

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: P545138

Luminaire Tested: **FMR-12-1-LD4-2LO-50-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: P545138  
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-50-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 5000K CCT LEDS  
Light Source: -  
Ballast/Driver: -

Luminaire Equipment: Sample No.   Condition   Description

**Summary**

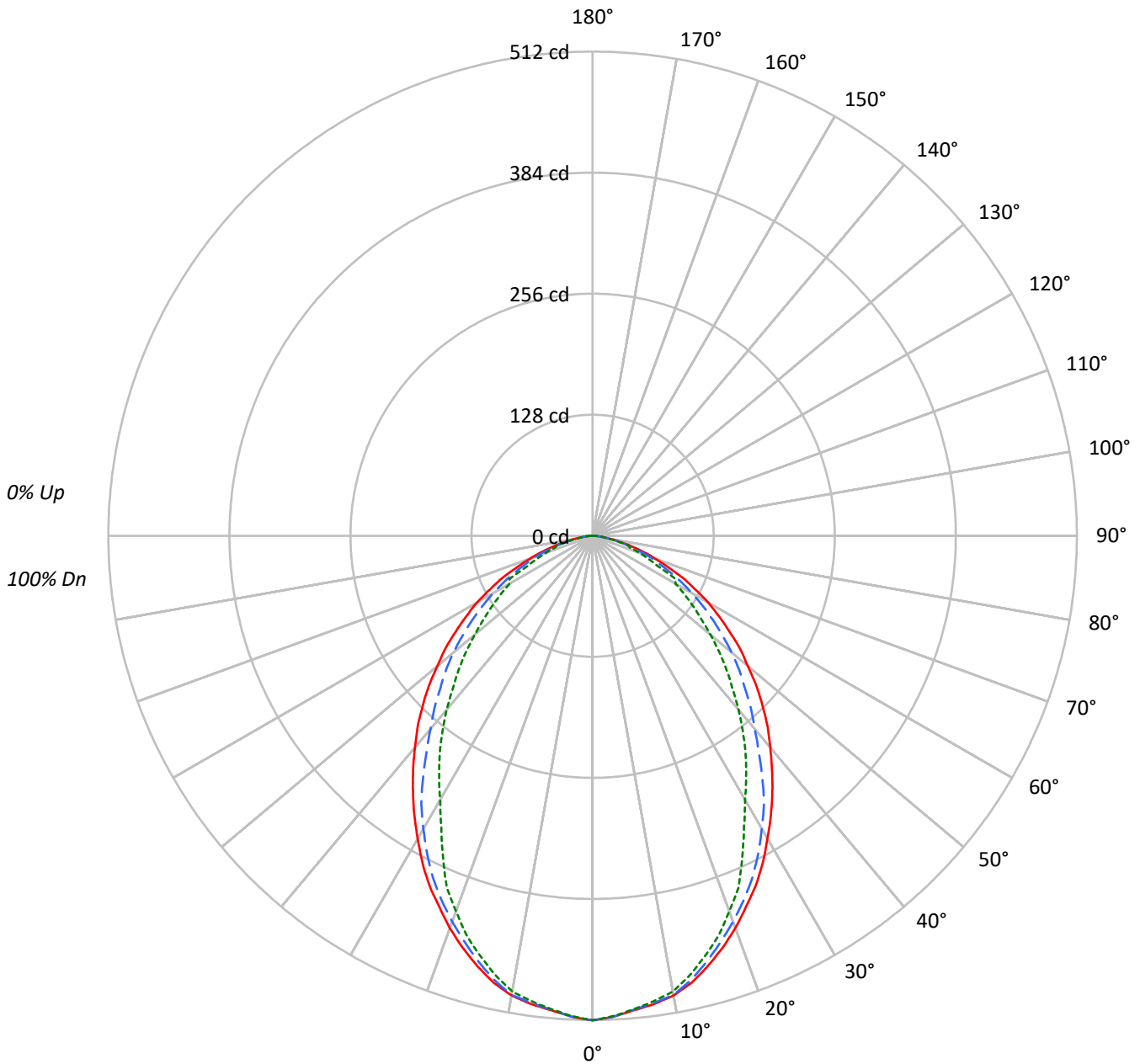
Lumens per Lamp: N/A  
Luminaire Lumens: 1006.0 lumens  
Efficiency: N/A  
Efficacy: 86.0 lumens/watt  
Spacing Criteria (0/90/45): 1.1 / 1 / 1.15  
Luminous Opening: Rectangular (W 1' x L: 1' x H: 0')  
CIE Type: Direct

