

Visual Comfort and Company

TEST REPORT

SCOPE OF WORK

LM-79 testing report

REPORT NUMBER

230531061GZU-001

ISSUE DATE

20-June-2023

REVISION DATE

None

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Report No.: 230531061GZU-001

TEST REPORT

TEST OF ONE LED LUMINAIRE

MODEL NO. CDWS11127WX

RENDERED TO

Visual Comfort and Company

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: QGZ230526090.

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
IES LM-79: 2019 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 CDWS11127WX. The sample was received in undamaged condition. The sample designation was S230531061-001.

DATES OF TESTS: 15-June-2023

ISSUED BY: Intertek Testing Services Shenzhen Ltd. Guangzhou Branch

TEST LOCATION: Room101/301/401/102/202/302/402/502/602/702/802, No. 7-2, Caipin Road, Huangpu Science City, Guangzhou, Guangdong, China

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TEST REPORT

SUMMARY

Model Number:	CDWS11127WX
Description:	LED Luminaries
Brand Name:	--

Test Condition: 120V, 60Hz For CDWS11127WX

Criteria	Result
Total Lumen Output	501.1 lm
Total Power	18.1 W
Luminaire Efficacy	27.6 lm/W
S/MH(C0/180)	1.41
S/MH(C90/270)	1.06
Correlated Color Temperature (CCT)	2579 K
Color Rendering Index (CRI)	92
R9	53
Chromaticity Coordinate (x)	0.4733
Chromaticity Coordinate (y)	0.4181
Chromaticity Coordinate (u')	0.2677
Chromaticity Coordinate (v')	0.5322

Remark:

Measurement uncertainty for applicable tests has been established.

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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	RC-HT601A	SA047-62

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 EVERFINE - Digital Power Meter., model PLM3000.

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: 3.9480A DC

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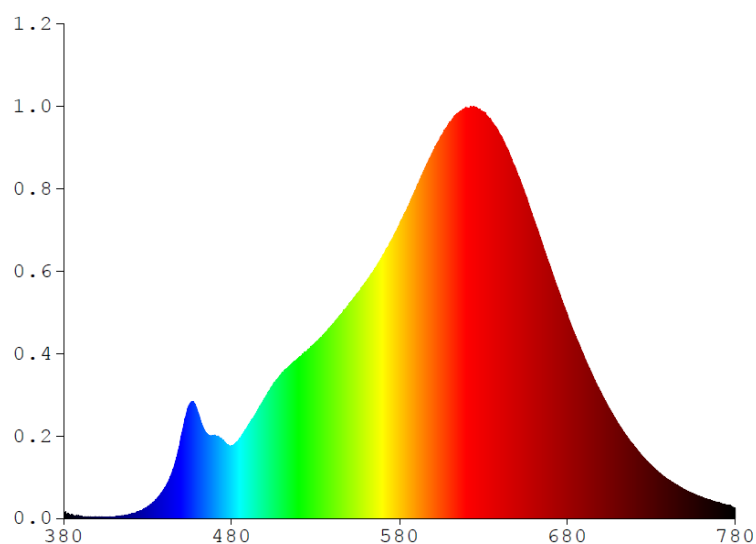
TEST REPORT

RESULTS OF TESTS

Test Condition: 120V, 60Hz For CDWS11127WX

Spectral Distribution over Visible Wavelengths

nm	mW/nm	nm	mW/nm	nm	mW/nm	nm	mW/nm	nm	mW/nm
380	0.0238	480	0.2745	580	1.1118	680	0.7679	780	0.0370
385	0.0118	485	0.3039	585	1.1791	685	0.6851		
390	0.0096	490	0.3533	590	1.2481	690	0.6115		
395	0.0065	495	0.4036	595	1.3232	695	0.5370		
400	0.0043	500	0.4567	600	1.3889	700	0.4738		
405	0.0053	505	0.5104	605	1.4482	705	0.4139		
410	0.0069	510	0.5500	610	1.4981	710	0.3600		
415	0.0094	515	0.5805	615	1.5328	715	0.3120		
420	0.0160	520	0.6067	620	1.5517	720	0.2698		
425	0.0268	525	0.6341	625	1.5534	725	0.2313		
430	0.0435	530	0.6656	630	1.5347	730	0.1995		
435	0.0709	535	0.6980	635	1.4989	735	0.1707		
440	0.1127	540	0.7325	640	1.4477	740	0.1453		
445	0.1824	545	0.7709	645	1.3852	745	0.1252		
450	0.3089	550	0.8107	650	1.3055	750	0.1084		
455	0.4317	555	0.8524	655	1.2211	755	0.0925		
460	0.3989	560	0.8950	660	1.1292	760	0.0794		
465	0.3199	565	0.9394	665	1.0374	765	0.0695		
470	0.3145	570	0.9948	670	0.9450	770	0.0593		
475	0.2954	575	1.0495	675	0.8352	775	0.0514		



