

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: P589303

Luminaire Tested: **FMR-24-2-LD4-3HI-40-UNV-80-86-EDD**

Issue Date: 12/8/2021



**Test Information**

Test Method: LM-79-08  
Report Number: P589303  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-2102-135-1)  
Test Lab: INNOVATION CENTER  
Issue Date: 12/8/2021  
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)  
Product Line: FAIL-SAFE  
Catalog Number: FMR-24-2-LD4-3HI-40-UNV-80-86-EDD  
Description: 2X2 FMR TROFFER WITH .125 PRISMATIC ACRYLIC FIXTURE SIDE AND .250 CLEAR PC ENVIRONMENTAL SIDE LENSES WITH, 80 CRI AND 4000K CCT LEDS  
Light Source: -  
Ballast/Driver: -

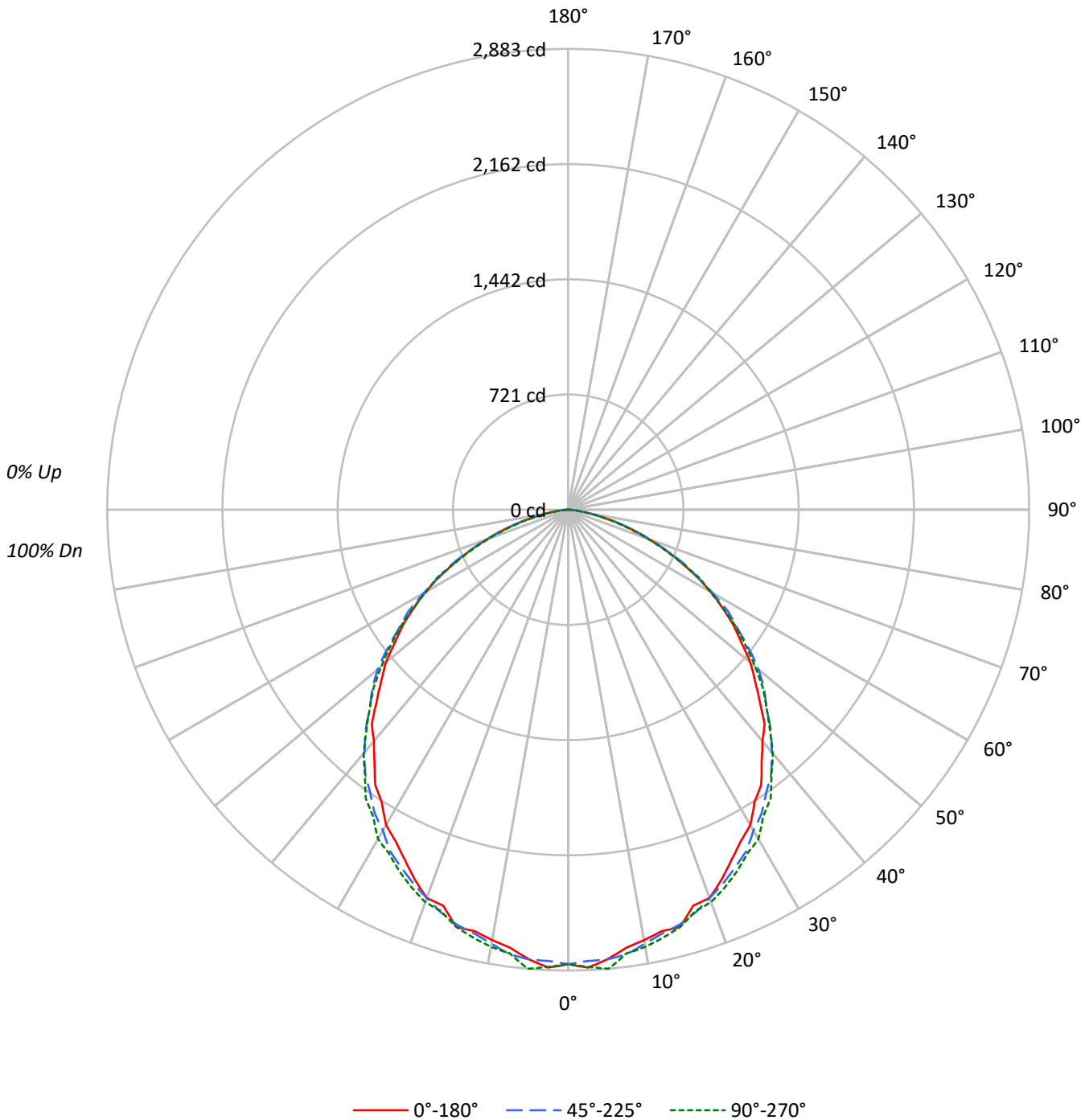
**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 7165.0 lumens  
Efficiency: N/A  
Efficacy: 110.6 lumens/watt  
Spacing Criteria (0/90/45): 1.19 / 1.23 / 1.33  
Luminous Opening: Rectangular (W 2' x L: 2' x H: 0')  
CIE Type: Direct  
  
