

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: P545255

Luminaire Tested: **FMR-12-2-LD4-1HI-35-UNV-82-84-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: P545255  
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-35-UNV-82-84-EDD  
Description: 1X2 FMR TROFFER WITH .187 CLEAR PC FIXTURE SIDE AND .125 CLEAR PC ENVIRONMENTAL SIDE LENSES WITH, 90 CRI AND 3500K CCT LEDS  
Light Source: -  
Ballast/Driver: -

Luminaire Equipment: Sample No.   Condition   Description

**Summary**

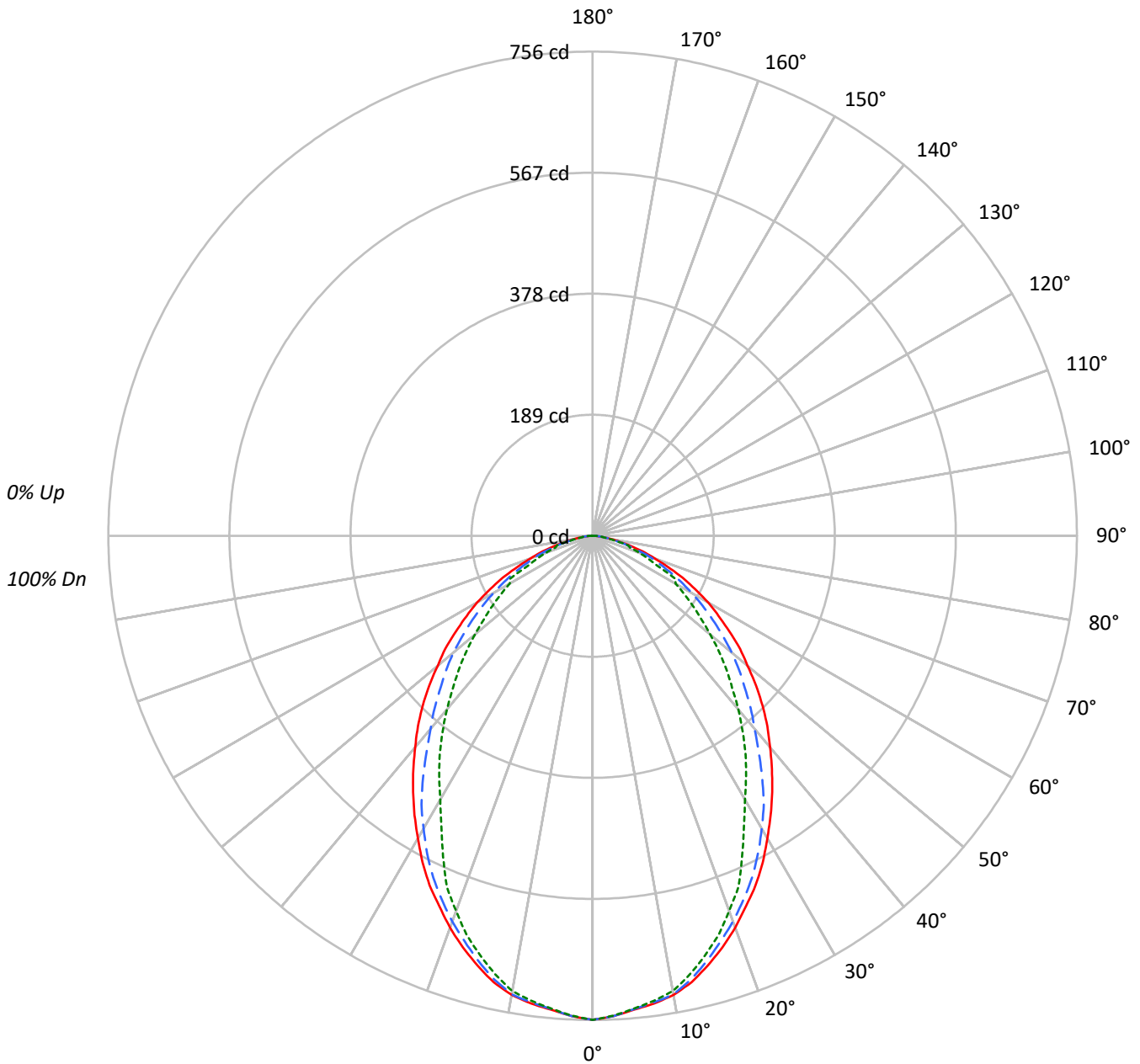
Lumens per Lamp: N/A  
Luminaire Lumens: 1484.0 lumens  
Efficiency: N/A  
Efficacy: 68.7 lumens/watt  
Spacing Criteria (0/90/45): 1.1 / 1 / 1.15  
Luminous Opening: Rectangular (W 1' x L: 2' x H: 0')  
CIE Type: Direct

