

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: P545052

Luminaire Tested: **FMR-12-1-LD4-2LO-35-UNV-80-94-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: P545052  
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-LD4-2LO-35-UNV-80-94-EDD  
Description: 1X1 FMR TROFFER WITH .125 PRISMATIC ACRYLIC 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**

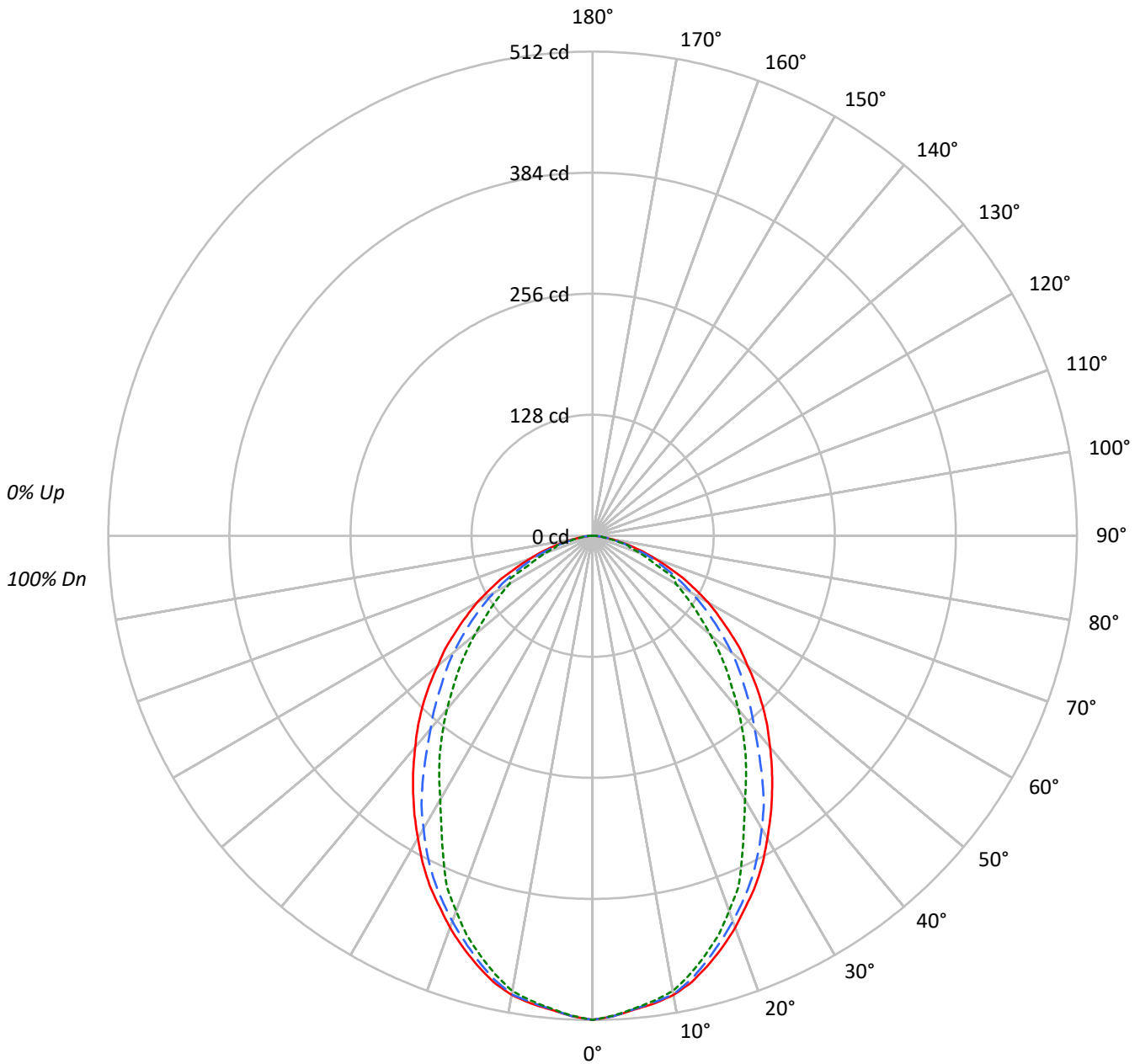
Lumens per Lamp: N/A  
Luminaire Lumens: 1005.0 lumens  
Efficiency: N/A  
Efficacy: 85.9 lumens/watt  
Spacing Criteria (0/90/45): 1.1 / 1 / 1.15  
Luminous Opening: Rectangular (W 1' x L: 1' x H: 0')  
CIE Type: Direct

