

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: P589784

Luminaire Tested: **FMR-24-2-LD4-4STD-40-UNV-80-87-EDD**

Issue Date: 12/8/2021



**Test Information**

Test Method: LM-79-08  
Report Number: P589784  
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-80-87-EDD  
Description: 2X2 FMR TROFFER WITH .125 PRISMATIC ACRYLIC FIXTURE SIDE AND .375 CLEAR PC ENVIRONMENTAL SIDE LENSES WITH, 80 CRI AND 4000K CCT LEDS  
Light Source: -  
Ballast/Driver: -

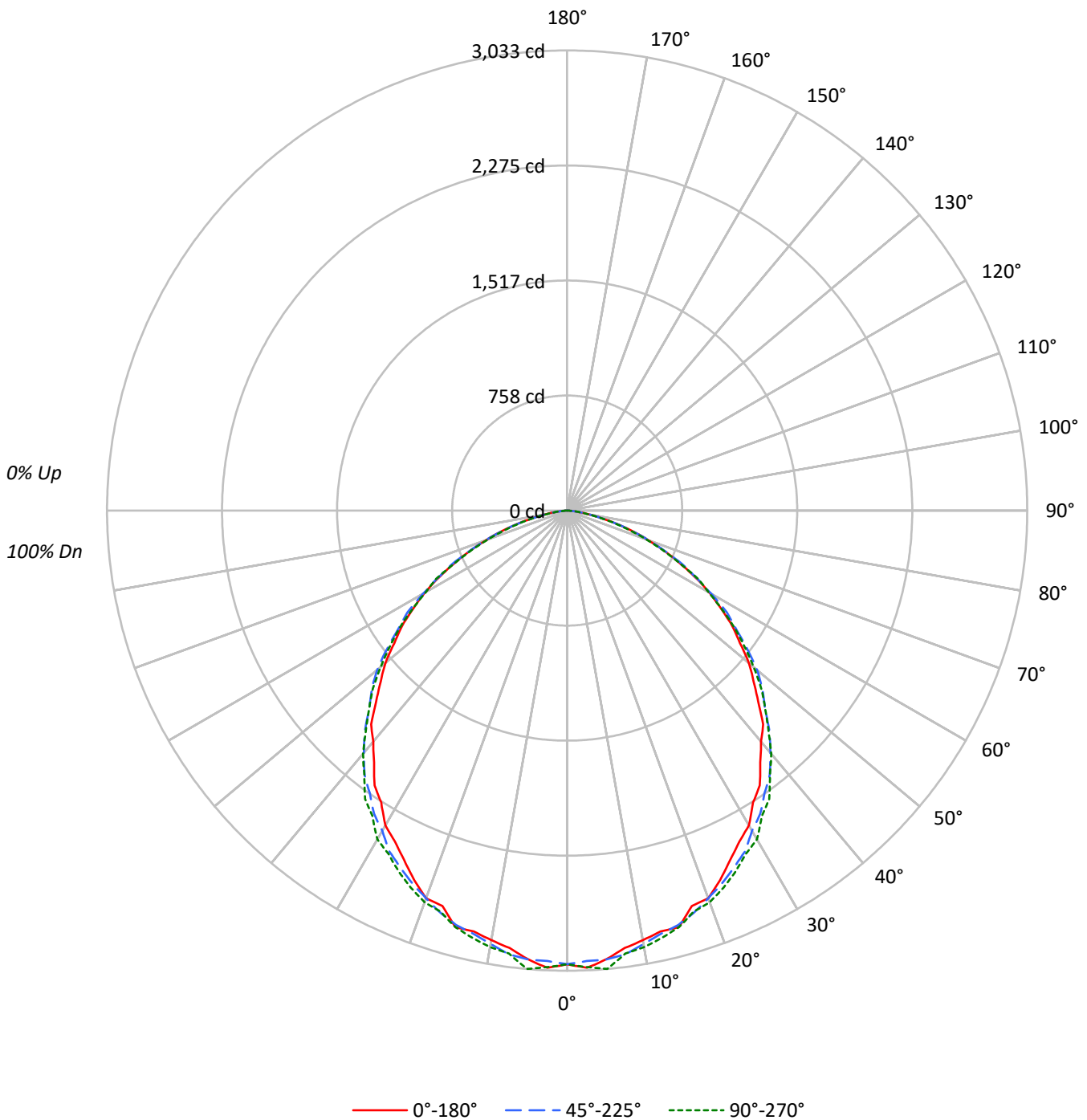
**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 7536.0 lumens  
Efficiency: N/A  
Efficacy: 113.2 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

