

Visual Comfort & Co.

TEST REPORT

SCOPE OF WORK

LM-79 testing report

REPORT NUMBER

250623168GZU-034

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REVISION DATE

None

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Report format for LM-79_G

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Report No.: 250623168GZU-034

TEST REPORT

TEST OF ONE LED LUMINAIRE

MODEL NO. MDFM74027XXX

Remark: "XXX" represents the color of the appearance.

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: QGZ250619128.
<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 MDFM74027XXX. The sample was received by Intertek in undamaged condition and tested as received. The sample designation was S250623168-038.
<u>MANUFACTURER /FACTORY & ADDRESS:</u>	Guangzhou Xiongyi Precision Metalworking Co., Ltd Hantang Industrial Zone, Langbian Village, Shiji Town, Panyu District, Guangzhou City, Guangdong Province, China 511450
<u>DATES OF TESTS:</u>	28 July 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:	MDFM74027XXX
Description:	LED Luminaries
Brand Name:	--

Test Condition: 120V, 60Hz For MDFM74027XXX

Criteria	Result
Total Lumen Output	1166.5 lm
Total Power	18.9 W
Luminaire Efficacy	61.6 lm/W
S/MH(C0/180)	1.26
S/MH(C90/270)	1.25
Correlated Color Temperature (CCT)	2730 K
Color Rendering Index (CRI)	93
R9	62
Chromaticity Coordinate (x)	0.4577
Chromaticity Coordinate (y)	0.4106
Chromaticity Coordinate (u')	0.2611
Chromaticity Coordinate (v')	0.5270

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: 3.958A DC

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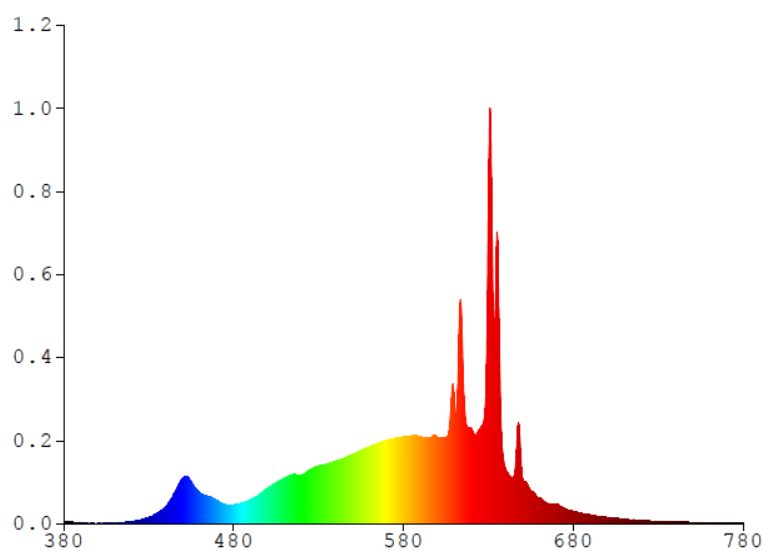
TEST REPORT

RESULTS OF TESTS

Test Condition: 120V, 60Hz For MDFM74027XXX

Spectral Distribution over Visible Wavelengths

nm	mW/nm	nm	mW/nm	nm	mW/nm	nm	mW/nm	nm	mW/nm
380	0.3158	480	5.0580	580	23.1770	680	3.3343	780	0.2121
385	0.4295	485	5.5319	585	23.4020	685	2.8120		
390	0.2407	490	6.4340	590	23.1590	690	2.3932		
395	0.0799	495	7.7684	595	22.7560	695	2.0648		
400	0.2207	500	9.5061	600	23.0380	700	1.7258		
405	0.1441	505	10.9410	605	22.9450	705	1.4676		
410	0.2169	510	12.1310	610	32.6420	710	1.2544		
415	0.3417	515	13.1890	615	42.2770	715	1.0782		
420	0.6101	520	12.9490	620	25.3260	720	0.9041		
425	1.0421	525	14.3390	625	25.3020	725	0.8030		
430	1.6918	530	15.2430	630	83.9950	730	0.6540		
435	2.8143	535	15.8940	635	76.8890	735	0.5660		
440	4.5880	540	16.6720	640	14.6740	740	0.4818		
445	7.9689	545	17.3950	645	12.5080	745	0.4339		
450	12.2160	550	18.4270	650	12.7300	750	0.3684		
455	11.1950	555	19.4340	655	8.8481	755	0.3196		
460	8.2837	560	20.4110	660	7.0399	760	0.2770		
465	7.3242	565	21.3670	665	5.4542	765	0.2418		
470	6.2772	570	22.1600	670	5.4343	770	0.2146		
475	5.1692	575	22.7580	675	3.8459	775	0.2056		



