTS (cont'd)

Test Condition: 120V, 60Hz For 700TDEBL16XX-LED927

Intensity (Candlepower) Summary at 25°C - Candelas

V \ H(°)	0	22.5	45	67.5	90
0	302.3	302.1	301.9	302.1	302.1
5	312.8	309.4	303.4	294.4	287.6
10	302.0	300.5	299.5	296.8	281.4
15	294.0	285.7	280.9	278.2	281.4
20	272.4	266.8	262.0	256.7	254.5
25	226.4	229.1	232.6	233.1	233.1
30	172.5	181.8	184.2	189.8	197.8
35	124.1	134.0	139.1	145.0	153.9
40	88.8	99.5	104.6	107.3	114.3
45	65.0	73.5	77.4	79.3	84.1
50	47.3	51.9	53.3	55.7	58.5
55	36.8	39.3	38.5	39.3	40.6
60	30.7	33.9	32.0	32.4	33.3
65	25.2	26.9	26.9	26.8	27.1
70	21.4	22.0	21.5	21.9	23.1
75	16.9	17.0	17.2	17.9	17.5
80	11.6	12.5	12.8	13.1	13.3
85	8.8	9.5	9.5	9.9	10.7
90	6.3	6.8	7.0	7.5	8.1
95	3.9	5.1	5.3	5.4	5.6
100	3.9	4.3	4.5	4.6	4.8
105	3.2	3.5	3.6	3.7	4.0
110	3.1	3.1	2.9	2.8	3.0
115	3.8	3.6	3.4	2.5	2.5
120	4.9	4.0	4.3	3.7	3.3
125	5.6	0.8	5.7	4.9	4.3
130	3.6	0.2	4.5	4.7	4.3
135	1.1	0.2	3.1	3.1	2.9
140	0.3	0.3	0.3	0.4	0.6
145	0.3	0.3	0.3	0.3	0.3
150	0.4	0.3	0.4	0.4	0.4
155	0.4	0.4	0.4	0.4	0.4
160	0.4	0.4	0.4	0.4	0.4
165	0.4	0.4	0.4	0.4	0.4
170	0.4	0.4	0.4	0.4	0.4
175	0.4	0.4	0.4	0.4	0.4
180	0.4	0.4	0.4	0.4	0.4

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

TEST REPORT

RESULTS OF TESTS (cont'd)

Test Condition: 120V, 60Hz For 700TDEBL16XX-LED927

Zonal Lumen Summary and Percentages at 25°C

Zone	Lumens (lm)	% Luminaire (%)
700TDEBL16XX-LED927		
0-30	215.9	44.0
0-40	310.5	63.2
0-60	412.0	83.9
0-90	469.3	95.5
60-90	57.3	11.6
0-180	491.2	100

Beam Angle

Total Beam Angle(°)

