

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: P589775

Luminaire Tested: **FMR-24-2-LD4-4STD-35-UNV-93-86-EDD**

Issue Date: 12/8/2021



**Test Information**

Test Method: LM-79-08  
Report Number: P589775  
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-35-UNV-93-86-EDD  
Description: 2X2 FMR TROFFER WITH .156 CLEAR TEMPERED GLASS FIXTURE SIDE AND .250 CLEAR PC ENVIRONMENTAL SIDE LENSES WITH, 80 CRI AND 3500K CCT LEDS  
Light Source: -  
Ballast/Driver: -

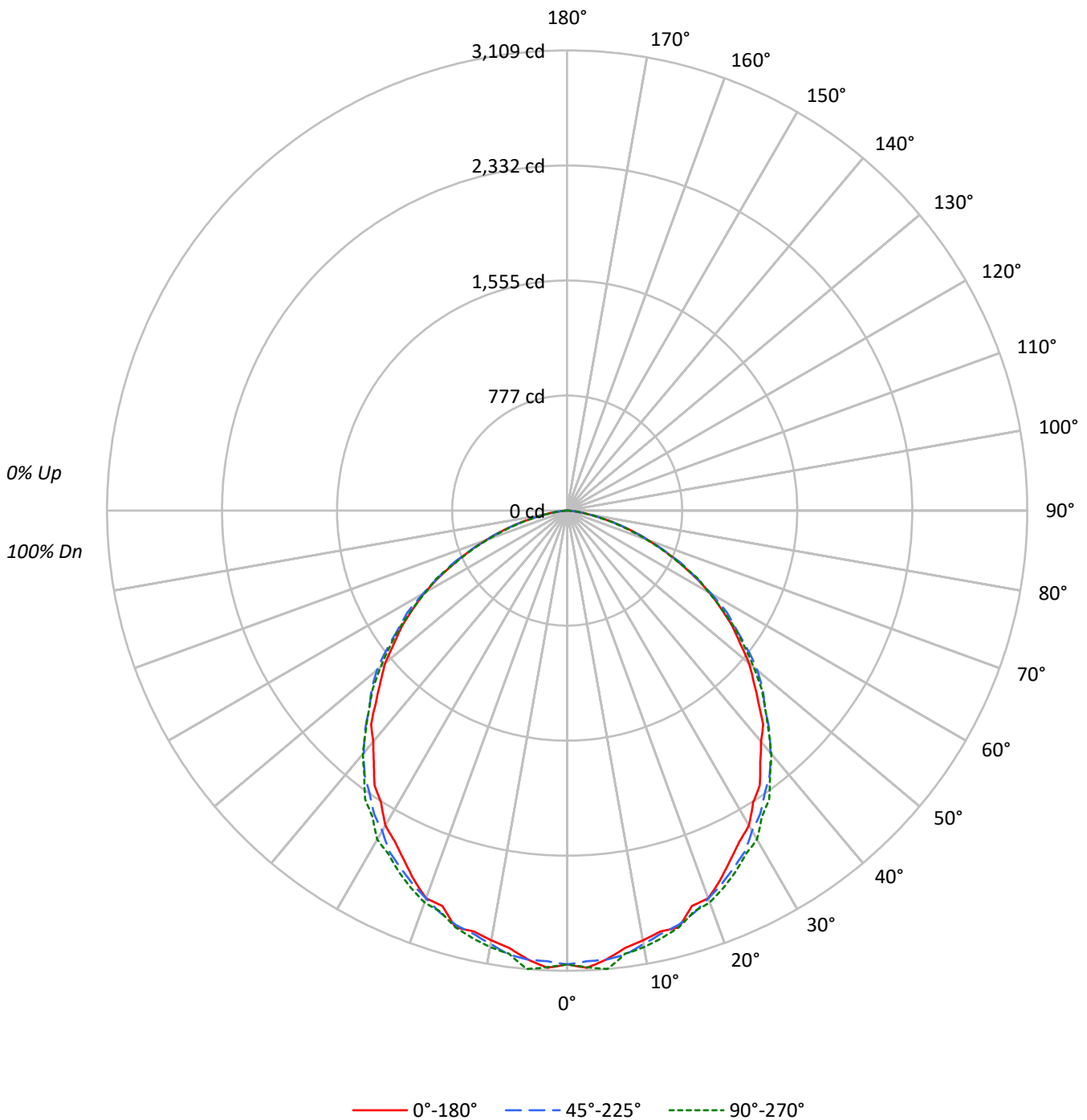
**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 7727.0 lumens  
Efficiency: N/A  
Efficacy: 116.0 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°	8250	8250	8250
5°	8223	8226	8399
10°	8056	8126	8184
15°	8120	8076	8121
20°	7983	7983	8068
25°	7737	7907	7994
30°	7631	7765	7972
35°	7451	7646	7818
40°	7161	7506	7540
45°	6945	7192	7203
50°	6717	7020	6886
55°	6400	6524	6478
60°	5984	6044	5935
65°	5336	5472	5298
70°	4578	4594	4467
75°	3625	3618	3478
80°	2430	2362	2270
85°	1321	1309	1223



