

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: P589564

Luminaire Tested: **FMR-24-2-LD4-4HI-35-UNV-80-97-EDD**

Issue Date: 12/8/2021



**Test Information**

Test Method: LM-79-08  
Report Number: P589564  
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-LD4-4HI-35-UNV-80-97-EDD  
Description: 2X2 FMR TROFFER WITH .125 PRISMATIC ACRYLIC FIXTURE SIDE AND .375 CLEAR TEMPERED GLASS ENVIRONMENTAL SIDE LENSES WITH, 80 CRI AND 3500K CCT LEDS  
Light Source: -  
Ballast/Driver: -

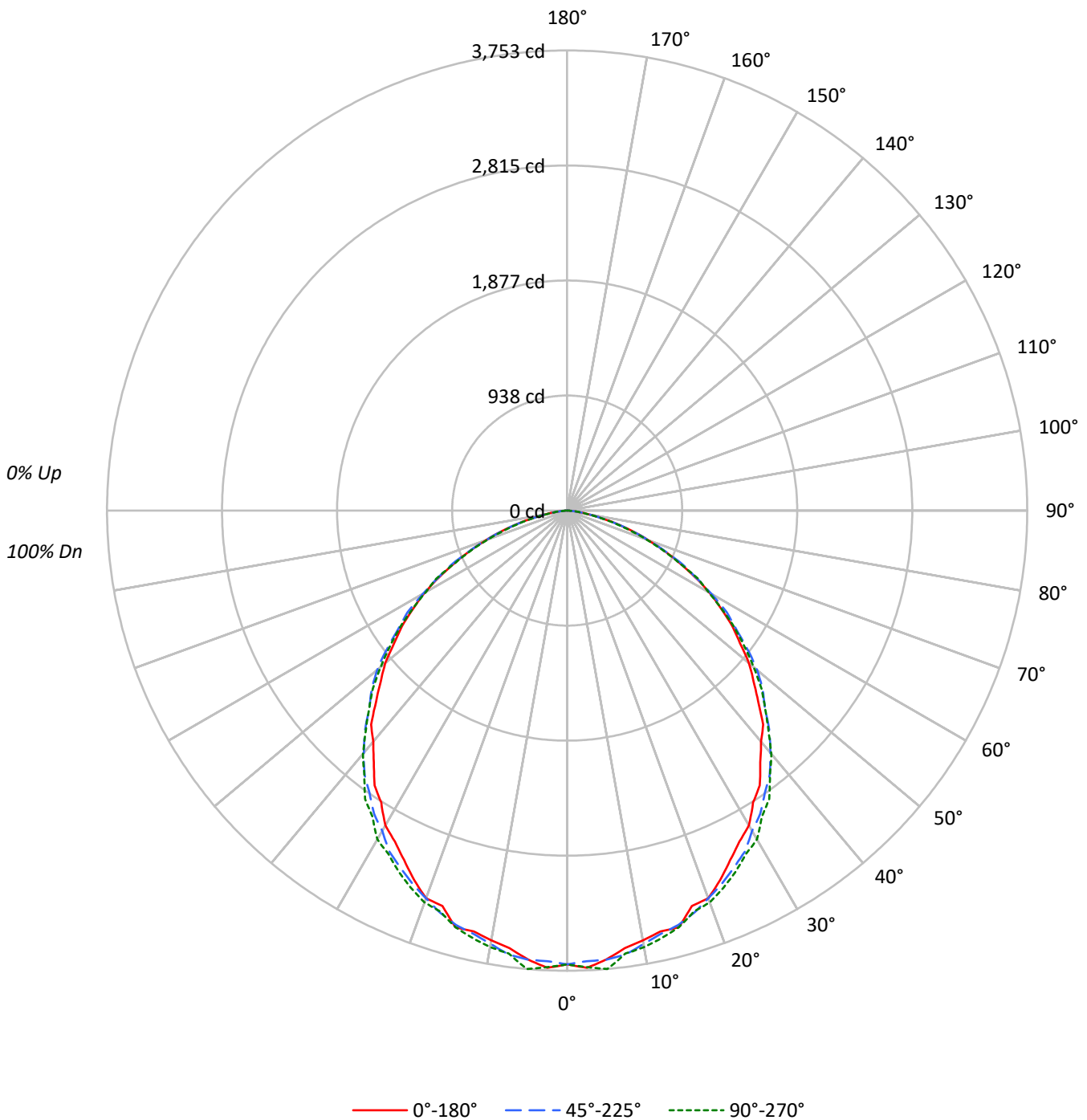
**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 9327.0 lumens  
Efficiency: N/A  
Efficacy: 108.0 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): 86.4  
Input Voltage (V): NR  
Input Current (A<sub>in</sub>): 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°	9959	9959	9959
5°	9926	9930	10139
10°	9724	9809	9879
15°	9801	9748	9803
20°	9636	9636	9738
25°	9340	9544	9649
30°	9211	9373	9623
35°	8994	9230	9437
40°	8644	9061	9101
45°	8383	8681	8694
50°	8107	8473	8311
55°	7725	7875	7819
60°	7224	7296	7164
65°	6441	6605	6395
70°	5526	5545	5391
75°	4377	4367	4198
80°	2932	2851	2740
85°	1593	1578	1476



