

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: P589804

Luminaire Tested: **FMR-24-2-LD4-4STD-40-UNV-82-97-EDD**

Issue Date: 12/8/2021



**Test Information**

Test Method: LM-79-08  
Report Number: P589804  
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-40-UNV-82-97-EDD  
Description: 2X2 FMR TROFFER WITH .187 CLEAR PC FIXTURE SIDE AND .375 CLEAR  
TEMPERED GLASS ENVIRONMENTAL SIDE LENSES WITH, 80 CRI AND 4000K CCT LEDS  
Light Source: -  
Ballast/Driver: -

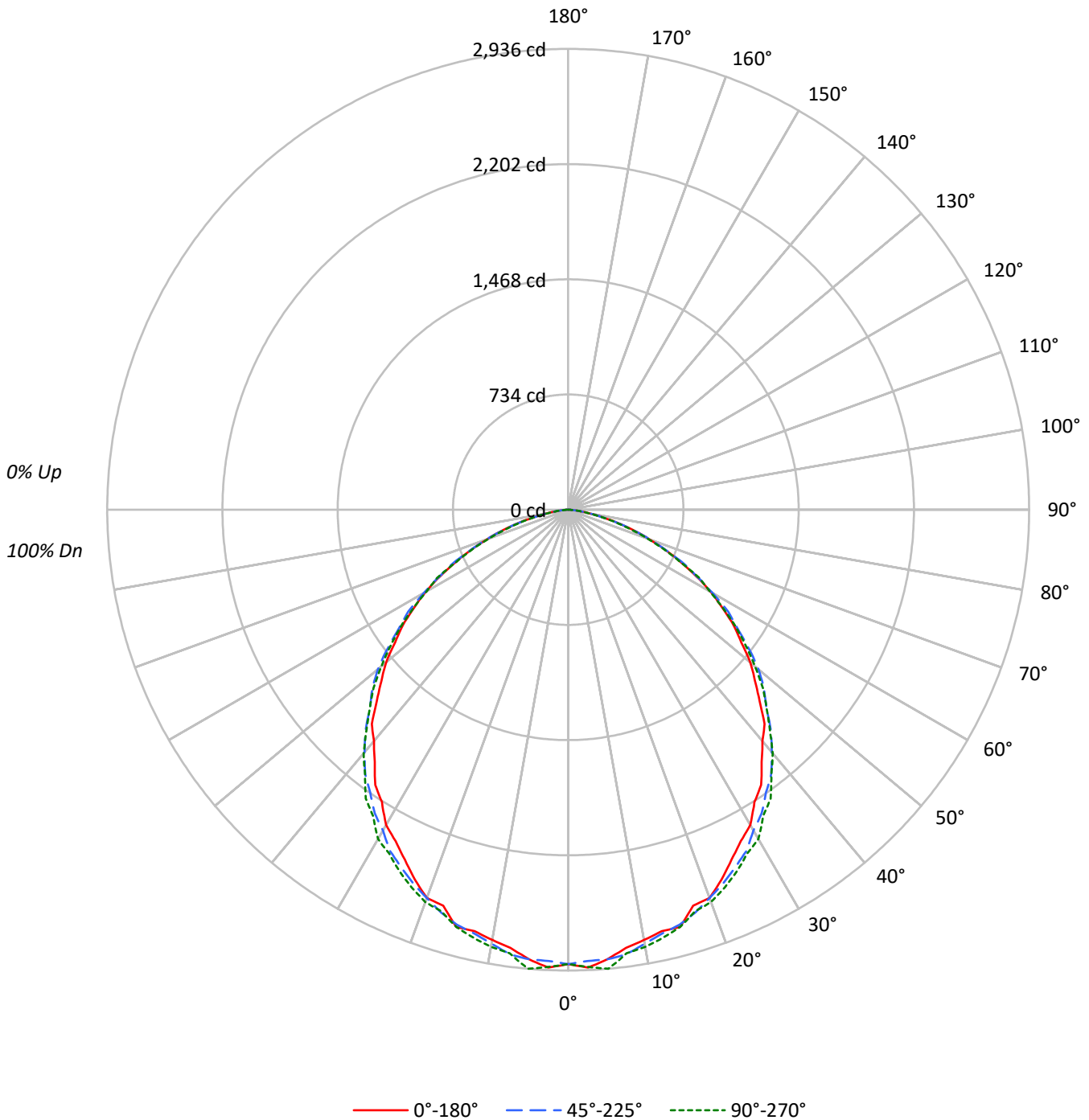
**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 7296.0 lumens  
Efficiency: N/A  
Efficacy: 109.5 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 (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°	7790	7790	7790
5°	7764	7767	7931
10°	7607	7673	7727
15°	7667	7625	7668
20°	7537	7537	7618
25°	7306	7466	7548
30°	7205	7332	7527
35°	7036	7220	7382
40°	6762	7087	7119
45°	6557	6791	6801
50°	6342	6628	6502
55°	6043	6161	6116
60°	5651	5707	5604
65°	5039	5167	5003
70°	4323	4338	4217
75°	3424	3415	3283
80°	2294	2230	2143
85°	1247	1235	1155



