

Visual Comfort & Co.

TEST REPORT

SCOPE OF WORK

LM-79 testing report

REPORT NUMBER

250623168GZU-019

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REVISION DATE

None

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DOCUMENT CONTROL NUMBER

Report format for LM-79_G

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Report No.: 250623168GZU-019

TEST REPORT

TEST OF ONE LED LUMINAIRE

MODEL NO. MDFM73927XXX

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 MDFM73927XXX. The sample was received by Intertek in undamaged condition and tested as received. The sample designation was S250623168-022.
<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>	16 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:	MDFM73927XXX
Description:	LED Luminaries
Brand Name:	--

Test Condition: 120V, 60Hz For MDFM73927XXX

Criteria	Result
Total Lumen Output	2048.3 lm
Total Power	26.9 W
Luminaire Efficacy	76.2 lm/W
S/MH(C0/180)	1.31
S/MH(C90/270)	1.34
Correlated Color Temperature (CCT)	2902 K
Color Rendering Index (CRI)	93
R9	72
Chromaticity Coordinate (x)	0.4454
Chromaticity Coordinate (y)	0.4090
Chromaticity Coordinate (u')	0.2539
Chromaticity Coordinate (v')	0.5246

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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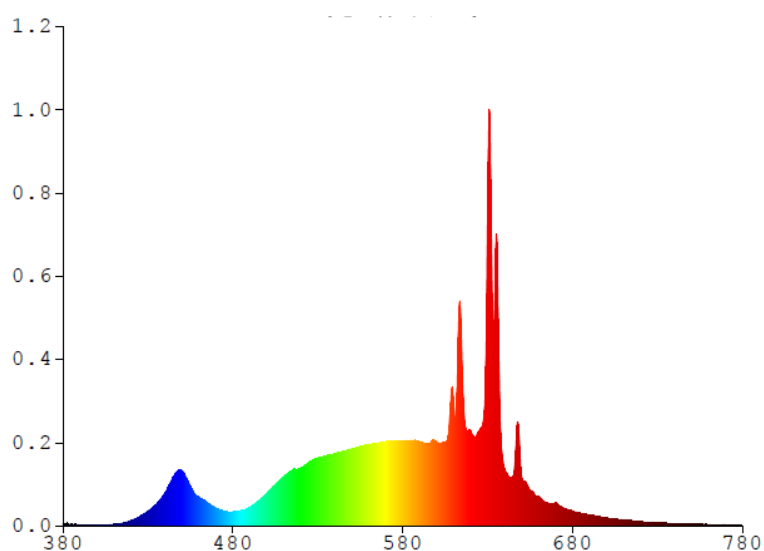
TEST REPORT

RESULTS OF TESTS

Test Condition: 120V, 60Hz For MDFM73927XXX

Spectral Distribution over Visible Wavelengths

nm	mW/nm	nm	mW/nm	nm	mW/nm	nm	mW/nm	nm	mW/nm
380	1.5009	480	7.4061	580	44.6460	680	7.7936	780	0.2524
385	0.8457	485	8.1551	585	44.8070	685	6.7265		
390	0.6239	490	9.8895	590	44.1320	690	5.7907		
395	0.5563	495	13.0650	595	43.1180	695	5.1187		
400	0.2037	500	17.3310	600	43.8300	700	4.3153		
405	0.4657	505	21.7900	605	43.9270	705	3.7527		
410	0.8313	510	25.7960	610	63.7800	710	3.1768		
415	1.4930	515	29.3500	615	83.4920	715	2.8077		
420	2.7659	520	30.5380	620	49.7220	720	2.4124		
425	4.7800	525	33.6280	625	49.7560	725	2.0323		
430	7.6570	530	35.6170	630	165.08	730	1.8024		
435	11.3810	535	36.7490	635	151.80	735	1.5389		
440	17.3090	540	37.9280	640	29.8810	740	1.3205		
445	25.8220	545	39.0400	645	25.8190	745	1.1310		
450	29.0760	550	40.3780	650	26.5670	750	0.9945		
455	20.4740	555	41.6790	655	18.8680	755	0.8943		
460	14.9630	560	42.7500	660	15.3710	760	0.7876		
465	12.1750	565	43.4490	665	12.1630	765	0.6969		
470	9.2058	570	43.9260	670	12.1450	770	0.6054		
475	7.7264	575	44.5450	675	8.8940	775	0.5532		



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TEST REPORT

RESULTS OF TESTS (cont'd)

