

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: P589628

Luminaire Tested: **FMR-24-2-LD4-4HI-50-UNV-80-97-EDD**

Issue Date: 12/8/2021



**Test Information**

Test Method: LM-79-08  
Report Number: P589628  
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-80-97-EDD  
Description: 2X2 FMR TROFFER WITH .125 PRISMATIC ACRYLIC FIXTURE SIDE AND .375 CLEAR TEMPERED GLASS ENVIRONMENTAL SIDE LENSES WITH, 80 CRI AND 5000K CCT LEDS  
Light Source: -  
Ballast/Driver: -

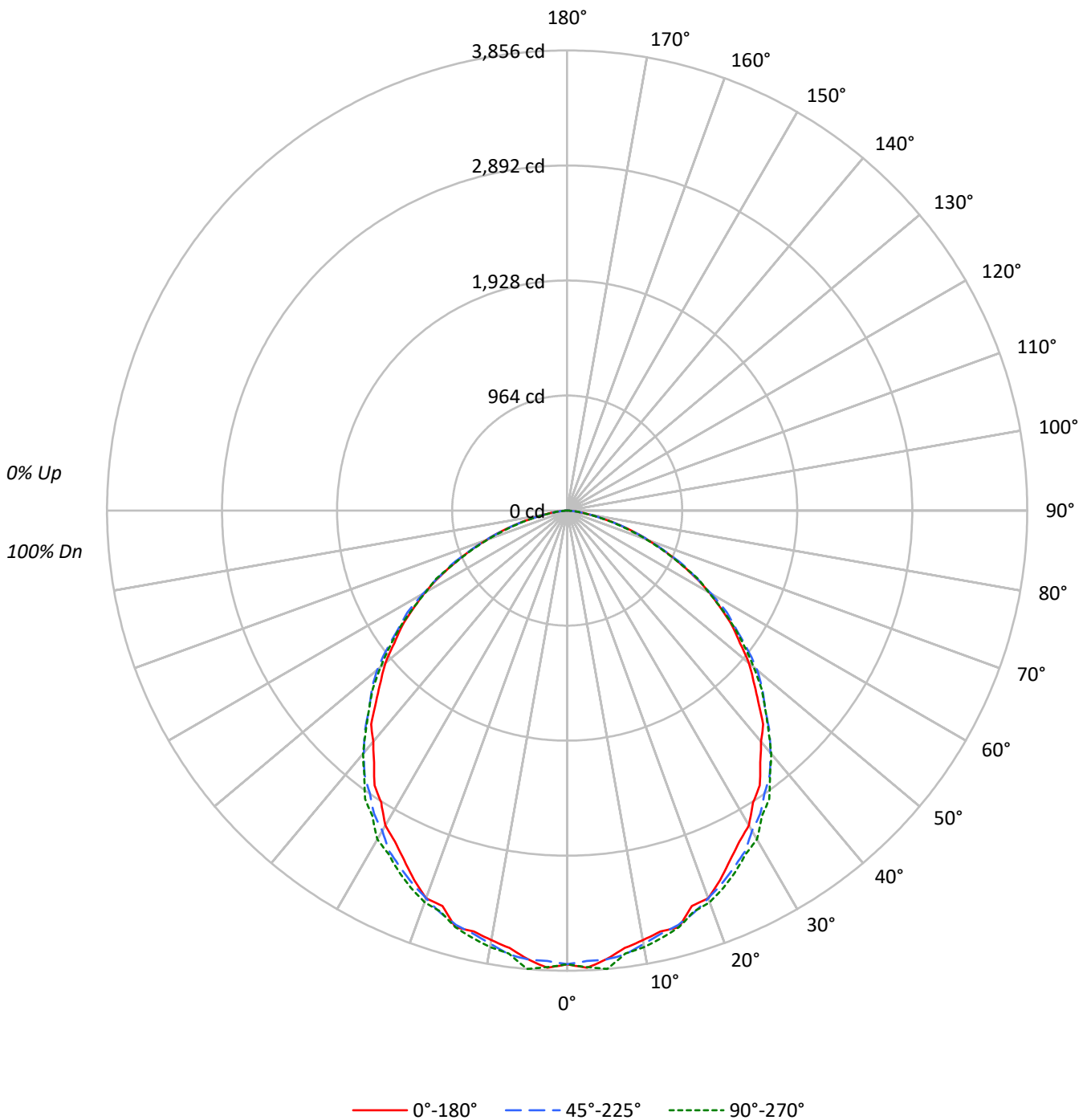
**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 9581.0 lumens  
Efficiency: N/A  
Efficacy: 110.9 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°	10230	10230	10230
5°	10196	10200	10415
10°	9989	10076	10147
15°	10068	10014	10070
20°	9898	9898	10004
25°	9594	9804	9912
30°	9462	9628	9885
35°	9239	9481	9694
40°	8880	9307	9349
45°	8611	8917	8931
50°	8328	8704	8538
55°	7935	8090	8032
60°	7420	7494	7360
65°	6616	6785	6569
70°	5677	5696	5538
75°	4496	4485	4313
80°	3013	2929	2814
85°	1636	1621	1516



