

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: P545747

Luminaire Tested: **FMR-12-2-LD4-2STD-35-UNV-93-88-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: P545747  
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-12-2-LD4-2STD-35-UNV-93-88-EDD  
Description: 1X2 FMR TROFFER WITH .156 CLEAR TEMPERED GLASS FIXTURE SIDE AND .500 CLEAR PC ENVIRONMENTAL SIDE LENSES WITH, 90 CRI AND 3500K CCT LEDS  
Light Source: -  
Ballast/Driver: -

Luminaire Equipment: Sample No.   Condition   Description

**Summary**

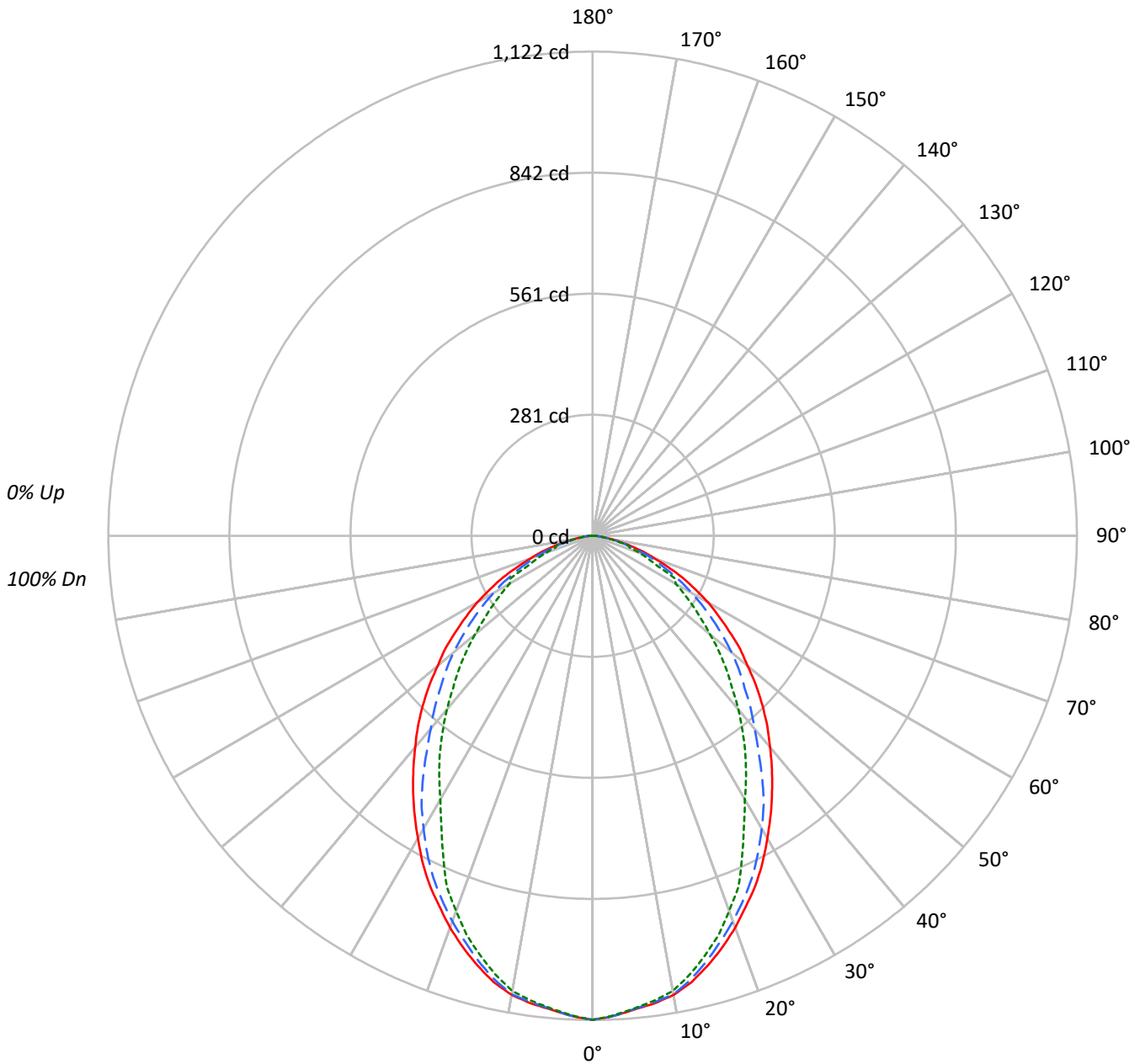
Lumens per Lamp: N/A  
Luminaire Lumens: 2202.0 lumens  
Efficiency: N/A  
Efficacy: 66.1 lumens/watt  
Spacing Criteria (0/90/45): 1.1 / 1 / 1.15  
Luminous Opening: Rectangular (W 1' x L: 2' x H: 0')  
CIE Type: Direct