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°	4068	4068	4068
5°	4013	4008	4004
10°	3979	3974	3945
15°	3871	3832	3779
20°	3729	3669	3569
25°	3575	3498	3280
30°	3389	3280	2954
35°	3210	3031	2733
40°	3027	2763	2486
45°	2853	2554	2248
50°	2642	2370	2005
55°	2443	2149	1796
60°	2239	1919	1608
65°	1970	1681	1425
70°	1622	1471	1210
75°	1289	1127	1181
80°	868	812	759
85°	537	648	753



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	70.4	4.7
10°-20°	193.1	13.0
20°-30°	267.4	18.0
30°-40°	285.1	19.2
40°-50°	260.1	17.5
50°-60°	203.7	13.7
60°-70°	132.8	8.9
70°-80°	58.8	4.0
80°-90°	12.6	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°	530.8	35.8
0°-40°	815.9	55.0
0°-60°	1279.7	86.2
0°-90°	1484.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1484.0	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	756	756	756	756	756	
5°	743	742	742	741	741	71
15°	695	695	688	681	678	195
25°	602	599	589	568	552	276
35°	488	485	461	426	416	305
45°	375	367	336	308	295	289
55°	260	253	229	202	191	234
65°	155	146	132	135	112	152
75°	62	58	54	52	57	66
85°	9	10	10	11	12	12
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	755.9	755.9	755.9	755.9	755.9
2.5°	750.7	750.7	750.7	749.8	749.8
5°	742.8	741.9	741.9	741.1	741.1
7.5°	736.7	735.8	735.0	734.1	732.3
10°	728.0	728.0	727.1	722.7	721.8
12.5°	714.0	713.1	709.6	703.5	701.7
15°	694.8	694.8	687.8	680.8	678.2
17.5°	673.8	672.9	664.2	657.2	653.7
20°	651.1	649.3	640.6	629.2	623.1
22.5°	625.7	625.7	615.2	600.4	594.3
25°	602.1	598.6	589.0	568.0	552.3
27.5°	575.0	569.8	559.3	529.6	511.2
30°	545.3	542.7	527.8	489.4	475.4
32.5°	517.4	513.0	497.3	457.1	445.7
35°	488.5	485.0	461.4	426.5	416.0
37.5°	459.7	455.3	425.6	397.6	384.5
40°	430.8	425.6	393.3	367.9	353.9
42.5°	403.7	396.8	365.3	338.2	322.5
45°	374.9	367.0	335.6	307.6	295.4
47.5°	346.1	339.1	310.2	281.4	267.4
50°	315.5	309.4	283.1	254.3	239.5
52.5°	290.1	280.5	255.2	226.3	214.1
55°	260.4	252.6	229.0	201.9	191.4
57.5°	233.3	225.5	203.6	178.3	169.5
60°	208.0	196.6	178.3	156.4	149.4
62.5°	180.0	171.3	155.6	137.2	145.9
65°	154.7	145.9	132.0	134.6	111.9
67.5°	126.7	122.3	110.1	97.9	94.4
70°	103.1	97.9	93.5	80.4	76.9
72.5°	82.1	76.9	70.8	63.8	61.2
75°	62.0	57.7	54.2	51.6	56.8
77.5°	42.8	41.1	38.5	35.8	35.0
80°	28.0	27.1	26.2	25.3	24.5
82.5°	16.6	16.6	16.6	16.6	16.6
85°	8.7	9.6	10.5	11.4	12.2
87.5°	5.2	5.2	6.1	7.0	7.9
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)