

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: P589626

Luminaire Tested: **FMR-24-2-LD4-4HI-50-UNV-80-94-EDD**

Issue Date: 12/8/2021



**Test Information**

Test Method: LM-79-08  
Report Number: P589626  
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-80-94-EDD  
Description: 2X2 FMR TROFFER WITH .125 PRISMATIC ACRYLIC FIXTURE SIDE AND .187 CLEAR TEMPERED GLASS ENVIRONMENTAL SIDE LENSES WITH, 80 CRI AND 5000K CCT LEDS  
Light Source: -  
Ballast/Driver: -

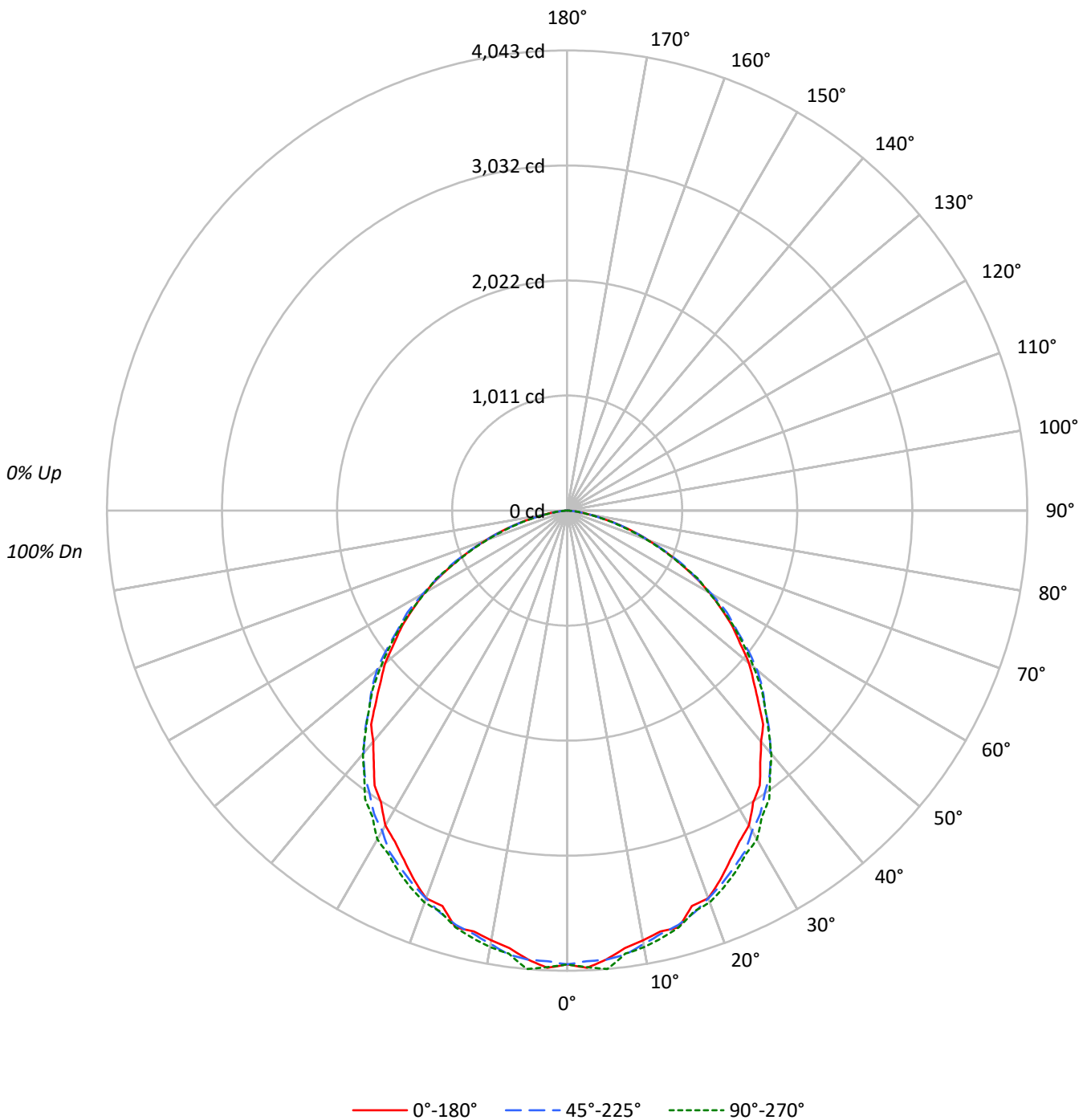
**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 10048.0 lumens  
Efficiency: N/A  
Efficacy: 116.3 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°	10728	10728	10728
5°	10693	10697	10922
10°	10476	10568	10642
15°	10559	10502	10561
20°	10381	10381	10491
25°	10061	10282	10395
30°	9923	10098	10366
35°	9690	9943	10166
40°	9312	9761	9804
45°	9031	9352	9366
50°	8734	9128	8954
55°	8322	8484	8424
60°	7782	7860	7718
65°	6939	7116	6890
70°	5954	5974	5808
75°	4715	4705	4523
80°	3158	3071	2952
85°	1717	1701	1590



