

Visual Comfort & Co.

TEST REPORT

SCOPE OF WORK

LM-79 testing report

REPORT NUMBER

250530064GZU-007

ISSUE DATE

20 June 2025

REVISION DATE

None

NUMBER OF PAGES

13

DOCUMENT CONTROL NUMBER

Report format for LM-79_G

© 2024 INTERTEK



Report No.: 250530064GZU-007

TEST REPORT

TEST OF ONE LED LUMINAIRE

MODEL NO. KWWS69927XXXALB

Remark: "XXX" are denoted appearance color.

RENDERED TO

Visual Comfort & Co.

Contact Name: Javan Rivero

7400 LINDER AVE. SKOKIE, IL, 60077

Email: jrivero@visualcomfort.com

Phone No.: 847-410-4552

<u>TEST:</u>	Electrical and Photometric as required to the IES LM-79 test standard.
<u>AUTHORIZATION:</u>	The testing performed was authorized by signed quote number: QGZ250527132.
<u>STANDARDS USED:</u>	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-79-24	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
<u>DESCRIPTION OF SAMPLE:</u>	The client submitted one sample of model KWWS69927HABALB. The sample was received by Intertek in undamaged condition and tested as received. The sample designation was S250530064-001.
<u>MANUFACTURER /FACTORY & ADDRESS:</u>	Shao Guan Weng Yuan Pearly Gates Furniture Manufacturing Co., Ltd. GuanYing Industrial Park, GuanDu Economic Development Experimental Zone, Weng Yuan County, Guang Dong Province, PRC. 512625.
<u>DATES OF TESTS:</u>	12 June 2025
<u>ISSUED BY:</u>	Intertek Testing Services Shenzhen Ltd. Guangzhou Branch
<u>TEST LOCATION:</u>	Room101/301/401/102/202/302/402/502/602/702/802, No. 7-2, Caipin Road, Huangpu District, Guangzhou, Guangdong, China

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

TEST REPORT

SUMMARY

Model Number:	KWWS69927HABALB
Description:	LED Luminaries
Brand Name:	--

Test Condition: 120V, 60Hz For KWWS69927HABALB

Criteria	Result
Total Lumen Output	1314.6 lm
Total Power	31.9 W
Luminaire Efficacy	41.2 lm/W
S/MH(C0/180)	1.26
S/MH(C90/270)	1.26
Correlated Color Temperature (CCT)	2649 K
Color Rendering Index (CRI)	93
R9	61
Chromaticity Coordinate (x)	0.4640
Chromaticity Coordinate (y)	0.4113
Chromaticity Coordinate (u')	0.2648
Chromaticity Coordinate (v')	0.5283

Remark:

N/A

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

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	D215S	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

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 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

