

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: P545315

Luminaire Tested: **FMR-12-2-LD4-1HI-50-UNV-81-88-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: P545315  
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-LD4-1HI-50-UNV-81-88-EDD  
Description: 1X2 FMR TROFFER WITH .156 CLEAR PC 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**

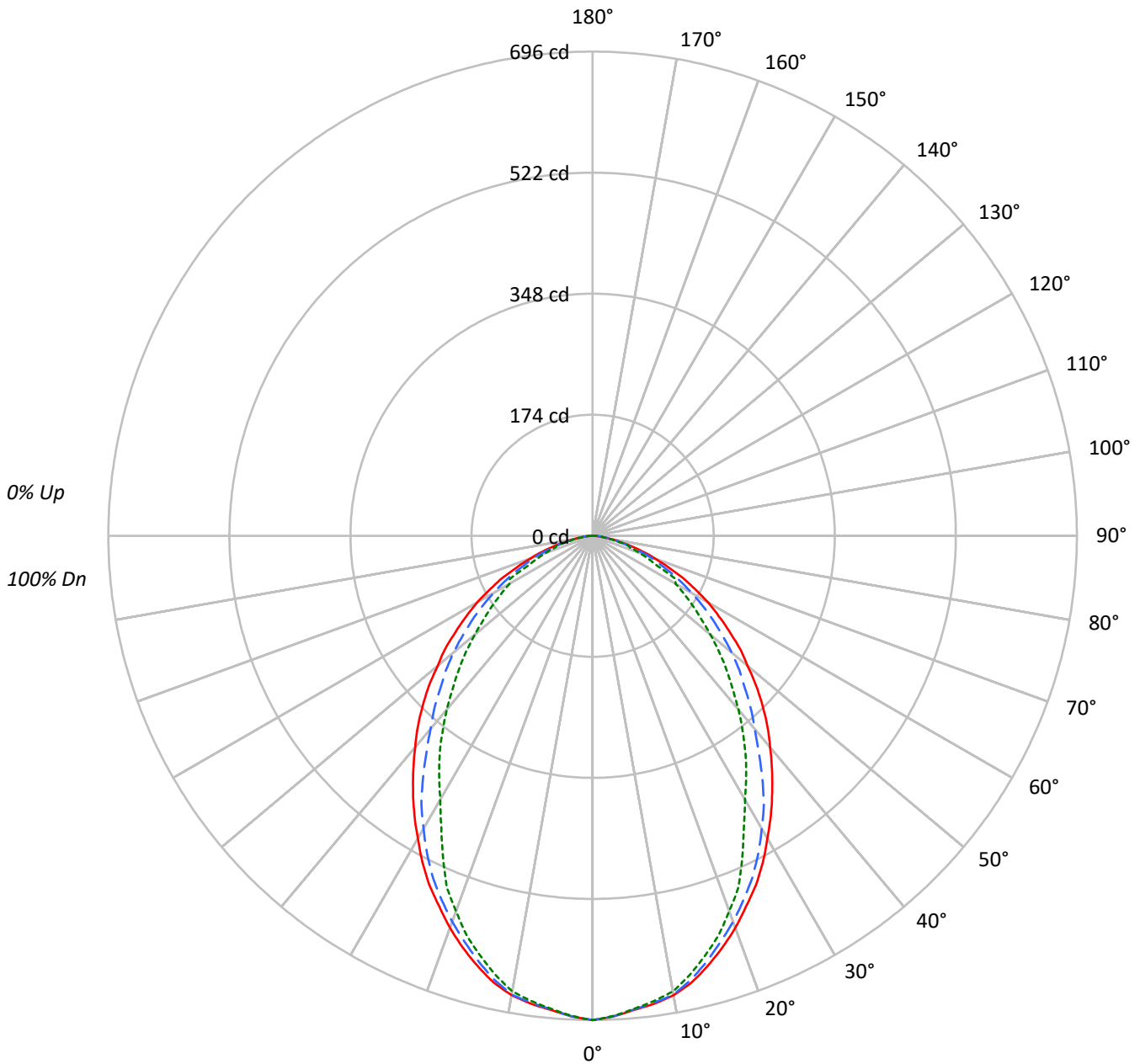
Lumens per Lamp: N/A  
Luminaire Lumens: 1367.0 lumens  
Efficiency: N/A  
Efficacy: 63.3 lumens/watt  
Spacing Criteria (0/90/45): 1.1 / 1 / 1.15  
Luminous Opening: Rectangular (W 1' x L: 2' x H: 0')  
CIE Type: Direct

