

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: P589629

Luminaire Tested: **FMR-24-2-LD4-4HI-50-UNV-81-84-EDD**

Issue Date: 12/8/2021



**Test Information**

Test Method: LM-79-08  
Report Number: P589629  
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-50-UNV-81-84-EDD  
Description: 2X2 FMR TROFFER WITH .156 CLEAR PC FIXTURE SIDE AND .125 CLEAR PC ENVIRONMENTAL SIDE LENSES WITH, 80 CRI AND 5000K CCT LEDS  
Light Source: -  
Ballast/Driver: -

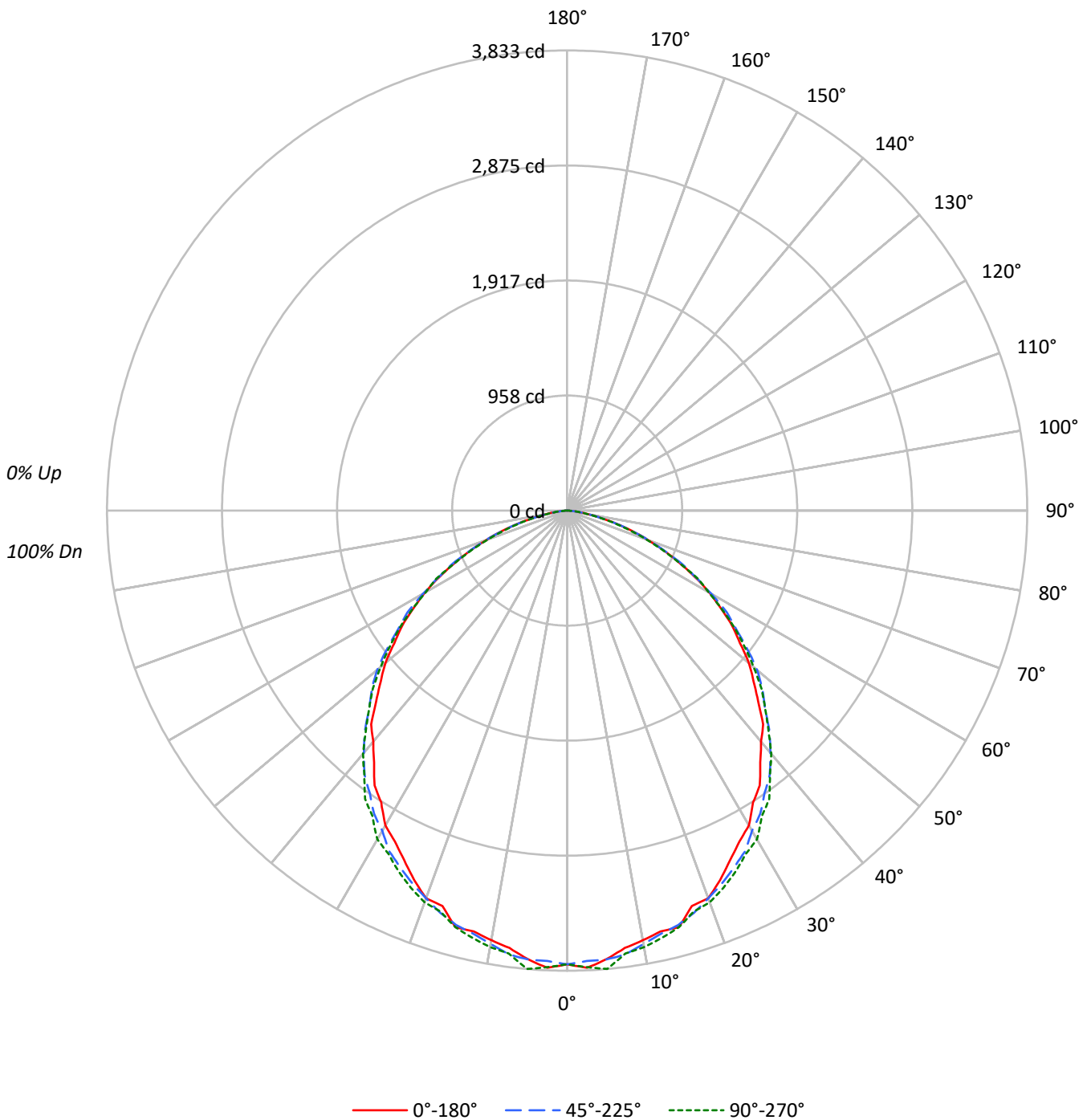
**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 9524.0 lumens  
Efficiency: N/A  
Efficacy: 110.2 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 (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																		
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	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°	10169	10169	10169
5°	10135	10139	10353
10°	9930	10016	10087
15°	10008	9954	10010
20°	9839	9839	9944
25°	9537	9745	9853
30°	9406	9571	9826
35°	9184	9425	9636
40°	8827	9252	9293
45°	8560	8864	8877
50°	8279	8652	8487
55°	7888	8041	7984
60°	7376	7450	7316
65°	6577	6745	6530
70°	5643	5663	5505
75°	4470	4459	4287
80°	2994	2910	2797
85°	1627	1612	1507