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TEST REPORT

RESULTS OF TESTS (cont'd)

Test Condition: 120V, 60Hz For MDFM74027XXX

Total operation burning time: 60 minutes

Stabilization time: 30 minutes

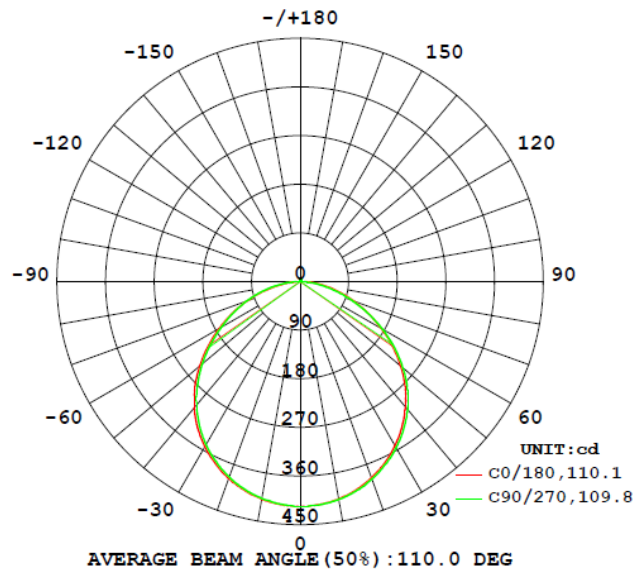
Photometric Measurements at 25°C – Distribution Method

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')
MDFM74027XXX								
S2506231 68-038	base-up	2730	93	62	0.4577	0.4106	0.2611	0.5270

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)
MDFM74027XXX							
S2506231 68-038	base-up	120.1	159.3	18.9	0.990	1166.5	61.6

Intensity (Candlepower) Summary at 25°C - Candelas



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TEST REPORT

RESULTS OF TESTS (cont'd)

Test Condition: 120V, 60Hz For MDFM74027XXX

Intensity (Candlepower) Summary at 25°C - Candelas

V \ H(°)	0	22.5	45	67.5	90
0	416.1	415.5	415.8	415.7	415.8
5	413.9	413.8	414.2	414.4	414.3
10	408.8	408.6	408.9	409.6	409.7
15	399.5	398.8	400.0	400.8	401.1
20	386.5	386.1	386.6	388.7	389.0
25	370.4	369.8	370.6	373.2	373.5
30	350.8	350.3	351.7	354.1	355.3
35	328.4	327.8	329.4	332.5	333.9
40	303.3	302.3	304.3	308.1	309.2
45	274.7	273.7	276.1	280.2	280.8
50	243.1	241.8	243.6	247.6	248.2
55	209.0	206.9	207.9	211.8	212.7
60	173.1	170.2	170.1	173.6	175.4
65	137.8	134.4	133.0	135.7	137.5
70	105.2	100.9	98.8	100.1	101.4
75	75.0	70.1	67.3	67.9	68.1
80	46.7	41.6	39.0	38.7	37.9
85	19.7	15.7	13.4	12.9	11.7
90	1.3	0.4	0.1	0.1	0.1
95	0.1	0.1	0.1	0.1	0.1
100	0.1	0.1	0.1	0.1	0.1
105	0.1	0.2	0.2	0.2	0.2
110	0.2	0.2	0.2	0.3	0.3
115	0.3	0.3	0.3	0.5	0.6
120	0.4	0.7	0.7	0.8	1.1
125	0.6	1.2	1.6	1.8	2.3
130	0.8	2.0	2.7	2.7	3.1
135	1.0	2.7	3.5	3.2	3.7
140	1.2	3.0	4.2	4.0	4.3
145	1.4	3.2	4.9	4.5	4.9
150	1.7	3.2	5.2	5.0	5.4
155	2.2	3.3	5.1	5.1	5.6
160	2.6	3.1	4.8	4.9	5.1
165	3.0	3.2	4.3	4.3	4.3
170	3.7	4.0	3.7	3.1	3.1
175	4.2	4.4	4.4	4.3	4.1
180	0.8	1.3	1.5	1.7	1.5