Input Watts (W): 21.6  
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°	3747	3747	3747
5°	3697	3693	3688
10°	3665	3660	3634
15°	3566	3530	3481
20°	3435	3380	3288
25°	3294	3222	3021
30°	3122	3022	2721
35°	2957	2792	2518
40°	2788	2545	2290
45°	2628	2353	2071
50°	2433	2184	1847
55°	2251	1979	1654
60°	2062	1767	1482
65°	1815	1549	1312
70°	1495	1355	1114
75°	1189	1038	1088
80°	800	750	697
85°	500	599	698



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	64.8	4.7
10°-20°	177.9	13.0
20°-30°	246.3	18.0
30°-40°	262.6	19.2
40°-50°	239.6	17.5
50°-60°	187.7	13.7
60°-70°	122.3	8.9
70°-80°	54.2	4.0
80°-90°	11.6	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°	489.0	35.8
0°-40°	751.6	55.0
0°-60°	1178.8	86.2
0°-90°	1367.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1367.0	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	696	696	696	696	696	
5°	684	684	684	683	683	65
15°	640	640	634	627	625	180
25°	555	551	543	523	509	255
35°	450	447	425	393	383	281
45°	345	338	309	283	272	266
55°	240	233	211	186	176	215
65°	142	134	122	124	103	140
75°	57	53	50	48	52	61
85°	8	9	10	10	11	11
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	696.3	696.3	696.3	696.3	696.3
2.5°	691.5	691.5	691.5	690.7	690.7
5°	684.3	683.5	683.5	682.6	682.6
7.5°	678.6	677.8	677.0	676.2	674.6
10°	670.6	670.6	669.8	665.7	664.9
12.5°	657.7	656.9	653.7	648.0	646.4
15°	640.0	640.0	633.5	627.1	624.7
17.5°	620.7	619.9	611.8	605.4	602.1
20°	599.7	598.1	590.1	579.6	574.0
22.5°	576.4	576.4	566.7	553.0	547.4
25°	554.7	551.4	542.6	523.3	508.8
27.5°	529.7	524.9	515.2	487.8	470.9
30°	502.3	499.9	486.2	450.8	437.9
32.5°	476.6	472.5	458.0	421.0	410.6
35°	450.0	446.8	425.0	392.8	383.2
37.5°	423.4	419.4	392.0	366.3	354.2
40°	396.9	392.0	362.3	338.9	326.0
42.5°	371.9	365.5	336.5	311.5	297.0
45°	345.3	338.1	309.1	283.4	272.1
47.5°	318.8	312.3	285.8	259.2	246.3
50°	290.6	285.0	260.8	234.3	220.6
52.5°	267.3	258.4	235.1	208.5	197.2
55°	239.9	232.6	210.9	186.0	176.3
57.5°	214.9	207.7	187.6	164.2	156.2
60°	191.6	181.1	164.2	144.1	137.7
62.5°	165.8	157.8	143.3	126.4	134.4
65°	142.5	134.4	121.6	124.0	103.0
67.5°	116.7	112.7	101.4	90.2	86.9
70°	95.0	90.2	86.1	74.1	70.8
72.5°	75.7	70.8	65.2	58.8	56.4
75°	57.2	53.1	49.9	47.5	52.3
77.5°	39.4	37.8	35.4	33.0	32.2
80°	25.8	25.0	24.2	23.3	22.5
82.5°	15.3	15.3	15.3	15.3	15.3
85°	8.1	8.9	9.7	10.5	11.3
87.5°	4.8	4.8	5.6	6.4	7.2
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)