

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: P589296

Luminaire Tested: **FMR-24-2-LD4-3HI-35-UNV-93-87-EDD**

Issue Date: 12/8/2021



**Test Information**

Test Method: LM-79-08  
Report Number: P589296  
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-93-87-EDD  
Description: 2X2 FMR TROFFER WITH .156 CLEAR TEMPERED GLASS FIXTURE SIDE AND .375 CLEAR PC ENVIRONMENTAL SIDE LENSES WITH, 80 CRI AND 3500K CCT LEDS  
Light Source: -  
Ballast/Driver: -

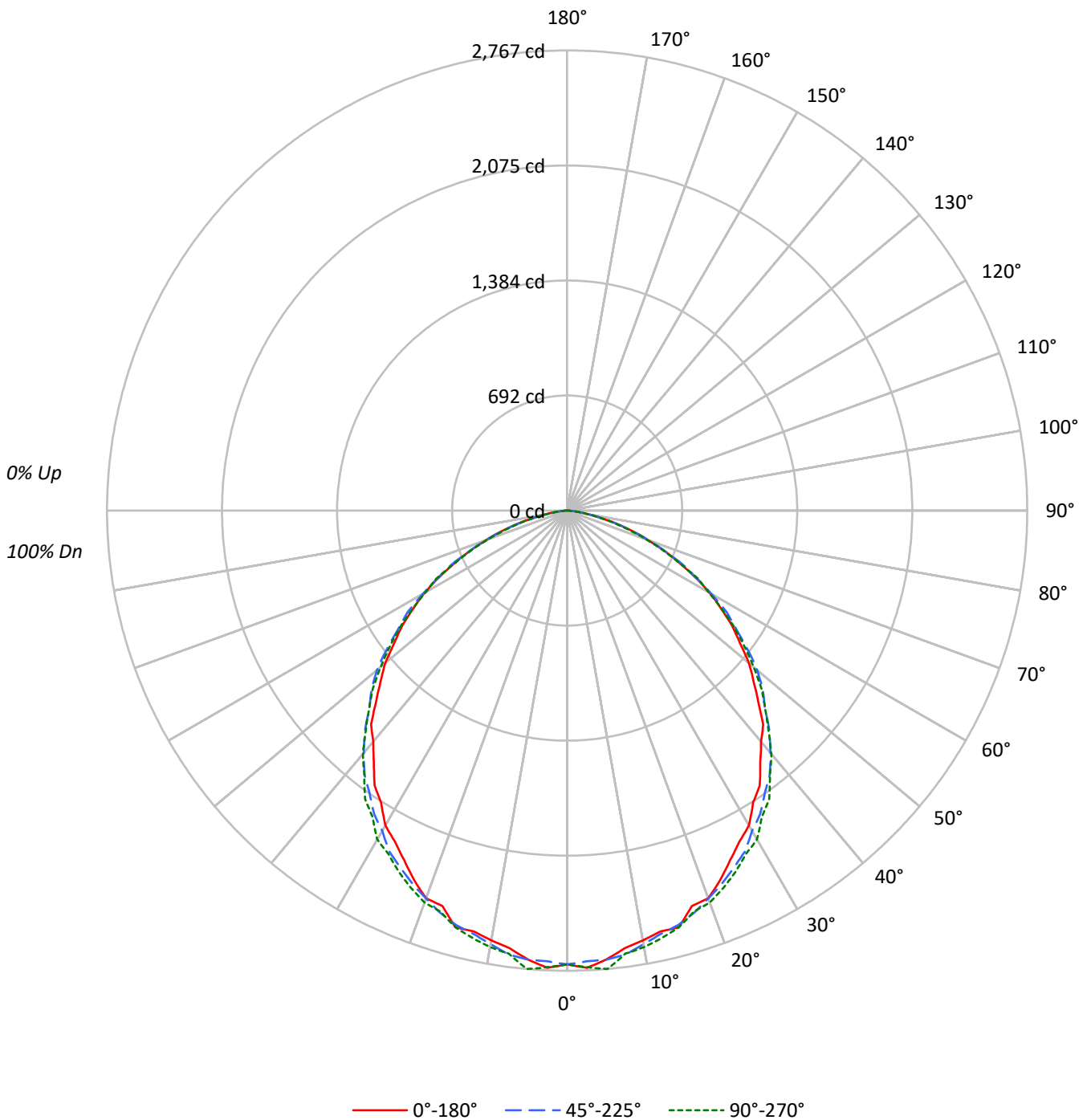
**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 6877.0 lumens  
Efficiency: N/A  
Efficacy: 106.1 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	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					100			
1	110	105	101	98	107	103	100	96	99	96	93	95	93	90	91	90	88	86					86			
2	100	93	86	81	98	91	85	80	87	82	78	84	80	76	81	78	75	73					73			
3	92	82	74	68	89	80	73	67	77	71	66	75	69	65	72	68	64	62					62			
4	84	73	64	58	82	71	64	58	69	62	57	67	61	56	65	59	55	53					53			
5	78	65	57	50	76	64	56	50	62	55	49	60	54	49	58	53	48	46					46			
6	72	59	50	44	70	58	50	44	56	49	43	54	48	43	53	47	43	41					41			
7	67	53	45	39	65	53	45	39	51	44	39	50	43	38	48	42	38	36					36			
8	62	49	41	35	61	48	40	35	47	40	34	46	39	34	44	39	34	32					32			
9	58	45	37	31	57	44	37	31	43	36	31	42	36	31	41	35	31	29					29			
10	54	41	34	29	53	41	33	28	40	33	28	39	33	28	38	32	28	26					26			