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	355.5	3.7
10°-20°	1007.4	10.6
20°-30°	1509.3	15.8
30°-40°	1788.9	18.8
40°-50°	1792.2	18.8
50°-60°	1521.2	16.0
60°-70°	1025.6	10.8
70°-80°	450.7	4.7
80°-90°	73.2	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°	2872.2	30.2
0°-40°	4661.1	48.9
0°-60°	7974.5	83.7
0°-90°	9524.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	9524.0	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	3779	3779	3779	3779	3779	
5°	3752	3743	3754	3742	3833	354
15°	3592	3551	3573	3592	3593	1001
25°	3212	3230	3282	3325	3318	1485
35°	2796	2804	2869	2935	2933	1736
45°	2249	2291	2329	2389	2333	1740
55°	1681	1670	1714	1702	1702	1496
65°	1033	1019	1059	1019	1026	1027
75°	430	421	429	399	412	461
85°	53	51	52	51	49	76
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	3778.9	3778.9	3778.9	3778.9	3778.9
2.5°	3811.6	3782.8	3756.0	3787.2	3806.2
5°	3752.0	3743.3	3753.5	3742.3	3832.6
7.5°	3675.0	3708.6	3728.1	3715.9	3721.3
10°	3634.0	3622.3	3665.7	3695.9	3691.5
12.5°	3590.1	3607.6	3610.1	3642.8	3645.7
15°	3592.5	3551.0	3573.0	3591.5	3593.0
17.5°	3453.0	3497.8	3513.0	3555.4	3502.7
20°	3435.9	3403.2	3435.9	3479.3	3472.5
22.5°	3331.0	3294.4	3364.6	3403.2	3400.8
25°	3211.9	3229.5	3282.2	3325.1	3318.3
27.5°	3107.5	3128.0	3203.1	3262.2	3224.1
30°	3027.0	3016.8	3080.2	3132.9	3162.2
32.5°	2883.1	2920.2	2994.3	3046.5	3018.7
35°	2795.7	2804.0	2868.9	2935.3	2933.3
37.5°	2643.0	2681.6	2772.8	2791.3	2774.3
40°	2512.7	2551.3	2633.8	2653.8	2645.5
42.5°	2416.6	2423.5	2494.2	2517.1	2480.5
45°	2249.3	2291.2	2329.3	2389.3	2332.7
47.5°	2106.8	2126.3	2208.3	2224.4	2194.6
50°	1977.5	1984.3	2066.8	2046.8	2027.3
52.5°	1815.0	1843.8	1890.2	1886.3	1863.3
55°	1681.3	1670.1	1714.0	1702.3	1701.8
57.5°	1520.8	1540.3	1576.4	1557.9	1528.1
60°	1370.5	1371.0	1384.2	1363.2	1359.3
62.5°	1203.2	1209.0	1212.0	1186.1	1228.1
65°	1032.9	1019.2	1059.3	1018.8	1025.6
67.5°	876.3	883.1	879.2	853.8	863.6
70°	717.2	726.0	719.7	690.9	699.7
72.5°	571.8	561.1	567.9	531.8	548.4
75°	429.9	421.1	428.9	398.6	412.3
77.5°	292.7	299.6	294.7	278.6	287.9
80°	193.2	187.8	187.8	178.6	180.5
82.5°	112.7	107.3	105.9	102.9	107.3
85°	52.7	51.2	52.2	50.7	48.8
87.5°	19.0	19.5	19.5	18.5	17.6
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)