

Visual Comfort & Co.

TEST REPORT

SCOPE OF WORK

LM-79 testing report

REPORT NUMBER

250530064GZU-001

ISSUE DATE

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REVISION DATE

None

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Report format for LM-79_G

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Report No.: 250530064GZU-001

TEST REPORT

TEST OF ONE LED LUMINAIRE

MODEL NO. KWCH70127XXXALB

Remark: "XXX" are denoted appearance color.

RENDERED TO

Visual Comfort & Co.

Contact Name: Javan Rivero

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<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 KWCH70127HABALB. The sample was received by Intertek in undamaged condition and tested as received. The sample designation was S250530064-005.
<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>	09 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

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TEST REPORT

SUMMARY

Model Number:	KWCH70127HABALB
Description:	LED Luminaries
Brand Name:	--

Test Condition: 120V, 60Hz For KWCH70127HABALB

Criteria	Result
Total Lumen Output	2707.5 lm
Total Power	62.4 W
Luminaire Efficacy	43.4 lm/W
S/MH(C0/180)	1.18
S/MH(C90/270)	1.16
Correlated Color Temperature (CCT)	2666 K
Color Rendering Index (CRI)	94
R9	67
Chromaticity Coordinate (x)	0.4621
Chromaticity Coordinate (y)	0.4102
Chromaticity Coordinate (u')	0.2641
Chromaticity Coordinate (v')	0.5275

Remark:

N/A

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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	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

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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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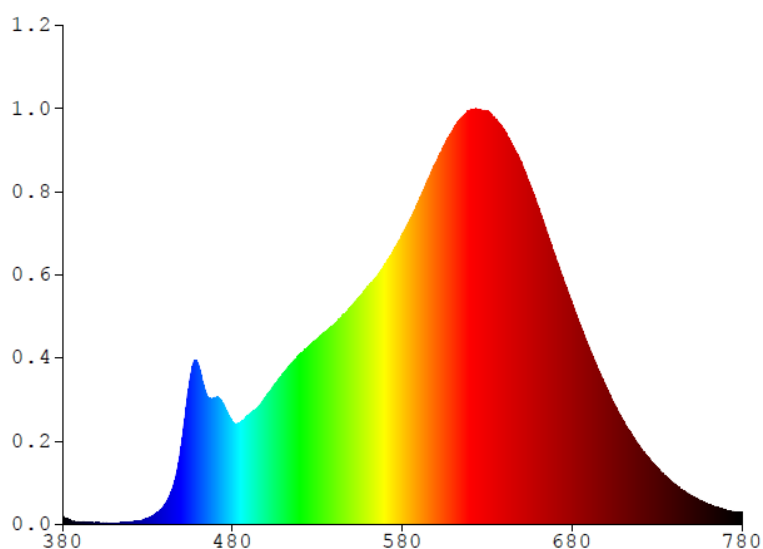
TEST REPORT

RESULTS OF TESTS

Test Condition: 120V, 60Hz For KWCH70127HABALB

Spectral Distribution over Visible Wavelengths

nm	mW/nm	nm	mW/nm	nm	mW/nm	nm	mW/nm	nm	mW/nm
380	1.3571	480	15.9200	580	44.9690	680	34.3210	780	1.9690
385	0.4588	485	15.8680	585	47.5320	685	30.7520		
390	0.3301	490	17.0660	590	50.3260	690	27.4680		
395	0.2737	495	18.1590	595	53.4900	695	24.2020		
400	0.2430	500	19.8700	600	56.0600	700	21.2950		
405	0.2215	505	21.7320	605	58.8490	705	18.6160		
410	0.1901	510	23.3800	610	61.2440	710	16.0870		
415	0.2817	515	25.0690	615	63.0660	715	14.0030		
420	0.3747	520	26.5070	620	64.2100	720	12.0440		
425	0.5947	525	27.4930	625	64.3440	725	10.2710		
430	0.9564	530	28.8010	630	63.9990	730	8.8165		
435	1.6424	535	29.9660	635	62.8280	735	7.4707		
440	2.9853	540	31.0140	640	61.1870	740	6.3231		
445	5.6743	545	32.5220	645	58.7190	745	5.3238		
450	12.3210	550	33.8260	650	56.2210	750	4.4851		
455	22.3690	555	35.3500	655	52.8000	755	3.7293		
460	24.7070	560	36.9440	660	49.1980	760	3.1736		
465	19.9740	565	38.3870	665	45.4010	765	2.6770		
470	19.6790	570	40.4190	670	41.6480	770	2.2821		
475	18.4980	575	42.5230	675	37.1520	775	1.9540		



