

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: P545619

Luminaire Tested: **FMR-12-2-LD4-2HI-50-UNV-93-88-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: P545619  
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-93-88-EDD  
Description: 1X2 FMR TROFFER WITH .156 CLEAR TEMPERED GLASS 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**

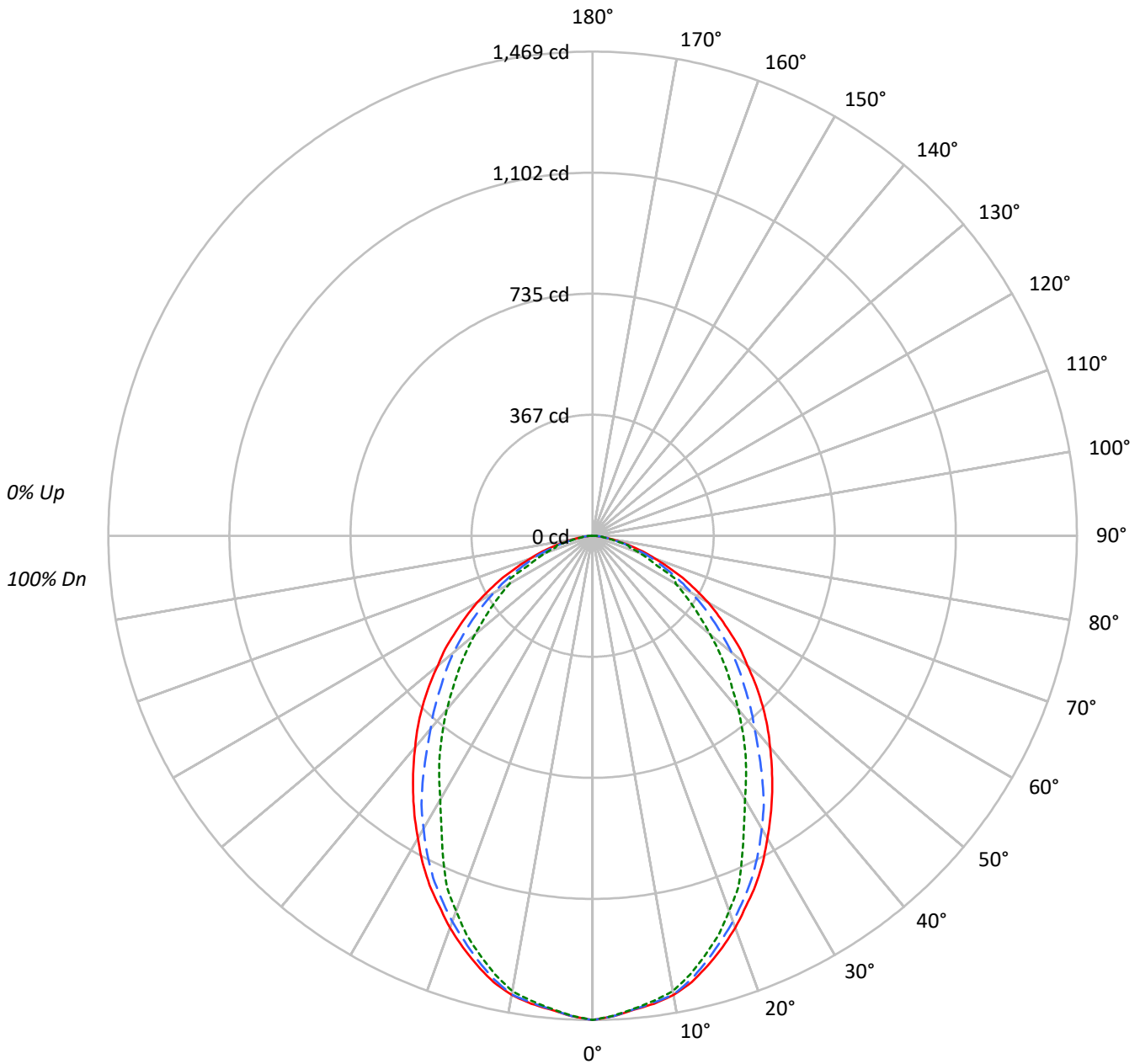
Lumens per Lamp: N/A  
Luminaire Lumens: 2884.0 lumens  
Efficiency: N/A  
Efficacy: 66.8 lumens/watt  
Spacing Criteria (0/90/45): 1.1 / 1 / 1.15  
Luminous Opening: Rectangular (W 1' x L: 2' x H: 0')  
CIE Type: Direct

