

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: P589592

Luminaire Tested: **FMR-24-2-LD4-4HI-40-UNV-80-87-EDD**

Issue Date: 12/8/2021



**Test Information**

Test Method: LM-79-08  
Report Number: P589592  
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-40-UNV-80-87-EDD  
Description: 2X2 FMR TROFFER WITH .125 PRISMATIC ACRYLIC FIXTURE SIDE AND .375 CLEAR PC ENVIRONMENTAL SIDE LENSES WITH, 80 CRI AND 4000K CCT LEDS  
Light Source: -  
Ballast/Driver: -

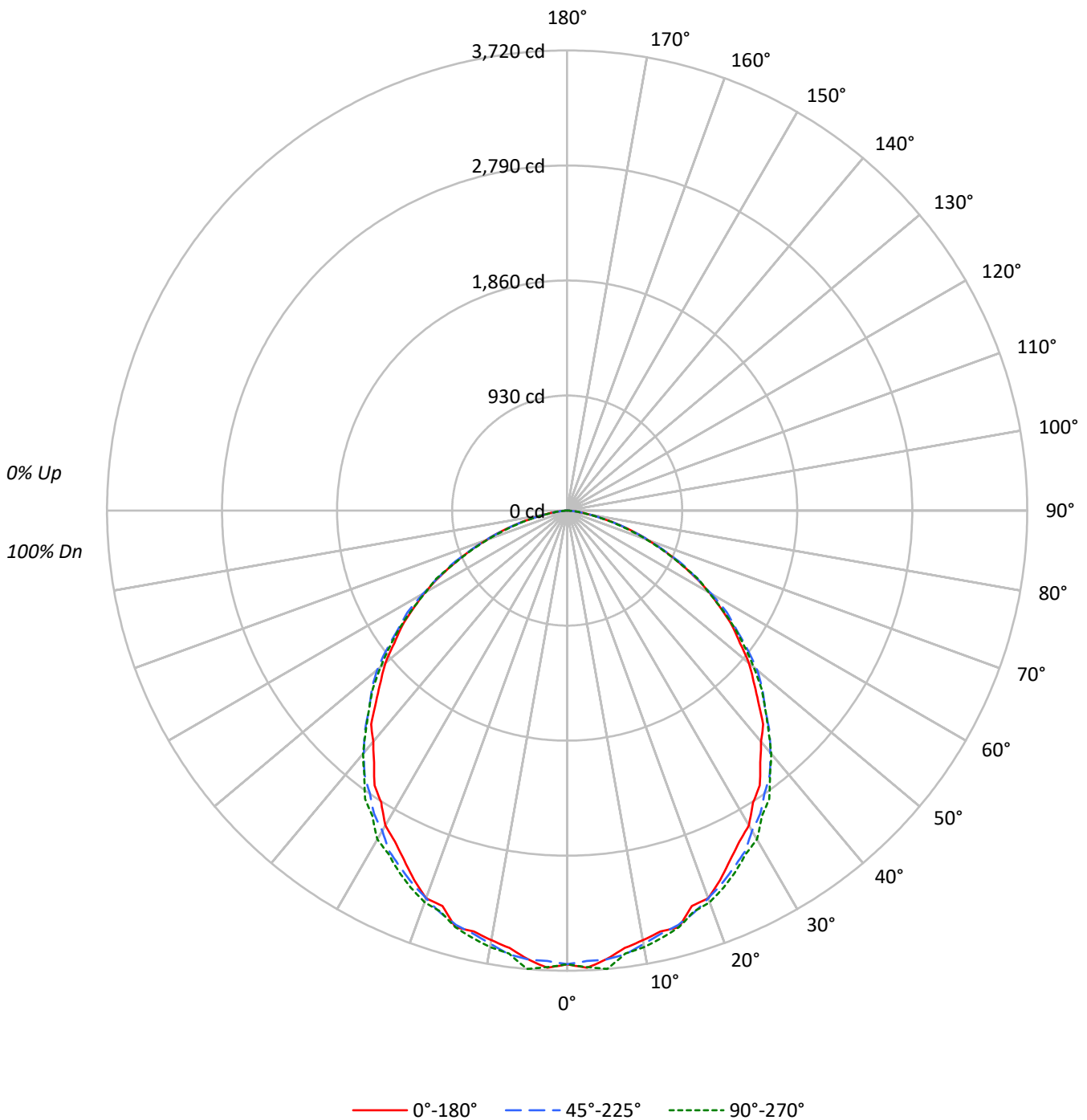
**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 9243.0 lumens  
Efficiency: N/A  
Efficacy: 107.0 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 (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°	9869	9869	9869
5°	9836	9840	10047
10°	9637	9721	9789
15°	9713	9660	9714
20°	9549	9549	9651
25°	9255	9458	9562
30°	9128	9289	9536
35°	8913	9147	9352
40°	8566	8979	9019
45°	8307	8603	8616
50°	8035	8397	8237
55°	7655	7804	7749
60°	7159	7230	7100
65°	6383	6546	6337
70°	5477	5495	5342
75°	4338	4327	4160
80°	2906	2825	2715
85°	1578	1565	1463



