

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: P589282

Luminaire Tested: **FMR-24-2-LD4-3HI-35-UNV-81-94-EDD**

Issue Date: 12/8/2021



**Test Information**

Test Method: LM-79-08  
Report Number: P589282  
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-LD4-3HI-35-UNV-81-94-EDD  
Description: 2X2 FMR TROFFER WITH .156 CLEAR PC FIXTURE SIDE AND .187 CLEAR  
TEMPERED GLASS ENVIRONMENTAL SIDE LENSES WITH, 80 CRI AND 3500K CCT LEDS  
Light Source: -  
Ballast/Driver: -

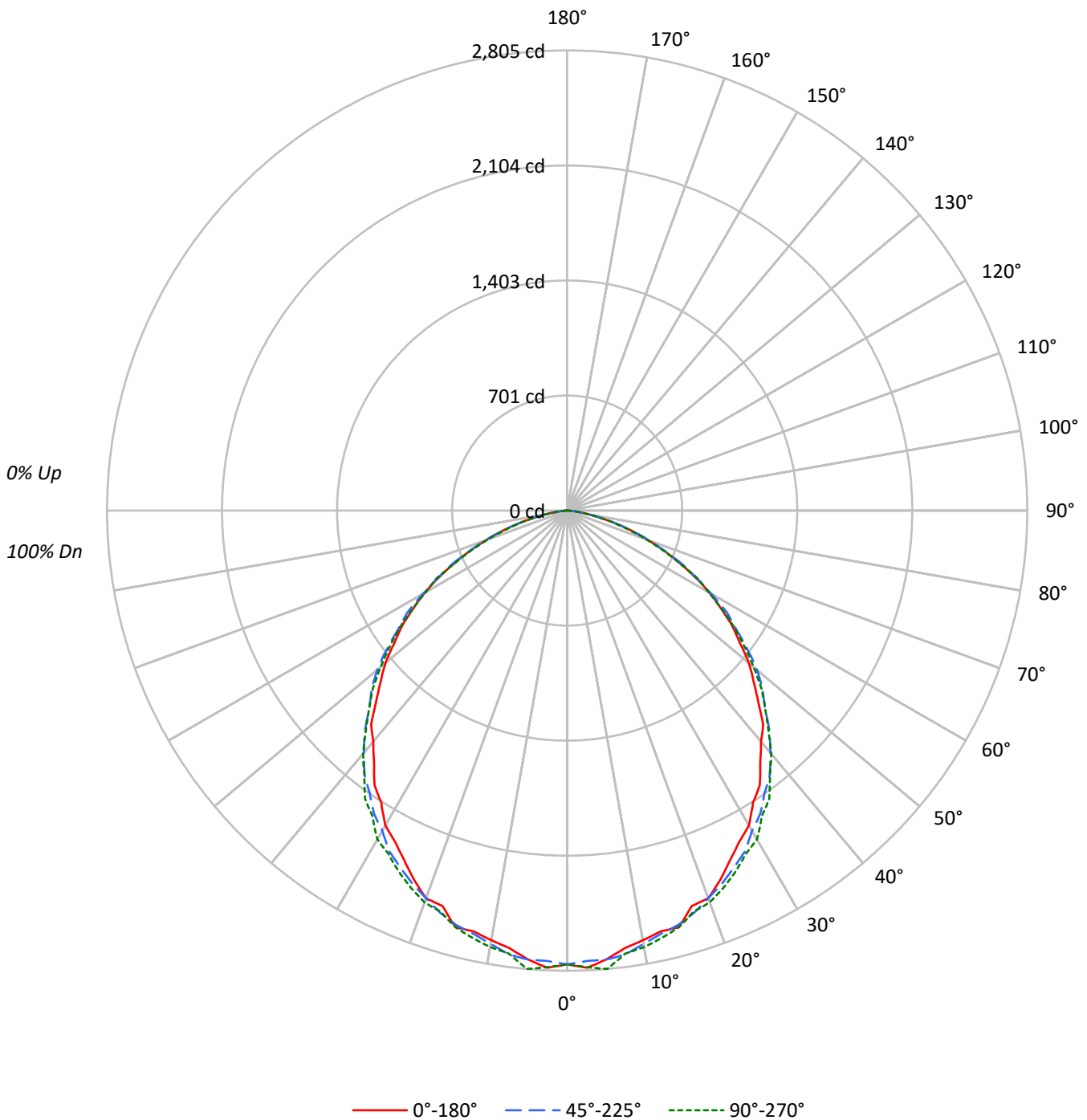
**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 6970.0 lumens  
Efficiency: N/A  
Efficacy: 107.6 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): 64.8  
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°	7442	7442	7442
5°	7417	7420	7576
10°	7267	7330	7382
15°	7324	7285	7326
20°	7201	7201	7277
25°	6979	7132	7210
30°	6884	7004	7191
35°	6721	6897	7052
40°	6460	6771	6801
45°	6264	6487	6497
50°	6059	6332	6211
55°	5773	5885	5843
60°	5398	5452	5354
65°	4813	4936	4779
70°	4130	4144	4028
75°	3271	3264	3137
80°	2191	2131	2047
85°	1192	1179	1102