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

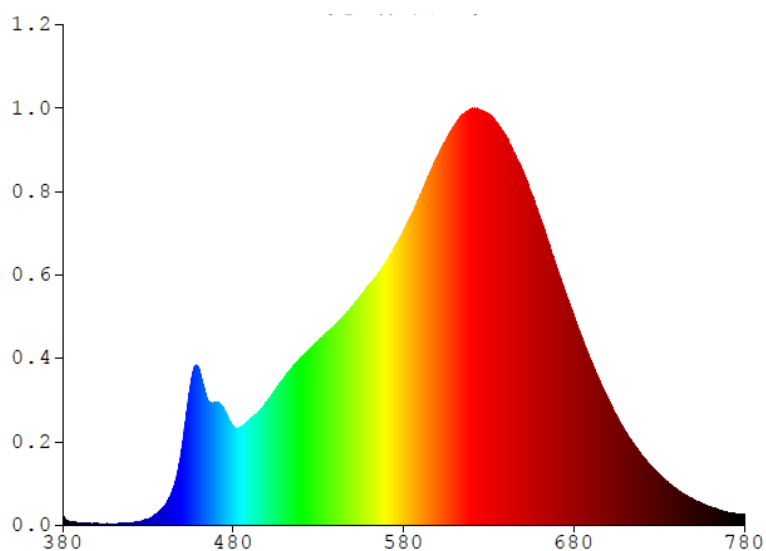
TEST REPORT

RESULTS OF TESTS

Test Condition: 120V, 60Hz For KWWS69927HABALB

Spectral Distribution over Visible Wavelengths

nm	mW/nm	nm	mW/nm	nm	mW/nm	nm	mW/nm	nm	mW/nm
380	0.6597	480	8.4094	580	25.0870	680	17.8170	780	0.9334
385	0.2444	485	8.4141	585	26.4910	685	15.8460		
390	0.1693	490	9.0751	590	28.1610	690	14.0350		
395	0.1546	495	9.6518	595	29.7990	695	12.3290		
400	0.1295	500	10.5450	600	31.3390	700	10.7500		
405	0.1304	505	11.5500	605	32.7360	705	9.3534		
410	0.1231	510	12.5370	610	34.0630	710	8.0227		
415	0.1693	515	13.4650	615	34.9190	715	6.9375		
420	0.2348	520	14.3310	620	35.4350	720	5.9302		
425	0.3300	525	14.9710	625	35.2690	725	5.0823		
430	0.5554	530	15.6650	630	35.0110	730	4.3141		
435	0.9383	535	16.4100	635	34.2110	735	3.6757		
440	1.6980	540	17.0320	640	33.1250	740	3.0992		
445	3.1580	545	17.8260	645	31.6140	745	2.6250		
450	6.6562	550	18.6110	650	30.1900	750	2.2235		
455	11.9490	555	19.5930	655	28.2380	755	1.8567		
460	13.3150	560	20.4680	660	26.2420	760	1.5474		
465	10.6870	565	21.3130	665	24.1170	765	1.3176		
470	10.4310	570	22.5520	670	21.8820	770	1.1155		
475	9.7513	575	23.6820	675	19.3940	775	0.9576		



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

TEST REPORT

RESULTS OF TESTS (cont'd)

Test Condition: 120V, 60Hz For KWWS69927HABALB

Total operation burning time: 60 minutes

Stabilization time: 30 minutes

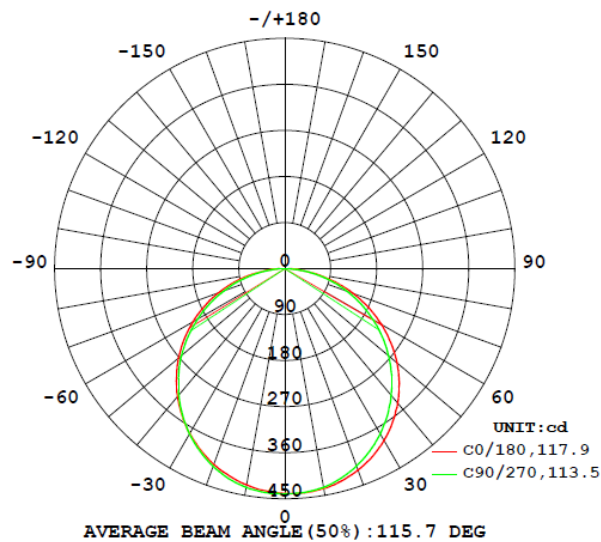
Photometric Measurements at 25°C – Distribution Method

Intertek Sample No.	Base Orientation	Correlated Color Temperature (K)	CRI	R9	CIE 31'	CIE 31'	CIE 76'	CIE 76'
					Chromaticit y	Chromaticit y	Chromaticit y	Chromaticit y
					Coordinate (x)	Coordinate (y)	Coordinate (u')	Coordinate (v')
KWWS69927HABALB								
S2505300 64-001	base-up	2649	93	61	0.4640	0.4113	0.2648	0.5283

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	Lumen
						Flux (Lumens)	Efficacy (Lumens Per Watt)
KWWS69927HABALB							
S2505300 64-001	base-up	120.1	270.0	31.9	0.985	1314.6	41.2

Intensity (Candlepower) Summary at 25°C - Candelas



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

TEST REPORT

RESULTS OF TESTS (cont'd)

