

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: P589565

Luminaire Tested: **FMR-24-2-LD4-4HI-35-UNV-81-84-EDD**

Issue Date: 12/8/2021



**Test Information**

Test Method: LM-79-08  
Report Number: P589565  
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-81-84-EDD  
Description: 2X2 FMR TROFFER WITH .156 CLEAR PC FIXTURE SIDE AND .125 CLEAR PC ENVIRONMENTAL SIDE LENSES WITH, 80 CRI AND 3500K CCT LEDS  
Light Source: -  
Ballast/Driver: -

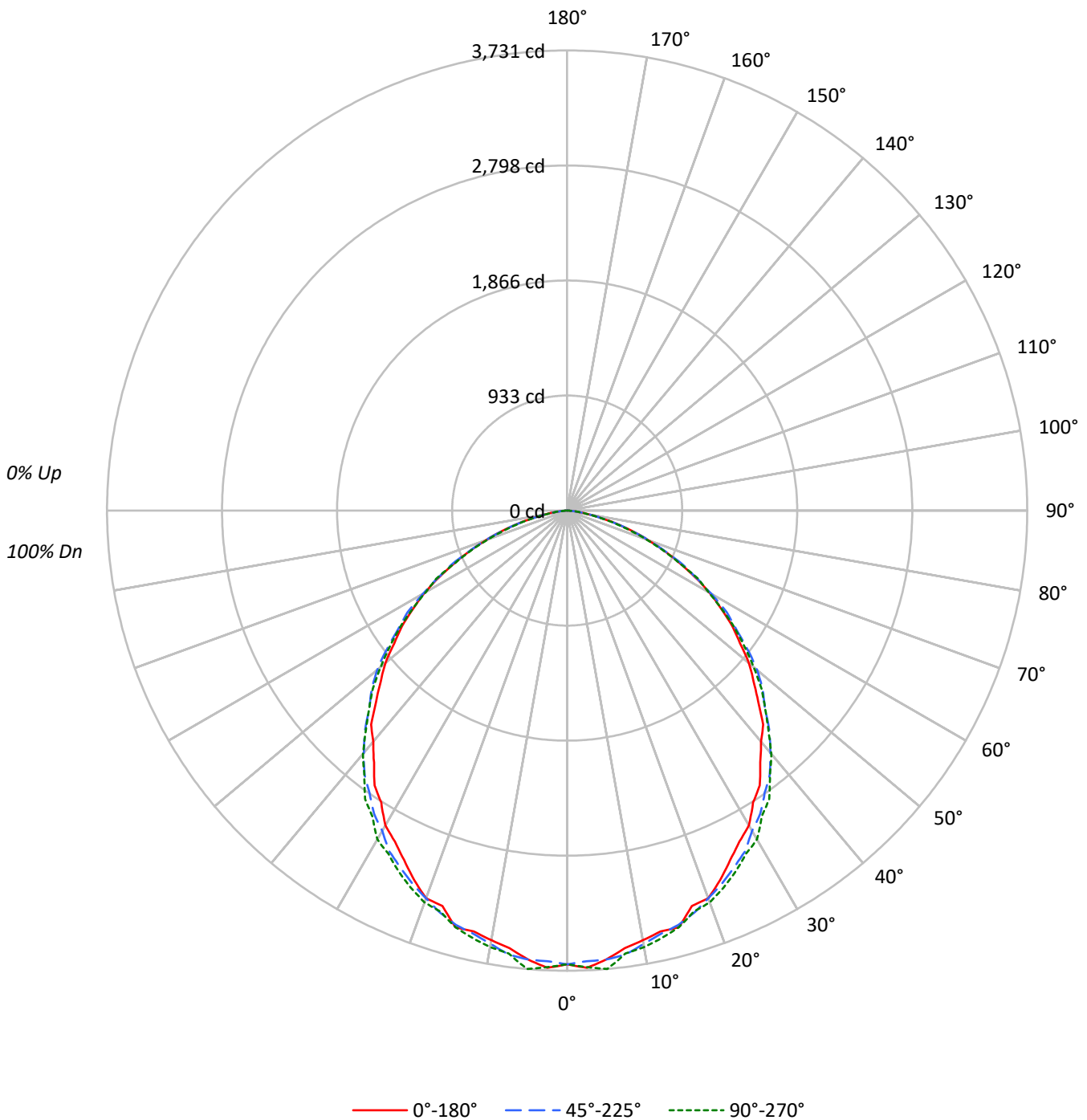
**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 9272.0 lumens  
Efficiency: N/A  
Efficacy: 107.3 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 (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°	9900	9900	9900
5°	9867	9871	10079
10°	9667	9751	9820
15°	9743	9690	9745
20°	9579	9579	9681
25°	9284	9487	9592
30°	9157	9318	9566
35°	8941	9175	9381
40°	8593	9007	9047
45°	8334	8630	8643
50°	8060	8423	8262
55°	7680	7829	7773
60°	7181	7253	7122
65°	6403	6566	6358
70°	5494	5512	5360
75°	4351	4341	4173
80°	2915	2834	2724
85°	1584	1568	1467