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TEST REPORT

RESULTS OF TESTS (cont'd)

Test Condition: 120V, 60Hz For KWCH70127HABALB

Total operation burning time: 60 minutes

Stabilization time: 30 minutes

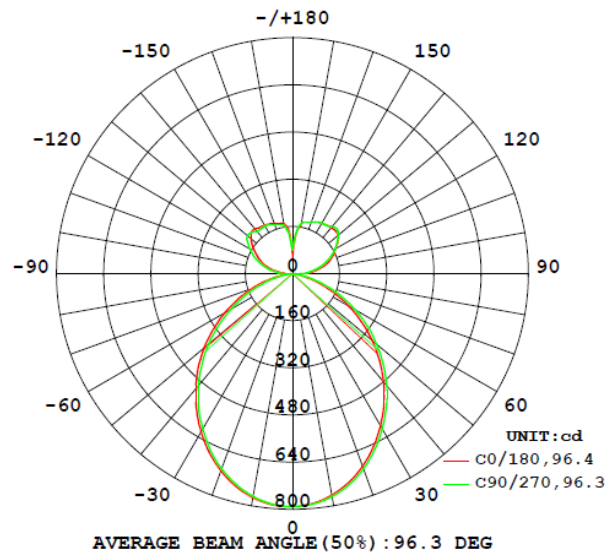
Photometric Measurements at 25°C – Distribution Method

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')
KWCH70127HABALB								
S2505300 64-005	base-up	2666	94	67	0.4621	0.4102	0.2641	0.5275

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)
KWCH70127HABALB							
S2505300 64-005	base-up	120.1	522.6	62.4	0.995	2707.5	43.4

Intensity (Candlepower) Summary at 25°C - Candelas



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TEST REPORT

RESULTS OF TESTS (cont'd)

Test Condition: 120V, 60Hz For KWCH70127HABALB

Intensity (Candlepower) Summary at 25°C - Candelas

V \ H(°)	0	22.5	45	67.5	90
0	790.6	790.7	790.8	790.8	790.9
5	782.8	783.0	783.7	784.3	785.2
10	763.6	764.3	765.7	767.0	768.7
15	734.1	735.2	737.1	739.3	741.8
20	695.4	696.6	698.8	701.4	704.5
25	649.0	650.6	653.3	656.1	659.3
30	596.8	597.8	600.7	603.8	608.2
35	540.4	542.0	545.1	549.2	554.1
40	480.9	482.8	486.8	491.9	497.4
45	417.7	419.4	423.5	428.6	435.2
50	352.2	354.5	359.4	365.5	372.4
55	285.5	288.3	294.3	301.5	309.5
60	219.7	222.4	228.2	235.7	244.2
65	156.6	159.7	166.0	174.0	182.3
70	97.6	100.6	107.1	115.1	123.7
75	44.2	47.0	52.8	60.1	68.5
80	5.9	7.6	7.6	13.5	20.9
85	14.1	12.6	10.7	7.4	5.0
90	38.6	37.5	34.8	31.2	26.9
95	64.6	63.1	59.9	56.0	51.5
100	90.2	88.8	85.4	81.3	76.5
105	114.6	113.2	109.7	105.6	100.8
110	135.6	136.1	132.5	128.5	123.7
115	154.8	157.9	154.4	150.4	145.7
120	168.4	178.0	174.6	170.8	166.3
125	187.1	196.5	193.1	189.5	185.3
130	202.0	209.1	209.6	206.8	202.8
135	206.1	205.2	216.5	215.2	213.6
140	204.4	196.6	210.7	209.2	208.6
145	201.7	193.0	202.9	201.9	199.8
150	197.8	191.3	196.1	198.7	198.2
155	192.7	189.5	191.4	194.4	194.8
160	187.0	186.0	184.0	187.4	187.2
165	182.1	182.4	179.3	179.3	178.8
170	171.2	172.4	172.9	173.3	172.6
175	130.3	132.4	133.6	135.6	138.5
180	51.6	59.0	63.8	79.7	87.2

