

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: P588771

Luminaire Tested: **FMR-24-2-LD4-1HI-50-UNV-81-96-EDD**

Issue Date: 12/8/2021



**Test Information**

Test Method: LM-79-08  
Report Number: P588771  
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-LD4-1HI-50-UNV-81-96-EDD  
Description: 2X2 FMR TROFFER WITH .156 CLEAR PC FIXTURE SIDE AND .250 CLEAR  
TEMPERED GLASS ENVIRONMENTAL SIDE LENSES WITH, 80 CRI AND 5000K CCT LEDS  
Light Source: -  
Ballast/Driver: -

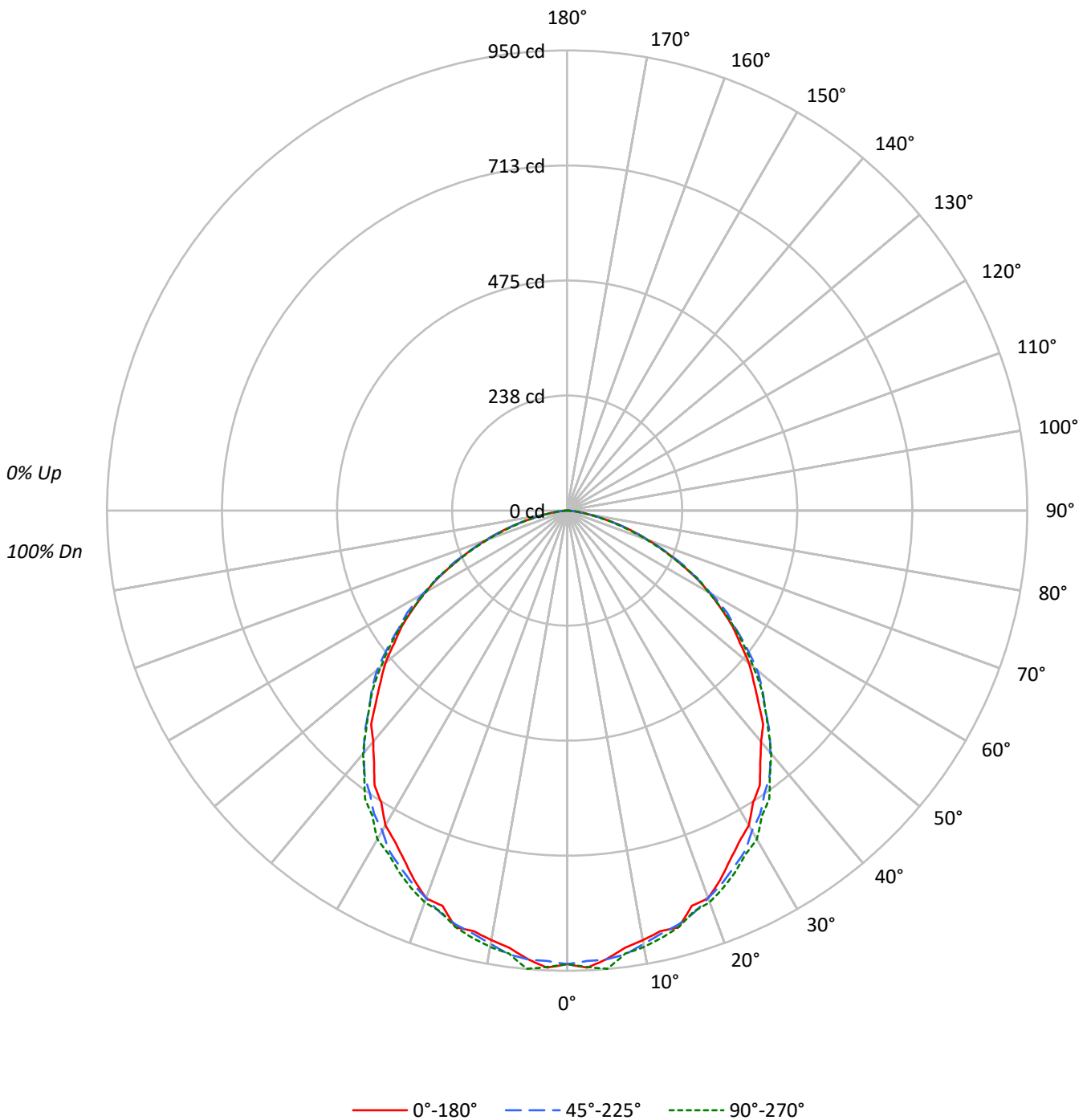
**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 2360.0 lumens  
Efficiency: N/A  
Efficacy: 109.3 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): 21.6  
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: P588771

