

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: P589831

Luminaire Tested: **FMR-24-2-LD4-4STD-50-UNV-82-86-EDD**

Issue Date: 12/8/2021



Test Information

Test Method: LM-79-08
Report Number: P589831
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-50-UNV-82-86-EDD
Description: 2X2 FMR TROFFER WITH .187 CLEAR PC FIXTURE SIDE AND .250 CLEAR PC ENVIRONMENTAL SIDE LENSES WITH, 80 CRI AND 5000K CCT LEDS
Light Source: -
Ballast/Driver: -

Summary

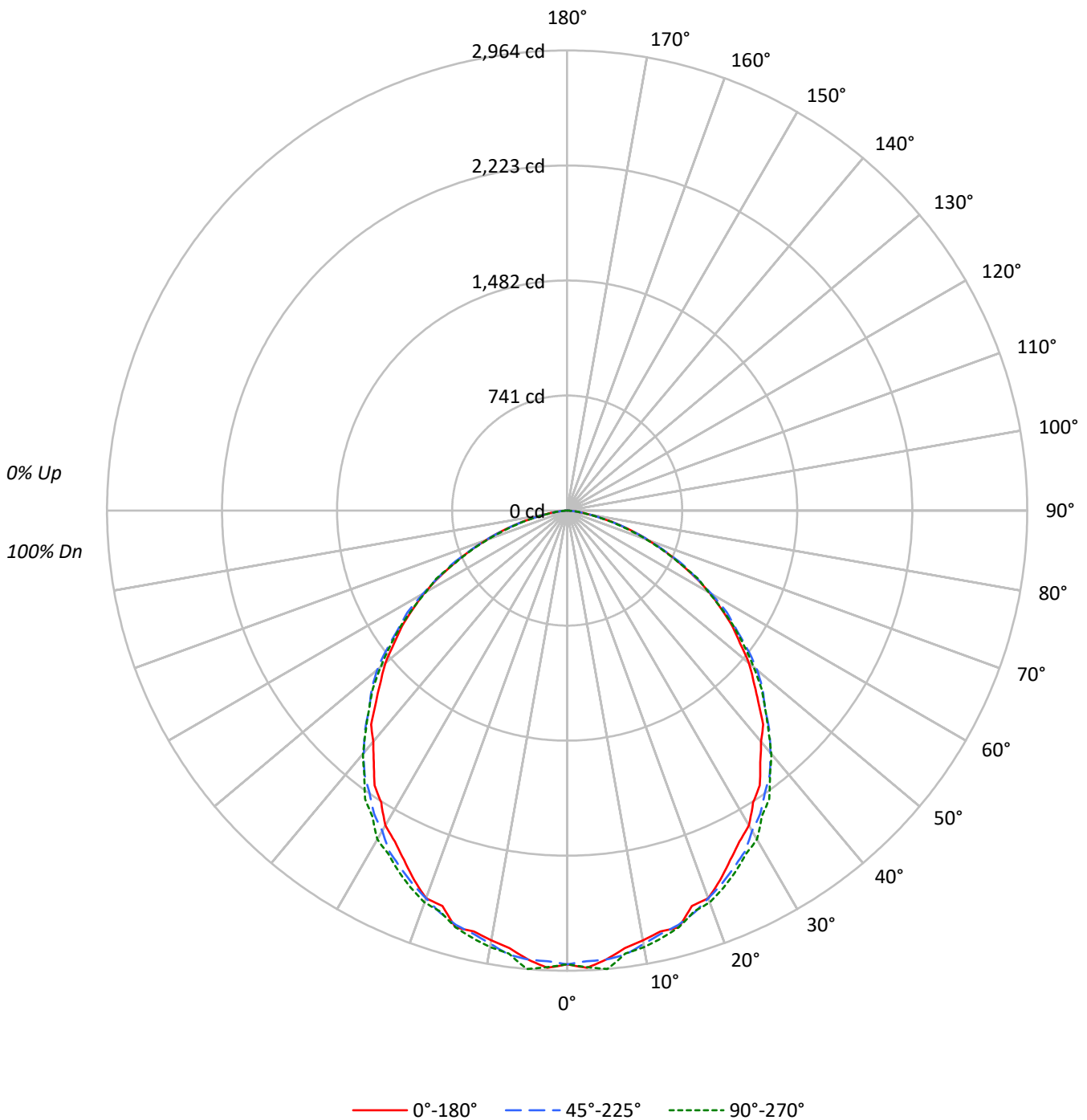
Lumens per Lamp: N/A
Luminaire Lumens: 7366.0 lumens
Efficiency: N/A
Efficacy: 110.6 lumens/watt
Spacing Criteria (0/90/45): 1.19 / 1.23 / 1.33
Luminous Opening: Rectangular (W 2' x L: 2' x H: 0')
CIE Type: Direct