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TEST REPORT

RESULTS OF TESTS (cont'd)

Test Condition: 120V, 60Hz For MDFM74027XXX

Zonal Lumen Summary and Percentages at 25°C

Zone	Lumens (lm)	% Luminaire (%)
MDFM74027XXX		
0-30	323.0	27.7
0-40	529.1	45.4
0-60	926.7	79.4
0-90	1158.1	99.3
60-90	231.4	19.9
0-180	1166.5	100.0

Beam Angle

Total Beam Angle(°)

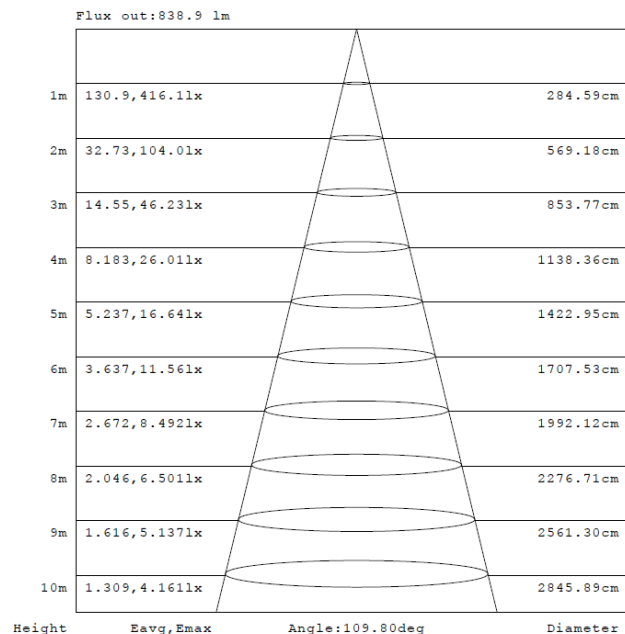
110.0

Illumination Plots

Model No.: MDFM74027XXX

Mount Height: 2.5 m

Illuminance - Cone of Light



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TEST REPORT

