

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: P544676

Luminaire Tested: **FMR-12-1-LD4-1HI-35-UNV-81-94-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: P544676  
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-12-1-LD4-1HI-35-UNV-81-94-EDD  
Description: 1X1 FMR TROFFER WITH .156 CLEAR PC FIXTURE SIDE AND .187 CLEAR  
TEMPERED GLASS ENVIRONMENTAL SIDE LENSES WITH, 90 CRI AND 3500K CCT LEDS  
Light Source: -  
Ballast/Driver: -

Luminaire Equipment: Sample No.   Condition   Description

**Summary**

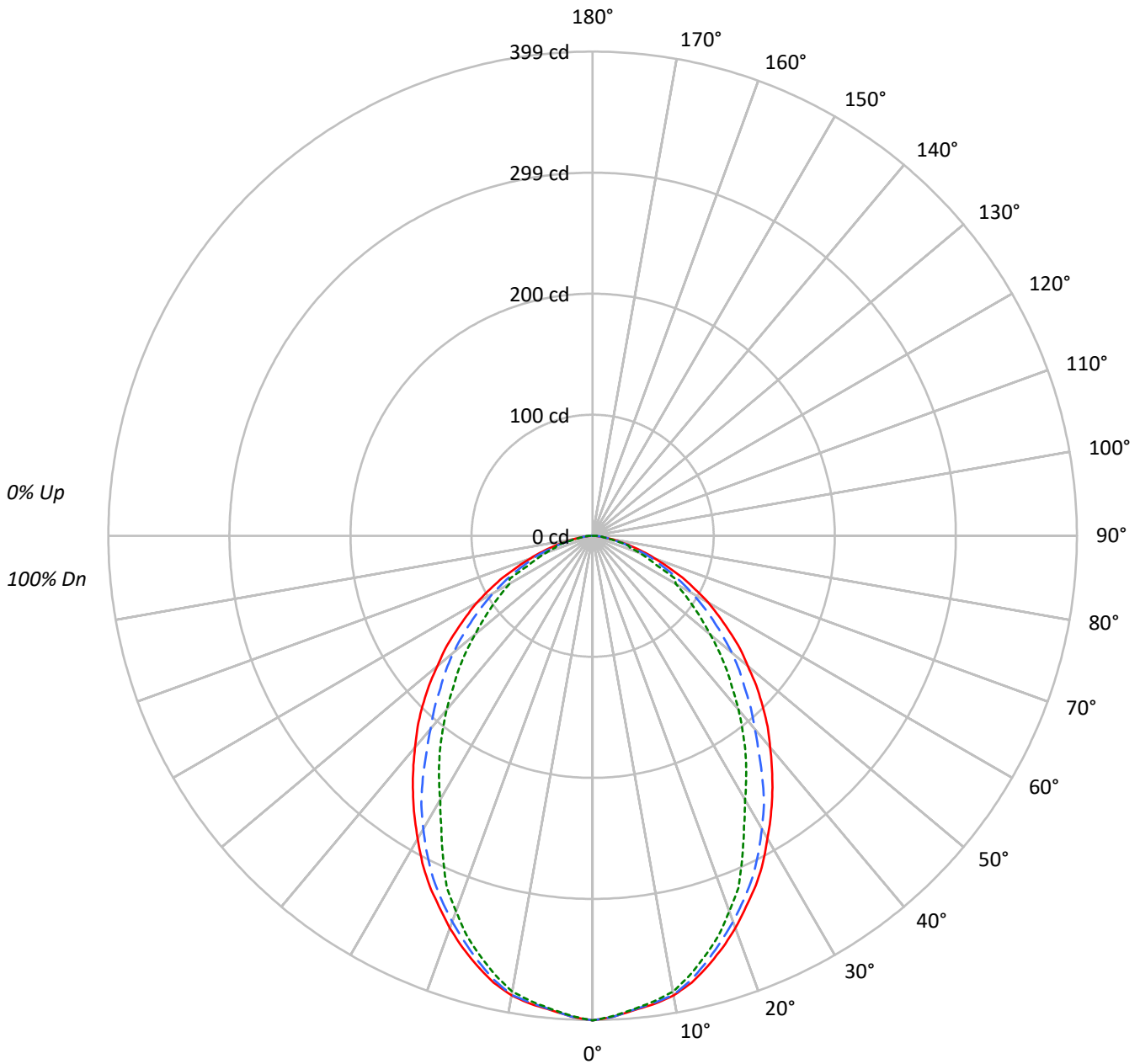
Lumens per Lamp: N/A  
Luminaire Lumens: 784.0 lumens  
Efficiency: N/A  
Efficacy: 72.6 lumens/watt  
Spacing Criteria (0/90/45): 1.1 / 1 / 1.15  
Luminous Opening: Rectangular (W 1' x L: 1' x H: 0')  
CIE Type: Direct