Input Watts (W): 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°	7865	7865	7865
5°	7839	7842	8007
10°	7680	7747	7802
15°	7741	7699	7742
20°	7610	7610	7691
25°	7376	7537	7620
30°	7274	7402	7599
35°	7103	7289	7453
40°	6827	7156	7187
45°	6620	6856	6866
50°	6403	6692	6564
55°	6101	6220	6175
60°	5705	5762	5658
65°	5087	5216	5051
70°	4364	4379	4257
75°	3457	3449	3316
80°	2315	2252	2163
85°	1260	1247	1164



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	274.9	3.7
10°-20°	779.2	10.6
20°-30°	1167.3	15.8
30°-40°	1383.5	18.8
40°-50°	1386.1	18.8
50°-60°	1176.6	16.0
60°-70°	793.2	10.8
70°-80°	348.6	4.7
80°-90°	56.6	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°	2221.4	30.2
0°-40°	3604.9	48.9
0°-60°	6167.6	83.7
0°-90°	7366.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	7366.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	2923	2923	2923	2923	2923	
5°	2902	2895	2903	2894	2964	274
15°	2778	2746	2763	2778	2779	774
25°	2484	2498	2538	2572	2566	1148
35°	2162	2169	2219	2270	2269	1343
45°	1740	1772	1802	1848	1804	1346
55°	1300	1292	1326	1317	1316	1157
65°	799	788	819	788	793	795
75°	332	326	332	308	319	356
85°	41	40	40	39	38	59
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	2922.6	2922.6	2922.6	2922.6	2922.6
2.5°	2947.9	2925.7	2904.9	2929.1	2943.8
5°	2901.9	2895.1	2903.0	2894.3	2964.2
7.5°	2842.3	2868.3	2883.4	2874.0	2878.1
10°	2810.6	2801.5	2835.1	2858.5	2855.1
12.5°	2776.6	2790.2	2792.1	2817.4	2819.6
15°	2778.5	2746.4	2763.4	2777.7	2778.9
17.5°	2670.6	2705.3	2717.0	2749.8	2709.1
20°	2657.4	2632.1	2657.4	2690.9	2685.7
22.5°	2576.2	2547.9	2602.3	2632.1	2630.2
25°	2484.2	2497.7	2538.5	2571.7	2566.4
27.5°	2403.4	2419.2	2477.4	2523.0	2493.6
30°	2341.1	2333.2	2382.3	2423.0	2445.7
32.5°	2229.8	2258.5	2315.9	2356.2	2334.7
35°	2162.3	2168.7	2218.9	2270.2	2268.7
37.5°	2044.2	2074.0	2144.5	2158.9	2145.7
40°	1943.4	1973.2	2037.0	2052.5	2046.0
42.5°	1869.1	1874.3	1929.1	1946.8	1918.5
45°	1739.6	1772.1	1801.5	1847.9	1804.2
47.5°	1629.4	1644.5	1707.9	1720.4	1697.4
50°	1529.4	1534.7	1598.5	1583.0	1567.9
52.5°	1403.8	1426.0	1461.9	1458.9	1441.1
55°	1300.4	1291.7	1325.7	1316.6	1316.2
57.5°	1176.2	1191.3	1219.2	1204.9	1181.9
60°	1060.0	1060.4	1070.6	1054.3	1051.3
62.5°	930.6	935.1	937.4	917.4	949.8
65°	798.9	788.3	819.2	787.9	793.2
67.5°	677.7	683.0	680.0	660.4	667.9
70°	554.7	561.5	556.6	534.3	541.1
72.5°	442.3	434.0	439.2	411.3	424.2
75°	332.5	325.7	331.7	308.3	318.9
77.5°	226.4	231.7	227.9	215.5	222.6
80°	149.4	145.3	145.3	138.1	139.6
82.5°	87.2	83.0	81.9	79.6	83.0
85°	40.8	39.6	40.4	39.2	37.7
87.5°	14.7	15.1	15.1	14.3	13.6
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)