

Scaled data based on original data using  
LM-79-08 Approved Method: Electrical and Photometric Measurements of Solid-State  
Lighting Products

Test Report Prepared for

Cooper Lighting Solutions

(formerly Eaton)

Brand: FAIL-SAFE

Report Number: P545595

Luminaire Tested: **FMR-12-2-LD4-2HI-50-UNV-80-88-EDD**

Issue Date: 6/15/2021

This test was performed under the Supervised Manufacturer's Testing Program. The results of this test have not been influenced by sources from within Cooper Lighting Solutions or from external interests.



**Test Information**

Test Method: LM-79-08  
Report Number: P545595  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-2102-135-5)  
Test Lab: INNOVATION CENTER  
Issue Date: 6/15/2021  
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)  
Product Line: FAIL-SAFE  
Catalog Number: FMR-12-2-LD4-2HI-50-UNV-80-88-EDD  
Description: 1X2 FMR TROFFER WITH .125 PRISMATIC ACRYLIC FIXTURE SIDE AND .500 CLEAR PC ENVIRONMENTAL SIDE LENSES WITH, 90 CRI AND 5000K CCT LEDS  
Light Source: -  
Ballast/Driver: -

Luminaire Equipment: Sample No.   Condition   Description

**Summary**

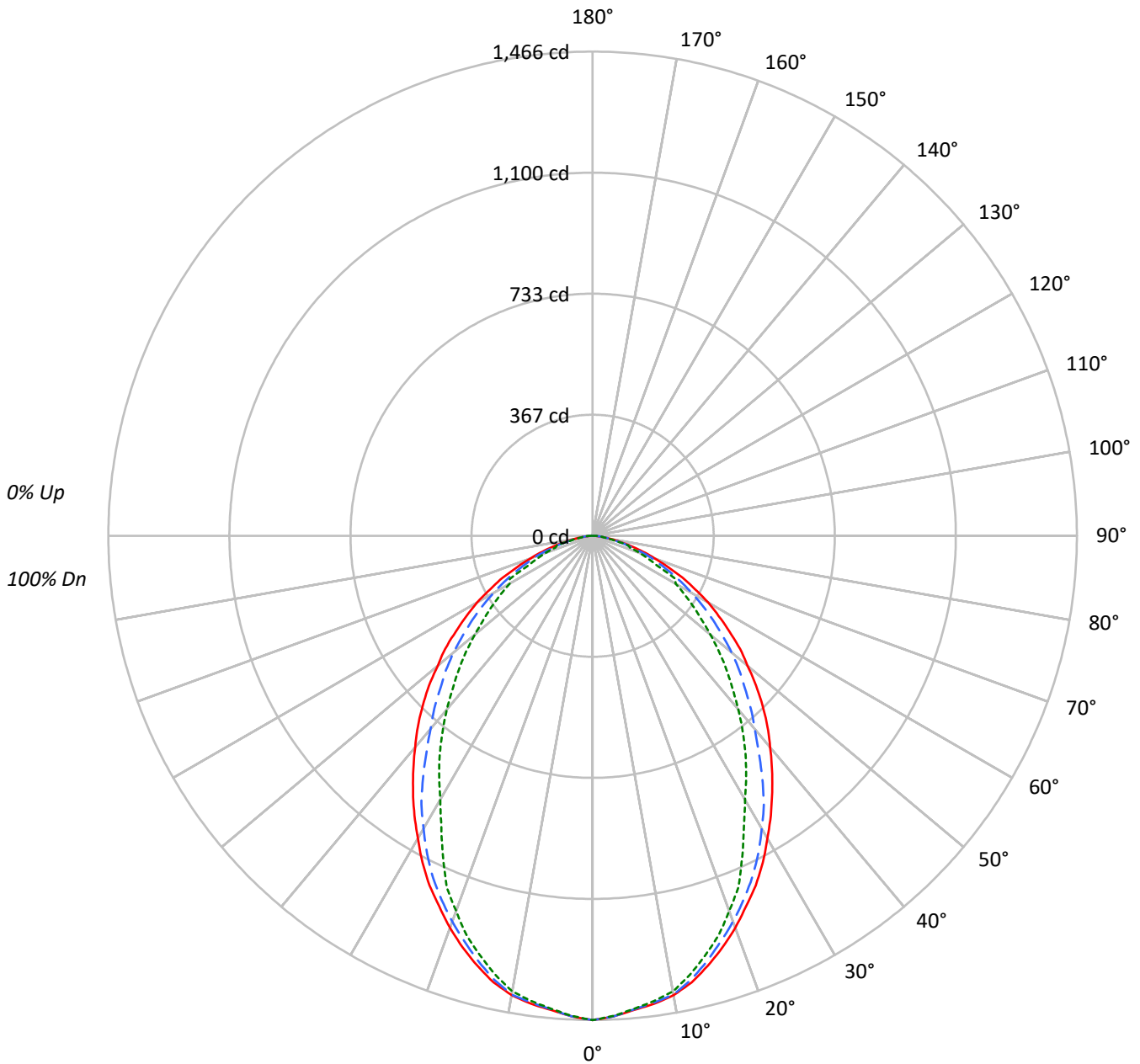
Lumens per Lamp: N/A  
Luminaire Lumens: 2879.0 lumens  
Efficiency: N/A  
Efficacy: 66.6 lumens/watt  
Spacing Criteria (0/90/45): 1.1 / 1 / 1.15  
Luminous Opening: Rectangular (W 1' x L: 2' x H: 0')  
CIE Type: Direct

Input Watts (W): 43.2  
Input Voltage (V): NR  
Input Current (Ain): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 25 FT

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### Luminous Intensity Polar Plot