Input Watts (W): 64.8  
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	
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	0
RCR																		
0	119	119	119	119	116	116	116	116	111	111	111	106	106	106	102	102	102	100
1	110	105	101	98	107	103	100	96	99	96	93	95	93	90	91	90	88	86
2	100	93	86	81	98	91	85	80	87	82	78	84	80	76	81	78	75	73
3	92	82	74	68	89	80	73	67	77	71	66	75	69	65	72	68	64	62
4	84	73	64	58	82	71	64	58	69	62	57	67	61	56	65	59	55	53
5	78	65	57	50	76	64	56	50	62	55	49	60	54	49	58	53	48	46
6	72	59	50	44	70	58	50	44	56	49	43	54	48	43	53	47	43	41
7	67	53	45	39	65	53	45	39	51	44	39	50	43	38	48	42	38	36
8	62	49	41	35	61	48	40	35	47	40	34	46	39	34	44	39	34	32
9	58	45	37	31	57	44	37	31	43	36	31	42	36	31	41	35	31	29
10	54	41	34	29	53	41	33	28	40	33	28	39	33	28	38	32	28	26

**AVERAGE LUMINANCE (cd/sqm):**

	0°	45°	90°
0°	7650	7650	7650
5°	7625	7628	7789
10°	7470	7535	7589
15°	7529	7489	7530
20°	7402	7402	7481
25°	7175	7331	7412
30°	7076	7200	7392
35°	6910	7090	7250
40°	6641	6960	6991
45°	6440	6669	6678
50°	6228	6509	6385
55°	5934	6050	6007
60°	5549	5605	5504
65°	4948	5074	4913
70°	4246	4260	4142
75°	3362	3354	3225
80°	2253	2190	2104
85°	1223	1213	1133



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	267.4	3.7
10°-20°	757.9	10.6
20°-30°	1135.5	15.8
30°-40°	1345.8	18.8
40°-50°	1348.3	18.8
50°-60°	1144.5	16.0
60°-70°	771.6	10.8
70°-80°	339.0	4.7
80°-90°	55.1	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°	2160.8	30.2
0°-40°	3506.6	48.9
0°-60°	5999.3	83.7
0°-90°	7165.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	7165.0	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	2843	2843	2843	2843	2843	
5°	2823	2816	2824	2815	2883	266
15°	2703	2672	2688	2702	2703	753
25°	2416	2430	2469	2502	2496	1117
35°	2103	2110	2158	2208	2207	1306
45°	1692	1724	1752	1798	1755	1309
55°	1265	1256	1290	1281	1280	1125
65°	777	767	797	766	772	773
75°	323	317	323	300	310	347
85°	40	38	39	38	37	57
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	2842.9	2842.9	2842.9	2842.9	2842.9
2.5°	2867.5	2845.8	2825.6	2849.1	2863.4
5°	2822.7	2816.1	2823.8	2815.4	2883.3
7.5°	2764.7	2790.0	2804.7	2795.5	2799.6
10°	2733.9	2725.1	2757.7	2780.5	2777.2
12.5°	2700.8	2714.1	2715.9	2740.5	2742.7
15°	2702.7	2671.5	2688.0	2701.9	2703.0
17.5°	2597.7	2631.5	2642.8	2674.8	2635.1
20°	2584.8	2560.3	2584.8	2617.5	2612.4
22.5°	2505.9	2478.4	2531.3	2560.3	2558.4
25°	2416.4	2429.6	2469.2	2501.5	2496.4
27.5°	2337.8	2353.2	2409.8	2454.2	2425.5
30°	2277.2	2269.5	2317.3	2356.9	2378.9
32.5°	2169.0	2196.9	2252.7	2291.9	2271.0
35°	2103.3	2109.5	2158.3	2208.2	2206.8
37.5°	1988.4	2017.4	2086.0	2100.0	2087.1
40°	1890.4	1919.4	1981.4	1996.4	1990.2
42.5°	1818.1	1823.2	1876.4	1893.7	1866.1
45°	1692.2	1723.7	1752.4	1797.5	1754.9
47.5°	1585.0	1599.7	1661.3	1673.4	1651.0
50°	1487.7	1492.8	1554.9	1539.8	1525.1
52.5°	1365.5	1387.1	1422.0	1419.1	1401.8
55°	1264.9	1256.5	1289.5	1280.7	1280.3
57.5°	1144.1	1158.8	1186.0	1172.0	1149.6
60°	1031.1	1031.4	1041.4	1025.6	1022.6
62.5°	905.2	909.6	911.8	892.3	923.9
65°	777.1	766.8	796.9	766.4	771.6
67.5°	659.2	664.4	661.4	642.4	649.7
70°	539.6	546.2	541.4	519.8	526.4
72.5°	430.2	422.1	427.3	400.1	412.6
75°	323.4	316.8	322.6	299.9	310.2
77.5°	220.2	225.4	221.7	209.6	216.6
80°	145.4	141.3	141.3	134.3	135.8
82.5°	84.8	80.8	79.7	77.4	80.8
85°	39.6	38.5	39.3	38.2	36.7
87.5°	14.3	14.7	14.7	13.9	13.2
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)