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	375.0	3.7
10°-20°	1062.8	10.6
20°-30°	1592.4	15.8
30°-40°	1887.3	18.8
40°-50°	1890.8	18.8
50°-60°	1605.0	16.0
60°-70°	1082.1	10.8
70°-80°	475.5	4.7
80°-90°	77.3	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°	3030.2	30.2
0°-40°	4917.5	48.9
0°-60°	8413.2	83.7
0°-90°	10048.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	10048.0	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	3987	3987	3987	3987	3987	
5°	3958	3949	3960	3948	4043	373
15°	3790	3746	3770	3789	3791	1056
25°	3389	3407	3463	3508	3501	1567
35°	2950	2958	3027	3097	3095	1831
45°	2373	2417	2457	2521	2461	1836
55°	1774	1762	1808	1796	1796	1578
65°	1090	1075	1118	1075	1082	1084
75°	454	444	452	421	435	486
85°	56	54	55	54	52	81
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	3986.8	3986.8	3986.8	3986.8	3986.8
2.5°	4021.3	3990.9	3962.6	3995.5	4015.6
5°	3958.5	3949.2	3960.0	3948.2	4043.4
7.5°	3877.1	3912.7	3933.3	3920.4	3926.1
10°	3833.9	3821.6	3867.4	3899.3	3894.7
12.5°	3787.6	3806.1	3808.7	3843.2	3846.3
15°	3790.2	3746.4	3769.6	3789.1	3790.7
17.5°	3642.9	3690.3	3706.3	3751.0	3695.4
20°	3624.9	3590.4	3624.9	3670.7	3663.5
22.5°	3514.2	3475.6	3549.8	3590.4	3587.9
25°	3388.6	3407.2	3462.8	3508.1	3500.9
27.5°	3278.5	3300.1	3379.4	3441.7	3401.5
30°	3193.6	3182.7	3249.7	3305.3	3336.1
32.5°	3041.7	3080.8	3159.1	3214.1	3184.8
35°	2949.6	2958.3	3026.8	3096.8	3094.7
37.5°	2788.4	2829.1	2925.4	2944.9	2926.9
40°	2651.0	2691.7	2778.7	2799.8	2791.0
42.5°	2549.6	2556.8	2631.4	2655.6	2617.0
45°	2373.0	2417.3	2457.4	2520.8	2461.1
47.5°	2222.7	2243.3	2329.8	2346.8	2315.4
50°	2086.3	2093.5	2180.5	2159.4	2138.8
52.5°	1914.9	1945.3	1994.2	1990.1	1965.9
55°	1773.9	1762.0	1808.3	1796.0	1795.5
57.5°	1604.5	1625.1	1663.2	1643.6	1612.2
60°	1446.0	1446.5	1460.4	1438.2	1434.1
62.5°	1269.4	1275.6	1278.7	1251.4	1295.6
65°	1089.7	1075.3	1117.5	1074.8	1082.0
67.5°	924.5	931.7	927.6	900.8	911.1
70°	756.7	766.0	759.3	728.9	738.2
72.5°	603.3	592.0	599.2	561.1	578.6
75°	453.5	444.2	452.5	420.6	435.0
77.5°	308.9	316.1	310.9	293.9	303.7
80°	203.8	198.2	198.2	188.4	190.5
82.5°	118.9	113.2	111.7	108.6	113.2
85°	55.6	54.0	55.1	53.5	51.5
87.5°	20.1	20.6	20.6	19.6	18.5
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)