

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: P544911

Luminaire Tested: **FMR-12-1-LD4-1STD-40-UNV-93-84-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: P544911  
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-LD4-1STD-40-UNV-93-84-EDD  
Description: 1X1 FMR TROFFER WITH .156 CLEAR TEMPERED GLASS FIXTURE SIDE AND .125 CLEAR PC ENVIRONMENTAL SIDE LENSES WITH, 90 CRI AND 4000K CCT LEDS  
Light Source: -  
Ballast/Driver: -

Luminaire Equipment: Sample No.   Condition   Description

**Summary**

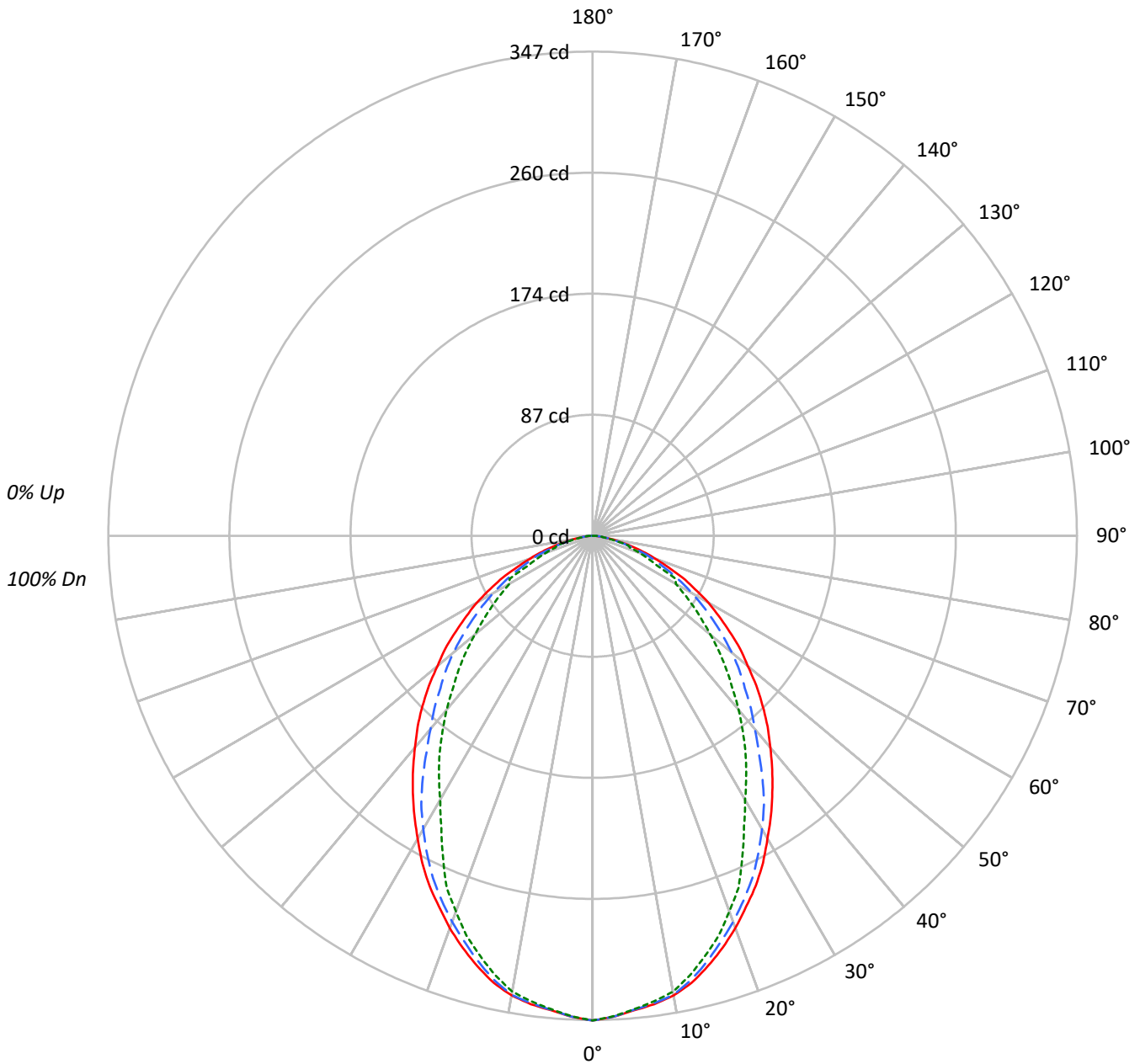
Lumens per Lamp: N/A  
Luminaire Lumens: 682.0 lumens  
Efficiency: N/A  
Efficacy: 82.2 lumens/watt  
Spacing Criteria (0/90/45): 1.1 / 1 / 1.15  
Luminous Opening: Rectangular (W 1' x L: 1' x H: 0')  
CIE Type: Direct