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TEST REPORT

RESULTS OF TESTS (cont'd)

Test Condition: 120V, 60Hz For CDWS11127WX

Total operation burning time: 60 minutes

Stabilization time: 45 minutes

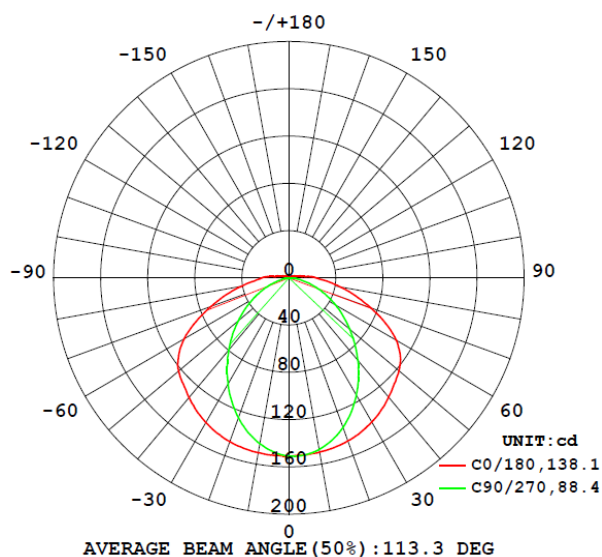
Photometric Measurements at 25°C – Integrating Sphere Method

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')
CDWS11127WX								
S2305310 61-001	--	2579	92	53	0.4733	0.4181	0.2677	0.5322

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)
CDWS11127WX							
S2305310 61-001	--	120.2	152.0	18.1	0.993	501.1	27.6

Intensity (Candlepower) Summary at 25°C – Candelas



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TEST REPORT

RESULTS OF TESTS (cont'd)

Test Condition: 120V, 60Hz For CDWS11127WX

Intensity (Candlepower) Summary at 25°C - Candelas

V \ H(°)	0	22.5	45	67.5	90
0	150.6	150.7	150.7	150.7	150.7
5	150.3	150.7	150.8	150.6	150.6
10	149.7	150.1	149.2	148.0	147.4
15	148.6	148.7	146.1	143.3	142.1
20	146.8	146.3	141.7	136.7	134.5
25	144.2	143.0	135.9	128.5	125.2
30	140.9	138.7	129.0	118.9	114.5
35	136.7	133.6	121.1	108.5	103.1
40	131.8	127.9	112.7	97.5	91.2
45	126.8	121.7	104.0	86.4	79.4
50	122.3	115.9	95.2	75.6	67.7
55	115.6	109.9	87.1	65.1	56.4
60	105.2	101.2	80.0	55.6	45.7
65	90.8	89.5	72.4	46.6	35.5
70	74.0	75.4	64.2	39.1	26.1
75	58.5	61.6	56.2	33.0	17.5
80	44.5	49.5	47.7	27.0	9.8
85	32.3	38.4	39.6	21.2	3.9
90	23.3	29.7	31.8	15.8	0.7
95	16.5	24.2	24.6	10.9	0.0
100	10.4	19.1	18.0	6.7	0.0
105	8.5	14.5	12.3	3.1	0.0
110	6.4	10.2	7.6	0.8	0.0
115	4.4	6.4	4.0	0.1	0.1
120	2.6	3.4	1.3	0.1	0.1
125	1.1	1.1	0.3	0.1	0.1
130	0.2	0.2	0.1	0.1	0.1
135	0.2	0.2	0.1	0.1	0.1
140	0.2	0.2	0.2	0.2	0.2
145	0.2	0.2	0.2	0.2	0.2
150	0.2	0.2	0.2	0.2	0.2
155	0.2	0.2	0.2	0.2	0.2
160	0.3	0.2	0.2	0.2	0.2
165	0.2	0.2	0.3	0.3	0.2
170	0.2	0.2	0.3	0.3	0.3
175	0.2	0.2	0.2	0.2	0.2
180	0.2	0.2	0.2	0.2	0.2