Test Condition: 120V, 60Hz For KWWS69927HABALB

Intensity (Candlepower) Summary at 25°C - Candelas

V \ H(°)	0	22.5	45	67.5	90
0	439.6	441.3	440.9	439.1	440.2
5	439.6	441.5	440.9	438.4	438.8
10	436.5	437.9	437.4	434.7	434.2
15	429.4	432.0	429.5	425.5	424.0
20	419.0	421.1	417.8	412.4	410.4
25	405.2	406.4	402.2	396.1	393.2
30	387.7	388.8	383.3	375.9	372.9
35	366.9	367.6	360.7	353.5	349.7
40	343.6	342.7	335.4	327.6	323.9
45	316.6	315.2	307.7	299.3	295.6
50	286.6	284.3	277.0	269.1	265.1
55	253.3	251.4	244.0	236.4	232.7
60	218.4	216.1	209.1	202.2	199.3
65	181.0	178.7	173.0	166.8	164.6
70	141.9	139.9	135.3	130.6	129.2
75	101.8	100.8	97.5	94.3	93.6
80	62.0	61.7	60.2	58.3	58.0
85	24.8	25.1	24.8	24.4	24.8
90	0.9	1.0	0.9	2.6	2.7
95	0.1	0.2	0.3	0.2	0.2
100	0.1	0.2	0.2	0.2	0.2
105	0.2	0.2	0.2	0.2	0.2
110	0.2	0.2	0.2	0.2	0.2
115	0.2	0.2	0.2	0.2	0.2
120	0.2	0.2	0.2	0.2	0.2
125	0.3	0.3	0.3	0.3	0.3
130	0.4	0.4	0.4	0.3	0.4
135	0.4	0.4	0.4	0.4	0.4
140	0.5	0.5	0.5	0.5	0.5
145	0.6	0.6	0.6	0.6	0.6
150	0.6	0.6	0.6	0.6	0.6
155	0.7	0.7	0.7	0.7	0.7
160	0.7	0.7	0.7	0.7	0.7
165	0.7	0.7	0.7	0.7	0.7
170	0.7	0.7	0.7	0.7	0.7
175	0.7	0.7	0.7	0.7	0.7
180	0.7	0.7	0.7	0.7	0.6

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

TEST REPORT

RESULTS OF TESTS (cont'd)

Test Condition: 120V, 60Hz For KWW569927HABALB

Zonal Lumen Summary and Percentages at 25°C

Zone	Lumens (lm)	% Luminaire (%)
KWW569927HABALB		
0-30	344.4	26.2
0-40	566.3	43.1
0-60	1013.1	77.1
0-90	1312.6	99.9
60-90	299.5	22.8
0-180	1314.6	100.0

Beam Angle

Total Beam Angle(°)

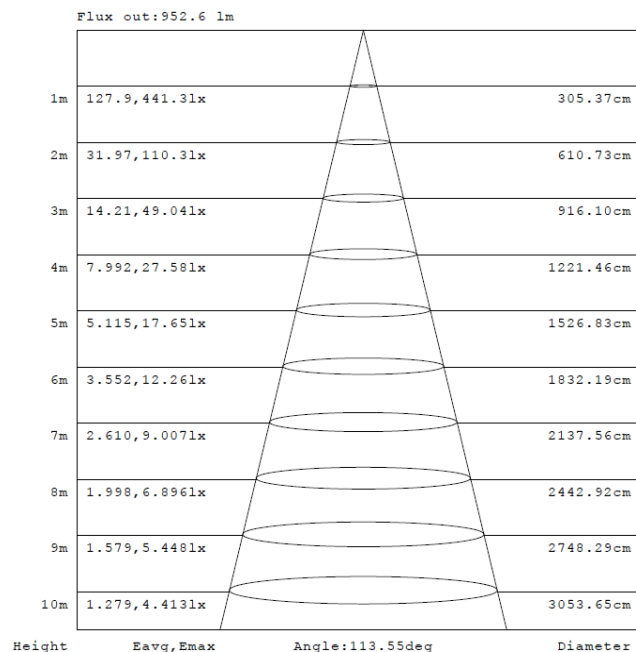
115.7

Illumination Plots

Model No.: KWW569927HABALB

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.