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	346.1	3.7
10°-20°	980.8	10.6
20°-30°	1469.4	15.8
30°-40°	1741.5	18.8
40°-50°	1744.7	18.8
50°-60°	1481.0	16.0
60°-70°	998.5	10.8
70°-80°	438.8	4.7
80°-90°	71.3	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°	2796.2	30.2
0°-40°	4537.7	48.9
0°-60°	7763.5	83.7
0°-90°	9272.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	9272.0	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	3679	3679	3679	3679	3679	
5°	3653	3644	3654	3643	3731	344
15°	3497	3457	3478	3496	3498	974
25°	3127	3144	3195	3237	3230	1446
35°	2722	2730	2793	2858	2856	1690
45°	2190	2231	2268	2326	2271	1694
55°	1637	1626	1669	1657	1657	1456
65°	1006	992	1031	992	998	1000
75°	418	410	418	388	401	448
85°	51	50	51	49	48	74
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	3678.9	3678.9	3678.9	3678.9	3678.9
2.5°	3710.7	3682.7	3656.6	3687.0	3705.5
5°	3652.8	3644.2	3654.2	3643.3	3731.1
7.5°	3577.7	3610.5	3629.5	3617.6	3622.8
10°	3537.8	3526.4	3568.7	3598.1	3593.9
12.5°	3495.1	3512.2	3514.5	3546.4	3549.2
15°	3497.4	3457.1	3478.4	3496.5	3497.9
17.5°	3361.6	3405.3	3420.0	3461.3	3410.0
20°	3345.0	3313.1	3345.0	3387.2	3380.6
22.5°	3242.8	3207.2	3275.6	3313.1	3310.8
25°	3126.9	3144.0	3195.3	3237.1	3230.5
27.5°	3025.3	3045.2	3118.4	3175.9	3138.8
30°	2946.9	2936.9	2998.7	3050.0	3078.5
32.5°	2806.8	2842.9	2915.1	2965.9	2938.8
35°	2721.8	2729.8	2793.0	2857.6	2855.7
37.5°	2573.1	2610.6	2699.4	2717.5	2700.9
40°	2446.3	2483.8	2564.1	2583.5	2575.5
42.5°	2352.7	2359.3	2428.2	2450.5	2414.9
45°	2189.8	2230.6	2267.7	2326.1	2271.0
47.5°	2051.1	2070.1	2149.9	2165.5	2136.6
50°	1925.2	1931.8	2012.1	1992.6	1973.6
52.5°	1767.0	1795.0	1840.2	1836.4	1814.0
55°	1636.9	1625.9	1668.7	1657.3	1656.8
57.5°	1480.6	1499.6	1534.7	1516.7	1487.7
60°	1334.3	1334.8	1347.6	1327.2	1323.4
62.5°	1171.4	1177.1	1179.9	1154.7	1195.6
65°	1005.6	992.3	1031.2	991.8	998.5
67.5°	853.1	859.8	856.0	831.3	840.8
70°	698.3	706.8	700.6	672.6	681.2
72.5°	556.7	546.3	552.9	517.8	533.9
75°	418.5	409.9	417.5	388.1	401.4
77.5°	285.0	291.7	286.9	271.2	280.3
80°	188.1	182.9	182.9	173.9	175.8
82.5°	109.7	104.5	103.1	100.2	104.5
85°	51.3	49.9	50.8	49.4	47.5
87.5°	18.5	19.0	19.0	18.1	17.1
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)