CATALOG NUMBER: FMR-24-2-LD4-1HI-50-UNV-81-96-EDD

### Luminous Intensity Polar Plot





TEST NUMBER: P588771

CATALOG NUMBER: FMR-24-2-LD4-1HI-50-UNV-81-96-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°	2520	2520	2520
5°	2511	2512	2565
10°	2461	2482	2499
15°	2480	2467	2480
20°	2438	2438	2464
25°	2363	2415	2442
30°	2331	2372	2435
35°	2276	2335	2388
40°	2187	2292	2303
45°	2121	2197	2200
50°	2051	2144	2103
55°	1955	1993	1978
60°	1828	1846	1813
65°	1630	1671	1618
70°	1398	1403	1364
75°	1107	1105	1063
80°	742	721	693
85°	404	398	374



TEST NUMBER: P588771

CATALOG NUMBER: FMR-24-2-LD4-1HI-50-UNV-81-96-EDD

**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	88.1	3.7
10°-20°	249.6	10.6
20°-30°	374.0	15.8
30°-40°	443.3	18.8
40°-50°	444.1	18.8
50°-60°	376.9	16.0
60°-70°	254.1	10.8
70°-80°	111.7	4.7
80°-90°	18.1	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°	711.7	30.2
0°-40°	1155.0	48.9
0°-60°	1976.0	83.7
0°-90°	2360.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	2360.0	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	936	936	936	936	936	
5°	930	928	930	927	950	88
15°	890	880	885	890	890	248
25°	796	800	813	824	822	368
35°	693	695	711	727	727	430
45°	557	568	577	592	578	431
55°	417	414	425	422	422	371
65°	256	253	262	252	254	255
75°	106	104	106	99	102	114
85°	13	13	13	13	12	19
90°	0	0	0	0	0	



TEST NUMBER: P588771

CATALOG NUMBER: FMR-24-2-LD4-1HI-50-UNV-81-96-EDD

**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	936.4	936.4	936.4	936.4	936.4
2.5°	944.5	937.4	930.7	938.4	943.2
5°	929.7	927.6	930.1	927.3	949.7
7.5°	910.6	919.0	923.8	920.8	922.1
10°	900.5	897.6	908.3	915.8	914.7
12.5°	889.6	894.0	894.6	902.7	903.4
15°	890.2	879.9	885.4	890.0	890.3
17.5°	855.6	866.7	870.5	881.0	868.0
20°	851.4	843.3	851.4	862.2	860.5
22.5°	825.4	816.3	833.7	843.3	842.7
25°	795.9	800.3	813.3	823.9	822.3
27.5°	770.0	775.1	793.7	808.4	798.9
30°	750.1	747.5	763.3	776.3	783.6
32.5°	714.4	723.6	742.0	754.9	748.0
35°	692.8	694.8	710.9	727.3	726.9
37.5°	654.9	664.5	687.1	691.7	687.5
40°	622.6	632.2	652.6	657.6	655.5
42.5°	598.8	600.5	618.1	623.7	614.7
45°	557.4	567.8	577.2	592.1	578.0
47.5°	522.1	526.9	547.2	551.2	543.8
50°	490.0	491.7	512.1	507.2	502.3
52.5°	449.8	456.9	468.4	467.4	461.7
55°	416.6	413.8	424.7	421.8	421.7
57.5°	376.9	381.7	390.6	386.0	378.7
60°	339.6	339.7	343.0	337.8	336.8
62.5°	298.1	299.6	300.3	293.9	304.3
65°	256.0	252.6	262.5	252.4	254.1
67.5°	217.1	218.8	217.9	211.6	214.0
70°	177.7	179.9	178.3	171.2	173.4
72.5°	141.7	139.0	140.7	131.8	135.9
75°	106.5	104.3	106.3	98.8	102.2
77.5°	72.5	74.2	73.0	69.0	71.3
80°	47.9	46.5	46.5	44.3	44.7
82.5°	27.9	26.6	26.2	25.5	26.6
85°	13.1	12.7	12.9	12.6	12.1
87.5°	4.7	4.8	4.8	4.6	4.4
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)