

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: P589782

Luminaire Tested: **FMR-24-2-LD4-4STD-40-UNV-80-85-EDD**

Issue Date: 12/8/2021



**Test Information**

Test Method: LM-79-08  
Report Number: P589782  
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-LD4-4STD-40-UNV-80-85-EDD  
Description: 2X2 FMR TROFFER WITH .125 PRISMATIC ACRYLIC FIXTURE SIDE AND .187 CLEAR PC ENVIRONMENTAL SIDE LENSES WITH, 80 CRI AND 4000K CCT LEDS  
Light Source: -  
Ballast/Driver: -

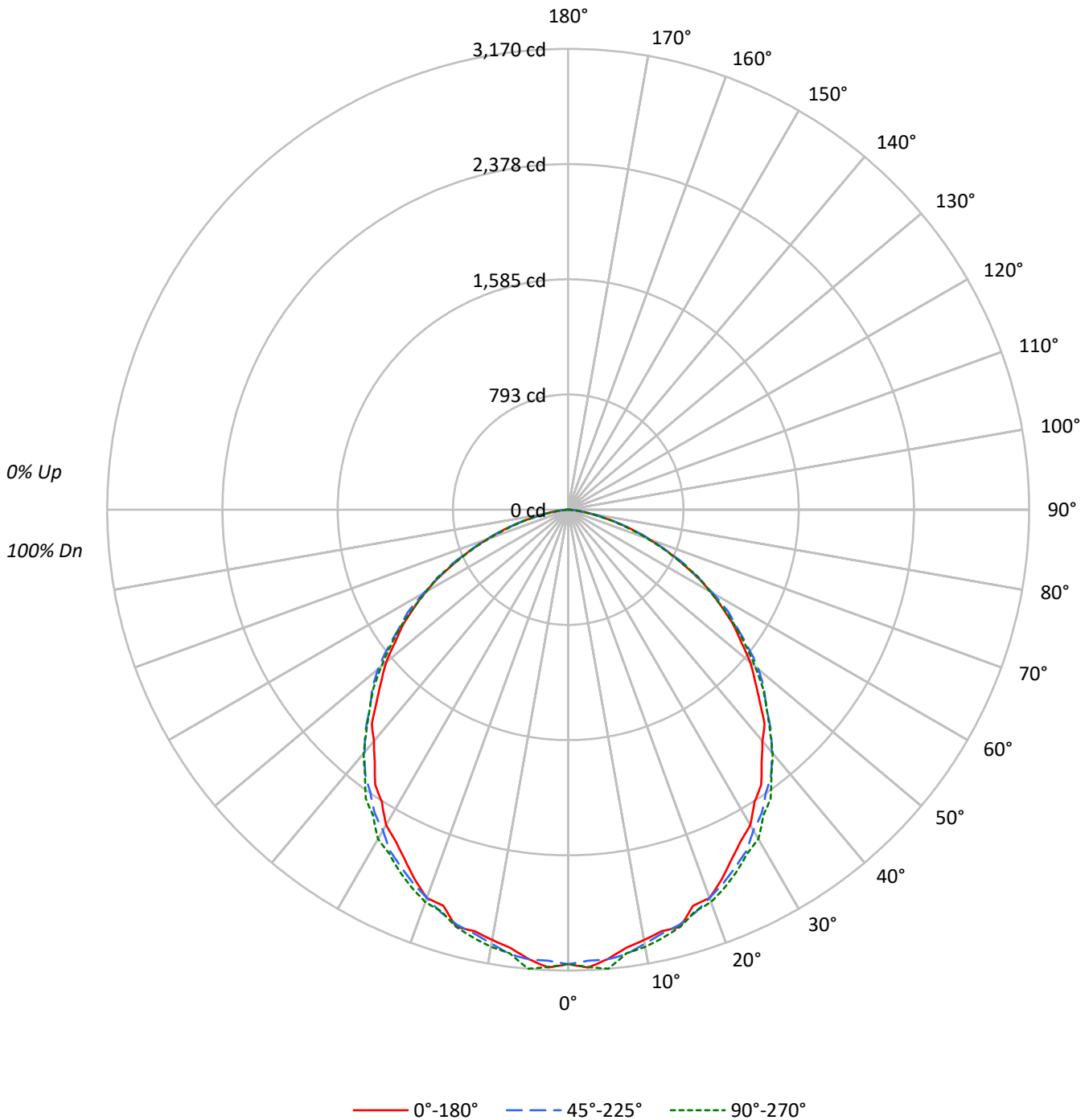
**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 7877.0 lumens  
Efficiency: N/A  
Efficacy: 118.3 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): 66.6  
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				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°	8410	8410	8410
5°	8383	8386	8562
10°	8213	8284	8343
15°	8277	8233	8279
20°	8138	8138	8224
25°	7888	8060	8149
30°	7779	7916	8126
35°	7596	7795	7970
40°	7300	7652	7686
45°	7080	7332	7342
50°	6847	7156	7019
55°	6524	6651	6603
60°	6100	6161	6051
65°	5440	5578	5401
70°	4667	4683	4553
75°	3696	3688	3545
80°	2476	2408	2314
85°	1346	1334	1247