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	345.0	3.7
10°-20°	977.7	10.6
20°-30°	1464.8	15.8
30°-40°	1736.1	18.8
40°-50°	1739.3	18.8
50°-60°	1476.4	16.0
60°-70°	995.4	10.8
70°-80°	437.4	4.7
80°-90°	71.1	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°	2787.5	30.2
0°-40°	4523.5	48.9
0°-60°	7739.2	83.7
0°-90°	9243.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	9243.0	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	3667	3667	3667	3667	3667	
5°	3641	3633	3643	3632	3720	343
15°	3486	3446	3468	3486	3487	971
25°	3117	3134	3185	3227	3220	1441
35°	2713	2721	2784	2849	2847	1685
45°	2183	2224	2261	2319	2264	1689
55°	1632	1621	1664	1652	1652	1452
65°	1002	989	1028	989	995	997
75°	417	409	416	387	400	447
85°	51	50	51	49	47	74
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	3667.4	3667.4	3667.4	3667.4	3667.4
2.5°	3699.1	3671.2	3645.1	3675.4	3693.9
5°	3641.3	3632.8	3642.8	3631.9	3719.5
7.5°	3566.5	3599.2	3618.1	3606.3	3611.5
10°	3526.8	3515.4	3557.5	3586.9	3582.6
12.5°	3484.1	3501.2	3503.6	3535.3	3538.1
15°	3486.5	3446.3	3467.6	3485.6	3487.0
17.5°	3351.1	3394.6	3409.3	3450.5	3399.4
20°	3334.5	3302.8	3334.5	3376.6	3370.0
22.5°	3232.7	3197.2	3265.4	3302.8	3300.4
25°	3117.2	3134.2	3185.3	3227.0	3220.4
27.5°	3015.8	3035.7	3108.6	3165.9	3129.0
30°	2937.7	2927.8	2989.3	3040.5	3068.9
32.5°	2798.0	2834.0	2906.0	2956.6	2929.6
35°	2713.3	2721.3	2784.3	2848.7	2846.8
37.5°	2565.0	2602.4	2691.0	2709.0	2692.4
40°	2438.6	2476.0	2556.0	2575.5	2567.4
42.5°	2345.3	2352.0	2420.6	2442.9	2407.4
45°	2182.9	2223.6	2260.6	2318.8	2263.9
47.5°	2044.6	2063.6	2143.1	2158.8	2129.9
50°	1919.2	1925.8	2005.8	1986.4	1967.5
52.5°	1761.5	1789.4	1834.4	1830.6	1808.4
55°	1631.7	1620.8	1663.5	1652.1	1651.6
57.5°	1476.0	1494.9	1529.9	1511.9	1483.1
60°	1330.1	1330.6	1343.4	1323.0	1319.2
62.5°	1167.7	1173.4	1176.2	1151.1	1191.8
65°	1002.4	989.2	1028.0	988.7	995.3
67.5°	850.4	857.1	853.3	828.7	838.1
70°	696.1	704.6	698.4	670.5	679.0
72.5°	555.0	544.5	551.2	516.1	532.2
75°	417.2	408.6	416.2	386.9	400.1
77.5°	284.1	290.7	286.0	270.4	279.4
80°	187.5	182.3	182.3	173.3	175.2
82.5°	109.4	104.2	102.8	99.9	104.2
85°	51.1	49.7	50.7	49.2	47.4
87.5°	18.5	18.9	18.9	18.0	17.0
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)