Input Watts (W): 8.3  
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			100																
1	110	106	102	99	108	104	100	97	100	97	94	96	94	91	92	90	89	87			87																
2	101	94	88	83	99	92	87	82	89	84	80	86	82	78	83	79	77	75			75																
3	93	84	77	71	91	82	76	70	79	74	69	77	72	68	74	70	67	65			65																
4	86	75	67	61	84	74	66	61	72	65	60	69	64	59	67	62	58	56			56																
5	80	68	60	54	78	67	59	53	65	58	53	63	57	52	61	56	52	50			50																
6	74	62	53	48	72	61	53	47	59	52	47	57	51	47	56	50	46	44			44																
7	69	56	48	43	67	56	48	42	54	47	42	53	46	42	51	46	42	40			40																
8	65	52	44	38	63	51	44	38	50	43	38	49	42	38	48	42	38	36			36																
9	61	48	40	35	59	47	40	35	46	39	35	45	39	34	44	38	34	33			33																
10	57	44	37	32	56	44	37	32	43	36	32	42	36	32	41	36	32	30			30																

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

	0°	45°	90°
0°	3739	3739	3739
5°	3689	3685	3680
10°	3656	3652	3625
15°	3558	3522	3473
20°	3427	3372	3281
25°	3286	3215	3014
30°	3115	3015	2716
35°	2950	2787	2512
40°	2782	2539	2286
45°	2623	2347	2066
50°	2428	2179	1842
55°	2246	1974	1651
60°	2058	1763	1479
65°	1811	1543	1309
70°	1492	1353	1111
75°	1185	1036	1085
80°	800	744	694
85°	494	593	692



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	32.3	4.7
10°-20°	88.7	13.0
20°-30°	122.9	18.0
30°-40°	131.0	19.2
40°-50°	119.5	17.5
50°-60°	93.6	13.7
60°-70°	61.0	8.9
70°-80°	27.0	4.0
80°-90°	5.8	0.8
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°	244.0	35.8
0°-40°	375.0	55.0
0°-60°	588.1	86.2
0°-90°	682.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	682.0	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	347	347	347	347	347	
5°	341	341	341	341	341	32
15°	319	319	316	313	312	90
25°	277	275	271	261	254	127
35°	224	223	212	196	191	140
45°	172	169	154	141	136	133
55°	120	116	105	93	88	107
65°	71	67	61	62	51	70
75°	28	26	25	24	26	31
85°	4	4	5	5	6	6
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	347.4	347.4	347.4	347.4	347.4
2.5°	345.0	345.0	345.0	344.6	344.6
5°	341.4	341.0	341.0	340.6	340.6
7.5°	338.6	338.2	337.8	337.4	336.6
10°	334.5	334.5	334.1	332.1	331.7
12.5°	328.1	327.7	326.1	323.3	322.5
15°	319.3	319.3	316.1	312.9	311.7
17.5°	309.6	309.2	305.2	302.0	300.4
20°	299.2	298.4	294.4	289.2	286.4
22.5°	287.6	287.6	282.7	275.9	273.1
25°	276.7	275.1	270.7	261.1	253.8
27.5°	264.3	261.9	257.0	243.4	234.9
30°	250.6	249.4	242.6	224.9	218.5
32.5°	237.8	235.8	228.5	210.0	204.8
35°	224.5	222.9	212.1	196.0	191.2
37.5°	211.3	209.2	195.6	182.7	176.7
40°	198.0	195.6	180.7	169.1	162.7
42.5°	185.5	182.3	167.9	155.4	148.2
45°	172.3	168.7	154.2	141.4	135.7
47.5°	159.0	155.8	142.6	129.3	122.9
50°	145.0	142.2	130.1	116.9	110.0
52.5°	133.3	128.9	117.3	104.0	98.4
55°	119.7	116.1	105.2	92.8	88.0
57.5°	107.2	103.6	93.6	81.9	77.9
60°	95.6	90.4	81.9	71.9	68.7
62.5°	82.7	78.7	71.5	63.1	67.1
65°	71.1	67.1	60.6	61.8	51.4
67.5°	58.2	56.2	50.6	45.0	43.4
70°	47.4	45.0	43.0	36.9	35.3
72.5°	37.8	35.3	32.5	29.3	28.1
75°	28.5	26.5	24.9	23.7	26.1
77.5°	19.7	18.9	17.7	16.5	16.1
80°	12.9	12.5	12.0	11.6	11.2
82.5°	7.6	7.6	7.6	7.6	7.6
85°	4.0	4.4	4.8	5.2	5.6
87.5°	2.4	2.4	2.8	3.2	3.6
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)