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	294.0	3.7
10°-20°	833.2	10.6
20°-30°	1248.3	15.8
30°-40°	1479.5	18.8
40°-50°	1482.2	18.8
50°-60°	1258.2	16.0
60°-70°	848.3	10.8
70°-80°	372.7	4.7
80°-90°	60.6	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°	2375.5	30.2
0°-40°	3855.0	48.9
0°-60°	6595.4	83.7
0°-90°	7877.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	7877.0	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	3125	3125	3125	3125	3125	
5°	3103	3096	3104	3095	3170	293
15°	2971	2937	2955	2970	2972	828
25°	2656	2671	2715	2750	2744	1228
35°	2312	2319	2373	2428	2426	1436
45°	1860	1895	1926	1976	1929	1439
55°	1391	1381	1418	1408	1408	1237
65°	854	843	876	843	848	850
75°	356	348	355	330	341	381
85°	44	42	43	42	40	63
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	3125.4	3125.4	3125.4	3125.4	3125.4
2.5°	3152.4	3128.6	3106.4	3132.3	3148.0
5°	3103.2	3095.9	3104.4	3095.1	3169.8
7.5°	3039.4	3067.3	3083.4	3073.3	3077.8
10°	3005.5	2995.9	3031.8	3056.8	3053.2
12.5°	2969.2	2983.8	2985.8	3012.8	3015.2
15°	2971.2	2936.9	2955.1	2970.4	2971.6
17.5°	2855.8	2893.0	2905.5	2940.6	2897.0
20°	2841.7	2814.7	2841.7	2877.6	2872.0
22.5°	2754.9	2724.7	2782.8	2814.7	2812.7
25°	2656.5	2671.0	2714.6	2750.1	2744.5
27.5°	2570.1	2587.1	2649.2	2698.0	2666.6
30°	2503.5	2495.1	2547.5	2591.1	2615.3
32.5°	2384.5	2415.2	2476.5	2519.7	2496.7
35°	2312.3	2319.1	2372.8	2427.7	2426.1
37.5°	2186.0	2217.8	2293.3	2308.6	2294.5
40°	2078.2	2110.1	2178.3	2194.8	2188.0
42.5°	1998.7	2004.4	2062.9	2081.8	2051.6
45°	1860.3	1895.0	1926.5	1976.1	1929.3
47.5°	1742.5	1758.6	1826.4	1839.7	1815.1
50°	1635.5	1641.2	1709.4	1692.8	1676.7
52.5°	1501.2	1525.0	1563.3	1560.1	1541.1
55°	1390.6	1381.3	1417.6	1407.9	1407.5
57.5°	1257.8	1274.0	1303.8	1288.5	1263.9
60°	1133.5	1133.9	1144.8	1127.5	1124.3
62.5°	995.1	1000.0	1002.4	981.0	1015.7
65°	854.3	843.0	876.1	842.6	848.2
67.5°	724.8	730.4	727.2	706.2	714.3
70°	593.2	600.5	595.2	571.4	578.7
72.5°	472.9	464.1	469.7	439.9	453.6
75°	355.5	348.3	354.7	329.7	341.0
77.5°	242.1	247.8	243.7	230.4	238.1
80°	159.8	155.4	155.4	147.7	149.3
82.5°	93.2	88.8	87.6	85.1	88.8
85°	43.6	42.4	43.2	42.0	40.4
87.5°	15.7	16.1	16.1	15.3	14.5
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)