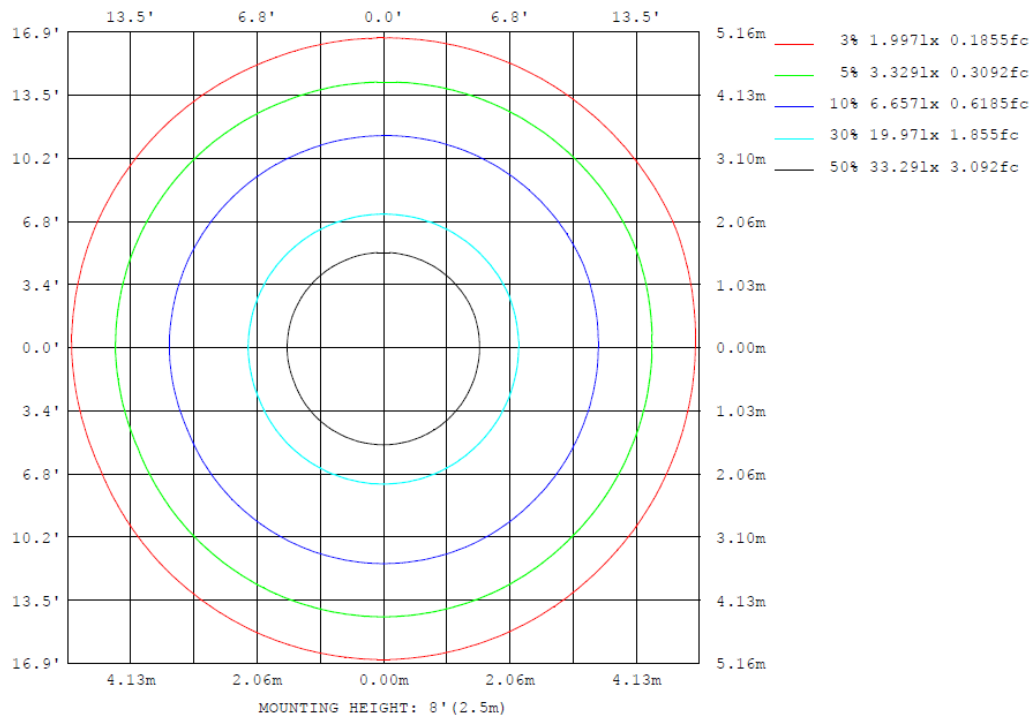
RESULTS OF TESTS (cont'd)

Test Condition: 120V, 60Hz For MDFM74027XXX

Model No.: MDFM74027XXX

Mount Height: 2.5 m

Isoillumination Plot



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TEST REPORT

RESULTS OF TESTS (cont'd)

Test Condition: 120V, 60Hz For MDFM74027XXX

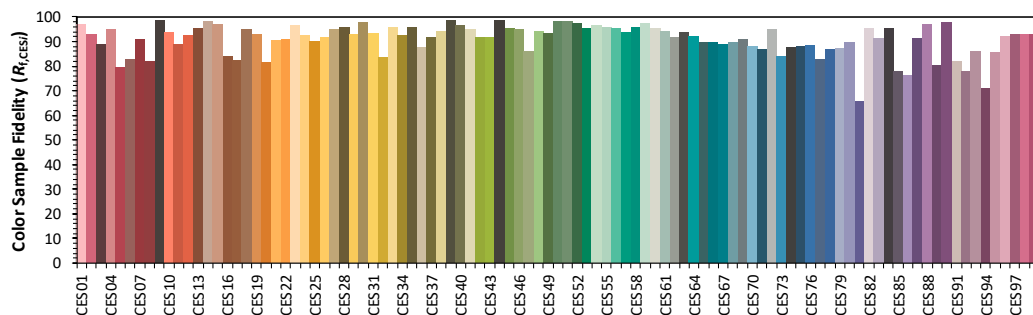
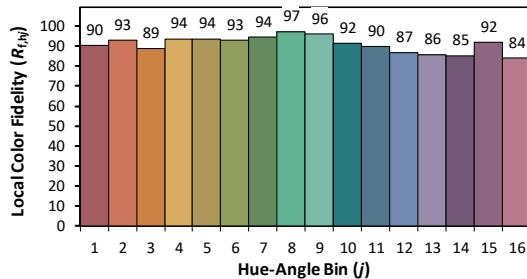
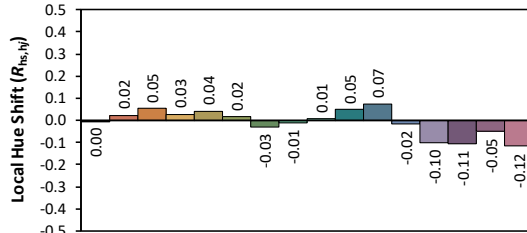
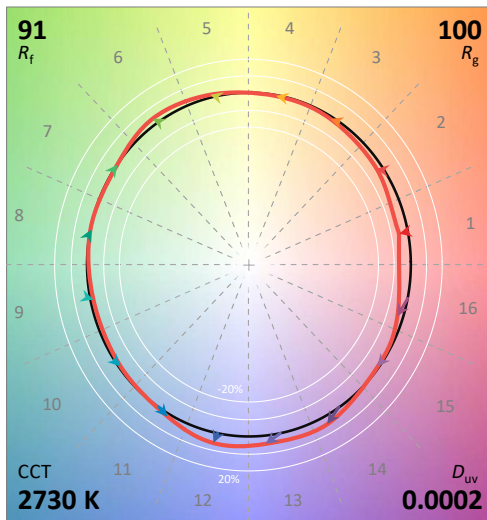
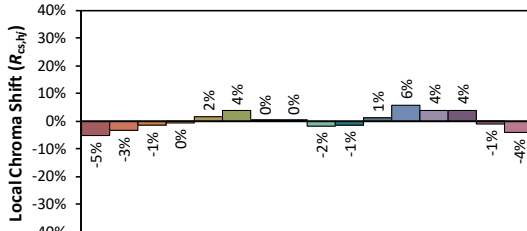
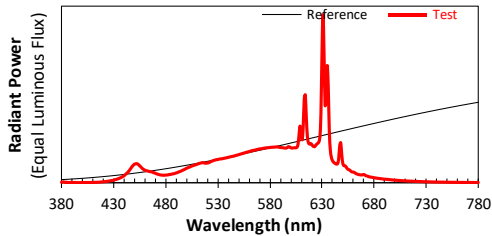
ANSI/IES TM-30-18 Color Rendition Report

