

Visual Comfort and Company

TEST REPORT

SCOPE OF WORK

LM-79 testing report

REPORT NUMBER

231016107GZU-002

ISSUE DATE

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REVISION DATE

None

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Report No.: 231016107GZU-002

TEST REPORT

TEST OF ONE LED LUMINAIRE

MODEL NO. CDCH17327XX

(Remark: "XX" are denoted finish color)

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: QGZ231013030.

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 CDCH17327XX. The sample was received in undamaged condition. The sample designation was S231016107-006.

DATES OF TESTS: 28-November-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:	CDCH17327XX
Description:	LED Luminaries
Brand Name:	--

Test Condition: 120V, 60Hz For CDCH17327XX

Criteria	Result
Total Lumen Output	2754.4 lm
Total Power	75.5 W
Luminaire Efficacy	36.5 lm/W
S/MH(C0/180)	1.28
S/MH(C90/270)	2.06
Correlated Color Temperature (CCT)	2541 K
Color Rendering Index (CRI)	94
R9	64
Chromaticity Coordinate (x)	0.4719
Chromaticity Coordinate (y)	0.4107
Chromaticity Coordinate (u')	0.2702
Chromaticity Coordinate (v')	0.5292

Remark:

Measurement uncertainty for applicable tests has been established.

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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 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, 4π 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

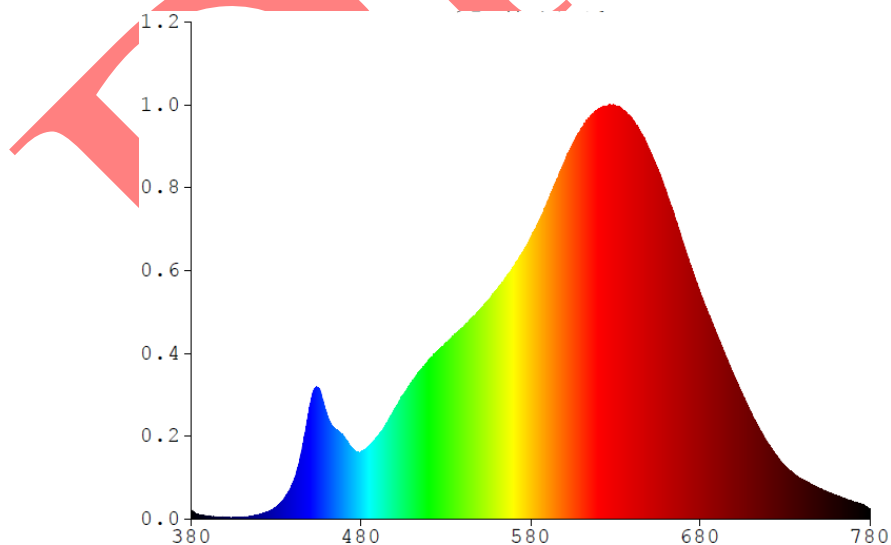
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RESULTS OF TESTS

Test Condition: 120V, 60Hz For CDCH17327XX

Spectral Distribution over Visible Wavelengths

nm	mW/nm	nm	mW/nm	nm	mW/nm	nm	mW/nm	nm	mW/nm
380	0.3193	480	2.0851	580	8.7032	680	7.0061	780	0.3357
385	0.1318	485	2.2619	585	9.2165	685	6.3290		
390	0.0787	490	2.5687	590	9.8286	690	5.7002		
395	0.0531	495	2.9530	595	10.4590	695	5.0729		
400	0.0401	500	3.4080	600	11.0330	700	4.4288		
405	0.0523	505	3.8429	605	11.6340	705	3.8567		
410	0.0592	510	4.2454	610	12.0790	710	3.3012		
415	0.0835	515	4.5881	615	12.4460	715	2.7917		
420	0.1409	520	4.8946	620	12.6650	720	2.3448		
425	0.2261	525	5.1821	625	12.7610	725	1.9535		
430	0.3854	530	5.4350	630	12.7590	730	1.6464		
435	0.6579	535	5.6842	635	12.6510	735	1.4158		
440	1.1338	540	5.9292	640	12.3700	740	1.2338		
445	2.1096	545	6.1916	645	11.9600	745	1.0899		
450	3.5431	550	6.4554	650	11.4590	750	0.9674		
455	4.0082	555	6.7538	655	10.8320	755	0.8501		
460	3.2046	560	7.0834	660	10.1340	760	0.7424		
465	2.7506	565	7.4384	665	9.3470	765	0.6351		
470	2.5344	570	7.8133	670	8.5215	770	0.5490		
475	2.1739	575	8.2103	675	7.6115	775	0.4689		



