

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: P545209

Luminaire Tested: **FMR-12-1-LD4-2STD-50-UNV-80-86-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: P545209  
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-LD4-2STD-50-UNV-80-86-EDD  
Description: 1X1 FMR TROFFER WITH .125 PRISMATIC ACRYLIC FIXTURE SIDE AND .250 CLEAR PC ENVIRONMENTAL SIDE LENSES WITH, 90 CRI AND 5000K CCT LEDS  
Light Source: -  
Ballast/Driver: -

Luminaire Equipment: Sample No.   Condition   Description

**Summary**

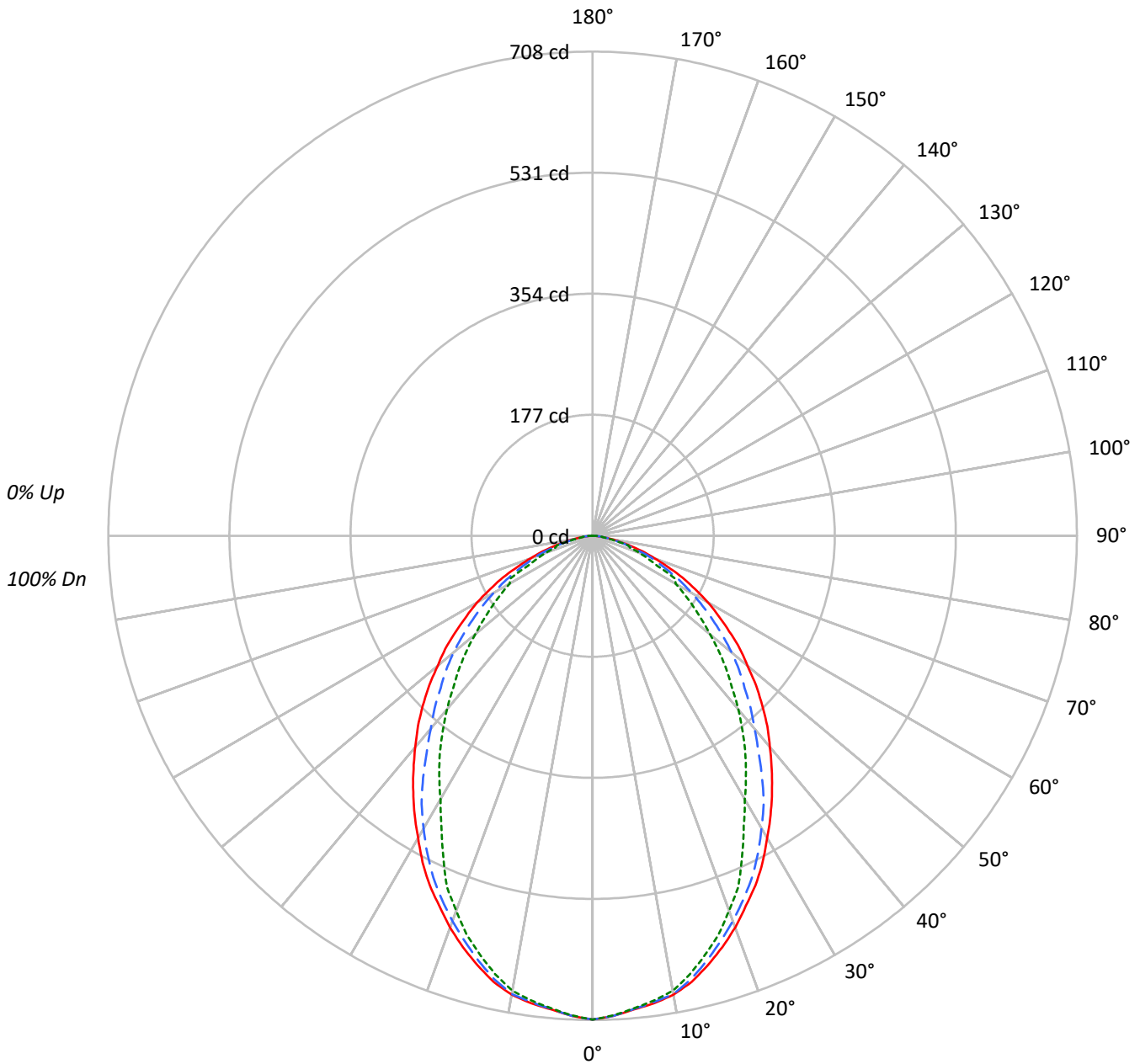
Lumens per Lamp: N/A  
Luminaire Lumens: 1389.0 lumens  
Efficiency: N/A  
Efficacy: 83.7 lumens/watt  
Spacing Criteria (0/90/45): 1.1 / 1 / 1.15  
Luminous Opening: Rectangular (W 1' x L: 1' x H: 0')  
CIE Type: Direct

