

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: P589783

Luminaire Tested: **FMR-24-2-LD4-4STD-40-UNV-80-86-EDD**

Issue Date: 12/8/2021



**Test Information**

Test Method: LM-79-08  
Report Number: P589783  
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-80-86-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: -

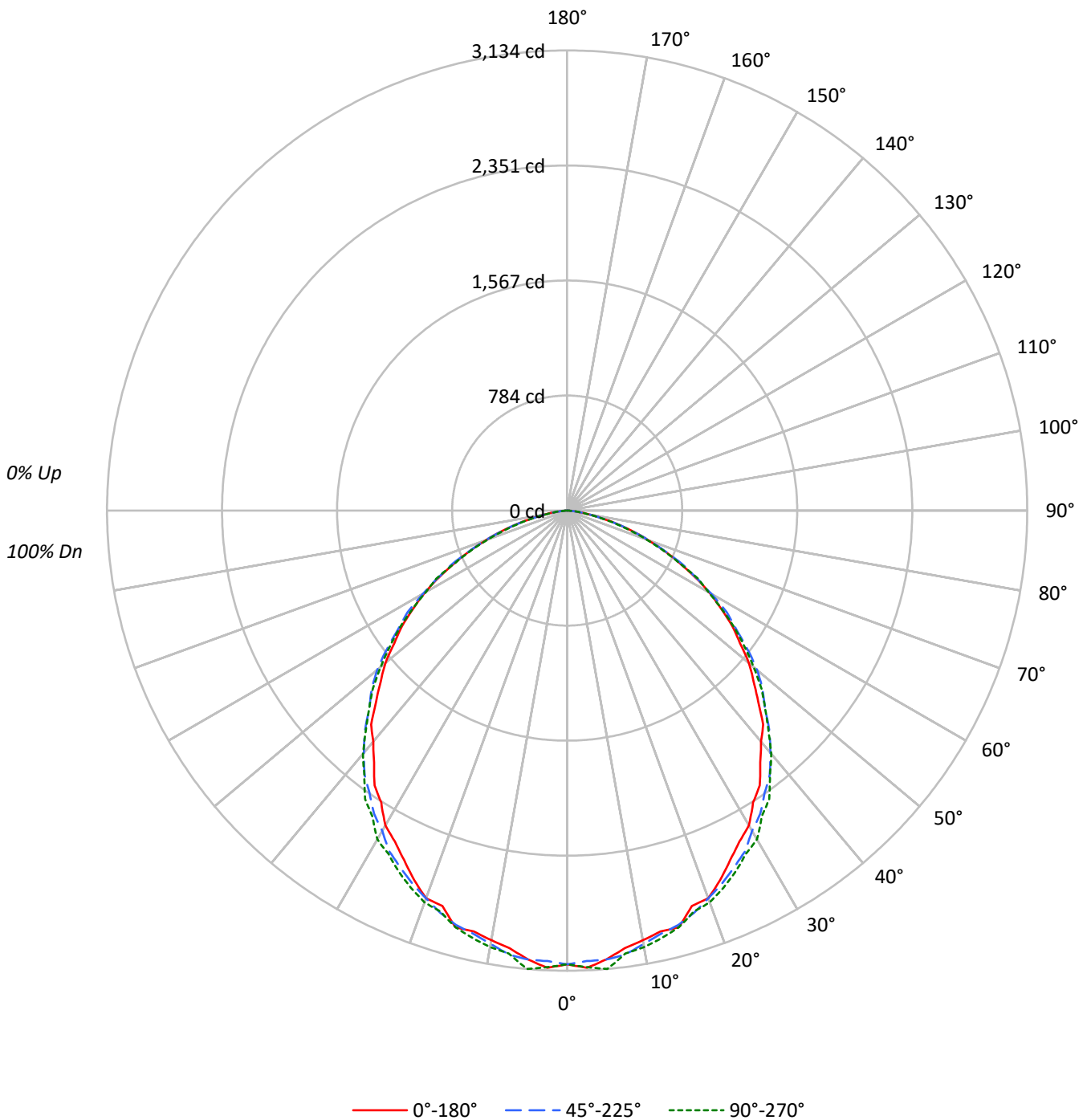
**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 7788.0 lumens  
Efficiency: N/A  
Efficacy: 116.9 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°	8315	8315	8315
5°	8288	8291	8466
10°	8120	8191	8249
15°	8184	8140	8185
20°	8046	8046	8131
25°	7799	7969	8057
30°	7691	7826	8035
35°	7510	7707	7880
40°	7218	7566	7599
45°	7000	7249	7259
50°	6770	7075	6940
55°	6450	6576	6529
60°	6032	6092	5983
65°	5378	5515	5340
70°	4615	4630	4501
75°	3655	3646	3505
80°	2448	2380	2287
85°	1331	1318	1232