**AVERAGE LUMINANCE (cd/sqm):**

	0°	45°	90°
0°	7343	7343	7343
5°	7318	7321	7475
10°	7170	7233	7284
15°	7227	7187	7228
20°	7105	7105	7180
25°	6886	7037	7114
30°	6792	6911	7095
35°	6632	6805	6958
40°	6374	6681	6710
45°	6181	6401	6410
50°	5978	6248	6128
55°	5696	5807	5765
60°	5326	5379	5282
65°	4749	4870	4715
70°	4075	4089	3975
75°	3227	3220	3095
80°	2162	2101	2021
85°	1173	1164	1087



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	256.7	3.7
10°-20°	727.4	10.6
20°-30°	1089.8	15.8
30°-40°	1291.7	18.8
40°-50°	1294.1	18.8
50°-60°	1098.4	16.0
60°-70°	740.6	10.8
70°-80°	325.4	4.7
80°-90°	52.9	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°	2073.9	30.2
0°-40°	3365.6	48.9
0°-60°	5758.1	83.7
0°-90°	6877.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	6877.0	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	2729	2729	2729	2729	2729	
5°	2709	2703	2710	2702	2767	255
15°	2594	2564	2580	2593	2594	723
25°	2319	2332	2370	2401	2396	1072
35°	2019	2025	2072	2120	2118	1253
45°	1624	1654	1682	1725	1684	1256
55°	1214	1206	1238	1229	1229	1080
65°	746	736	765	736	740	742
75°	310	304	310	288	298	333
85°	38	37	38	37	35	55
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	2728.6	2728.6	2728.6	2728.6	2728.6
2.5°	2752.2	2731.4	2712.1	2734.6	2748.3
5°	2709.2	2702.9	2710.3	2702.2	2767.4
7.5°	2653.6	2677.9	2692.0	2683.2	2687.0
10°	2624.0	2615.5	2646.9	2668.7	2665.6
12.5°	2592.3	2605.0	2606.7	2630.3	2632.4
15°	2594.0	2564.1	2579.9	2593.3	2594.4
17.5°	2493.3	2525.7	2536.6	2567.3	2529.2
20°	2480.9	2457.3	2480.9	2512.3	2507.4
22.5°	2405.2	2378.8	2429.5	2457.3	2455.6
25°	2319.2	2331.9	2370.0	2401.0	2396.0
27.5°	2243.8	2258.6	2312.9	2355.5	2328.0
30°	2185.7	2178.3	2224.1	2262.2	2283.3
32.5°	2081.8	2108.6	2162.1	2199.8	2179.7
35°	2018.7	2024.7	2071.6	2119.5	2118.1
37.5°	1908.4	1936.3	2002.2	2015.5	2003.2
40°	1814.4	1842.2	1901.8	1916.2	1910.2
42.5°	1745.0	1749.9	1801.0	1817.6	1791.1
45°	1624.1	1654.4	1681.9	1725.2	1684.4
47.5°	1521.3	1535.4	1594.5	1606.2	1584.7
50°	1427.9	1432.8	1492.4	1477.9	1463.8
52.5°	1310.6	1331.4	1364.8	1362.0	1345.5
55°	1214.1	1205.9	1237.7	1229.2	1228.8
57.5°	1098.1	1112.2	1138.3	1124.9	1103.4
60°	989.6	990.0	999.5	984.3	981.5
62.5°	868.8	873.0	875.1	856.5	886.8
65°	745.8	736.0	764.9	735.6	740.5
67.5°	632.7	637.7	634.9	616.5	623.6
70°	517.9	524.2	519.7	498.9	505.2
72.5°	412.9	405.2	410.1	384.0	396.0
75°	310.4	304.0	309.7	287.8	297.7
77.5°	211.4	216.3	212.8	201.2	207.9
80°	139.5	135.6	135.6	128.9	130.4
82.5°	81.4	77.5	76.5	74.3	77.5
85°	38.0	37.0	37.7	36.6	35.2
87.5°	13.7	14.1	14.1	13.4	12.7
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)