

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: P589291

Luminaire Tested: **FMR-24-2-LD4-3HI-35-UNV-82-96-EDD**

Issue Date: 12/8/2021



**Test Information**

Test Method: LM-79-08  
Report Number: P589291  
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-82-96-EDD  
Description: 2X2 FMR TROFFER WITH .187 CLEAR PC FIXTURE SIDE AND .250 CLEAR  
TEMPERED GLASS ENVIRONMENTAL SIDE LENSES WITH, 80 CRI AND 3500K CCT LEDS  
Light Source: -  
Ballast/Driver: -

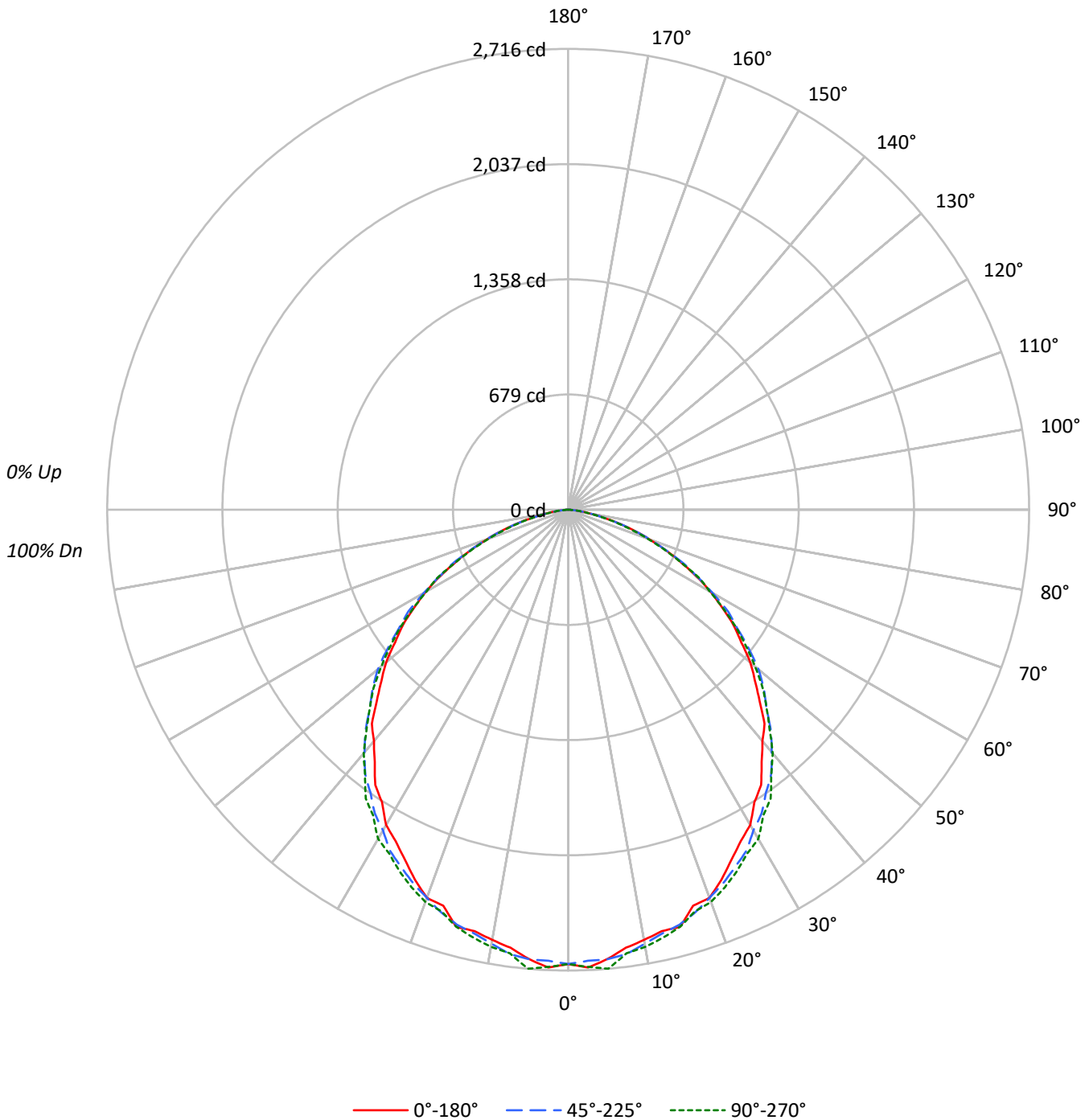
**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 6748.0 lumens  
Efficiency: N/A  
Efficacy: 104.1 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°	7205	7205	7205
5°	7181	7184	7335
10°	7036	7097	7147
15°	7091	7053	7092
20°	6971	6971	7046
25°	6757	6905	6981
30°	6664	6781	6962
35°	6507	6678	6827
40°	6254	6555	6584
45°	6065	6281	6290
50°	5866	6131	6013
55°	5589	5697	5657
60°	5226	5278	5183
65°	4660	4779	4627
70°	3998	4012	3900
75°	3167	3160	3037
80°	2122	2063	1982
85°	1152	1142	1068