Test Condition: 120V, 60Hz For MDFM73927XXX

Total operation burning time: 60 minutes

Stabilization time: 30 minutes

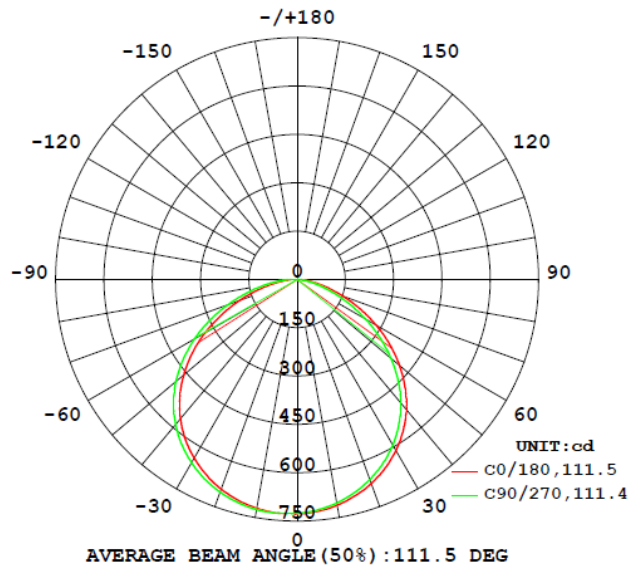
Photometric Measurements at 25°C – Distribution Method

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')
MDFM73927XXX								
S2506231 68-022	base-up	2902	93	72	0.4454	0.4090	0.2539	0.5246

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)
MDFM73927XXX							
S2506231 68-022	base-up	120.1	224.9	26.9	0.995	2048.3	76.2

Intensity (Candlepower) Summary at 25°C - Candelas



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TEST REPORT

RESULTS OF TESTS (cont'd)

Test Condition: 120V, 60Hz For MDFM73927XXX

Intensity (Candlepower) Summary at 25°C - Candelas

V \ H(°)	0	22.5	45	67.5	90
0	727.4	725.7	725.2	726.1	725.8
5	722.4	717.3	716.1	717.3	718.0
10	711.2	703.3	701.9	702.8	704.3
15	695.2	683.8	682.3	683.0	684.9
20	673.5	658.7	657.2	657.7	660.3
25	646.4	628.3	625.4	626.5	630.1
30	613.0	591.3	588.1	589.6	593.7
35	573.8	548.4	544.5	545.9	550.6
40	527.5	498.3	493.9	495.3	500.5
45	474.1	441.4	436.0	437.3	443.2
50	414.3	379.0	373.1	374.2	379.9
55	350.0	311.8	306.3	307.2	313.3
60	282.4	243.5	237.8	238.4	244.0
65	214.4	177.1	171.7	171.6	176.6
70	150.3	117.5	112.6	112.1	116.2
75	95.2	69.0	65.0	64.3	67.1
80	51.8	31.7	28.6	27.8	29.6
85	17.9	4.2	3.0	2.7	3.4
90	0.2	0.2	0.2	0.2	0.2
95	0.2	0.2	0.2	0.3	0.2
100	0.2	0.2	0.2	0.3	0.2
105	0.2	0.3	0.3	0.3	0.3
110	0.3	0.3	0.3	0.4	0.4
115	0.3	0.5	0.4	0.5	0.5
120	0.4	0.7	0.7	0.8	0.8
125	0.6	1.5	0.9	1.4	1.5
130	0.7	1.9	0.7	1.7	1.8
135	0.8	1.4	1.1	1.9	2.3
140	0.9	1.8	1.6	2.3	2.5
145	1.1	2.7	2.1	2.4	2.9
150	1.3	2.6	2.0	2.6	3.2
155	1.4	2.4	2.1	2.9	3.2
160	1.5	2.0	2.4	3.3	3.4
165	1.6	1.9	2.4	2.5	2.8
170	1.8	2.2	2.3	2.5	2.1
175	2.1	2.1	2.0	1.8	1.8
180	1.4	1.1	1.2	1.4	1.5

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

TEST REPORT

RESULTS OF TESTS (cont'd)

Test Condition: 120V, 60Hz For MDFM73927XXX

Zonal Lumen Summary and Percentages at 25°C

Zone	Lumens (lm)	% Luminaire (%)
MDFM73927XXX		
0-30	569.4	27.8
0-40	937.2	45.8
0-60	1650.4	80.6
0-90	2041.6	99.7
60-90	391.2	19.1
0-180	2048.3	100.0