Input Watts (W): 10.8  
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°	4299	4299	4299
5°	4240	4236	4230
10°	4204	4198	4169
15°	4090	4048	3993
20°	3940	3876	3771
25°	3778	3696	3466
30°	3581	3466	3122
35°	3392	3204	2888
40°	3198	2920	2628
45°	3016	2699	2376
50°	2792	2505	2118
55°	2582	2271	1897
60°	2366	2028	1699
65°	2081	1775	1505
70°	1715	1555	1278
75°	1364	1189	1248
80°	917	862	800
85°	568	679	803



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	37.2	4.7
10°-20°	102.0	13.0
20°-30°	141.2	18.0
30°-40°	150.6	19.2
40°-50°	137.4	17.5
50°-60°	107.6	13.7
60°-70°	70.2	8.9
70°-80°	31.1	4.0
80°-90°	6.7	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°	280.4	35.8
0°-40°	431.1	55.0
0°-60°	676.1	86.2
0°-90°	784.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	784.0	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	399	399	399	399	399	
5°	392	392	392	392	392	37
15°	367	367	363	360	358	103
25°	318	316	311	300	292	146
35°	258	256	244	225	220	161
45°	198	194	177	162	156	153
55°	138	133	121	107	101	123
65°	82	77	70	71	59	81
75°	33	30	29	27	30	35
85°	5	5	6	6	6	6
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	399.4	399.4	399.4	399.4	399.4
2.5°	396.6	396.6	396.6	396.1	396.1
5°	392.4	392.0	392.0	391.5	391.5
7.5°	389.2	388.7	388.3	387.8	386.9
10°	384.6	384.6	384.1	381.8	381.4
12.5°	377.2	376.7	374.9	371.7	370.7
15°	367.0	367.0	363.3	359.7	358.3
17.5°	356.0	355.5	350.9	347.2	345.3
20°	344.0	343.0	338.4	332.4	329.2
22.5°	330.6	330.6	325.0	317.2	313.9
25°	318.1	316.3	311.2	300.1	291.8
27.5°	303.8	301.0	295.5	279.8	270.1
30°	288.1	286.7	278.9	258.5	251.2
32.5°	273.3	271.0	262.7	241.5	235.5
35°	258.1	256.2	243.8	225.3	219.8
37.5°	242.8	240.5	224.8	210.1	203.1
40°	227.6	224.8	207.8	194.4	187.0
42.5°	213.3	209.6	193.0	178.7	170.4
45°	198.1	193.9	177.3	162.5	156.1
47.5°	182.8	179.1	163.9	148.7	141.3
50°	166.7	163.4	149.6	134.4	126.5
52.5°	153.3	148.2	134.8	119.6	113.1
55°	137.6	133.4	121.0	106.6	101.1
57.5°	123.3	119.1	107.6	94.2	89.6
60°	109.9	103.9	94.2	82.6	78.9
62.5°	95.1	90.5	82.2	72.5	77.1
65°	81.7	77.1	69.7	71.1	59.1
67.5°	66.9	64.6	58.2	51.7	49.9
70°	54.5	51.7	49.4	42.5	40.6
72.5°	43.4	40.6	37.4	33.7	32.3
75°	32.8	30.5	28.6	27.2	30.0
77.5°	22.6	21.7	20.3	18.9	18.5
80°	14.8	14.3	13.9	13.4	12.9
82.5°	8.8	8.8	8.8	8.8	8.8
85°	4.6	5.1	5.5	6.0	6.5
87.5°	2.8	2.8	3.2	3.7	4.2
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)