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

TEST REPORT

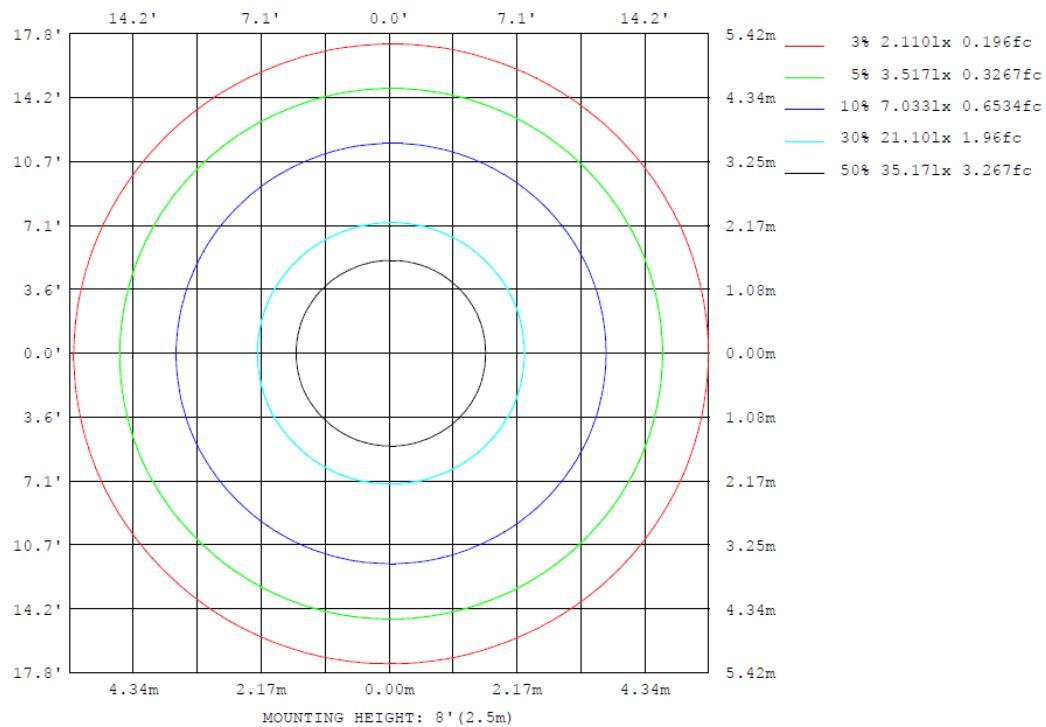
RESULTS OF TESTS (cont'd)

Test Condition: 120V, 60Hz For KWWS69927HABALB

Model No.: KWWS69927HABALB

Mount Height: 2.5 m

Isoillumination Plot



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

TEST REPORT

RESULTS OF TESTS (cont'd)