Input Watts (W): 11.7  
Input Voltage (V): NR  
Input Current (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				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°	5515	5515	5515
5°	5441	5435	5428
10°	5394	5387	5348
15°	5249	5195	5123
20°	5056	4974	4838
25°	4848	4742	4447
30°	4595	4447	4006
35°	4352	4110	3706
40°	4104	3746	3371
45°	3868	3463	3048
50°	3582	3213	2718
55°	3312	2913	2434
60°	3035	2603	2181
65°	2672	2280	1931
70°	2200	1995	1640
75°	1751	1526	1601
80°	1178	1103	1029
85°	729	877	1025



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	47.7	4.7
10°-20°	130.9	13.0
20°-30°	181.2	18.0
30°-40°	193.3	19.2
40°-50°	176.3	17.5
50°-60°	138.1	13.7
60°-70°	90.0	8.9
70°-80°	39.9	4.0
80°-90°	8.6	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°	359.9	35.8
0°-40°	553.1	55.0
0°-60°	867.5	86.2
0°-90°	1006.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1006.0	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	512	512	512	512	512	
5°	504	503	503	502	502	48
15°	471	471	466	462	460	132
25°	408	406	399	385	374	187
35°	331	329	313	289	282	207
45°	254	249	228	208	200	196
55°	176	171	155	137	130	158
65°	105	99	90	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°	512.4	512.4	512.4	512.4	512.4
2.5°	508.9	508.9	508.9	508.3	508.3
5°	503.6	503.0	503.0	502.4	502.4
7.5°	499.4	498.8	498.2	497.6	496.4
10°	493.5	493.5	492.9	489.9	489.3
12.5°	484.0	483.4	481.0	476.9	475.7
15°	471.0	471.0	466.2	461.5	459.7
17.5°	456.8	456.2	450.2	445.5	443.1
20°	441.4	440.2	434.2	426.5	422.4
22.5°	424.2	424.2	417.1	407.0	402.8
25°	408.2	405.8	399.3	385.1	374.4
27.5°	389.8	386.3	379.1	359.0	346.6
30°	369.7	367.9	357.8	331.8	322.3
32.5°	350.7	347.8	337.1	309.8	302.1
35°	331.2	328.8	312.8	289.1	282.0
37.5°	311.6	308.7	288.5	269.6	260.7
40°	292.1	288.5	266.6	249.4	239.9
42.5°	273.7	269.0	247.6	229.3	218.6
45°	254.1	248.8	227.5	208.5	200.2
47.5°	234.6	229.9	210.3	190.8	181.3
50°	213.9	209.7	191.9	172.4	162.3
52.5°	196.7	190.2	173.0	153.4	145.1
55°	176.5	171.2	155.2	136.8	129.7
57.5°	158.2	152.8	138.0	120.9	114.9
60°	141.0	133.3	120.9	106.0	101.3
62.5°	122.0	116.1	105.5	93.0	98.9
65°	104.9	98.9	89.5	91.2	75.8
67.5°	85.9	82.9	74.6	66.4	64.0
70°	69.9	66.4	63.4	54.5	52.1
72.5°	55.7	52.1	48.0	43.2	41.5
75°	42.1	39.1	36.7	35.0	38.5
77.5°	29.0	27.8	26.1	24.3	23.7
80°	19.0	18.4	17.8	17.2	16.6
82.5°	11.3	11.3	11.3	11.3	11.3
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)