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TEST REPORT

RESULTS OF TESTS (cont'd)

Test Condition: 120V, 60Hz For KWCH70127HABALB

Zonal Lumen Summary and Percentages at 25°C

Zone	Lumens (lm)	% Luminaire (%)
KWCH70127HABALB		
0-30	586.3	21.7
0-40	932.8	34.5
0-60	1542.2	57.0
0-90	1804.8	66.7
60-90	262.6	9.7
0-180	2707.5	100.0

Beam Angle

Total Beam Angle(°)

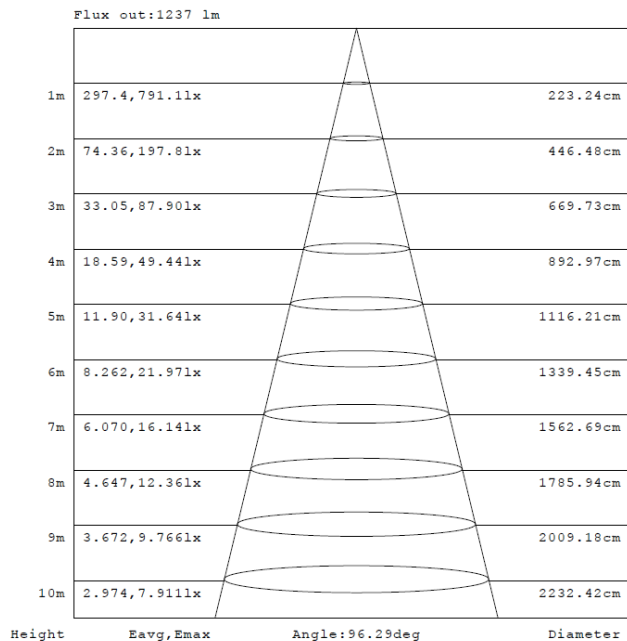
96.3

Illumination Plots

Model No.: KWCH70127HABALB

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

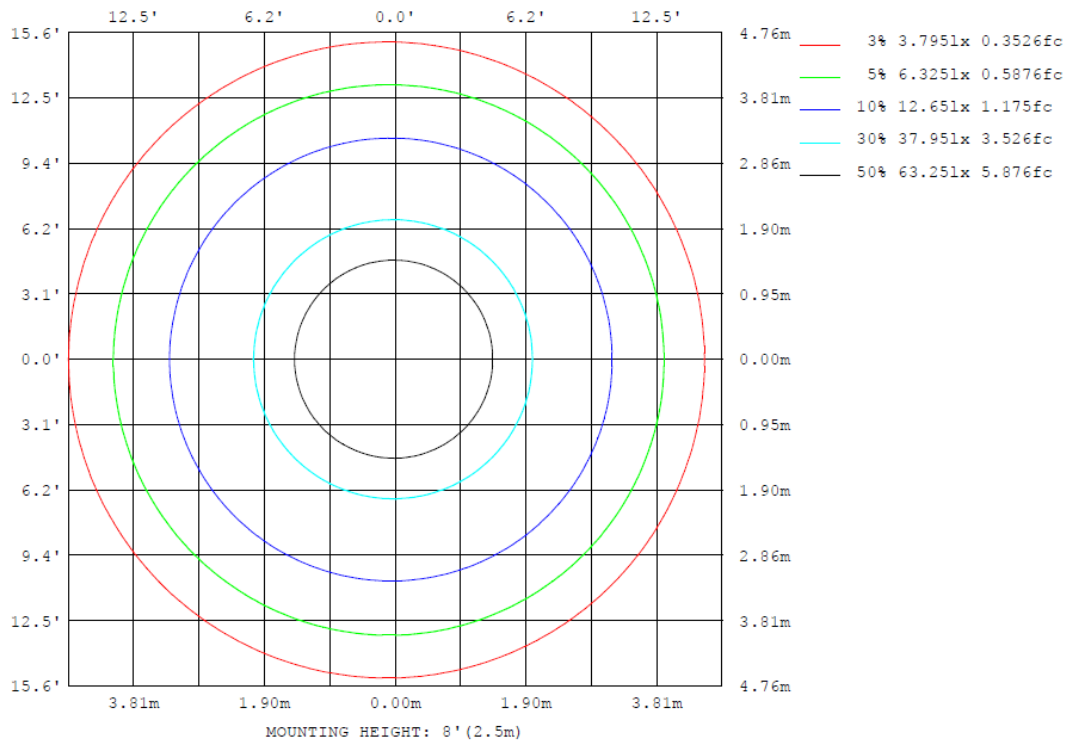
RESULTS OF TESTS (cont'd)