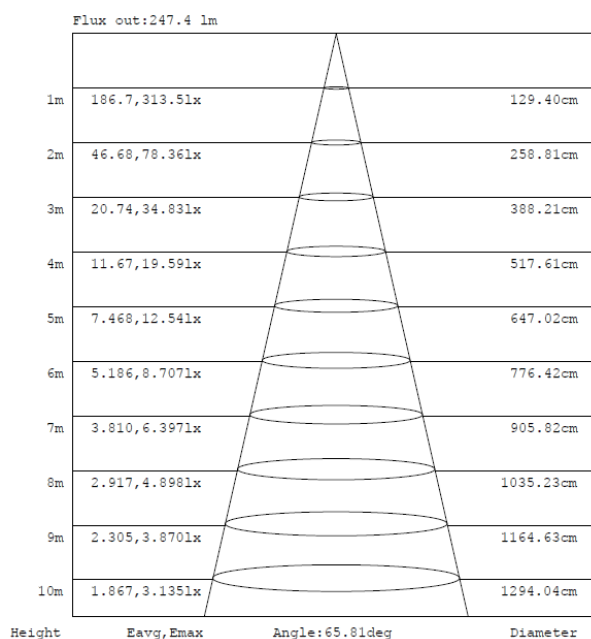
67.9

Illumination Plots

Model No.: 700TDEBL16XX-LED927

Mount Height: 2.5 m

Illuminance - Cone of Light



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

TEST REPORT

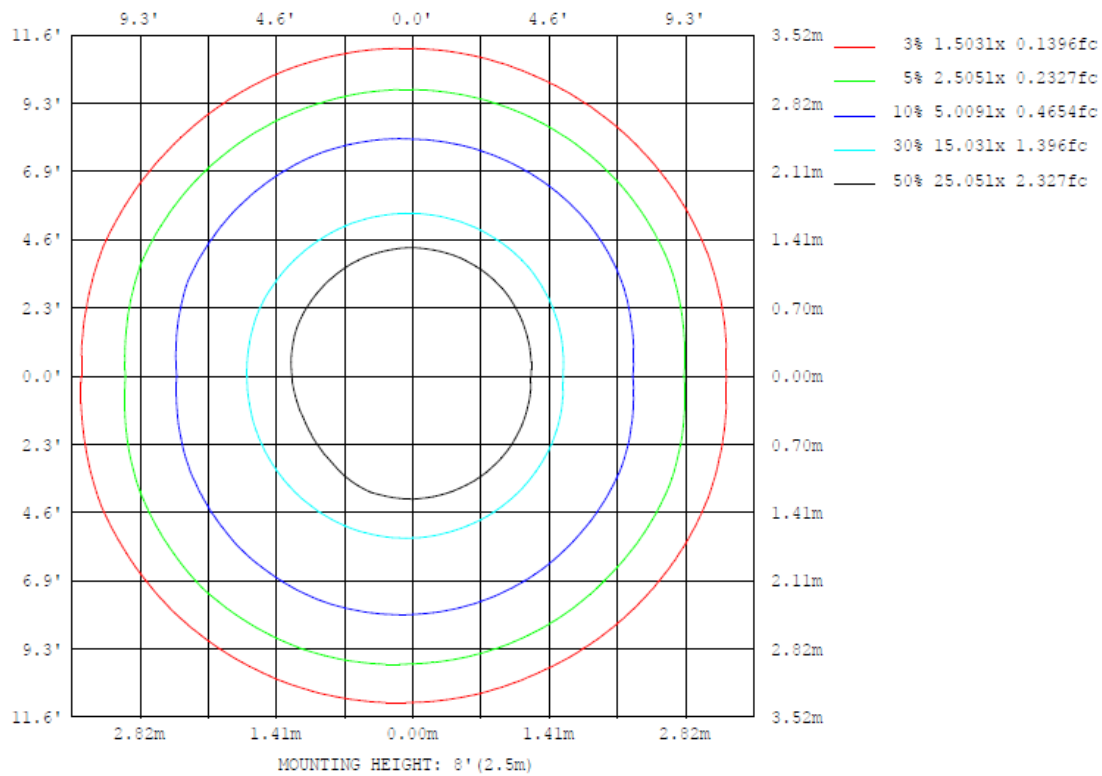
RESULTS OF TESTS (cont'd)

Test Condition: 120V, 60Hz For 700TDEBL16XX-LED927

Model No.: 700TDEBL16XX-LED927

Mount Height: 2.5 m

Isoillumination Plot



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

TEST REPORT

RESULTS OF TESTS (cont'd)