Source: User SPD

Manufacturer: Visual Comfort & Co.

Date: 2025/7/28

Model: MDFM74027XXX



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

x 0.4577
 y 0.4106
 u' 0.2611
 v' 0.5270

CIE 13.3-1995
(CRI)
 R_a 93
 R_g 62

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

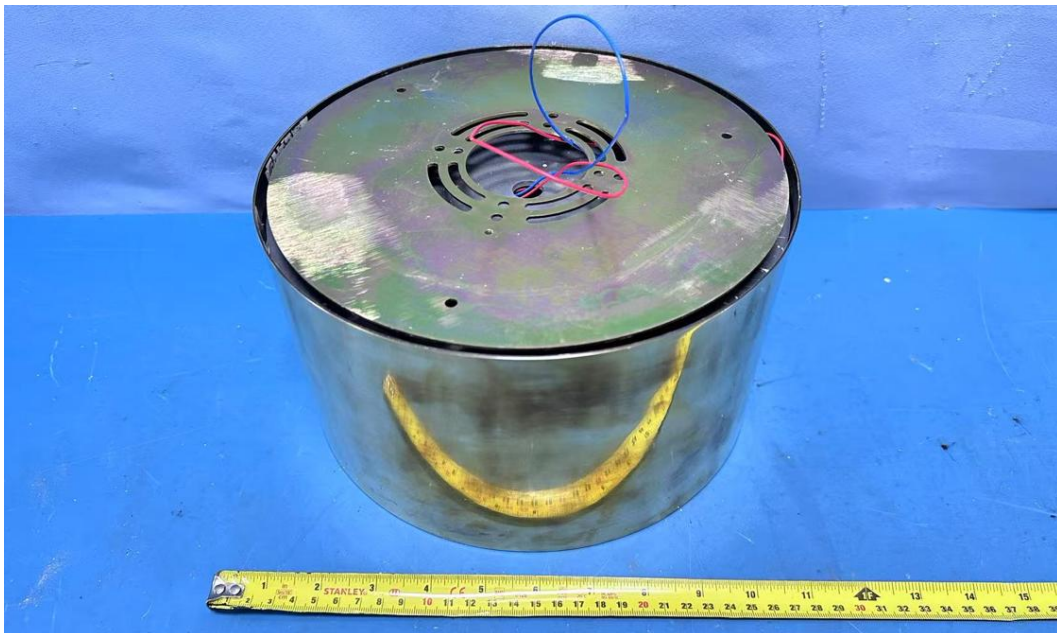
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TEST REPORT

PRODUCT PICTURE (not to scale)