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	288.4	3.7
10°-20°	817.3	10.6
20°-30°	1224.5	15.8
30°-40°	1451.3	18.8
40°-50°	1454.0	18.8
50°-60°	1234.2	16.0
60°-70°	832.1	10.8
70°-80°	365.6	4.7
80°-90°	59.4	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°	2330.3	30.2
0°-40°	3781.6	48.9
0°-60°	6469.8	83.7
0°-90°	7727.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	7727.0	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	3066	3066	3066	3066	3066	
5°	3044	3037	3045	3036	3109	287
15°	2915	2881	2899	2914	2915	812
25°	2606	2620	2663	2698	2692	1205
35°	2268	2275	2328	2381	2380	1408
45°	1825	1859	1890	1938	1893	1412
55°	1364	1355	1391	1381	1381	1213
65°	838	827	859	826	832	833
75°	349	342	348	323	334	374
85°	43	42	42	41	40	62
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	3065.9	3065.9	3065.9	3065.9	3065.9
2.5°	3092.4	3069.0	3047.3	3072.6	3088.0
5°	3044.1	3037.0	3045.3	3036.2	3109.4
7.5°	2981.6	3008.9	3024.7	3014.8	3019.2
10°	2948.3	2938.8	2974.0	2998.6	2995.0
12.5°	2912.7	2926.9	2928.9	2955.4	2957.8
15°	2914.7	2881.0	2898.8	2913.9	2915.1
17.5°	2801.4	2837.9	2850.1	2884.6	2841.8
20°	2787.6	2761.1	2787.6	2822.8	2817.3
22.5°	2702.5	2672.8	2729.8	2761.1	2759.1
25°	2605.9	2620.1	2662.9	2697.7	2692.2
27.5°	2521.2	2537.8	2598.8	2646.7	2615.8
30°	2455.9	2447.6	2499.0	2541.8	2565.5
32.5°	2339.1	2369.2	2429.3	2471.7	2449.1
35°	2268.2	2275.0	2327.6	2381.4	2379.9
37.5°	2144.3	2175.6	2249.6	2264.7	2250.8
40°	2038.6	2069.9	2136.8	2153.0	2146.3
42.5°	1960.7	1966.2	2023.6	2042.2	2012.5
45°	1824.9	1858.9	1889.8	1938.5	1892.6
47.5°	1709.3	1725.1	1791.6	1804.7	1780.5
50°	1604.4	1609.9	1676.8	1660.6	1644.8
52.5°	1472.6	1495.9	1533.5	1530.4	1511.8
55°	1364.1	1355.0	1390.6	1381.1	1380.7
57.5°	1233.9	1249.7	1279.0	1264.0	1239.8
60°	1111.9	1112.3	1123.0	1106.0	1102.8
62.5°	976.2	980.9	983.3	962.3	996.4
65°	838.0	826.9	859.4	826.5	832.1
67.5°	711.0	716.5	713.3	692.7	700.7
70°	581.9	589.0	583.9	560.5	567.7
72.5°	463.9	455.2	460.8	431.5	444.9
75°	348.7	341.6	348.0	323.4	334.5
77.5°	237.5	243.1	239.1	226.0	233.6
80°	156.8	152.4	152.4	144.9	146.5
82.5°	91.4	87.1	85.9	83.5	87.1
85°	42.8	41.6	42.4	41.2	39.6
87.5°	15.4	15.8	15.8	15.0	14.3
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)