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	272.3	3.7
10°-20°	771.7	10.6
20°-30°	1156.2	15.8
30°-40°	1370.4	18.8
40°-50°	1372.9	18.8
50°-60°	1165.4	16.0
60°-70°	785.7	10.8
70°-80°	345.2	4.7
80°-90°	56.1	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°	2200.3	30.2
0°-40°	3570.7	48.9
0°-60°	6109.0	83.7
0°-90°	7296.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	7296.0	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	2895	2895	2895	2895	2895	
5°	2874	2868	2875	2867	2936	271
15°	2752	2720	2737	2751	2752	767
25°	2460	2474	2514	2547	2542	1138
35°	2142	2148	2198	2249	2247	1330
45°	1723	1755	1784	1830	1787	1333
55°	1288	1279	1313	1304	1304	1146
65°	791	781	812	780	786	787
75°	329	323	328	305	316	353
85°	40	39	40	39	37	59
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	2894.9	2894.9	2894.9	2894.9	2894.9
2.5°	2919.9	2897.9	2877.3	2901.2	2915.8
5°	2874.3	2867.6	2875.4	2866.8	2936.0
7.5°	2815.3	2841.0	2856.0	2846.7	2850.8
10°	2783.9	2774.9	2808.2	2831.3	2828.0
12.5°	2750.2	2763.7	2765.5	2790.6	2792.8
15°	2752.1	2720.3	2737.1	2751.3	2752.5
17.5°	2645.2	2679.6	2691.2	2723.7	2683.3
20°	2632.1	2607.1	2632.1	2665.4	2660.1
22.5°	2551.7	2523.7	2577.5	2607.1	2605.2
25°	2460.5	2474.0	2514.4	2547.3	2542.0
27.5°	2380.6	2396.3	2453.8	2499.0	2469.9
30°	2318.9	2311.0	2359.6	2400.0	2422.4
32.5°	2208.6	2237.0	2293.8	2333.8	2312.5
35°	2141.7	2148.1	2197.8	2248.6	2247.1
37.5°	2024.7	2054.3	2124.1	2138.4	2125.3
40°	1924.9	1954.5	2017.6	2032.9	2026.6
42.5°	1851.3	1856.5	1910.7	1928.3	1900.3
45°	1723.1	1755.2	1784.4	1830.4	1787.0
47.5°	1613.9	1628.9	1691.7	1704.0	1681.2
50°	1514.9	1520.1	1583.3	1568.0	1553.0
52.5°	1390.4	1412.5	1448.0	1445.0	1427.4
55°	1288.0	1279.4	1313.1	1304.1	1303.7
57.5°	1165.0	1180.0	1207.7	1193.5	1170.7
60°	1049.9	1050.3	1060.4	1044.3	1041.3
62.5°	921.7	926.2	928.5	908.6	940.8
65°	791.3	780.8	811.5	780.4	785.7
67.5°	671.3	676.5	673.5	654.1	661.6
70°	549.4	556.2	551.3	529.3	536.0
72.5°	438.1	429.8	435.1	407.4	420.1
75°	329.3	322.6	328.5	305.4	315.8
77.5°	224.3	229.5	225.8	213.4	220.5
80°	148.0	143.9	143.9	136.8	138.3
82.5°	86.3	82.2	81.1	78.9	82.2
85°	40.4	39.2	40.0	38.9	37.4
87.5°	14.6	15.0	15.0	14.2	13.5
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)