

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: P545125

Luminaire Tested: **FMR-12-1-LD4-2LO-50-UNV-81-96-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: P545125  
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-81-96-EDD  
Description: 1X1 FMR TROFFER WITH .156 CLEAR PC FIXTURE SIDE AND .250 CLEAR  
TEMPERED GLASS ENVIRONMENTAL SIDE LENSES WITH, 90 CRI AND 5000K CCT LEDS  
Light Source: -  
Ballast/Driver: -

Luminaire Equipment: Sample No.   Condition   Description

**Summary**

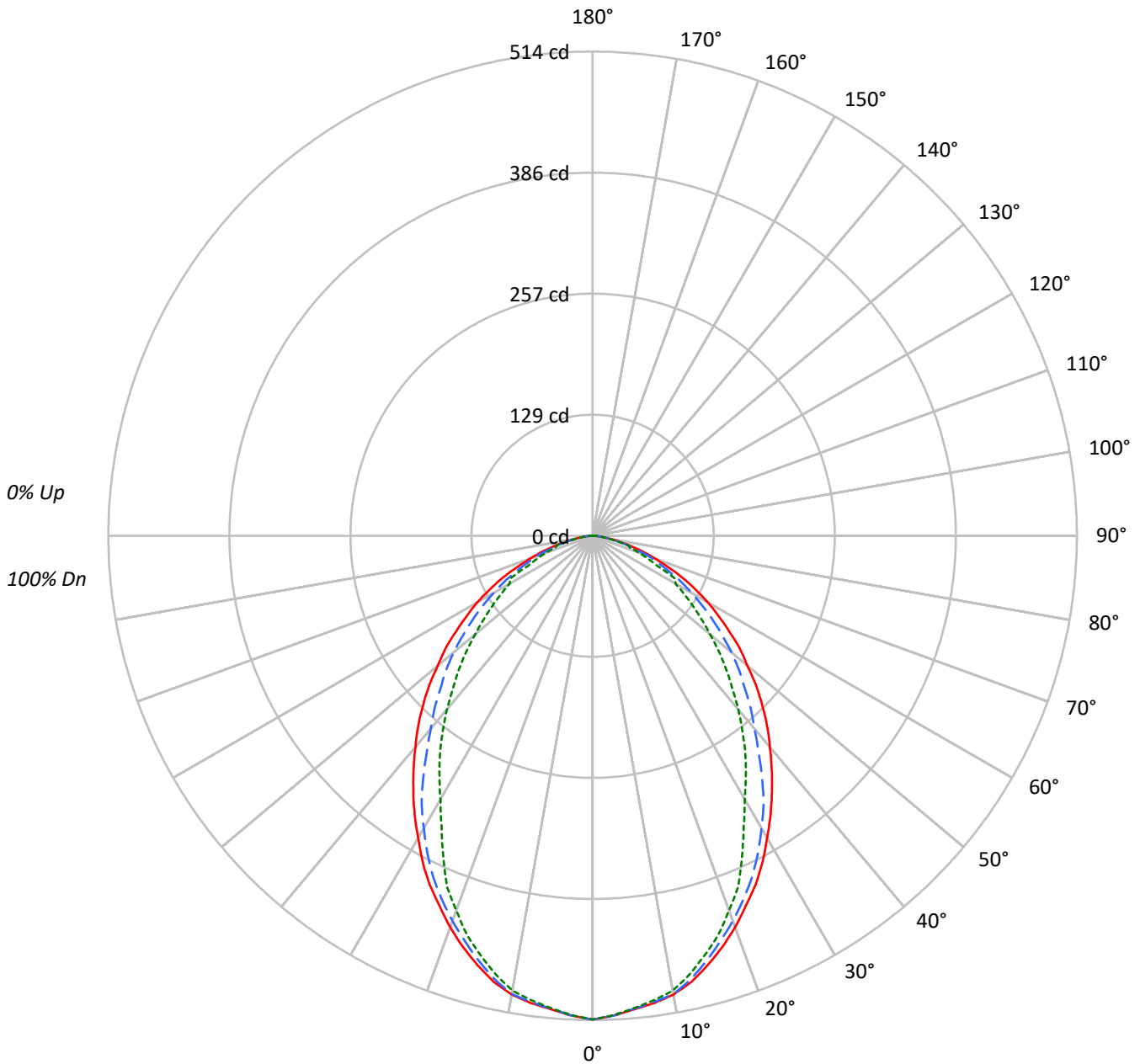
Lumens per Lamp: N/A  
Luminaire Lumens: 1008.0 lumens  
Efficiency: N/A  
Efficacy: 86.2 lumens/watt  
Spacing Criteria (0/90/45): 1.1 / 1 / 1.15  
Luminous Opening: Rectangular (W 1' x L: 1' x H: 0')  
CIE Type: Direct

