

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: P589493

Luminaire Tested: **FMR-24-2-LD4-3STD-40-UNV-80-84-EDD**

Issue Date: 12/8/2021



**Test Information**

Test Method: LM-79-08  
Report Number: P589493  
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-LD4-3STD-40-UNV-80-84-EDD  
Description: 2X2 FMR TROFFER WITH .125 PRISMATIC ACRYLIC FIXTURE SIDE AND .125 CLEAR PC ENVIRONMENTAL SIDE LENSES WITH, 80 CRI AND 4000K CCT LEDS  
Light Source: -  
Ballast/Driver: -

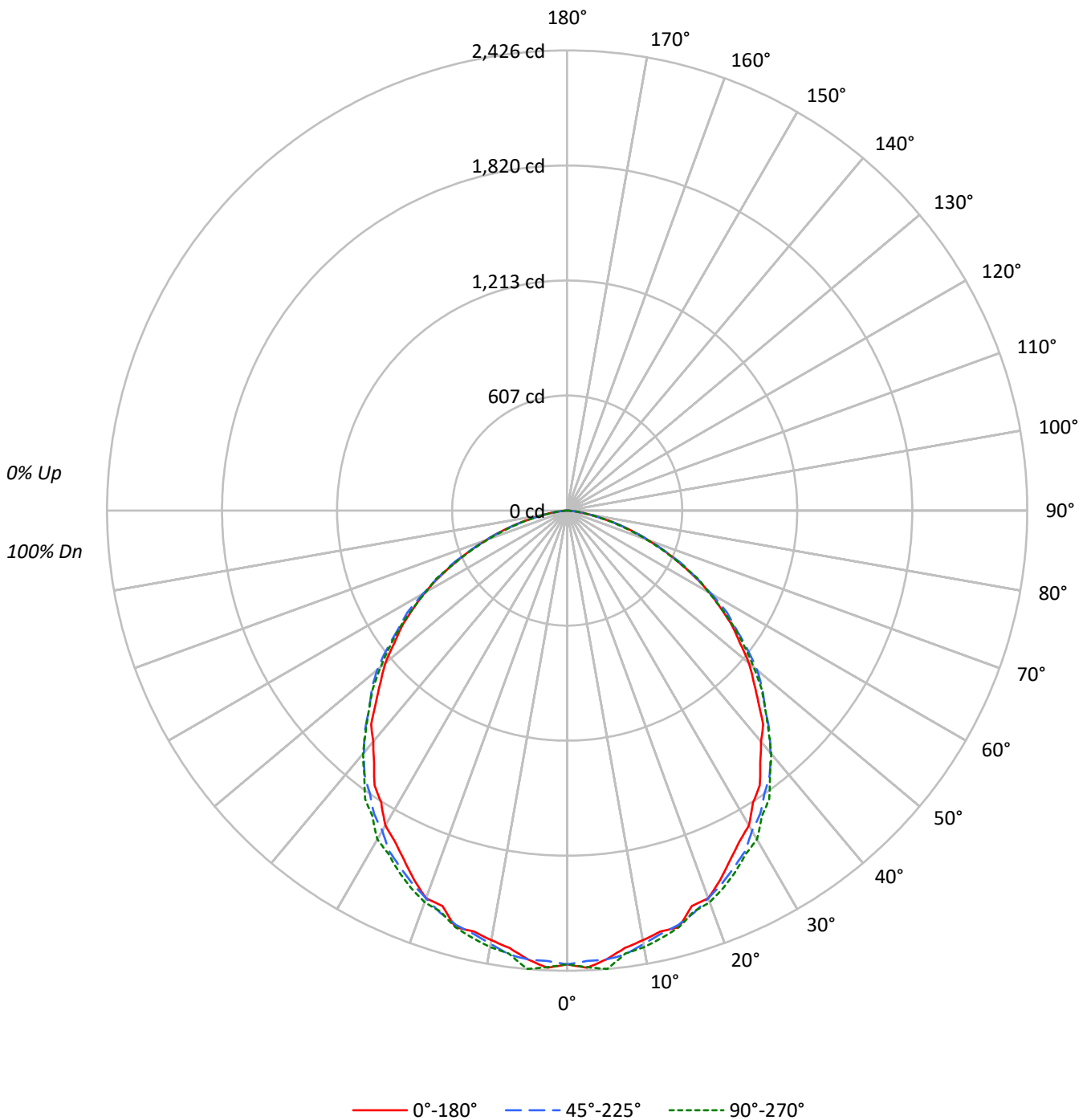
**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 6028.0 lumens  
Efficiency: N/A  
Efficacy: 120.6 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): 50  
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: P589493