Beam Angle

Total Beam Angle(°)

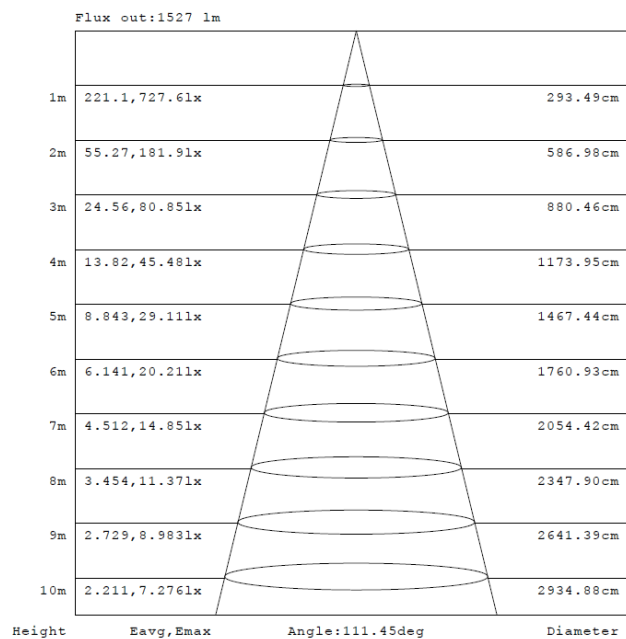
111.5

Illumination Plots

Model No.: MDFM73927XXX

Mount Height: 2.5 m

Illuminance - Cone of Light



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TEST REPORT

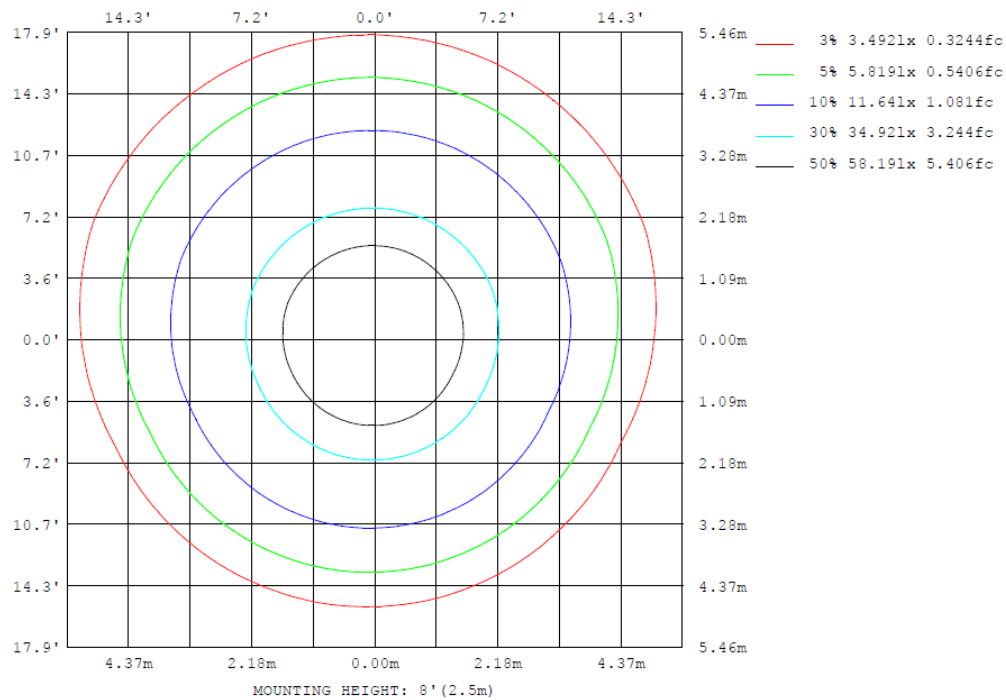
RESULTS OF TESTS (cont'd)

Test Condition: 120V, 60Hz For MDFM73927XXX

Model No.: MDFM73927XXX

Mount Height: 2.5 m

Isoillumination Plot



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TEST REPORT

RESULTS OF TESTS (cont'd)