Input Watts (W): 11.7  
Input Voltage (V): NR  
Input Current (A<sub>in</sub>): 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°	5510	5510	5510
5°	5436	5430	5423
10°	5388	5382	5344
15°	5243	5191	5118
20°	5050	4969	4834
25°	4843	4738	4442
30°	4590	4443	4002
35°	4347	4106	3702
40°	4100	3742	3368
45°	3865	3460	3044
50°	3579	3212	2716
55°	3310	2911	2432
60°	3033	2598	2179
65°	2669	2277	1931
70°	2197	1992	1640
75°	1747	1526	1601
80°	1172	1103	1029
85°	729	877	1025



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	47.7	4.7
10°-20°	130.8	13.0
20°-30°	181.1	18.0
30°-40°	193.1	19.2
40°-50°	176.1	17.5
50°-60°	138.0	13.7
60°-70°	89.9	8.9
70°-80°	39.8	4.0
80°-90°	8.5	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°	359.5	35.8
0°-40°	552.6	55.0
0°-60°	866.7	86.2
0°-90°	1005.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1005.0	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	512	512	512	512	512	
5°	503	502	502	502	502	48
15°	470	470	466	461	459	132
25°	408	405	399	385	374	187
35°	331	328	312	289	282	207
45°	254	249	227	208	200	196
55°	176	171	155	137	130	158
65°	105	99	89	91	76	103
75°	42	39	37	35	38	45
85°	6	6	7	8	8	8
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	511.9	511.9	511.9	511.9	511.9
2.5°	508.4	508.4	508.4	507.8	507.8
5°	503.1	502.5	502.5	501.9	501.9
7.5°	498.9	498.3	497.7	497.1	496.0
10°	493.0	493.0	492.4	489.4	488.9
12.5°	483.5	482.9	480.6	476.4	475.2
15°	470.5	470.5	465.8	461.0	459.3
17.5°	456.3	455.7	449.8	445.1	442.7
20°	440.9	439.7	433.8	426.1	422.0
22.5°	423.8	423.8	416.6	406.6	402.4
25°	407.8	405.4	398.9	384.7	374.0
27.5°	389.4	385.9	378.8	358.6	346.2
30°	369.3	367.5	357.5	331.4	322.0
32.5°	350.4	347.4	336.8	309.5	301.8
35°	330.8	328.5	312.5	288.8	281.7
37.5°	311.3	308.3	288.2	269.3	260.4
40°	291.8	288.2	266.3	249.2	239.7
42.5°	273.4	268.7	247.4	229.0	218.4
45°	253.9	248.6	227.3	208.3	200.0
47.5°	234.4	229.6	210.1	190.6	181.1
50°	213.7	209.5	191.8	172.2	162.2
52.5°	196.5	190.0	172.8	153.3	145.0
55°	176.4	171.0	155.1	136.7	129.6
57.5°	158.0	152.7	137.9	120.7	114.8
60°	140.9	133.2	120.7	105.9	101.2
62.5°	121.9	116.0	105.3	92.9	98.8
65°	104.8	98.8	89.4	91.1	75.8
67.5°	85.8	82.9	74.6	66.3	63.9
70°	69.8	66.3	63.3	54.4	52.1
72.5°	55.6	52.1	47.9	43.2	41.4
75°	42.0	39.1	36.7	34.9	38.5
77.5°	29.0	27.8	26.0	24.3	23.7
80°	18.9	18.3	17.8	17.2	16.6
82.5°	11.2	11.2	11.2	11.2	11.2
85°	5.9	6.5	7.1	7.7	8.3
87.5°	3.6	3.6	4.1	4.7	5.3
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)