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	357.6	3.7
10°-20°	1013.4	10.6
20°-30°	1518.4	15.8
30°-40°	1799.6	18.8
40°-50°	1802.9	18.8
50°-60°	1530.4	16.0
60°-70°	1031.8	10.8
70°-80°	453.4	4.7
80°-90°	73.7	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°	2889.4	30.2
0°-40°	4688.9	48.9
0°-60°	8022.2	83.7
0°-90°	9581.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	9581.0	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	3802	3802	3802	3802	3802	
5°	3774	3766	3776	3765	3856	356
15°	3614	3572	3594	3613	3614	1007
25°	3231	3249	3302	3345	3338	1494
35°	2812	2821	2886	2953	2951	1746
45°	2263	2305	2343	2404	2347	1750
55°	1691	1680	1724	1712	1712	1505
65°	1039	1025	1066	1025	1032	1033
75°	432	424	431	401	415	463
85°	53	52	52	51	49	77
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	3801.5	3801.5	3801.5	3801.5	3801.5
2.5°	3834.4	3805.4	3778.4	3809.8	3829.0
5°	3774.5	3765.7	3776.0	3764.7	3855.5
7.5°	3697.0	3730.8	3750.5	3738.2	3743.6
10°	3655.7	3643.9	3687.6	3718.1	3713.6
12.5°	3611.5	3629.2	3631.7	3664.6	3667.5
15°	3614.0	3572.3	3594.4	3613.0	3614.5
17.5°	3473.6	3518.8	3534.0	3576.7	3523.7
20°	3456.4	3423.6	3456.4	3500.1	3493.3
22.5°	3350.9	3314.1	3384.8	3423.6	3421.1
25°	3231.2	3248.8	3301.8	3345.0	3338.2
27.5°	3126.1	3146.7	3222.3	3281.7	3243.4
30°	3045.1	3034.8	3098.6	3151.6	3181.1
32.5°	2900.3	2937.6	3012.2	3064.8	3036.8
35°	2812.5	2820.8	2886.1	2952.8	2950.9
37.5°	2658.8	2697.6	2789.4	2808.1	2790.9
40°	2527.8	2566.6	2649.5	2669.6	2661.3
42.5°	2431.1	2438.0	2509.1	2532.2	2495.4
45°	2262.7	2305.0	2343.2	2403.6	2346.7
47.5°	2119.4	2139.0	2221.5	2237.7	2207.8
50°	1989.3	1996.2	2079.2	2059.0	2039.4
52.5°	1825.9	1854.9	1901.5	1897.6	1874.5
55°	1691.4	1680.1	1724.3	1712.5	1712.0
57.5°	1529.9	1549.6	1585.9	1567.2	1537.3
60°	1378.7	1379.2	1392.5	1371.4	1367.5
62.5°	1210.4	1216.3	1219.2	1193.2	1235.4
65°	1039.1	1025.3	1065.6	1024.9	1031.7
67.5°	881.5	888.4	884.5	859.0	868.8
70°	721.5	730.4	724.0	695.0	703.9
72.5°	575.3	564.5	571.3	535.0	551.7
75°	432.4	423.6	431.4	401.0	414.8
77.5°	294.5	301.4	296.5	280.3	289.6
80°	194.4	189.0	189.0	179.6	181.6
82.5°	113.4	108.0	106.5	103.6	108.0
85°	53.0	51.5	52.5	51.0	49.1
87.5°	19.1	19.6	19.6	18.7	17.7
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)