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°	7907	7907	7907
5°	7799	7790	7781
10°	7731	7722	7666
15°	7523	7447	7343
20°	7247	7130	6935
25°	6949	6798	6374
30°	6586	6375	5742
35°	6238	5891	5311
40°	5883	5370	4832
45°	5546	4964	4369
50°	5133	4608	3896
55°	4749	4176	3490
60°	4351	3730	3126
65°	3828	3266	2769
70°	3153	2859	2353
75°	2508	2190	2296
80°	1683	1581	1475
85°	1050	1260	1470



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	136.8	4.7
10°-20°	375.3	13.0
20°-30°	519.6	18.0
30°-40°	554.0	19.2
40°-50°	505.4	17.5
50°-60°	396.0	13.7
60°-70°	258.1	8.9
70°-80°	114.3	4.0
80°-90°	24.6	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°	1031.6	35.8
0°-40°	1585.7	55.0
0°-60°	2487.1	86.2
0°-90°	2884.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	2884.0	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	1469	1469	1469	1469	1469	
5°	1444	1442	1442	1440	1440	137
15°	1350	1350	1337	1323	1318	380
25°	1170	1163	1145	1104	1073	537
35°	949	943	897	829	808	594
45°	729	713	652	598	574	561
55°	506	491	445	392	372	454
65°	301	284	256	262	217	296
75°	121	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°	1469.1	1469.1	1469.1	1469.1	1469.1
2.5°	1458.9	1458.9	1458.9	1457.2	1457.2
5°	1443.6	1441.9	1441.9	1440.2	1440.2
7.5°	1431.7	1430.0	1428.3	1426.6	1423.2
10°	1414.7	1414.7	1413.0	1404.5	1402.8
12.5°	1387.6	1385.9	1379.1	1367.2	1363.8
15°	1350.2	1350.2	1336.6	1323.0	1317.9
17.5°	1309.4	1307.7	1290.7	1277.2	1270.4
20°	1265.3	1261.9	1244.9	1222.8	1210.9
22.5°	1216.0	1216.0	1195.6	1166.8	1154.9
25°	1170.2	1163.4	1144.7	1103.9	1073.4
27.5°	1117.5	1107.3	1086.9	1029.2	993.5
30°	1059.8	1054.7	1025.8	951.1	923.9
32.5°	1005.4	996.9	966.4	888.2	866.2
35°	949.4	942.6	896.7	828.8	808.4
37.5°	893.3	884.8	827.1	772.7	747.3
40°	837.3	827.1	764.3	715.0	687.8
42.5°	784.6	771.1	709.9	657.3	626.7
45°	728.6	713.3	652.2	597.8	574.0
47.5°	672.5	659.0	602.9	546.9	519.7
50°	613.1	601.2	550.3	494.2	465.3
52.5°	563.9	545.2	495.9	439.9	416.1
55°	506.1	490.8	445.0	392.3	371.9
57.5°	453.5	438.2	395.7	346.5	329.5
60°	404.2	382.1	346.5	304.0	290.4
62.5°	349.9	332.9	302.3	266.6	283.6
65°	300.6	283.6	256.5	261.5	217.4
67.5°	246.3	237.8	214.0	190.2	183.4
70°	200.4	190.2	181.7	156.2	149.5
72.5°	159.6	149.5	137.6	124.0	118.9
75°	120.6	112.1	105.3	100.2	110.4
77.5°	83.2	79.8	74.7	69.6	67.9
80°	54.3	52.6	51.0	49.3	47.6
82.5°	32.3	32.3	32.3	32.3	32.3
85°	17.0	18.7	20.4	22.1	23.8
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)