

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: P544945

Luminaire Tested: **FMR-12-1-LD4-1STD-50-UNV-93-86-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: P544945  
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-LD4-1STD-50-UNV-93-86-EDD  
Description: 1X1 FMR TROFFER WITH .156 CLEAR TEMPERED GLASS 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**

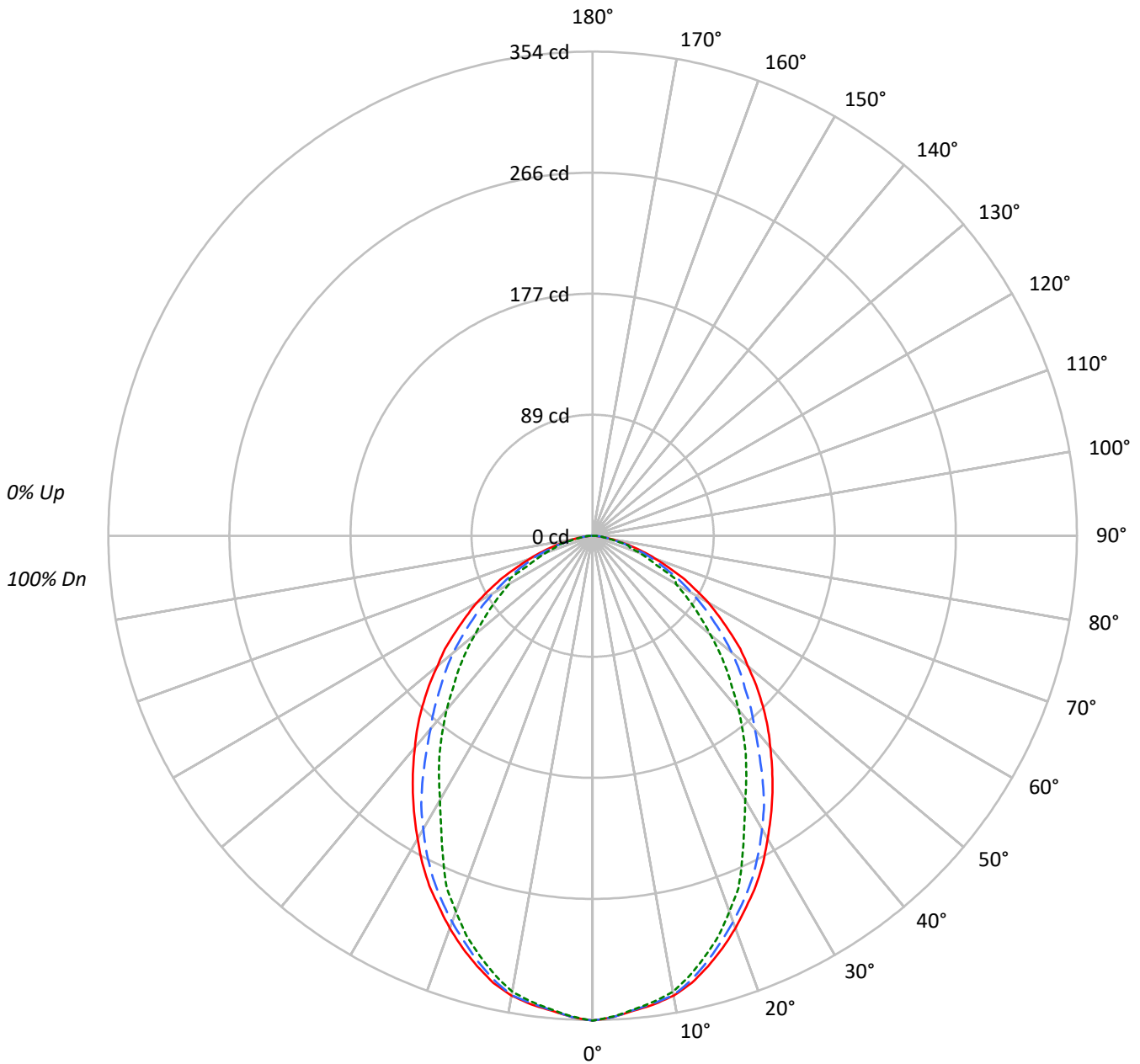
Lumens per Lamp: N/A  
Luminaire Lumens: 696.0 lumens  
Efficiency: N/A  
Efficacy: 83.9 lumens/watt  
Spacing Criteria (0/90/45): 1.1 / 1 / 1.15  
Luminous Opening: Rectangular (W 1' x L: 1' x H: 0')  
CIE Type: Direct