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TEST REPORT

RESULTS OF TESTS (cont'd)

Test Condition: 120V, 60Hz For CDWS11127WX

Zonal Lumen Summary and Percentages at 25°C

Zone	Lumens (lm)	% Luminaire (%)
CDWS11127WX		
0-30	115.6	23.1
0-40	188.5	37.6
0-60	338.5	67.5
0-90	474.4	94.7
60-90	135.9	27.2
0-180	501.1	100.0

Beam Angle

Total Beam Angle (°)

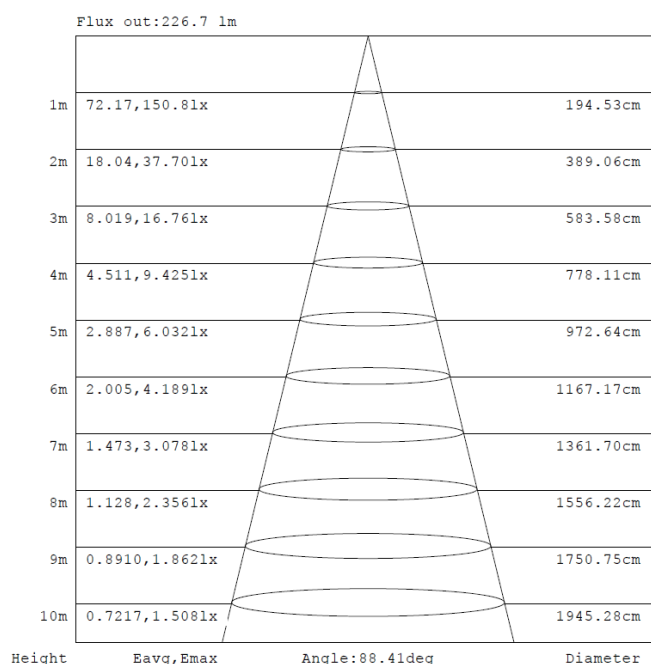
113.3

Illumination Plots

Model No.: CDWS11127WX

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

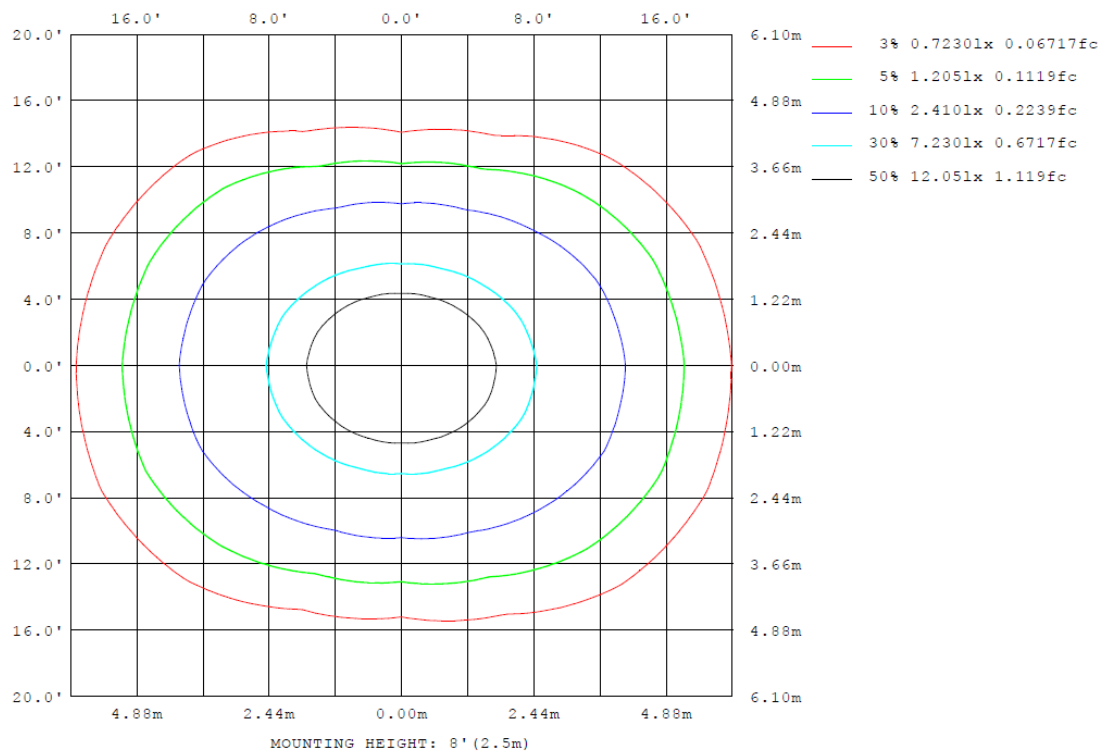
RESULTS OF TESTS (cont'd)