External view of MDFM74027XXX

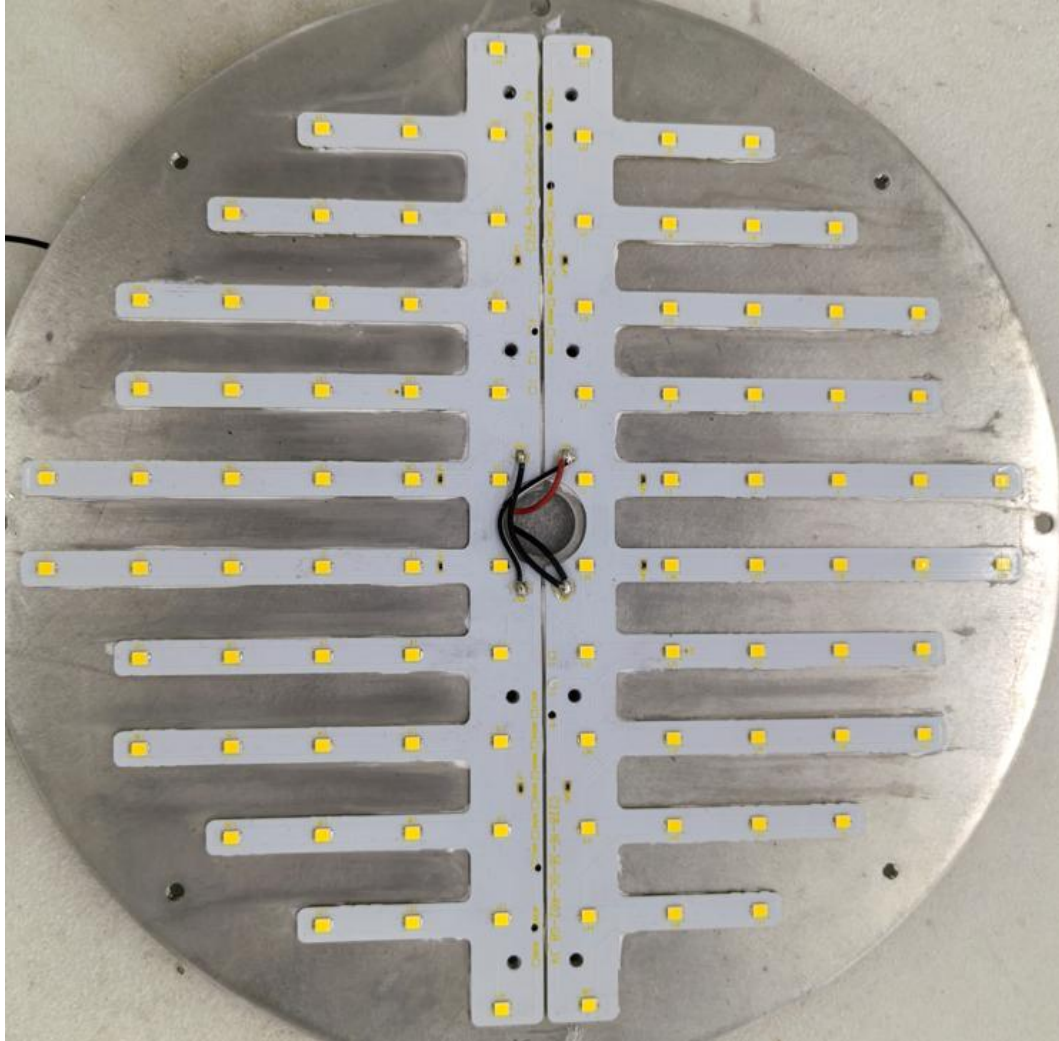


External view of MDFM74027XXX

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TEST REPORT

PRODUCT PICTURE (not to scale)



View of LED

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TEST REPORT

PRODUCT PICTURE (not to scale)



View of LED driver PVD20-C050V40-UNV3-HE-P

In Charge Of Tests:

Done Ye

Done Ye
Engineer

Report Reviewed By

Shelley Ying

Shelley Ying
Reviewer

Attachment: None

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