Input Watts (W): 8.3  
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°	3816	3816	3816
5°	3764	3760	3756
10°	3731	3727	3700
15°	3631	3595	3545
20°	3497	3441	3347
25°	3354	3280	3076
30°	3179	3077	2772
35°	3010	2844	2564
40°	2840	2591	2333
45°	2676	2396	2108
50°	2478	2224	1881
55°	2291	2016	1685
60°	2099	1800	1509
65°	1847	1577	1337
70°	1523	1382	1136
75°	1210	1056	1106
80°	812	762	713
85°	506	605	704



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	33.0	4.7
10°-20°	90.6	13.0
20°-30°	125.4	18.0
30°-40°	133.7	19.2
40°-50°	122.0	17.5
50°-60°	95.6	13.7
60°-70°	62.3	8.9
70°-80°	27.6	4.0
80°-90°	5.9	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°	249.0	35.8
0°-40°	382.7	55.0
0°-60°	600.2	86.2
0°-90°	696.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	696.0	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	354	354	354	354	354	
5°	348	348	348	348	348	33
15°	326	326	323	319	318	92
25°	282	281	276	266	259	130
35°	229	228	216	200	195	143
45°	176	172	157	144	138	135
55°	122	118	107	95	90	110
65°	72	68	62	63	52	71
75°	29	27	25	24	27	31
85°	4	4	5	5	6	6
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	354.5	354.5	354.5	354.5	354.5
2.5°	352.1	352.1	352.1	351.7	351.7
5°	348.4	348.0	348.0	347.6	347.6
7.5°	345.5	345.1	344.7	344.3	343.5
10°	341.4	341.4	341.0	339.0	338.5
12.5°	334.9	334.4	332.8	329.9	329.1
15°	325.8	325.8	322.6	319.3	318.1
17.5°	316.0	315.6	311.5	308.2	306.6
20°	305.3	304.5	300.4	295.1	292.2
22.5°	293.5	293.5	288.5	281.6	278.7
25°	282.4	280.8	276.2	266.4	259.0
27.5°	269.7	267.2	262.3	248.4	239.8
30°	255.8	254.5	247.6	229.5	223.0
32.5°	242.6	240.6	233.2	214.4	209.0
35°	229.1	227.5	216.4	200.0	195.1
37.5°	215.6	213.5	199.6	186.5	180.3
40°	202.1	199.6	184.4	172.6	166.0
42.5°	189.4	186.1	171.3	158.6	151.2
45°	175.8	172.1	157.4	144.3	138.5
47.5°	162.3	159.0	145.5	132.0	125.4
50°	148.0	145.1	132.8	119.3	112.3
52.5°	136.1	131.6	119.7	106.2	100.4
55°	122.1	118.5	107.4	94.7	89.8
57.5°	109.4	105.7	95.5	83.6	79.5
60°	97.5	92.2	83.6	73.4	70.1
62.5°	84.4	80.3	73.0	64.3	68.4
65°	72.5	68.4	61.9	63.1	52.5
67.5°	59.4	57.4	51.6	45.9	44.3
70°	48.4	45.9	43.9	37.7	36.1
72.5°	38.5	36.1	33.2	29.9	28.7
75°	29.1	27.1	25.4	24.2	26.6
77.5°	20.1	19.3	18.0	16.8	16.4
80°	13.1	12.7	12.3	11.9	11.5
82.5°	7.8	7.8	7.8	7.8	7.8
85°	4.1	4.5	4.9	5.3	5.7
87.5°	2.5	2.5	2.9	3.3	3.7
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)