

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: P544688

Luminaire Tested: **FMR-12-1-LD4-1HI-35-UNV-93-85-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: P544688  
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-93-85-EDD  
Description: 1X1 FMR TROFFER WITH .156 CLEAR TEMPERED GLASS FIXTURE SIDE AND .187 CLEAR PC ENVIRONMENTAL SIDE LENSES WITH, 90 CRI AND 3500K CCT LEDS  
Light Source: -  
Ballast/Driver: -

Luminaire Equipment: Sample No.   Condition   Description

**Summary**

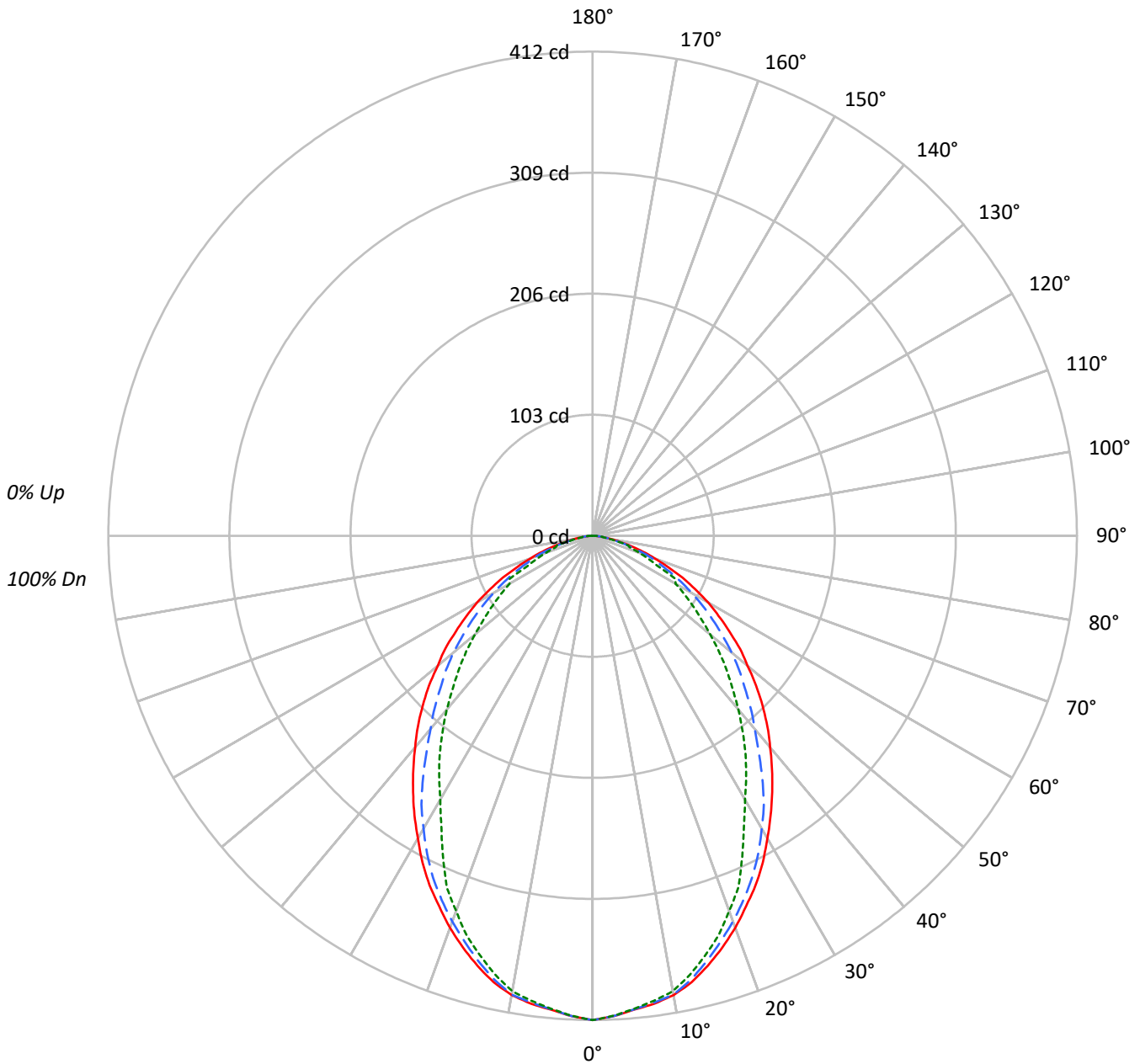
Lumens per Lamp: N/A  
Luminaire Lumens: 809.0 lumens  
Efficiency: N/A  
Efficacy: 74.9 lumens/watt  
Spacing Criteria (0/90/45): 1.1 / 1 / 1.15  
Luminous Opening: Rectangular (W 1' x L: 1' x H: 0')  
CIE Type: Direct