Test Condition: 120V, 60Hz For 700TDEBL16XX-LED927

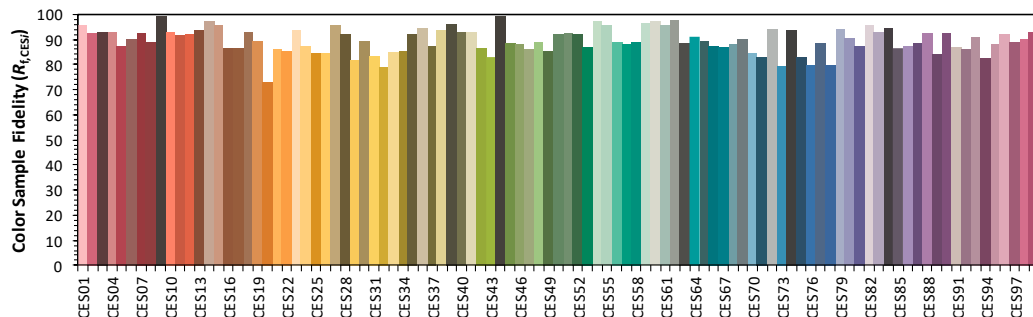
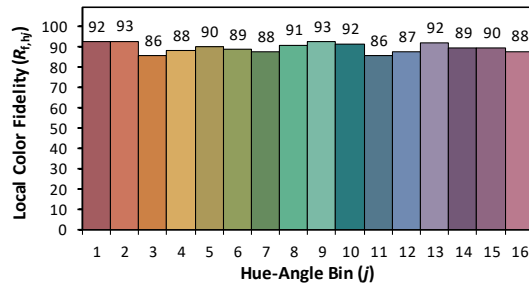
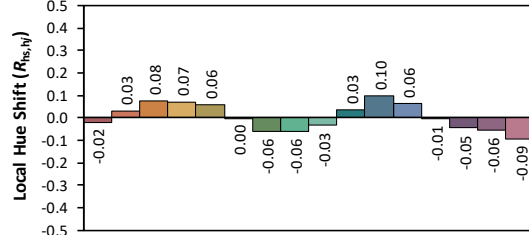
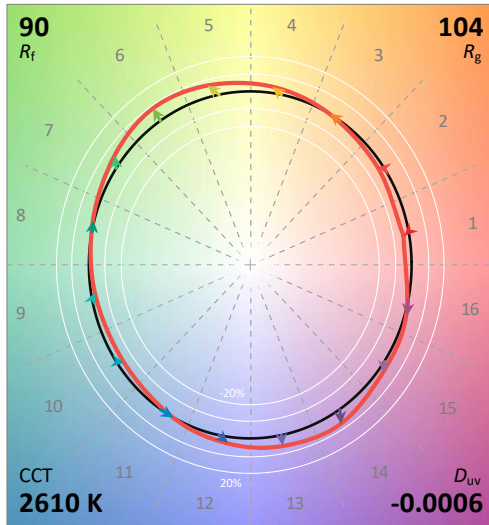
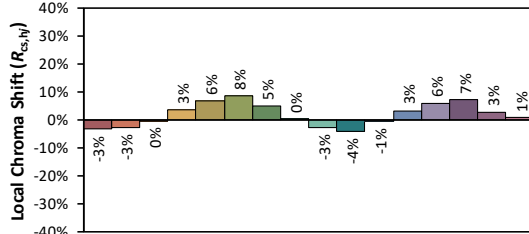
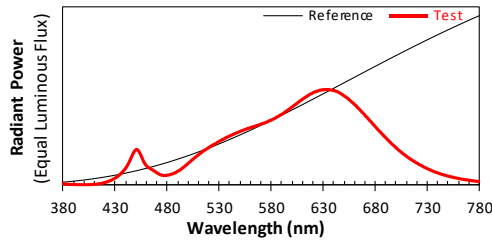
ANSI/IES TM-30-18 Color Rendition Report

Source: User SPD

Manufacturer: VC BRANDS LLC

Date: 2021/12/29

Model: 700TDEBL16XX-LED927



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

x 0.4662
 y 0.4102
 u' 0.2668
 v' 0.5282

CIE 13.3-1995
(CRI)

R_a 92
 R_g 72

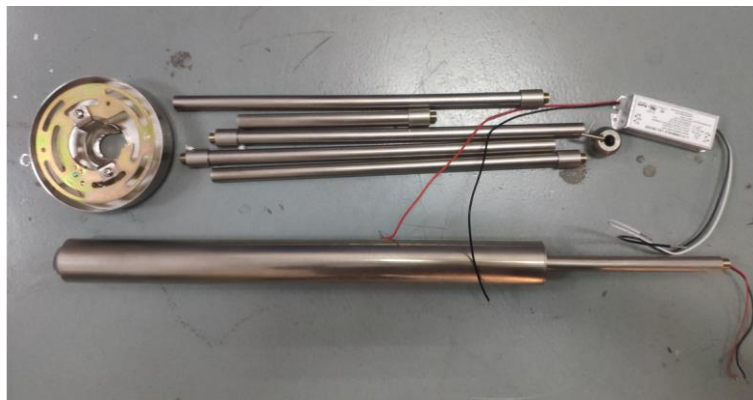
***** End of Page *****

TEST REPORT

PRODUCT PICTURE (not to scale)



External view of 700TDEBL16XX-LED927

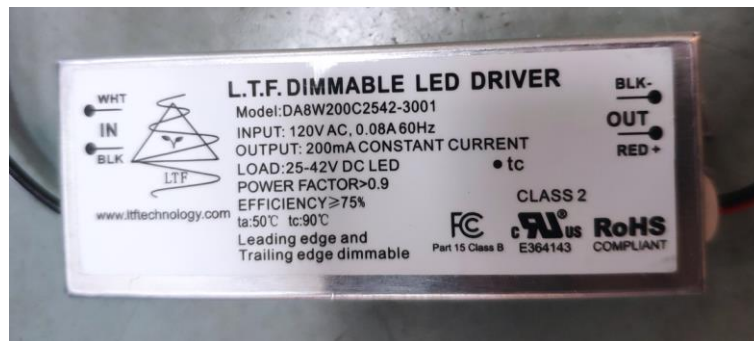


External view of 700TDEBL16XX-LED927

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

TEST REPORT

PRODUCT PICTURE (not to scale)



View of LED Driver DA8W200C2542-3001

In Charge Of Tests:

Done Ye

Done Ye
Engineer

Report Reviewed By

Shelley Ying

Shelley Ying
Reviewer

Attachment: None

***** End of Report *****