Input Watts (W): 16.6  
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°	7615	7615	7615
5°	7513	7504	7494
10°	7448	7438	7384
15°	7247	7173	7073
20°	6981	6868	6680
25°	6694	6548	6140
30°	6344	6140	5531
35°	6008	5675	5117
40°	5667	5172	4655
45°	5342	4781	4209
50°	4945	4438	3753
55°	4575	4022	3361
60°	4191	3593	3012
65°	3688	3145	2667
70°	3037	2754	2266
75°	2416	2109	2213
80°	1624	1519	1420
85°	1013	1210	1420



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	65.9	4.7
10°-20°	180.8	13.0
20°-30°	250.2	18.0
30°-40°	266.8	19.2
40°-50°	243.4	17.5
50°-60°	190.7	13.7
60°-70°	124.3	8.9
70°-80°	55.1	4.0
80°-90°	11.8	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°	496.9	35.8
0°-40°	763.7	55.0
0°-60°	1197.8	86.2
0°-90°	1389.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1389.0	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	708	708	708	708	708	
5°	695	694	694	694	694	66
15°	650	650	644	637	635	183
25°	564	560	551	532	517	259
35°	457	454	432	399	389	286
45°	351	344	314	288	276	270
55°	244	236	214	189	179	219
65°	145	137	124	126	105	143
75°	58	54	51	48	53	62
85°	8	9	10	11	12	11
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	707.5	707.5	707.5	707.5	707.5
2.5°	702.6	702.6	702.6	701.8	701.8
5°	695.3	694.5	694.5	693.6	693.6
7.5°	689.5	688.7	687.9	687.1	685.5
10°	681.4	681.4	680.5	676.5	675.6
12.5°	668.3	667.5	664.2	658.5	656.8
15°	650.3	650.3	643.7	637.2	634.7
17.5°	630.6	629.8	621.7	615.1	611.8
20°	609.4	607.7	599.6	588.9	583.2
22.5°	585.7	585.7	575.8	561.9	556.2
25°	563.6	560.3	551.3	531.7	517.0
27.5°	538.2	533.3	523.5	495.7	478.5
30°	510.4	508.0	494.0	458.1	445.0
32.5°	484.2	480.1	465.4	427.8	417.2
35°	457.2	454.0	431.9	399.2	389.4
37.5°	430.2	426.2	398.3	372.2	359.9
40°	403.3	398.3	368.1	344.4	331.3
42.5°	377.9	371.4	341.9	316.6	301.8
45°	350.9	343.5	314.1	287.9	276.5
47.5°	323.9	317.4	290.4	263.4	250.3
50°	295.3	289.6	265.0	238.0	224.1
52.5°	271.6	262.6	238.8	211.9	200.4
55°	243.8	236.4	214.3	188.9	179.1
57.5°	218.4	211.0	190.6	166.9	158.7
60°	194.7	184.0	166.9	146.4	139.9
62.5°	168.5	160.3	145.6	128.4	136.6
65°	144.8	136.6	123.5	126.0	104.7
67.5°	118.6	114.5	103.1	91.6	88.3
70°	96.5	91.6	87.5	75.3	72.0
72.5°	76.9	72.0	66.3	59.7	57.3
75°	58.1	54.0	50.7	48.3	53.2
77.5°	40.1	38.4	36.0	33.5	32.7
80°	26.2	25.4	24.5	23.7	22.9
82.5°	15.5	15.5	15.5	15.5	15.5
85°	8.2	9.0	9.8	10.6	11.5
87.5°	4.9	4.9	5.7	6.5	7.4
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)