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RESULTS OF TESTS (cont'd)

Test Condition: 120V, 60Hz For CDCH17327XX

Total operation burning time: 60 minutes

Stabilization time: 45 minutes

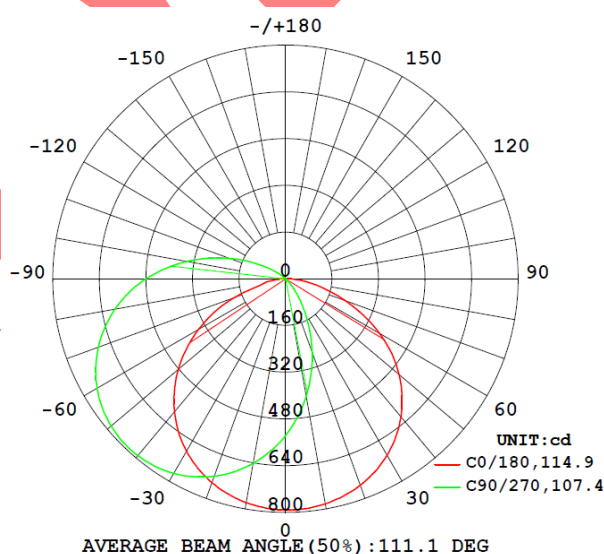
Photometric Measurements at 25°C – Distribution Method

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')
CDCH17327XX								
S2310161 07-006	--	2541	94	64	0.4719	0.4107	0.2702	0.5292

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)
CDCH17327XX							
S2310161 07-006	--	120.1	636.7	75.5	0.988	2754.4	36.5

Intensity (Candlepower) Summary at 25°C – Candelas



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RESULTS OF TESTS (cont'd)

Test Condition: 120V, 60Hz For CDCH17327XX

Intensity (Candlepower) Summary at 25°C - Candelas

V \ H(°)	0	22.5	45	67.5	90
0	791.2	729.6	657.8	584.0	536.4
5	789.5	699.7	613.2	527.9	475.0
10	782.3	663.8	560.1	464.0	409.1
15	769.7	621.1	496.4	391.4	339.1
20	751.6	570.3	422.7	314.4	268.4
25	727.7	510.0	342.4	237.9	199.9
30	697.6	439.6	259.4	170.5	135.7
35	660.9	362.0	186.1	116.1	82.5
40	617.5	282.2	128.2	72.9	43.3
45	567.1	204.8	84.6	35.3	12.5
50	509.5	138.2	48.4	5.2	0.3
55	445.2	88.9	14.9	0.4	0.4
60	372.9	48.9	0.3	0.7	0.4
65	295.4	12.4	0.6	1.0	0.4
70	216.8	0.3	1.1	1.1	0.4
75	147.3	0.7	1.4	1.2	0.5
80	92.5	0.9	1.5	1.2	0.6
85	43.3	1.1	1.5	1.2	0.8
90	8.7	1.3	1.4	1.2	0.9
95	0.3	1.3	1.4	1.2	1.0
100	0.5	1.3	1.4	1.3	1.1
105	0.5	1.2	1.4	1.3	1.2
110	0.6	1.1	1.3	1.3	1.2
115	0.7	1.2	1.3	1.3	1.3
120	0.8	1.2	1.3	1.3	1.3
125	0.9	1.2	1.3	1.3	1.3
130	1.0	1.3	1.3	1.2	1.2
135	1.1	1.3	1.2	1.2	1.1
140	1.1	1.3	1.1	1.2	1.1
145	1.2	1.2	1.1	1.0	1.0
150	1.2	1.1	1.1	0.9	1.0
155	1.3	1.2	0.9	0.9	1.0
160	1.3	1.1	0.9	0.9	1.0
165	1.3	0.9	0.9	0.9	1.0
170	1.1	0.9	0.8	0.8	0.9
175	1.1	0.9	0.8	0.8	0.9
180	1.2	0.8	0.7	0.8	0.9

