

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: P589749

Luminaire Tested: **FMR-24-2-LD4-4STD-35-UNV-80-84-EDD**

Issue Date: 12/8/2021



**Test Information**

Test Method: LM-79-08  
Report Number: P589749  
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-80-84-EDD  
Description: 2X2 FMR TROFFER WITH .125 PRISMATIC ACRYLIC FIXTURE SIDE AND .125 CLEAR PC ENVIRONMENTAL SIDE LENSES WITH, 80 CRI AND 3500K CCT LEDS  
Light Source: -  
Ballast/Driver: -

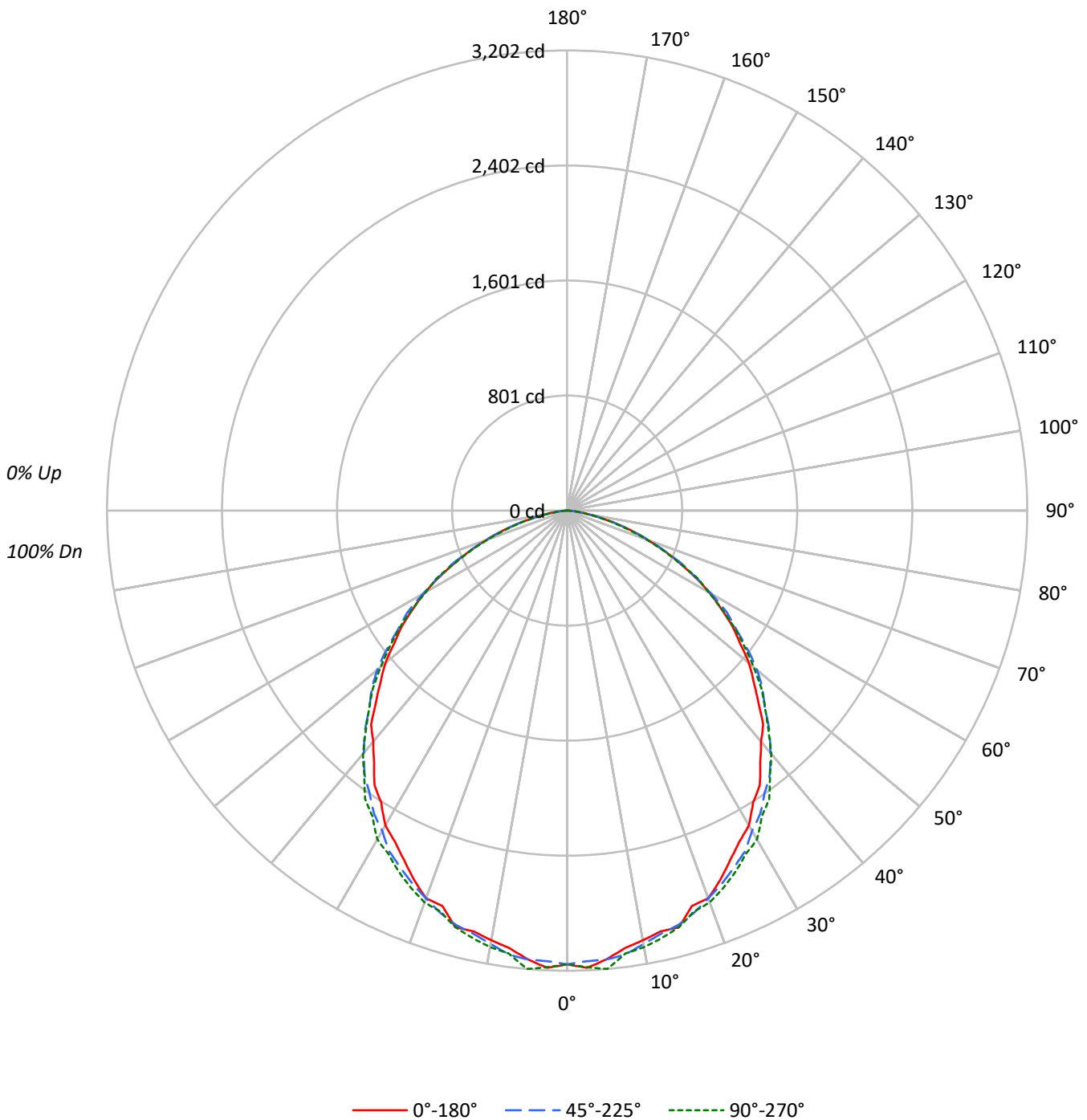
**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 7957.0 lumens  
Efficiency: N/A  
Efficacy: 119.5 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°	8496	8496	8496
5°	8468	8471	8649
10°	8296	8369	8428
15°	8362	8316	8363
20°	8220	8220	8308
25°	7968	8142	8231
30°	7858	7996	8209
35°	7673	7874	8051
40°	7374	7730	7764
45°	7152	7406	7417
50°	6916	7229	7091
55°	6590	6718	6670
60°	6162	6224	6112
65°	5495	5635	5456
70°	4714	4731	4599
75°	3734	3725	3582
80°	2501	2431	2337
85°	1359	1346	1260



