

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: P589757

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

Issue Date: 12/8/2021



**Test Information**

Test Method: LM-79-08  
Report Number: P589757  
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-LD4-4STD-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: -

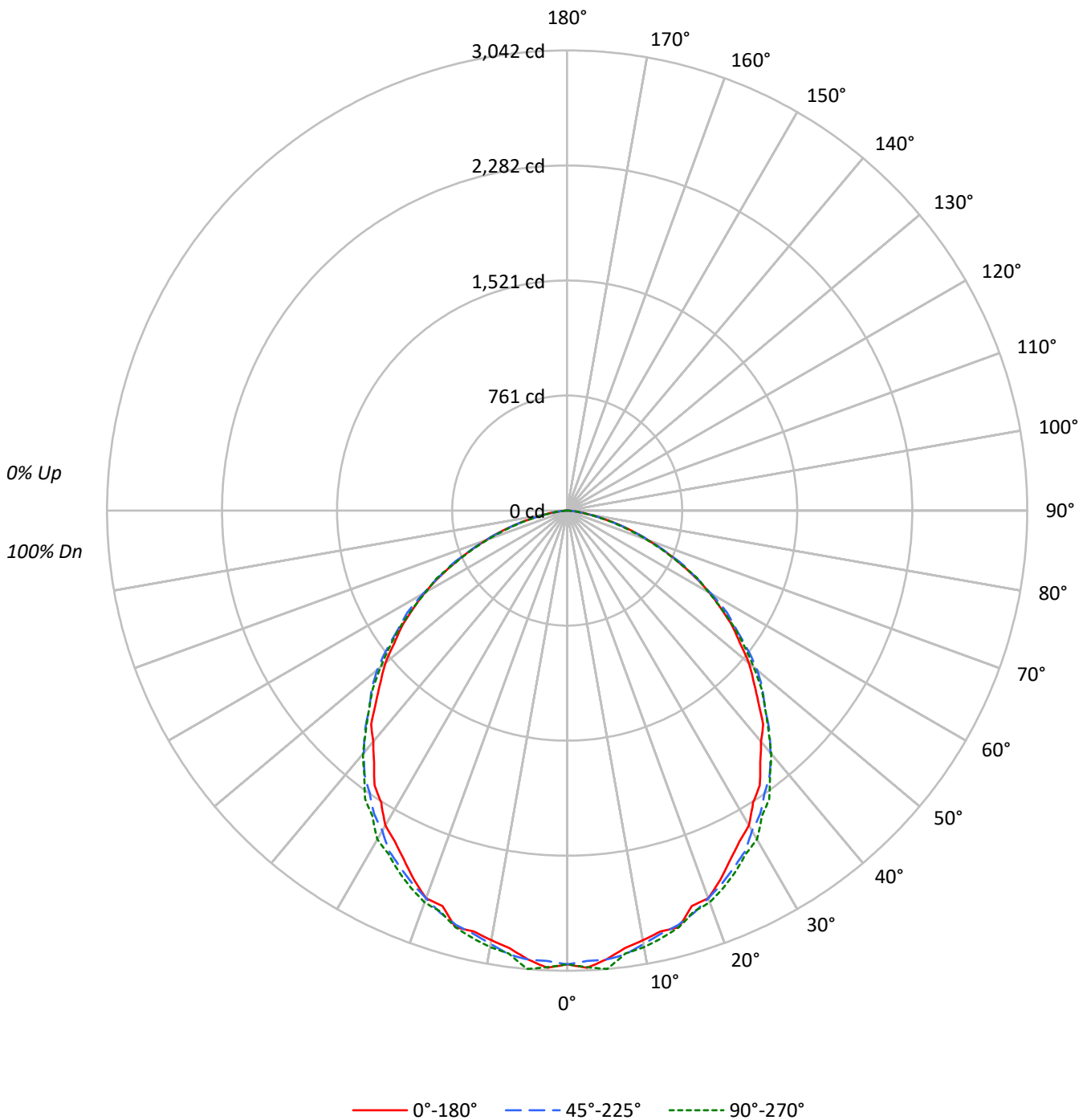
**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 7559.0 lumens  
Efficiency: N/A  
Efficacy: 113.5 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): 66.6  
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	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					100			
1	110	105	101	98	107	103	100	96	99	96	93	95	93	90	91	90	88	86					86			
2	100	93	86	81	98	91	85	80	87	82	78	84	80	76	81	78	75	73					73			
3	92	82	74	68	89	80	73	67	77	71	66	75	69	65	72	68	64	62					62			
4	84	73	64	58	82	71	64	58	69	62	57	67	61	56	65	59	55	53					53			
5	78	65	57	50	76	64	56	50	62	55	49	60	54	49	58	53	48	46					46			
6	72	59	50	44	70	58	50	44	56	49	43	54	48	43	53	47	43	41					41			
7	67	53	45	39	65	53	45	39	51	44	39	50	43	38	48	42	38	36					36			
8	62	49	41	35	61	48	40	35	47	40	34	46	39	34	44	39	34	32					32			
9	58	45	37	31	57	44	37	31	43	36	31	42	36	31	41	35	31	29					29			
10	54	41	34	29	53	41	33	28	40	33	28	39	33	28	38	32	28	26					26			