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	251.9	3.7
10°-20°	713.8	10.6
20°-30°	1069.4	15.8
30°-40°	1267.4	18.8
40°-50°	1269.8	18.8
50°-60°	1077.8	16.0
60°-70°	726.7	10.8
70°-80°	319.3	4.7
80°-90°	51.9	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°	2035.0	30.2
0°-40°	3302.5	48.9
0°-60°	5650.1	83.7
0°-90°	6748.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	6748.0	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	2677	2677	2677	2677	2677	
5°	2658	2652	2660	2652	2716	251
15°	2545	2516	2532	2545	2546	709
25°	2276	2288	2326	2356	2351	1052
35°	1981	1987	2033	2080	2078	1230
45°	1594	1623	1650	1693	1653	1233
55°	1191	1183	1214	1206	1206	1060
65°	732	722	750	722	727	728
75°	305	298	304	282	292	326
85°	37	36	37	36	35	54
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	2677.4	2677.4	2677.4	2677.4	2677.4
2.5°	2700.6	2680.2	2661.2	2683.3	2696.8
5°	2658.4	2652.2	2659.5	2651.5	2715.5
7.5°	2603.8	2627.7	2641.5	2632.8	2636.6
10°	2574.8	2566.5	2597.2	2618.7	2615.6
12.5°	2543.7	2556.1	2557.8	2581.0	2583.1
15°	2545.4	2516.0	2531.6	2544.7	2545.7
17.5°	2446.5	2478.3	2489.0	2519.1	2481.8
20°	2434.4	2411.2	2434.4	2465.2	2460.3
22.5°	2360.1	2334.2	2383.9	2411.2	2409.5
25°	2275.7	2288.2	2325.5	2355.9	2351.1
27.5°	2201.8	2216.3	2269.5	2311.3	2284.4
30°	2144.7	2137.5	2182.4	2219.7	2240.5
32.5°	2042.7	2069.0	2121.6	2158.5	2138.8
35°	1980.9	1986.7	2032.7	2079.7	2078.3
37.5°	1872.6	1900.0	1964.6	1977.7	1965.6
40°	1780.3	1807.7	1866.1	1880.3	1874.4
42.5°	1712.2	1717.1	1767.2	1783.5	1757.5
45°	1593.7	1623.4	1650.4	1692.9	1652.8
47.5°	1492.7	1506.6	1564.6	1576.0	1555.0
50°	1401.1	1406.0	1464.4	1450.2	1436.4
52.5°	1286.0	1306.4	1339.2	1336.5	1320.2
55°	1191.3	1183.3	1214.4	1206.1	1205.8
57.5°	1077.5	1091.4	1117.0	1103.8	1082.7
60°	971.1	971.4	980.7	965.9	963.1
62.5°	852.5	856.6	858.7	840.4	870.1
65°	731.8	722.2	750.5	721.8	726.7
67.5°	620.9	625.7	622.9	605.0	611.9
70°	508.2	514.4	509.9	489.5	495.7
72.5°	405.2	397.6	402.4	376.8	388.6
75°	304.6	298.3	303.9	282.4	292.1
77.5°	207.4	212.3	208.8	197.4	204.0
80°	136.9	133.1	133.1	126.5	127.9
82.5°	79.9	76.1	75.0	72.9	76.1
85°	37.3	36.3	37.0	36.0	34.6
87.5°	13.5	13.8	13.8	13.1	12.4
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)