Test Condition: 120V, 60Hz For MDFM73927XXX

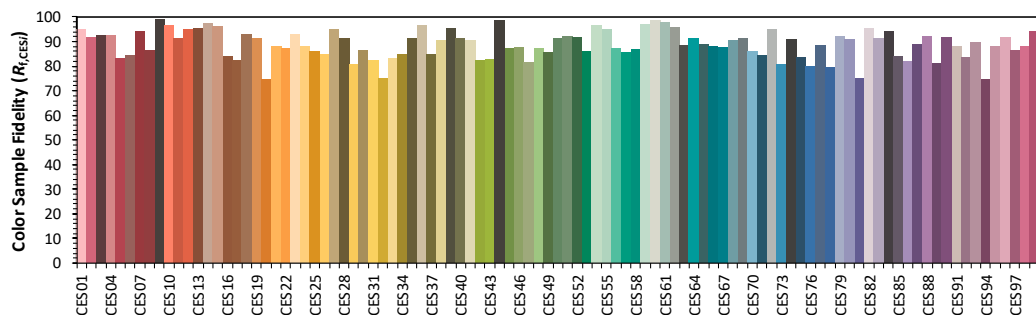
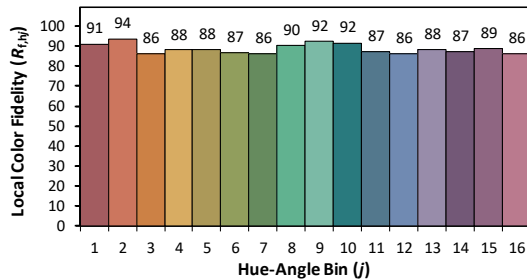
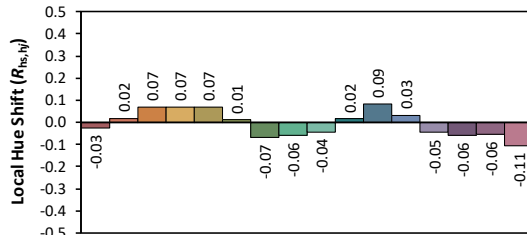
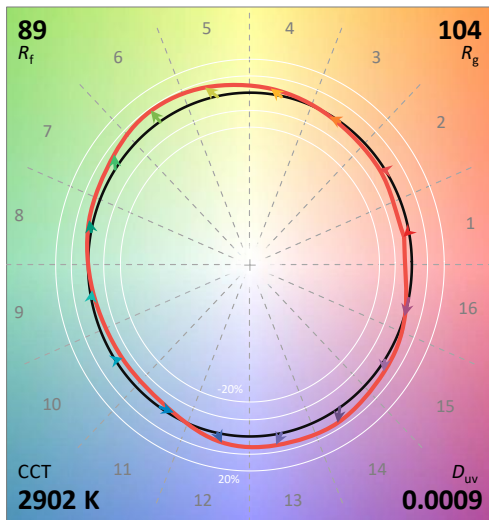
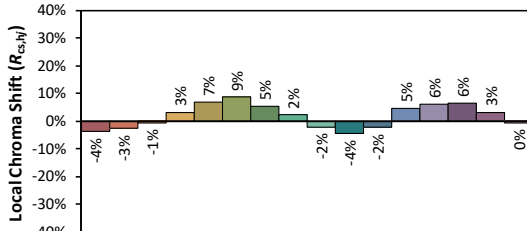
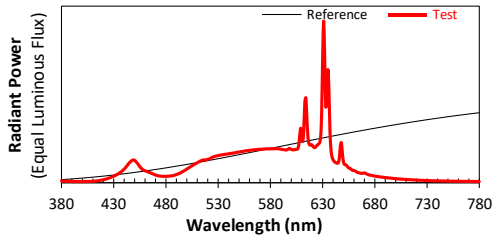
ANSI/IES TM-30-18 Color Rendition Report

Source: User SPD

Manufacturer: Visual Comfort & Co.