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	290.7	3.7
10°-20°	823.8	10.6
20°-30°	1234.2	15.8
30°-40°	1462.8	18.8
40°-50°	1465.5	18.8
50°-60°	1244.0	16.0
60°-70°	838.7	10.8
70°-80°	368.5	4.7
80°-90°	59.9	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°	2348.7	30.2
0°-40°	3811.5	48.9
0°-60°	6520.9	83.7
0°-90°	7788.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	7788.0	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	3090	3090	3090	3090	3090	
5°	3068	3061	3069	3060	3134	289
15°	2938	2904	2922	2937	2938	818
25°	2626	2641	2684	2719	2713	1214
35°	2286	2293	2346	2400	2399	1419
45°	1839	1874	1905	1954	1908	1423
55°	1375	1366	1402	1392	1392	1223
65°	845	834	866	833	839	840
75°	352	344	351	326	337	377
85°	43	42	43	42	40	62
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	3090.1	3090.1	3090.1	3090.1	3090.1
2.5°	3116.8	3093.3	3071.3	3096.9	3112.4
5°	3068.1	3061.0	3069.3	3060.2	3134.0
7.5°	3005.1	3032.6	3048.6	3038.6	3043.0
10°	2971.6	2962.0	2997.5	3022.3	3018.7
12.5°	2935.7	2950.0	2952.0	2978.8	2981.2
15°	2937.7	2903.8	2921.7	2936.9	2938.1
17.5°	2823.6	2860.3	2872.6	2907.3	2864.3
20°	2809.6	2782.9	2809.6	2845.1	2839.5
22.5°	2723.8	2693.9	2751.3	2782.9	2780.9
25°	2626.5	2640.8	2683.9	2719.0	2713.4
27.5°	2541.1	2557.8	2619.3	2667.6	2636.4
30°	2475.3	2466.9	2518.7	2561.8	2585.8
32.5°	2357.6	2387.9	2448.5	2491.2	2468.5
35°	2286.1	2292.9	2346.0	2400.2	2398.7
37.5°	2161.3	2192.8	2267.4	2282.6	2268.6
40°	2054.7	2086.3	2153.7	2170.0	2163.3
42.5°	1976.1	1981.7	2039.6	2058.3	2028.4
45°	1839.3	1873.6	1904.7	1953.8	1907.5
47.5°	1722.8	1738.7	1805.8	1818.9	1794.6
50°	1617.1	1622.6	1690.1	1673.7	1657.8
52.5°	1484.2	1507.7	1545.6	1542.4	1523.7
55°	1374.9	1365.7	1401.6	1392.0	1391.6
57.5°	1243.6	1259.6	1289.1	1273.9	1249.6
60°	1120.7	1121.1	1131.9	1114.7	1111.6
62.5°	983.9	988.7	991.1	969.9	1004.2
65°	844.6	833.5	866.2	833.1	838.7
67.5°	716.6	722.1	719.0	698.2	706.2
70°	586.5	593.7	588.5	565.0	572.1
72.5°	467.6	458.8	464.4	434.9	448.5
75°	351.5	344.3	350.7	326.0	337.1
77.5°	239.4	245.0	241.0	227.8	235.4
80°	158.0	153.6	153.6	146.0	147.6
82.5°	92.2	87.8	86.6	84.2	87.8
85°	43.1	41.9	42.7	41.5	39.9
87.5°	15.6	16.0	16.0	15.2	14.4
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)