**AVERAGE LUMINANCE (cd/sqm):**

	0°	45°	90°
0°	8071	8071	8071
5°	8044	8047	8217
10°	7881	7950	8006
15°	7943	7900	7945
20°	7809	7809	7892
25°	7569	7735	7820
30°	7465	7596	7798
35°	7289	7480	7648
40°	7006	7343	7376
45°	6794	7035	7046
50°	6571	6867	6736
55°	6260	6382	6337
60°	5854	5913	5807
65°	5220	5353	5183
70°	4479	4494	4369
75°	3548	3539	3402
80°	2376	2311	2221
85°	1291	1278	1195



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	282.1	3.7
10°-20°	799.6	10.6
20°-30°	1197.9	15.8
30°-40°	1419.8	18.8
40°-50°	1422.4	18.8
50°-60°	1207.4	16.0
60°-70°	814.0	10.8
70°-80°	357.7	4.7
80°-90°	58.1	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°	2279.6	30.2
0°-40°	3699.4	48.9
0°-60°	6329.2	83.7
0°-90°	7559.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	7559.0	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	2999	2999	2999	2999	2999	
5°	2978	2971	2979	2970	3042	281
15°	2851	2818	2836	2850	2852	794
25°	2549	2563	2605	2639	2634	1179
35°	2219	2226	2277	2330	2328	1378
45°	1785	1818	1849	1896	1851	1381
55°	1334	1326	1360	1351	1351	1187
65°	820	809	841	809	814	815
75°	341	334	340	316	327	366
85°	42	41	41	40	39	61
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	2999.2	2999.2	2999.2	2999.2	2999.2
2.5°	3025.2	3002.3	2981.0	3005.8	3020.9
5°	2977.9	2971.0	2979.1	2970.2	3041.8
7.5°	2916.7	2943.5	2958.9	2949.3	2953.5
10°	2884.2	2874.9	2909.4	2933.4	2929.9
12.5°	2849.4	2863.3	2865.2	2891.2	2893.5
15°	2851.3	2818.4	2835.8	2850.5	2851.7
17.5°	2740.5	2776.2	2788.2	2821.9	2780.0
20°	2727.0	2701.0	2727.0	2761.5	2756.0
22.5°	2643.7	2614.7	2670.4	2701.0	2699.1
25°	2549.2	2563.2	2605.0	2639.1	2633.7
27.5°	2466.4	2482.6	2542.3	2589.1	2558.9
30°	2402.5	2394.3	2444.7	2486.5	2509.7
32.5°	2288.2	2317.7	2376.5	2418.0	2395.9
35°	2218.9	2225.5	2277.0	2329.7	2328.1
37.5°	2097.7	2128.3	2200.7	2215.4	2201.9
40°	1994.3	2024.9	2090.4	2106.2	2099.6
42.5°	1918.0	1923.5	1979.6	1997.8	1968.8
45°	1785.2	1818.5	1848.7	1896.3	1851.4
47.5°	1672.1	1687.6	1752.7	1765.5	1741.8
50°	1569.5	1574.9	1640.4	1624.5	1609.0
52.5°	1440.6	1463.4	1500.2	1497.1	1478.9
55°	1334.4	1325.5	1360.4	1351.1	1350.7
57.5°	1207.0	1222.5	1251.2	1236.5	1212.9
60°	1087.8	1088.2	1098.6	1082.0	1078.9
62.5°	954.9	959.6	961.9	941.4	974.7
65°	819.8	809.0	840.7	808.6	814.0
67.5°	695.5	700.9	697.8	677.7	685.4
70°	569.3	576.2	571.2	548.3	555.3
72.5°	453.9	445.3	450.8	422.1	435.3
75°	341.2	334.2	340.4	316.4	327.2
77.5°	232.3	237.8	233.9	221.1	228.5
80°	153.3	149.1	149.1	141.7	143.3
82.5°	89.5	85.2	84.0	81.7	85.2
85°	41.8	40.7	41.4	40.3	38.7
87.5°	15.1	15.5	15.5	14.7	13.9
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)