Date: 2025/7/16

Model: MDFM73927XXX



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

x 0.4454
 y 0.4090
 u' 0.2539
 v' 0.5246

CIE 13.3-1995
(CRI)
 R_a 93
 R_g 72

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

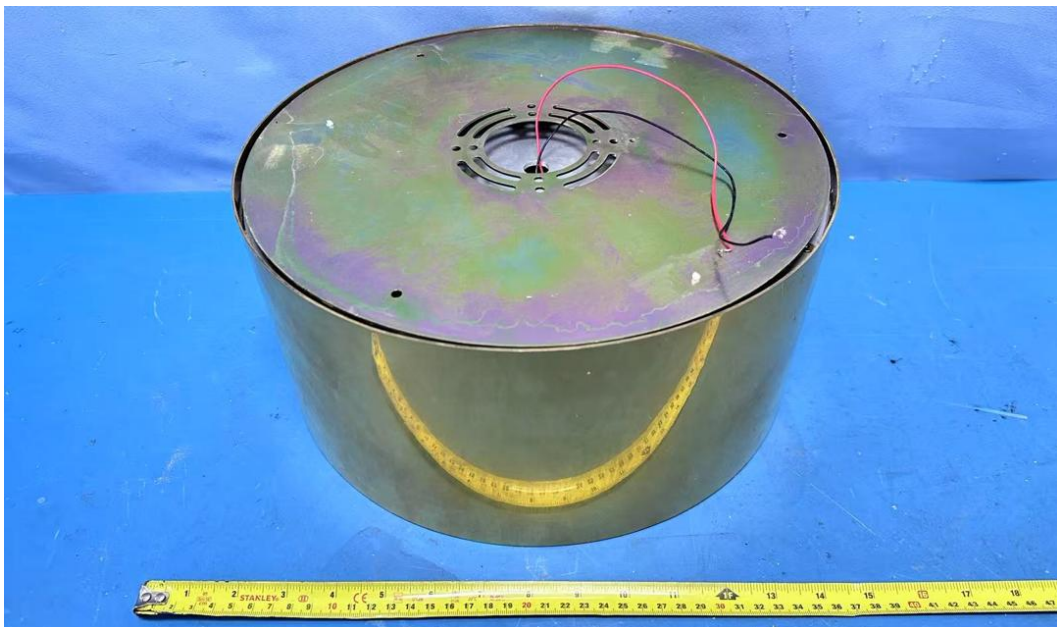
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TEST REPORT

PRODUCT PICTURE (not to scale)



External view of MDFM73927XXX

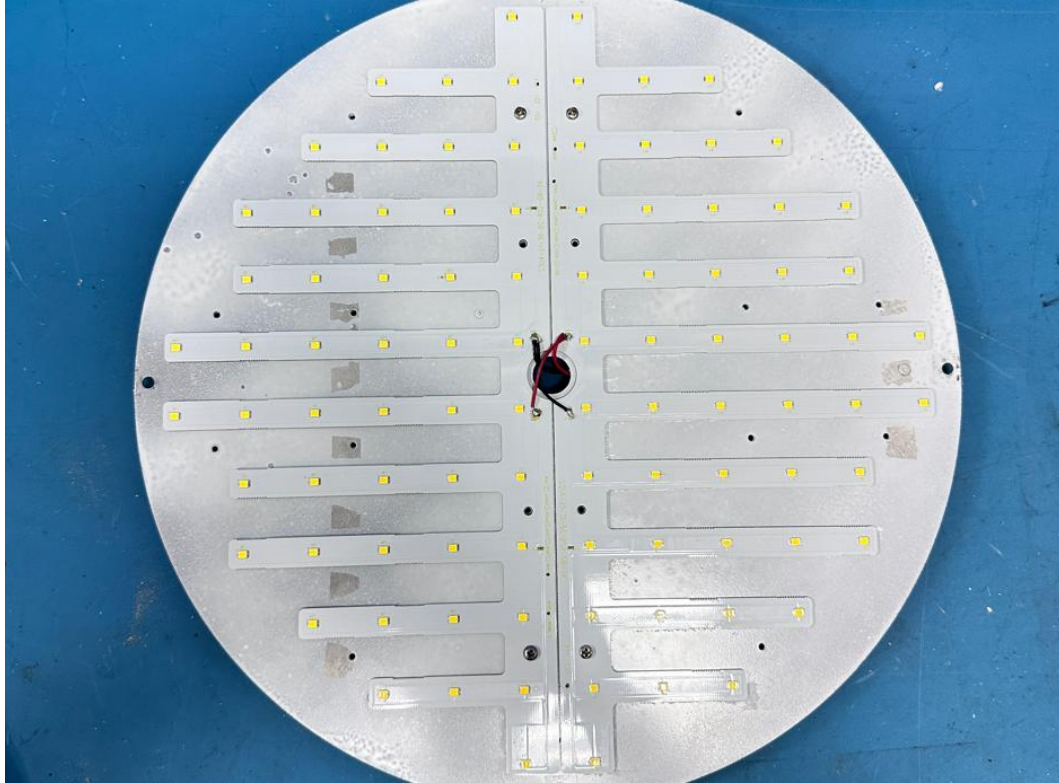


External view of MDFM73927XXX

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TEST REPORT

PRODUCT PICTURE (not to scale)



View of LED

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

TEST REPORT

PRODUCT PICTURE (not to scale)



View of LED driver PVD27-C070V38-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 *****