

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: P544690

Luminaire Tested: **FMR-12-1-LD4-1HI-35-UNV-93-87-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: P544690  
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-93-87-EDD  
Description: 1X1 FMR TROFFER WITH .156 CLEAR TEMPERED GLASS FIXTURE SIDE AND .375 CLEAR PC ENVIRONMENTAL SIDE LENSES WITH, 90 CRI AND 3500K CCT LEDS  
Light Source: -  
Ballast/Driver: -

Luminaire Equipment: Sample No.   Condition   Description

**Summary**

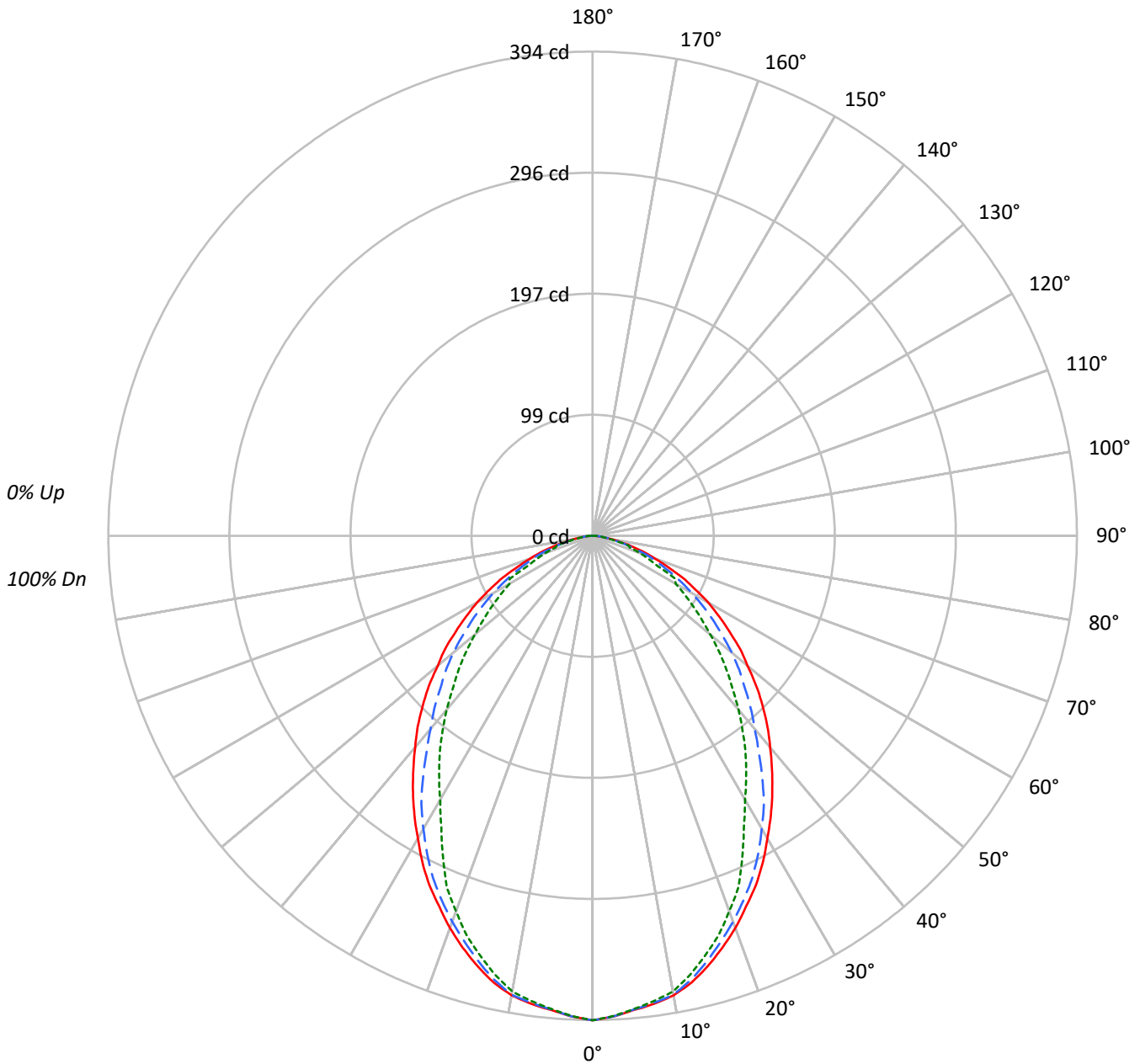
Lumens per Lamp: N/A  
Luminaire Lumens: 774.0 lumens  
Efficiency: N/A  
Efficacy: 71.7 lumens/watt  
Spacing Criteria (0/90/45): 1.1 / 1 / 1.15  
Luminous Opening: Rectangular (W 1' x L: 1' x H: 0')  
CIE Type: Direct