Test Condition: 120V, 60Hz For KWCH70127HABALB

Model No.: KWCH70127HABALB

Mount Height: 2.5 m

Isoillumination Plot



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TEST REPORT

RESULTS OF TESTS (cont'd)

Test Condition: 120V, 60Hz For KWCH70127HABALB

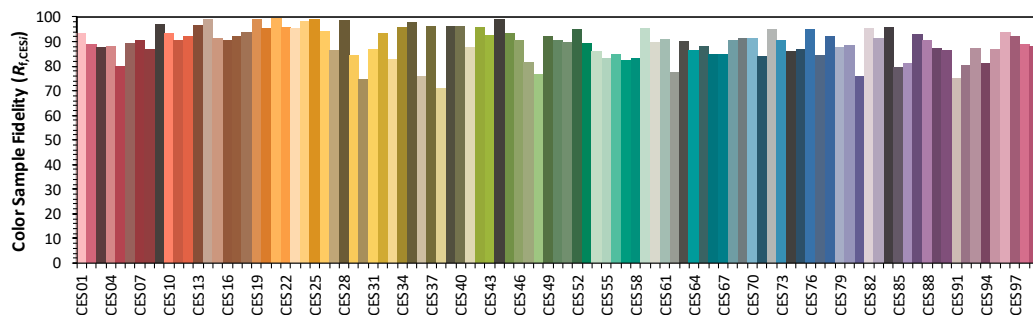
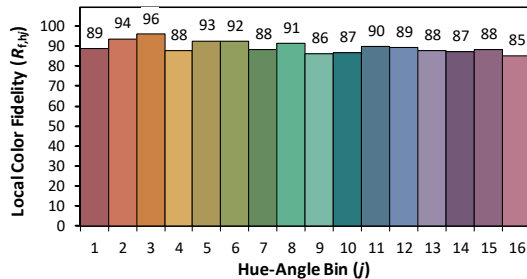
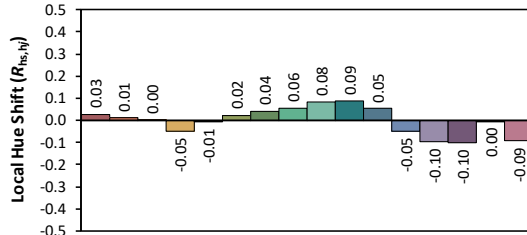
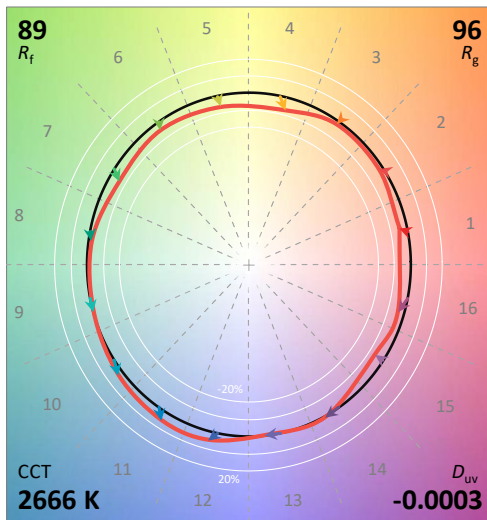
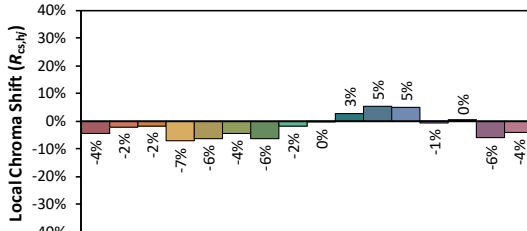
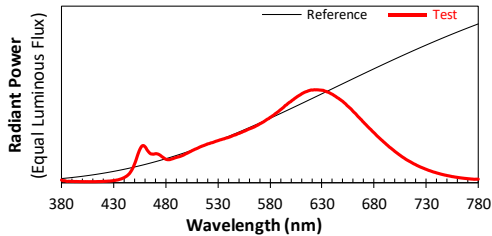
ANSI/IES TM-30-18 Color Rendition Report