Test Condition: 120V, 60Hz For KWWS69927HABALB

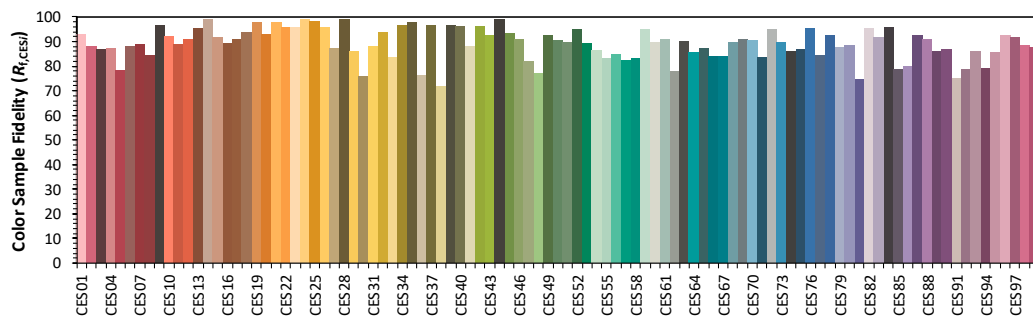
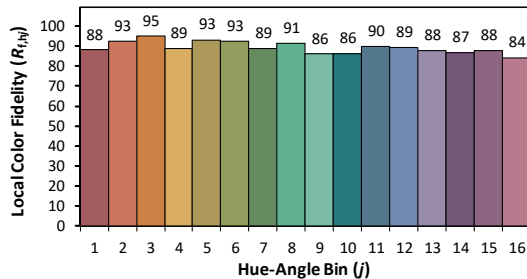
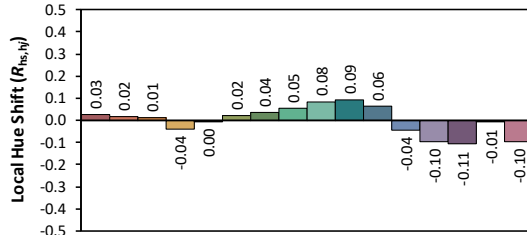
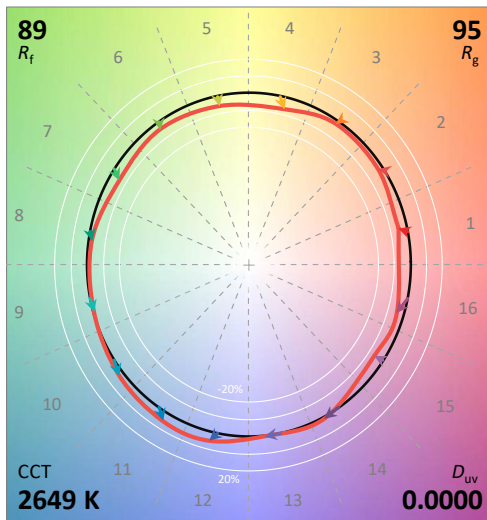
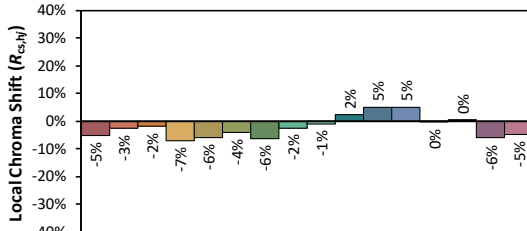
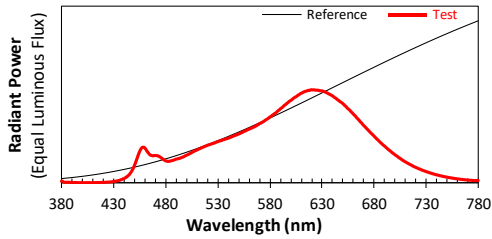
ANSI/IES TM-30-18 Color Rendition Report

Source: User SPD

Manufacturer: Visual Comfort & Co.

Date: 2025/6/12

Model: KWWS69927HABALB



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

x 0.4640
 y 0.4113
 u' 0.2648
 v' 0.5283

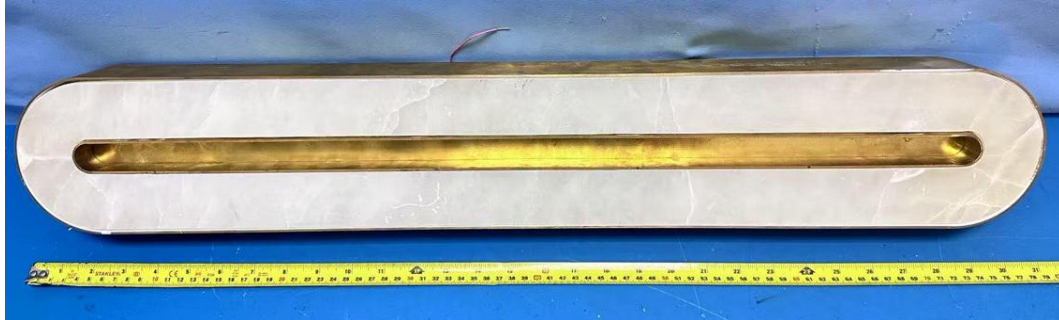
CIE 13.3-1995
(CRI)
 R_a 93
 R_g 61

Colors are for visual orientation purposes only. Created with the ANSI/IES TM-30-18 Calculator Version 2.00.