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RESULTS OF TESTS (cont'd)

Test Condition: 120V, 60Hz For CDCH17327XX

Zonal Lumen Summary and Percentages at 25°C

Zone	Lumens (lm)	% Luminaire (%)
CDCH17327XX		
0-30	454.2	16.5
0-40	751.5	27.3
0-60	1435.5	52.1
0-90	2345.5	85.2
60-90	910.0	33.1
0-180	1506.4	100.0

Beam Angle

Total Beam Angle (°)

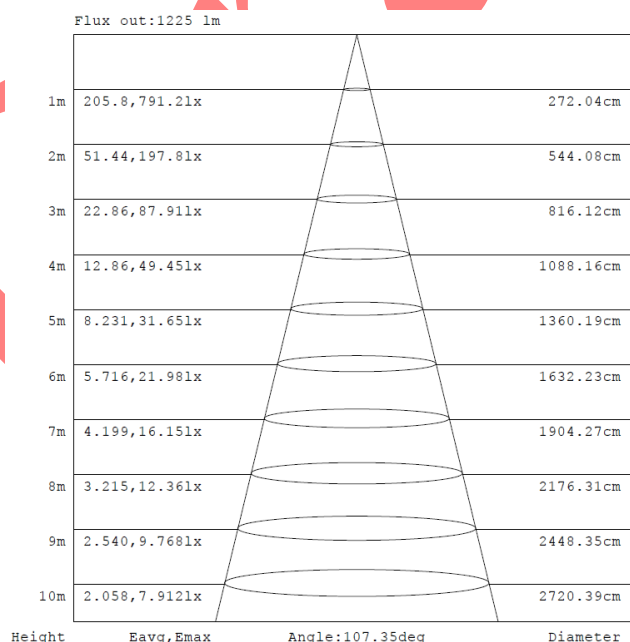
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Illumination Plots

Model No.: CDCH17327XX

Mount Height: 2.5 m

Illuminance - Cone of Light



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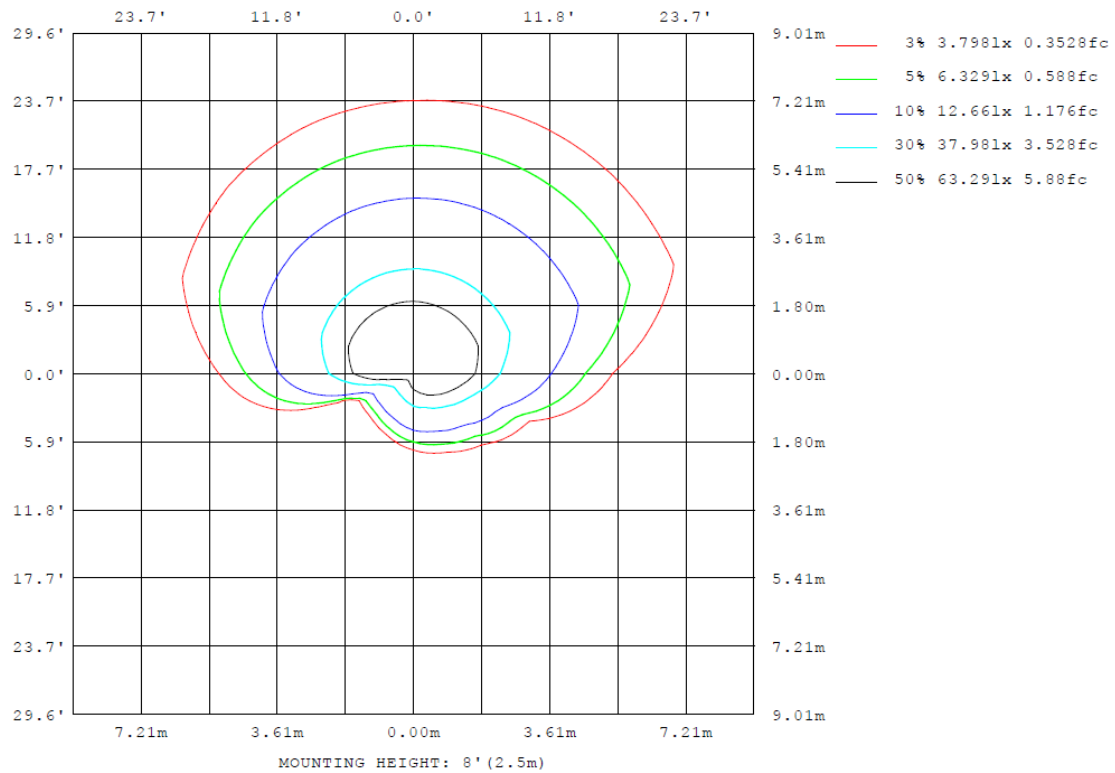
RESULTS OF TESTS (cont'd)