CATALOG NUMBER: FMR-24-2-LD4-3STD-40-UNV-80-84-EDD

### Luminous Intensity Polar Plot





TEST NUMBER: P589493

CATALOG NUMBER: FMR-24-2-LD4-3STD-40-UNV-80-84-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°	6436	6436	6436
5°	6415	6417	6552
10°	6285	6340	6384
15°	6335	6300	6335
20°	6228	6228	6294
25°	6036	6168	6236
30°	5953	6058	6219
35°	5813	5965	6099
40°	5587	5856	5882
45°	5418	5611	5619
50°	5240	5476	5372
55°	4993	5090	5053
60°	4669	4715	4631
65°	4163	4269	4133
70°	3572	3584	3484
75°	2829	2822	2713
80°	1895	1843	1771
85°	1031	1019	954



TEST NUMBER: P589493

CATALOG NUMBER: FMR-24-2-LD4-3STD-40-UNV-80-84-EDD

**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	225.0	3.7
10°-20°	637.6	10.6
20°-30°	955.3	15.8
30°-40°	1132.2	18.8
40°-50°	1134.3	18.8
50°-60°	962.8	16.0
60°-70°	649.1	10.8
70°-80°	285.2	4.7
80°-90°	46.3	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°	1817.9	30.2
0°-40°	2950.1	48.9
0°-60°	5047.3	83.7
0°-90°	6028.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	6028.0	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	2392	2392	2392	2392	2392	
5°	2375	2369	2376	2369	2426	224
15°	2274	2248	2261	2273	2274	634
25°	2033	2044	2077	2105	2100	940
35°	1770	1775	1816	1858	1857	1099
45°	1424	1450	1474	1512	1476	1101
55°	1064	1057	1085	1077	1077	947
65°	654	645	670	645	649	650
75°	272	266	271	252	261	292
85°	33	32	33	32	31	48
90°	0	0	0	0	0	



TEST NUMBER: P589493

CATALOG NUMBER: FMR-24-2-LD4-3STD-40-UNV-80-84-EDD

**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	2391.8	2391.8	2391.8	2391.8	2391.8
2.5°	2412.4	2394.2	2377.2	2397.0	2409.1
5°	2374.8	2369.2	2375.7	2368.6	2425.7
7.5°	2326.0	2347.3	2359.6	2351.9	2355.3
10°	2300.0	2292.6	2320.1	2339.3	2336.5
12.5°	2272.2	2283.4	2284.9	2305.6	2307.5
15°	2273.8	2247.5	2261.4	2273.2	2274.1
17.5°	2185.5	2213.9	2223.5	2250.3	2217.0
20°	2174.7	2154.0	2174.7	2202.1	2197.8
22.5°	2108.3	2085.1	2129.6	2154.0	2152.4
25°	2032.9	2044.0	2077.4	2104.6	2100.2
27.5°	1966.8	1979.8	2027.4	2064.7	2040.6
30°	1915.9	1909.4	1949.5	1982.9	2001.4
32.5°	1824.8	1848.2	1895.2	1928.2	1910.6
35°	1769.5	1774.7	1815.8	1857.8	1856.6
37.5°	1672.8	1697.2	1755.0	1766.7	1755.9
40°	1590.4	1614.8	1667.0	1679.6	1674.4
42.5°	1529.6	1533.9	1578.7	1593.2	1570.0
45°	1423.6	1450.2	1474.3	1512.3	1476.4
47.5°	1333.5	1345.8	1397.7	1407.9	1389.0
50°	1251.6	1255.9	1308.1	1295.5	1283.1
52.5°	1148.8	1167.0	1196.3	1193.9	1179.4
55°	1064.2	1057.1	1084.9	1077.4	1077.1
57.5°	962.6	974.9	997.8	986.0	967.2
60°	867.5	867.8	876.1	862.8	860.4
62.5°	761.5	765.2	767.1	750.7	777.3
65°	653.8	645.1	670.4	644.8	649.1
67.5°	554.6	559.0	556.5	540.4	546.6
70°	454.0	459.5	455.5	437.3	442.8
72.5°	361.9	355.1	359.5	336.6	347.1
75°	272.1	266.5	271.4	252.3	260.9
77.5°	185.3	189.6	186.5	176.3	182.2
80°	122.3	118.9	118.9	113.0	114.3
82.5°	71.3	67.9	67.0	65.2	67.9
85°	33.4	32.4	33.0	32.1	30.9
87.5°	12.0	12.4	12.4	11.7	11.1
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)