Test Condition: 120V, 60Hz For CDWS11127WX

Model No.: CDWS11127WX

Mount Height: 2.5 m

Isoillumination Plot



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TEST REPORT

RESULTS OF TESTS (cont'd)

Test Condition: 120V, 60Hz For CDWS11127WX

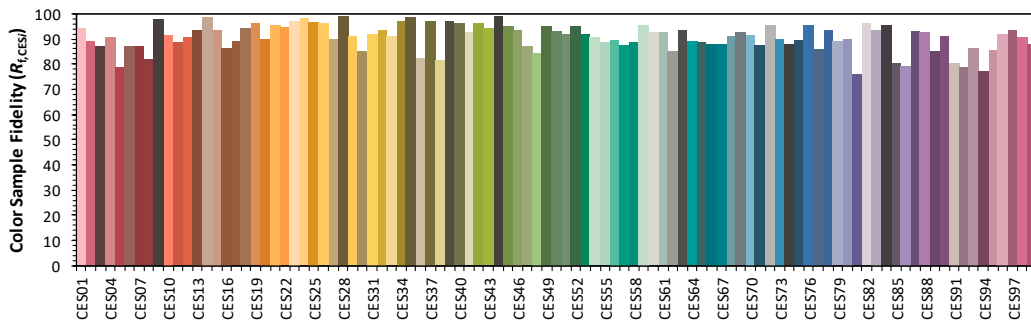
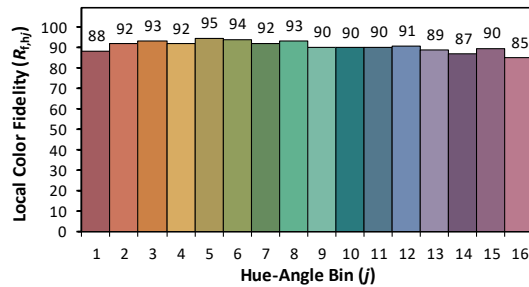
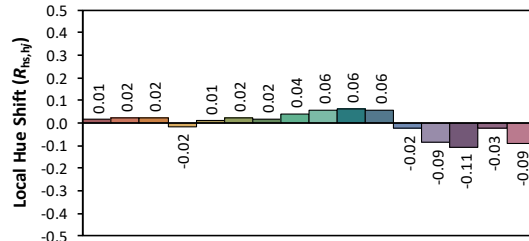
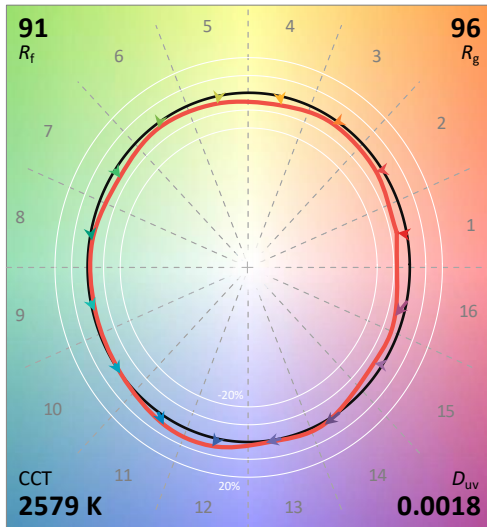
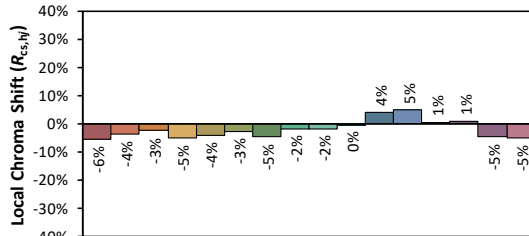
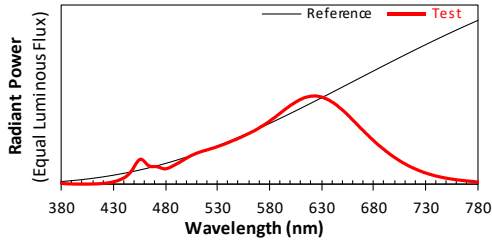
ANSI/IES TM-30-18 Color Rendition Report