Input Watts (W): 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									
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°	5527	5527	5527
5°	5452	5446	5439
10°	5405	5398	5359
15°	5259	5206	5133
20°	5065	4984	4848
25°	4858	4752	4456
30°	4604	4456	4013
35°	4360	4118	3713
40°	4111	3753	3378
45°	3877	3469	3054
50°	3589	3220	2723
55°	3320	2918	2440
60°	3042	2607	2185
65°	2677	2282	1936
70°	2203	1998	1643
75°	1751	1530	1605
80°	1178	1103	1029
85°	729	877	1025



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	47.8	4.7
10°-20°	131.2	13.0
20°-30°	181.6	18.0
30°-40°	193.6	19.2
40°-50°	176.6	17.5
50°-60°	138.4	13.7
60°-70°	90.2	8.9
70°-80°	40.0	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°	360.6	35.8
0°-40°	554.2	55.0
0°-60°	869.2	86.2
0°-90°	1008.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1008.0	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	514	514	514	514	514	
5°	505	504	504	503	503	48
15°	472	472	467	462	461	133
25°	409	407	400	386	375	188
35°	332	329	313	290	283	207
45°	255	249	228	209	201	196
55°	177	172	156	137	130	159
65°	105	99	90	91	76	104
75°	42	39	37	35	39	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°	513.5	513.5	513.5	513.5	513.5
2.5°	509.9	509.9	509.9	509.3	509.3
5°	504.6	504.0	504.0	503.4	503.4
7.5°	500.4	499.8	499.2	498.6	497.4
10°	494.5	494.5	493.9	490.9	490.3
12.5°	485.0	484.4	482.0	477.8	476.7
15°	471.9	471.9	467.2	462.4	460.6
17.5°	457.7	457.1	451.1	446.4	444.0
20°	442.2	441.0	435.1	427.4	423.2
22.5°	425.0	425.0	417.9	407.8	403.6
25°	409.0	406.6	400.1	385.8	375.2
27.5°	390.6	387.0	379.9	359.7	347.3
30°	370.4	368.6	358.5	332.4	322.9
32.5°	351.4	348.4	337.8	310.5	302.7
35°	331.8	329.4	313.4	289.7	282.6
37.5°	312.2	309.3	289.1	270.1	261.2
40°	292.6	289.1	267.1	249.9	240.4
42.5°	274.2	269.5	248.1	229.7	219.0
45°	254.7	249.3	227.9	208.9	200.6
47.5°	235.1	230.3	210.7	191.1	181.6
50°	214.3	210.1	192.3	172.7	162.6
52.5°	197.1	190.5	173.3	153.7	145.4
55°	176.9	171.5	155.5	137.1	130.0
57.5°	158.5	153.1	138.3	121.1	115.2
60°	141.3	133.6	121.1	106.3	101.5
62.5°	122.3	116.3	105.7	93.2	99.1
65°	105.1	99.1	89.6	91.4	76.0
67.5°	86.1	83.1	74.8	66.5	64.1
70°	70.0	66.5	63.5	54.6	52.2
72.5°	55.8	52.2	48.1	43.3	41.6
75°	42.1	39.2	36.8	35.0	38.6
77.5°	29.1	27.9	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	4.2	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)