TEST NUMBER: P589784

CATALOG NUMBER: FMR-24-2-LD4-4STD-40-UNV-80-87-EDD

### Luminous Intensity Polar Plot





TEST NUMBER: P589784

CATALOG NUMBER: FMR-24-2-LD4-4STD-40-UNV-80-87-EDD

**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°	8046	8046	8046
5°	8020	8023	8192
10°	7857	7926	7982
15°	7919	7876	7920
20°	7785	7785	7868
25°	7546	7711	7796
30°	7443	7573	7775
35°	7267	7457	7625
40°	6984	7321	7353
45°	6773	7014	7024
50°	6550	6846	6715
55°	6242	6363	6318
60°	5837	5895	5789
65°	5204	5337	5167
70°	4465	4480	4356
75°	3536	3529	3392
80°	2369	2303	2213
85°	1288	1275	1192



TEST NUMBER: P589784

CATALOG NUMBER: FMR-24-2-LD4-4STD-40-UNV-80-87-EDD

**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	281.3	3.7
10°-20°	797.1	10.6
20°-30°	1194.3	15.8
30°-40°	1415.5	18.8
40°-50°	1418.1	18.8
50°-60°	1203.7	16.0
60°-70°	811.5	10.8
70°-80°	356.6	4.7
80°-90°	57.9	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°	2272.7	30.2
0°-40°	3688.1	48.9
0°-60°	6309.9	83.7
0°-90°	7536.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	7536.0	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	2990	2990	2990	2990	2990	
5°	2969	2962	2970	2961	3033	280
15°	2843	2810	2827	2842	2843	792
25°	2542	2555	2597	2631	2626	1175
35°	2212	2219	2270	2323	2321	1374
45°	1780	1813	1843	1891	1846	1377
55°	1330	1322	1356	1347	1347	1183
65°	817	806	838	806	812	813
75°	340	333	339	315	326	364
85°	42	40	41	40	39	60
90°	0	0	0	0	0	



TEST NUMBER: P589784

CATALOG NUMBER: FMR-24-2-LD4-4STD-40-UNV-80-87-EDD

**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	2990.1	2990.1	2990.1	2990.1	2990.1
2.5°	3016.0	2993.2	2971.9	2996.7	3011.7
5°	2968.9	2961.9	2970.0	2961.1	3032.6
7.5°	2907.9	2934.5	2949.9	2940.3	2944.5
10°	2875.4	2866.2	2900.5	2924.5	2921.0
12.5°	2840.7	2854.6	2856.5	2882.4	2884.7
15°	2842.6	2809.8	2827.2	2841.8	2843.0
17.5°	2732.2	2767.7	2779.7	2813.3	2771.6
20°	2718.7	2692.8	2718.7	2753.0	2747.6
22.5°	2635.7	2606.7	2662.3	2692.8	2690.9
25°	2541.5	2555.4	2597.1	2631.1	2625.6
27.5°	2458.9	2475.1	2534.5	2581.2	2551.1
30°	2395.2	2387.1	2437.2	2478.9	2502.1
32.5°	2281.3	2310.6	2369.3	2410.6	2388.6
35°	2212.2	2218.7	2270.1	2322.6	2321.0
37.5°	2091.3	2121.8	2194.0	2208.7	2195.2
40°	1988.2	2018.7	2084.0	2099.8	2093.3
42.5°	1912.2	1917.6	1973.6	1991.7	1962.8
45°	1779.8	1813.0	1843.1	1890.6	1845.8
47.5°	1667.0	1682.5	1747.3	1760.1	1736.5
50°	1564.7	1570.1	1635.4	1619.6	1604.1
52.5°	1436.2	1458.9	1495.6	1492.5	1474.4
55°	1330.4	1321.5	1356.3	1347.0	1346.6
57.5°	1203.4	1218.8	1247.4	1232.7	1209.2
60°	1084.5	1084.9	1095.3	1078.7	1075.6
62.5°	952.0	956.7	959.0	938.5	971.7
65°	817.3	806.5	838.2	806.1	811.5
67.5°	693.4	698.8	695.7	675.6	683.3
70°	567.5	574.5	569.4	546.7	553.6
72.5°	452.5	444.0	449.4	420.8	433.9
75°	340.1	333.2	339.4	315.4	326.2
77.5°	231.6	237.0	233.2	220.4	227.8
80°	152.9	148.6	148.6	141.3	142.8
82.5°	89.2	84.9	83.8	81.5	84.9
85°	41.7	40.5	41.3	40.2	38.6
87.5°	15.1	15.4	15.4	14.7	13.9
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)