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	260.1	3.7
10°-20°	737.3	10.6
20°-30°	1104.6	15.8
30°-40°	1309.1	18.8
40°-50°	1311.6	18.8
50°-60°	1113.3	16.0
60°-70°	750.6	10.8
70°-80°	329.8	4.7
80°-90°	53.6	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°	2102.0	30.2
0°-40°	3411.1	48.9
0°-60°	5836.0	83.7
0°-90°	6970.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	6970.0	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	2766	2766	2766	2766	2766	
5°	2746	2740	2747	2739	2805	259
15°	2629	2599	2615	2628	2630	733
25°	2351	2364	2402	2433	2428	1087
35°	2046	2052	2100	2148	2147	1270
45°	1646	1677	1705	1749	1707	1273
55°	1230	1222	1254	1246	1246	1095
65°	756	746	775	746	751	752
75°	315	308	314	292	302	337
85°	39	38	38	37	36	56
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	2765.5	2765.5	2765.5	2765.5	2765.5
2.5°	2789.4	2768.4	2748.7	2771.6	2785.5
5°	2745.9	2739.5	2747.0	2738.7	2804.8
7.5°	2689.5	2714.1	2728.4	2719.5	2723.4
10°	2659.5	2650.9	2682.7	2704.8	2701.6
12.5°	2627.3	2640.2	2642.0	2665.9	2668.0
15°	2629.1	2598.8	2614.8	2628.4	2629.5
17.5°	2527.0	2559.8	2570.9	2602.0	2563.4
20°	2514.5	2490.6	2514.5	2546.3	2541.3
22.5°	2437.7	2410.9	2462.4	2490.6	2488.8
25°	2350.6	2363.5	2402.0	2433.4	2428.4
27.5°	2274.2	2289.2	2344.2	2387.4	2359.5
30°	2215.3	2207.8	2254.2	2292.8	2314.2
32.5°	2109.9	2137.1	2191.3	2229.6	2209.2
35°	2046.0	2052.1	2099.6	2148.1	2146.7
37.5°	1934.3	1962.5	2029.2	2042.8	2030.3
40°	1838.9	1867.1	1927.5	1942.1	1936.0
42.5°	1768.6	1773.6	1825.4	1842.1	1815.4
45°	1646.1	1676.8	1704.7	1748.6	1707.2
47.5°	1541.8	1556.1	1616.1	1627.9	1606.1
50°	1447.2	1452.2	1512.6	1497.9	1483.6
52.5°	1328.3	1349.4	1383.3	1380.4	1363.7
55°	1230.5	1222.3	1254.4	1245.8	1245.5
57.5°	1113.0	1127.3	1153.7	1140.1	1118.3
60°	1003.0	1003.4	1013.0	997.7	994.8
62.5°	880.5	884.8	887.0	868.0	898.7
65°	755.9	745.9	775.2	745.6	750.6
67.5°	641.3	646.3	643.4	624.9	632.0
70°	524.9	531.3	526.7	505.6	512.0
72.5°	418.5	410.6	415.6	389.2	401.3
75°	314.6	308.2	313.9	291.7	301.7
77.5°	214.2	219.2	215.7	203.9	210.7
80°	141.4	137.5	137.5	130.7	132.1
82.5°	82.5	78.6	77.5	75.3	78.6
85°	38.6	37.5	38.2	37.1	35.7
87.5°	13.9	14.3	14.3	13.6	12.9
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)