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	348.1	3.7
10°-20°	986.6	10.6
20°-30°	1478.1	15.8
30°-40°	1751.9	18.8
40°-50°	1755.1	18.8
50°-60°	1489.8	16.0
60°-70°	1004.4	10.8
70°-80°	441.4	4.7
80°-90°	71.7	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°	2812.8	30.2
0°-40°	4564.7	48.9
0°-60°	7809.5	83.7
0°-90°	9327.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	9327.0	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	3701	3701	3701	3701	3701	
5°	3674	3666	3676	3665	3753	346
15°	3518	3478	3499	3517	3519	980
25°	3146	3163	3214	3256	3250	1454
35°	2738	2746	2810	2875	2873	1700
45°	2203	2244	2281	2340	2284	1704
55°	1647	1636	1679	1667	1667	1465
65°	1012	998	1037	998	1004	1006
75°	421	412	420	390	404	451
85°	52	50	51	50	48	75
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	3700.7	3700.7	3700.7	3700.7	3700.7
2.5°	3732.7	3704.5	3678.3	3708.8	3727.5
5°	3674.4	3665.8	3675.9	3664.9	3753.3
7.5°	3598.9	3631.9	3651.0	3639.1	3644.3
10°	3558.8	3547.3	3589.9	3619.5	3615.2
12.5°	3515.8	3533.0	3535.4	3567.4	3570.3
15°	3518.2	3477.6	3499.1	3517.2	3518.7
17.5°	3381.5	3425.5	3440.3	3481.9	3430.3
20°	3364.8	3332.8	3364.8	3407.3	3400.6
22.5°	3262.1	3226.2	3295.0	3332.8	3330.4
25°	3145.5	3162.7	3214.3	3256.3	3249.7
27.5°	3043.2	3063.3	3136.9	3194.7	3157.4
30°	2964.4	2954.4	3016.5	3068.1	3096.8
32.5°	2823.4	2859.8	2932.4	2983.5	2956.3
35°	2737.9	2746.0	2809.6	2874.6	2872.7
37.5°	2588.4	2626.1	2715.5	2733.6	2716.9
40°	2460.8	2498.5	2579.3	2598.9	2590.7
42.5°	2366.6	2373.3	2442.6	2465.1	2429.2
45°	2202.8	2243.8	2281.1	2339.9	2284.5
47.5°	2063.2	2082.3	2162.6	2178.4	2149.2
50°	1936.6	1943.3	2024.0	2004.5	1985.3
52.5°	1777.5	1805.7	1851.1	1847.3	1824.8
55°	1646.6	1635.6	1678.6	1667.1	1666.6
57.5°	1489.4	1508.5	1543.8	1525.7	1496.5
60°	1342.2	1342.7	1355.6	1335.0	1331.2
62.5°	1178.3	1184.0	1186.9	1161.6	1202.7
65°	1011.5	998.2	1037.3	997.7	1004.4
67.5°	858.2	864.9	861.0	836.2	845.7
70°	702.4	711.0	704.8	676.6	685.2
72.5°	560.0	549.5	556.2	520.8	537.1
75°	421.0	412.4	420.0	390.4	403.8
77.5°	286.7	293.4	288.6	272.8	281.9
80°	189.2	184.0	184.0	174.9	176.8
82.5°	110.4	105.1	103.7	100.8	105.1
85°	51.6	50.2	51.1	49.7	47.8
87.5°	18.6	19.1	19.1	18.2	17.2
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)