Source: User SPD

Manufacturer: Visual Comfort & Co.

Date: 2025/6/9

Model: KWCH70127HABALB



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

x 0.4621
 y 0.4102
 u' 0.2641
 v' 0.5275

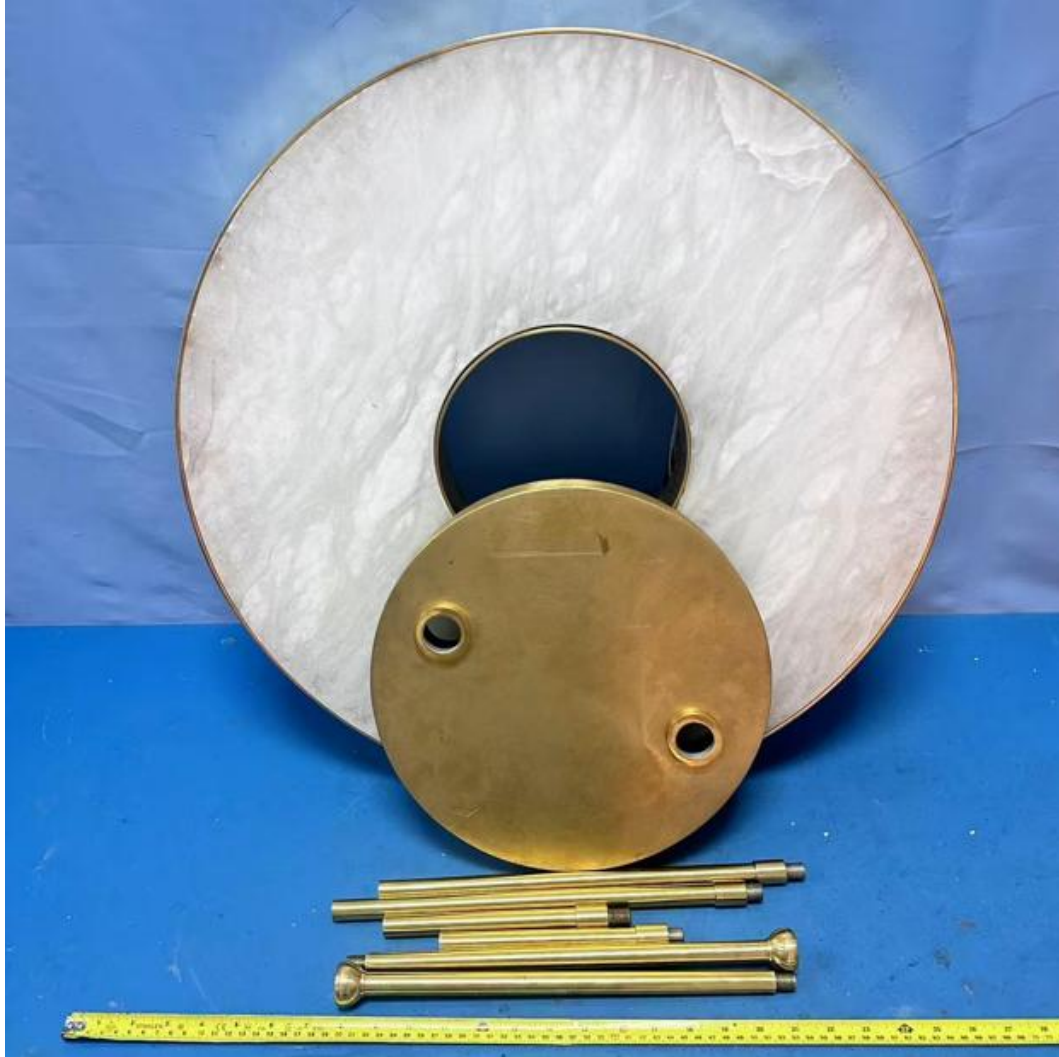
CIE 13.3-1995
(CRI)
 R_a 94
 R_g 67

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

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TEST REPORT

PRODUCT PICTURE (not to scale)