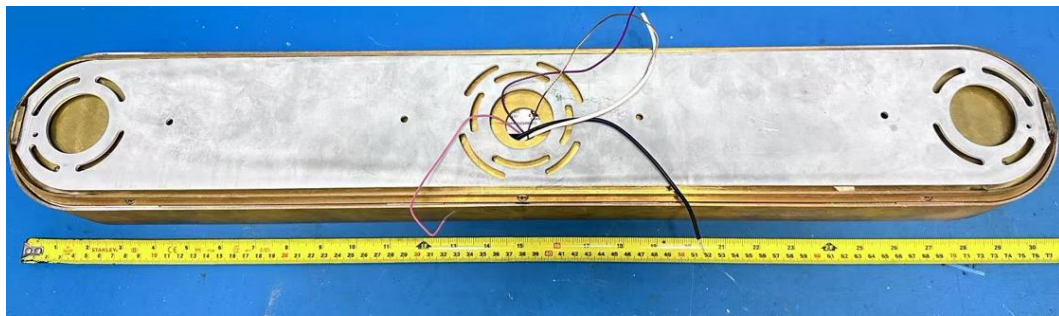
***** End of Page *****

TEST REPORT

PRODUCT PICTURE (not to scale)



External view of KWW569927HABALB

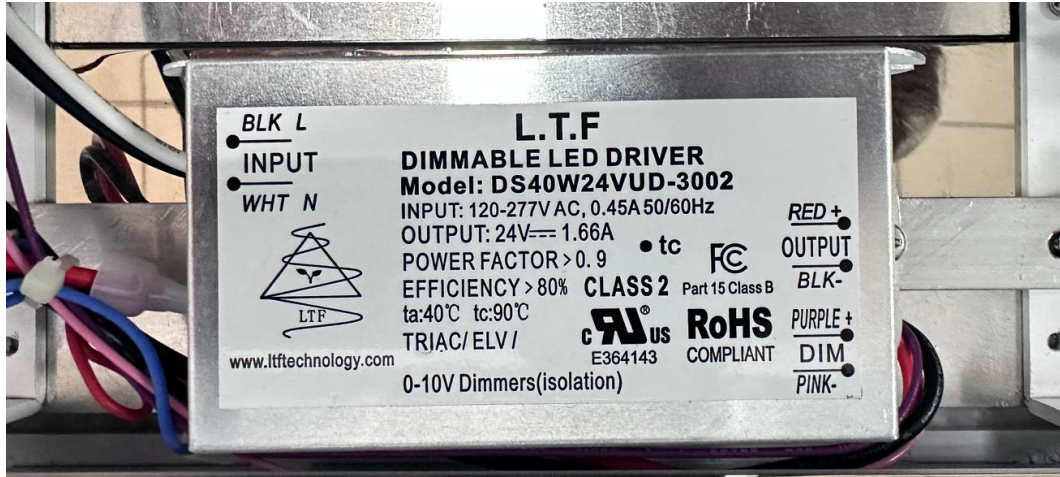


External view of KWW569927HABALB

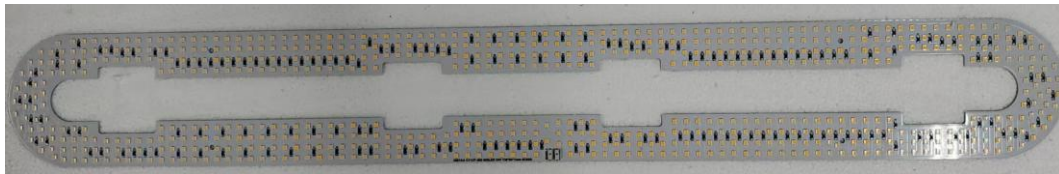
***** End of Page *****

TEST REPORT

PRODUCT PICTURE (not to scale)



View of LED driver DS40W24VUD-3002



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 *****