Source: User SPD

Manufacturer: Visual Comfort and Company

Date: 2023/6/15

Model: CDWS11127WX



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

x 0.4733
 y 0.4181
 u' 0.2677
 v' 0.5322

CIE 13.3-1995
(CRI)

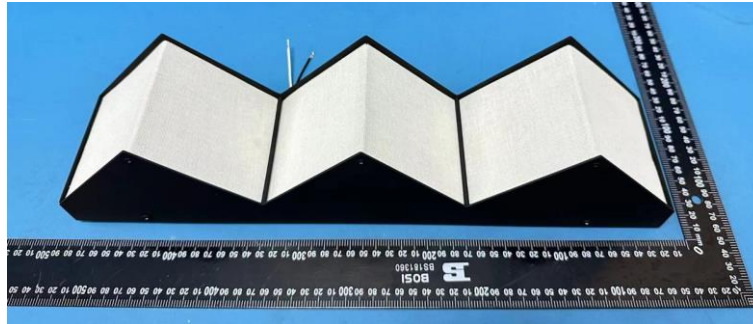
R_a 92
 R_g 53

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

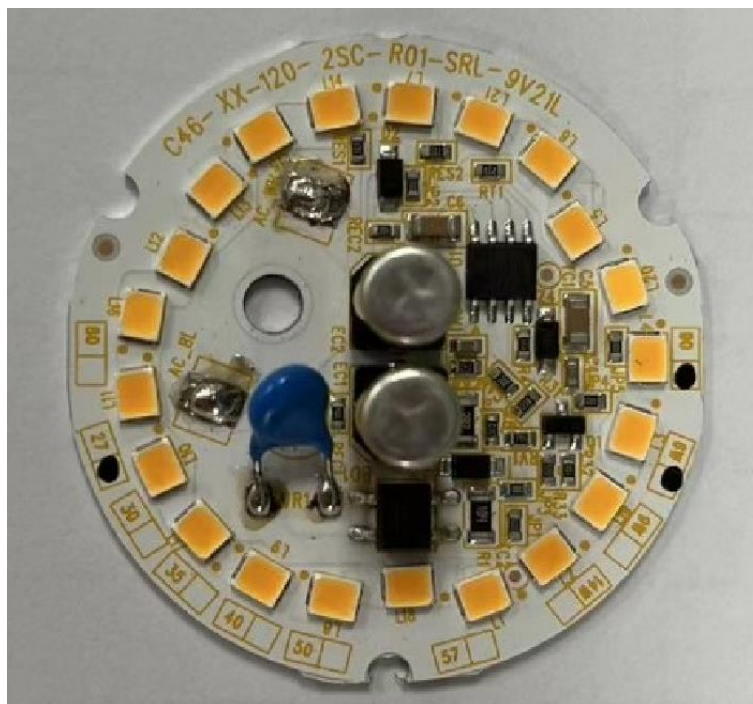
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TEST REPORT

PRODUCT PICTURE (not to scale)



External view of CDWS11127WX



View of LED board

In Charge Of Tests:

Done Ye

Done Ye
Engineer

Report Reviewed By

Shelley Ying

Shelley Ying
Reviewer

Attachment: None

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