Input Watts (W): 33.3  
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°	6037	6037	6037
5°	5955	5948	5941
10°	5903	5896	5854
15°	5744	5686	5607
20°	5533	5444	5296
25°	5305	5190	4866
30°	5029	4867	4384
35°	4763	4499	4055
40°	4491	4099	3690
45°	4234	3790	3336
50°	3919	3517	2975
55°	3626	3187	2665
60°	3322	2847	2386
65°	2923	2493	2114
70°	2408	2183	1795
75°	1915	1672	1753
80°	1286	1206	1125
85°	803	963	1124



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	104.4	4.7
10°-20°	286.6	13.0
20°-30°	396.7	18.0
30°-40°	423.0	19.2
40°-50°	385.9	17.5
50°-60°	302.3	13.7
60°-70°	197.0	8.9
70°-80°	87.3	4.0
80°-90°	18.7	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°	787.7	35.8
0°-40°	1210.7	55.0
0°-60°	1898.9	86.2
0°-90°	2202.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	2202.0	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	1122	1122	1122	1122	1122	
5°	1102	1101	1101	1100	1100	105
15°	1031	1031	1020	1010	1006	290
25°	893	888	874	843	820	410
35°	725	720	685	633	617	453
45°	556	545	498	456	438	429
55°	386	375	340	300	284	347
65°	230	217	196	200	166	226
75°	92	86	80	76	84	99
85°	13	14	16	17	18	18
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	1121.7	1121.7	1121.7	1121.7	1121.7
2.5°	1113.9	1113.9	1113.9	1112.6	1112.6
5°	1102.2	1100.9	1100.9	1099.6	1099.6
7.5°	1093.1	1091.8	1090.5	1089.3	1086.7
10°	1080.2	1080.2	1078.9	1072.4	1071.1
12.5°	1059.4	1058.1	1052.9	1043.9	1041.3
15°	1030.9	1030.9	1020.5	1010.2	1006.3
17.5°	999.8	998.5	985.5	975.1	970.0
20°	966.1	963.5	950.5	933.6	924.6
22.5°	928.5	928.5	912.9	890.9	881.8
25°	893.4	888.3	874.0	842.9	819.5
27.5°	853.2	845.5	829.9	785.8	758.6
30°	809.2	805.3	783.2	726.2	705.4
32.5°	767.7	761.2	737.8	678.2	661.3
35°	724.9	719.7	684.7	632.8	617.2
37.5°	682.1	675.6	631.5	590.0	570.6
40°	639.3	631.5	583.5	545.9	525.2
42.5°	599.1	588.7	542.0	501.8	478.5
45°	556.3	544.6	497.9	456.4	438.3
47.5°	513.5	503.1	460.3	417.5	396.8
50°	468.1	459.0	420.1	377.3	355.3
52.5°	430.5	416.2	378.6	335.9	317.7
55°	386.4	374.8	339.7	299.5	284.0
57.5°	346.2	334.6	302.1	264.5	251.6
60°	308.6	291.8	264.5	232.1	221.7
62.5°	267.1	254.2	230.8	203.6	216.6
65°	229.5	216.6	195.8	199.7	166.0
67.5°	188.0	181.5	163.4	145.2	140.0
70°	153.0	145.2	138.7	119.3	114.1
72.5°	121.9	114.1	105.0	94.7	90.8
75°	92.1	85.6	80.4	76.5	84.3
77.5°	63.5	60.9	57.1	53.2	51.9
80°	41.5	40.2	38.9	37.6	36.3
82.5°	24.6	24.6	24.6	24.6	24.6
85°	13.0	14.3	15.6	16.9	18.2
87.5°	7.8	7.8	9.1	10.4	11.7
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)