Test Condition: 120V, 60Hz For CDCH17327XX

Model No.: CDCH17327XX

Mount Height: 2.5 m

Isoillumination Plot



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RESULTS OF TESTS (cont'd)

Test Condition: 120V, 60Hz For CDCH17327XX

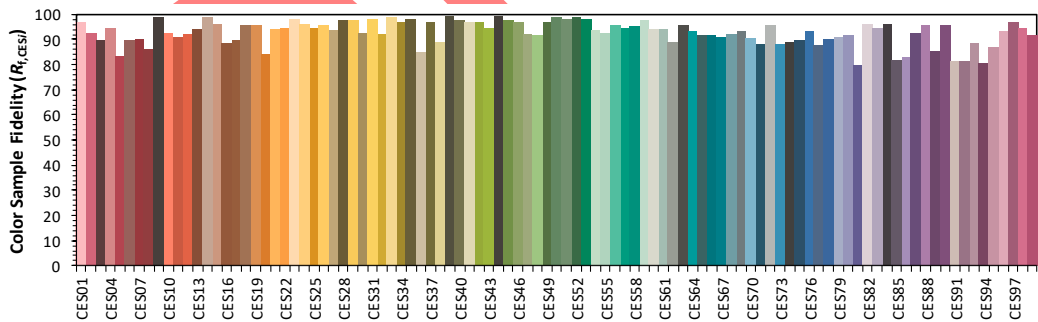
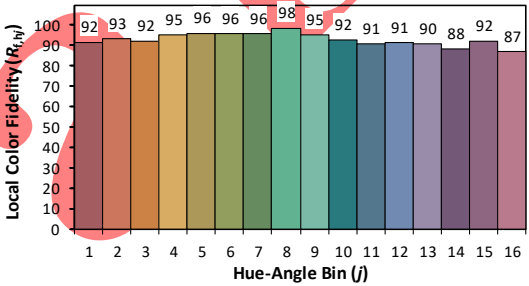
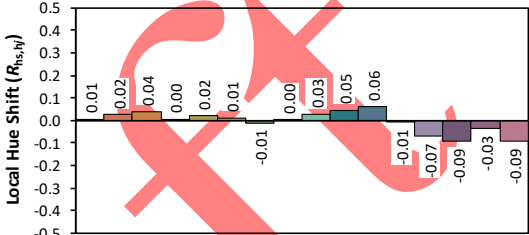
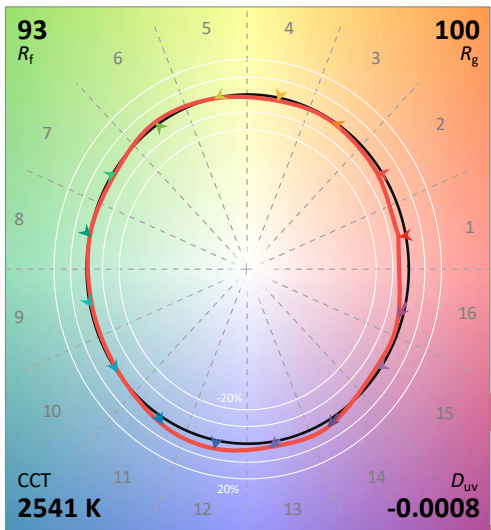
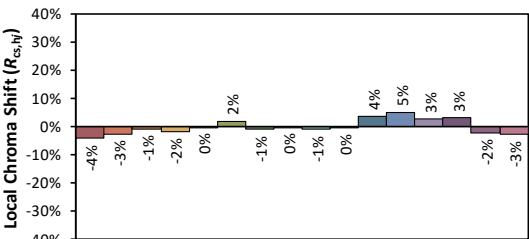
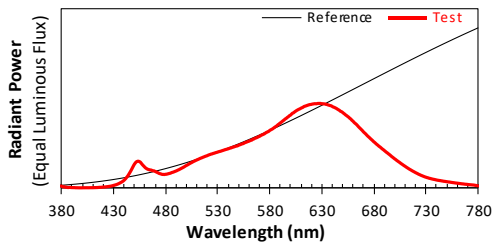
ANSI/IES TM-30-18 Color Rendition Report