External view of KWCH70127HABALB

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TEST REPORT

PRODUCT PICTURE (not to scale)

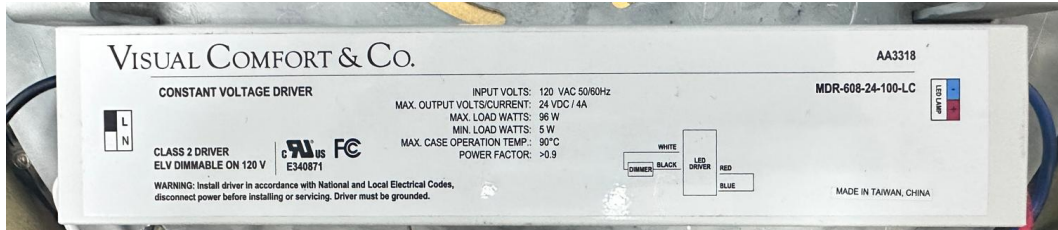


External view of KWCH70127HABALB

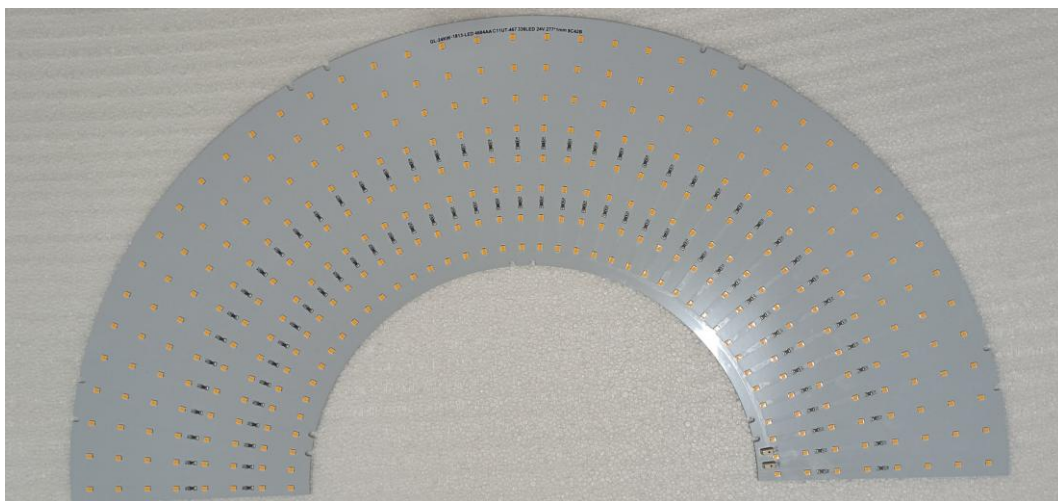
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TEST REPORT

PRODUCT PICTURE (not to scale)



View of LED driver MDR-608-24-100-LC



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 *****