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					20					
RC	80					70					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°	4244	4244	4244
5°	4186	4182	4176
10°	4150	4145	4115
15°	4038	3997	3942
20°	3890	3827	3723
25°	3729	3649	3422
30°	3535	3422	3082
35°	3348	3163	2851
40°	3157	2882	2594
45°	2976	2664	2346
50°	2755	2473	2092
55°	2548	2241	1873
60°	2336	2002	1677
65°	2055	1752	1485
70°	1693	1536	1262
75°	1347	1177	1231
80°	905	849	793
85°	568	679	790



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	36.7	4.7
10°-20°	100.7	13.0
20°-30°	139.4	18.0
30°-40°	148.7	19.2
40°-50°	135.6	17.5
50°-60°	106.3	13.7
60°-70°	69.2	8.9
70°-80°	30.7	4.0
80°-90°	6.6	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°	276.9	35.8
0°-40°	425.6	55.0
0°-60°	667.5	86.2
0°-90°	774.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	774.0	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	394	394	394	394	394	
5°	387	387	387	386	386	37
15°	362	362	359	355	354	102
25°	314	312	307	296	288	144
35°	255	253	241	222	217	159
45°	196	191	175	160	154	151
55°	136	132	119	105	100	122
65°	81	76	69	70	58	80
75°	32	30	28	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°	394.3	394.3	394.3	394.3	394.3
2.5°	391.5	391.5	391.5	391.1	391.1
5°	387.4	387.0	387.0	386.5	386.5
7.5°	384.2	383.8	383.3	382.9	382.0
10°	379.7	379.7	379.2	376.9	376.5
12.5°	372.4	371.9	370.1	366.9	366.0
15°	362.4	362.4	358.7	355.1	353.7
17.5°	351.4	351.0	346.4	342.8	340.9
20°	339.6	338.7	334.1	328.2	325.0
22.5°	326.4	326.4	320.9	313.1	309.9
25°	314.0	312.2	307.2	296.3	288.1
27.5°	299.9	297.2	291.7	276.2	266.6
30°	284.4	283.1	275.3	255.2	248.0
32.5°	269.8	267.6	259.3	238.4	232.5
35°	254.8	253.0	240.7	222.4	217.0
37.5°	239.7	237.5	222.0	207.4	200.6
40°	224.7	222.0	205.1	191.9	184.6
42.5°	210.6	206.9	190.5	176.4	168.2
45°	195.5	191.4	175.0	160.4	154.1
47.5°	180.5	176.8	161.8	146.8	139.5
50°	164.5	161.4	147.7	132.6	124.9
52.5°	151.3	146.3	133.1	118.1	111.7
55°	135.8	131.7	119.4	105.3	99.8
57.5°	121.7	117.6	106.2	93.0	88.4
60°	108.5	102.6	93.0	81.6	77.9
62.5°	93.9	89.3	81.1	71.6	76.1
65°	80.7	76.1	68.8	70.2	58.3
67.5°	66.1	63.8	57.4	51.0	49.2
70°	53.8	51.0	48.8	41.9	40.1
72.5°	42.8	40.1	36.9	33.3	31.9
75°	32.4	30.1	28.3	26.9	29.6
77.5°	22.3	21.4	20.1	18.7	18.2
80°	14.6	14.1	13.7	13.2	12.8
82.5°	8.7	8.7	8.7	8.7	8.7
85°	4.6	5.0	5.5	5.9	6.4
87.5°	2.7	2.7	3.2	3.6	4.1
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)