Source: User SPD

Manufacturer: Visual Comfort and Company

Date: 2023/11/28

Model: CDCH17327xx



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

x 0.4719
 y 0.4107
 u' 0.2702
 v' 0.5292

CIE 13.3-1995
(CRI)
 R_a 94
 R_g 64

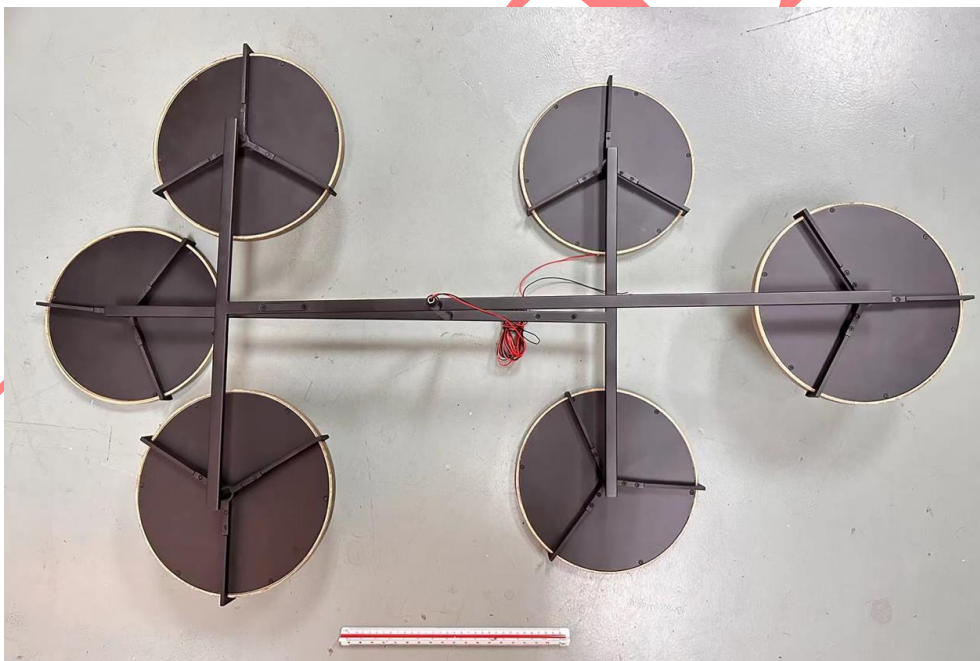
Colors are for visual orientation purposes only. Created with the ANSI/IES TM-30-18 Calculator Version 2.00.

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PRODUCT PICTURE (not to scale)



External view of CDCH17327XX



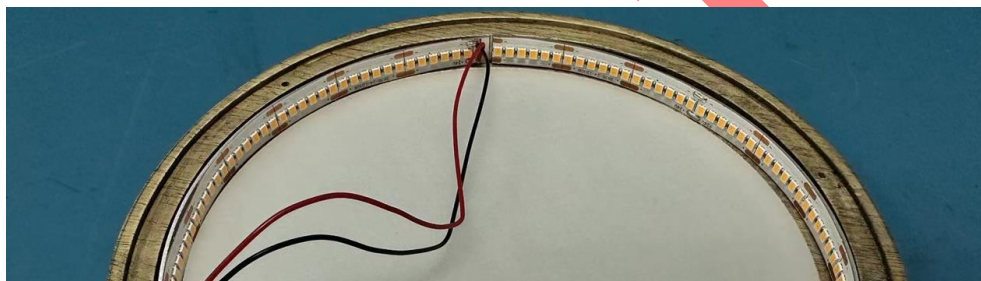
External view of CDCH17327XX

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PRODUCT PICTURE (not to scale)



View of LED driver GBLD001



View of LED board

In Charge Of Tests:

Report Reviewed By

Done Ye
Engineer

Shelley Ying
Reviewer

Attachment: None

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