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

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

	0°	45°	90°
0°	4436	4436	4436
5°	4375	4371	4365
10°	4337	4333	4301
15°	4220	4178	4120
20°	4065	4000	3891
25°	3898	3814	3576
30°	3695	3577	3222
35°	3499	3305	2980
40°	3301	3013	2710
45°	3111	2784	2451
50°	2880	2586	2185
55°	2665	2342	1957
60°	2441	2093	1755
65°	2147	1831	1554
70°	1769	1605	1319
75°	1406	1227	1289
80°	942	886	824
85°	593	704	827



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	38.4	4.7
10°-20°	105.3	13.0
20°-30°	145.7	18.0
30°-40°	155.4	19.2
40°-50°	141.8	17.5
50°-60°	111.1	13.7
60°-70°	72.4	8.9
70°-80°	32.1	4.0
80°-90°	6.9	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°	289.4	35.8
0°-40°	444.8	55.0
0°-60°	697.6	86.2
0°-90°	809.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	809.0	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	412	412	412	412	412	
5°	405	404	404	404	404	38
15°	379	379	375	371	370	106
25°	328	326	321	310	301	151
35°	266	264	252	232	227	166
45°	204	200	183	168	161	157
55°	142	138	125	110	104	127
65°	84	80	72	73	61	83
75°	34	31	30	28	31	36
85°	5	5	6	6	7	7
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	412.1	412.1	412.1	412.1	412.1
2.5°	409.2	409.2	409.2	408.8	408.8
5°	404.9	404.5	404.5	404.0	404.0
7.5°	401.6	401.1	400.7	400.2	399.2
10°	396.8	396.8	396.4	394.0	393.5
12.5°	389.2	388.7	386.8	383.5	382.6
15°	378.7	378.7	374.9	371.1	369.7
17.5°	367.3	366.8	362.1	358.3	356.4
20°	354.9	354.0	349.2	343.0	339.7
22.5°	341.1	341.1	335.4	327.3	324.0
25°	328.2	326.3	321.1	309.7	301.1
27.5°	313.5	310.6	304.9	288.7	278.7
30°	297.3	295.8	287.8	266.8	259.2
32.5°	282.0	279.7	271.1	249.2	243.0
35°	266.3	264.4	251.5	232.5	226.8
37.5°	250.6	248.2	232.0	216.8	209.6
40°	234.9	232.0	214.4	200.6	192.9
42.5°	220.1	216.3	199.1	184.4	175.8
45°	204.4	200.1	182.9	167.7	161.0
47.5°	188.7	184.8	169.1	153.4	145.8
50°	172.0	168.6	154.4	138.6	130.5
52.5°	158.2	152.9	139.1	123.4	116.7
55°	142.0	137.7	124.8	110.1	104.3
57.5°	127.2	122.9	111.0	97.2	92.4
60°	113.4	107.2	97.2	85.3	81.5
62.5°	98.1	93.4	84.8	74.8	79.6
65°	84.3	79.6	71.9	73.4	61.0
67.5°	69.1	66.7	60.0	53.4	51.5
70°	56.2	53.4	51.0	43.8	41.9
72.5°	44.8	41.9	38.6	34.8	33.3
75°	33.8	31.4	29.5	28.1	31.0
77.5°	23.3	22.4	21.0	19.5	19.1
80°	15.2	14.8	14.3	13.8	13.3
82.5°	9.1	9.1	9.1	9.1	9.1
85°	4.8	5.2	5.7	6.2	6.7
87.5°	2.9	2.9	3.3	3.8	4.3
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)