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**COEFFICIENT OF UTILIZATION - ZONAL CAVITY METHOD:**

RF	20									20									20									20									
RC	80									50									30									10									0
RW	70	50	30	10	70	50	30	10	50	30	10	50	30	10	50	30	10	50	30	10	0																
RCR																																					
0	119	119	119	119	116	116	116	116	111	111	111	106	106	106	102	102	102	100																			
1	110	106	102	99	108	104	100	97	100	97	94	96	94	91	92	90	89	87																			
2	101	94	88	83	99	92	87	82	89	84	80	86	82	78	83	79	77	75																			
3	93	84	77	71	91	82	76	70	79	74	69	77	72	68	74	70	67	65																			
4	86	75	67	61	84	74	66	61	72	65	60	69	64	59	67	62	58	56																			
5	80	68	60	54	78	67	59	53	65	58	53	63	57	52	61	56	52	50																			
6	74	62	53	48	72	61	53	47	59	52	47	57	51	47	56	50	46	44																			
7	69	56	48	43	67	56	48	42	54	47	42	53	46	42	51	46	42	40																			
8	65	52	44	38	63	51	44	38	50	43	38	49	42	38	48	42	38	36																			
9	61	48	40	35	59	47	40	35	46	39	35	45	39	34	44	38	34	33																			
10	57	44	37	32	56	44	37	32	43	36	32	42	36	32	41	36	32	30																			

**AVERAGE LUMINANCE (cd/sqm):**

	0°	45°	90°
0°	7893	7893	7893
5°	7786	7776	7767
10°	7718	7709	7653
15°	7510	7434	7330
20°	7234	7117	6923
25°	6937	6786	6363
30°	6574	6364	5732
35°	6227	5882	5302
40°	5872	5360	4824
45°	5536	4955	4361
50°	5124	4599	3889
55°	4740	4168	3484
60°	4343	3723	3120
65°	3822	3260	2763
70°	3149	2854	2348
75°	2504	2185	2292
80°	1683	1578	1472
85°	1050	1254	1463



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	136.5	4.7
10°-20°	374.6	13.0
20°-30°	518.7	18.0
30°-40°	553.1	19.2
40°-50°	504.6	17.5
50°-60°	395.3	13.7
60°-70°	257.6	8.9
70°-80°	114.1	4.0
80°-90°	24.5	0.9
90°-100°	0.0	0.0
100°-110°	0.0	0.0
110°-120°	0.0	0.0
120°-130°	0.0	0.0
130°-140°	0.0	0.0
140°-150°	0.0	0.0
150°-160°	0.0	0.0
160°-170°	0.0	0.0
170°-180°	0.0	0.0
0°-30°	1029.8	35.8
0°-40°	1582.9	55.0
0°-60°	2482.7	86.2
0°-90°	2879.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	2879.0	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	1466	1466	1466	1466	1466	
5°	1441	1439	1439	1438	1438	137
15°	1348	1348	1334	1321	1316	379
25°	1168	1161	1143	1102	1072	536
35°	948	941	895	827	807	592
45°	727	712	651	597	573	560
55°	505	490	444	392	371	453
65°	300	283	256	261	217	296
75°	120	112	105	100	110	129
85°	17	19	20	22	24	24
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	1466.5	1466.5	1466.5	1466.5	1466.5
2.5°	1456.4	1456.4	1456.4	1454.7	1454.7
5°	1441.1	1439.4	1439.4	1437.7	1437.7
7.5°	1429.2	1427.5	1425.8	1424.1	1420.7
10°	1412.3	1412.3	1410.6	1402.1	1400.4
12.5°	1385.1	1383.4	1376.7	1364.8	1361.4
15°	1347.8	1347.8	1334.3	1320.7	1315.6
17.5°	1307.2	1305.5	1288.5	1274.9	1268.2
20°	1263.1	1259.7	1242.7	1220.7	1208.8
22.5°	1213.9	1213.9	1193.6	1164.7	1152.9
25°	1168.1	1161.4	1142.7	1102.0	1071.5
27.5°	1115.6	1105.4	1085.1	1027.4	991.8
30°	1057.9	1052.8	1024.0	949.4	922.3
32.5°	1003.7	995.2	964.7	886.7	864.7
35°	947.7	940.9	895.2	827.4	807.0
37.5°	891.8	883.3	825.7	771.4	746.0
40°	835.8	825.7	762.9	713.8	686.6
42.5°	783.3	769.7	708.7	656.1	625.6
45°	727.3	712.1	651.0	596.8	573.0
47.5°	671.4	657.8	601.9	545.9	518.8
50°	612.0	600.2	549.3	493.4	464.5
52.5°	562.9	544.2	495.1	439.1	415.4
55°	505.2	490.0	444.2	391.6	371.3
57.5°	452.7	437.4	395.0	345.9	328.9
60°	403.5	381.5	345.9	303.5	289.9
62.5°	349.3	332.3	301.8	266.2	283.1
65°	300.1	283.1	256.0	261.1	217.0
67.5°	245.8	237.4	213.6	189.9	183.1
70°	200.1	189.9	181.4	156.0	149.2
72.5°	159.4	149.2	137.3	123.8	118.7
75°	120.4	111.9	105.1	100.0	110.2
77.5°	83.1	79.7	74.6	69.5	67.8
80°	54.3	52.6	50.9	49.2	47.5
82.5°	32.2	32.2	32.2	32.2	32.2
85°	17.0	18.6	20.3	22.0	23.7
87.5°	10.2	10.2	11.9	13.6	15.3
90°	0.0	0.0	0.0	0.0	0.0



Report Generated By 670246072 / DESKTOP-MV3F9LC







— 0°-180°    - - 45°-225°    - - - - 90°-270°







(END OF REPORT)