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	297.0	3.7
10°-20°	841.7	10.6
20°-30°	1261.0	15.8
30°-40°	1494.5	18.8
40°-50°	1497.3	18.8
50°-60°	1271.0	16.0
60°-70°	856.9	10.8
70°-80°	376.5	4.7
80°-90°	61.2	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°	2399.6	30.2
0°-40°	3894.2	48.9
0°-60°	6662.4	83.7
0°-90°	7957.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	7957.0	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	3157	3157	3157	3157	3157	
5°	3135	3127	3136	3127	3202	296
15°	3001	2967	2985	3001	3002	836
25°	2684	2698	2742	2778	2772	1241
35°	2336	2343	2397	2452	2451	1450
45°	1879	1914	1946	1996	1949	1454
55°	1405	1395	1432	1422	1422	1250
65°	863	852	885	851	857	858
75°	359	352	358	333	344	385
85°	44	43	44	42	41	64
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	3157.1	3157.1	3157.1	3157.1	3157.1
2.5°	3184.4	3160.4	3138.0	3164.1	3180.0
5°	3134.7	3127.4	3135.9	3126.6	3202.0
7.5°	3070.3	3098.4	3114.7	3104.6	3109.0
10°	3036.1	3026.3	3062.6	3087.8	3084.2
12.5°	2999.4	3014.1	3016.1	3043.4	3045.9
15°	3001.4	2966.8	2985.1	3000.6	3001.8
17.5°	2884.8	2922.3	2935.0	2970.4	2926.4
20°	2870.6	2843.3	2870.6	2906.8	2901.1
22.5°	2782.9	2752.4	2811.1	2843.3	2841.2
25°	2683.5	2698.1	2742.2	2778.0	2772.3
27.5°	2596.2	2613.4	2676.1	2725.5	2693.7
30°	2529.0	2520.4	2573.4	2617.4	2641.9
32.5°	2408.7	2439.7	2501.7	2545.3	2522.0
35°	2335.8	2342.7	2396.9	2452.3	2450.7
37.5°	2208.2	2240.4	2316.6	2332.1	2317.8
40°	2099.3	2131.5	2200.4	2217.1	2210.2
42.5°	2019.0	2024.7	2083.8	2103.0	2072.4
45°	1879.2	1914.3	1946.1	1996.2	1948.9
47.5°	1760.2	1776.5	1845.0	1858.4	1833.5
50°	1652.1	1657.9	1726.7	1710.0	1693.7
52.5°	1516.4	1540.5	1579.2	1575.9	1556.8
55°	1404.7	1395.3	1432.0	1422.2	1421.8
57.5°	1270.6	1286.9	1317.1	1301.6	1276.7
60°	1145.0	1145.5	1156.5	1138.9	1135.7
62.5°	1005.2	1010.1	1012.6	991.0	1026.0
65°	863.0	851.6	885.0	851.1	856.8
67.5°	732.1	737.8	734.6	713.4	721.5
70°	599.2	606.6	601.3	577.2	584.5
72.5°	477.7	468.8	474.5	444.3	458.2
75°	359.1	351.8	358.3	333.0	344.5
77.5°	244.6	250.3	246.2	232.8	240.5
80°	161.4	156.9	156.9	149.2	150.8
82.5°	94.2	89.7	88.5	86.0	89.7
85°	44.0	42.8	43.6	42.4	40.8
87.5°	15.9	16.3	16.3	15.5	14.7
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)