

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: P589723

Luminaire Tested: **FMR-24-2-LD4-4LO-50-UNV-80-96-EDD**

Issue Date: 12/8/2021



**Test Information**

Test Method: LM-79-08  
Report Number: P589723  
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-LD4-4LO-50-UNV-80-96-EDD  
Description: 2X2 FMR TROFFER WITH .125 PRISMATIC ACRYLIC FIXTURE SIDE AND .250 CLEAR TEMPERED GLASS ENVIRONMENTAL SIDE LENSES WITH, 80 CRI AND 5000K CCT LEDS  
Light Source: -  
Ballast/Driver: -

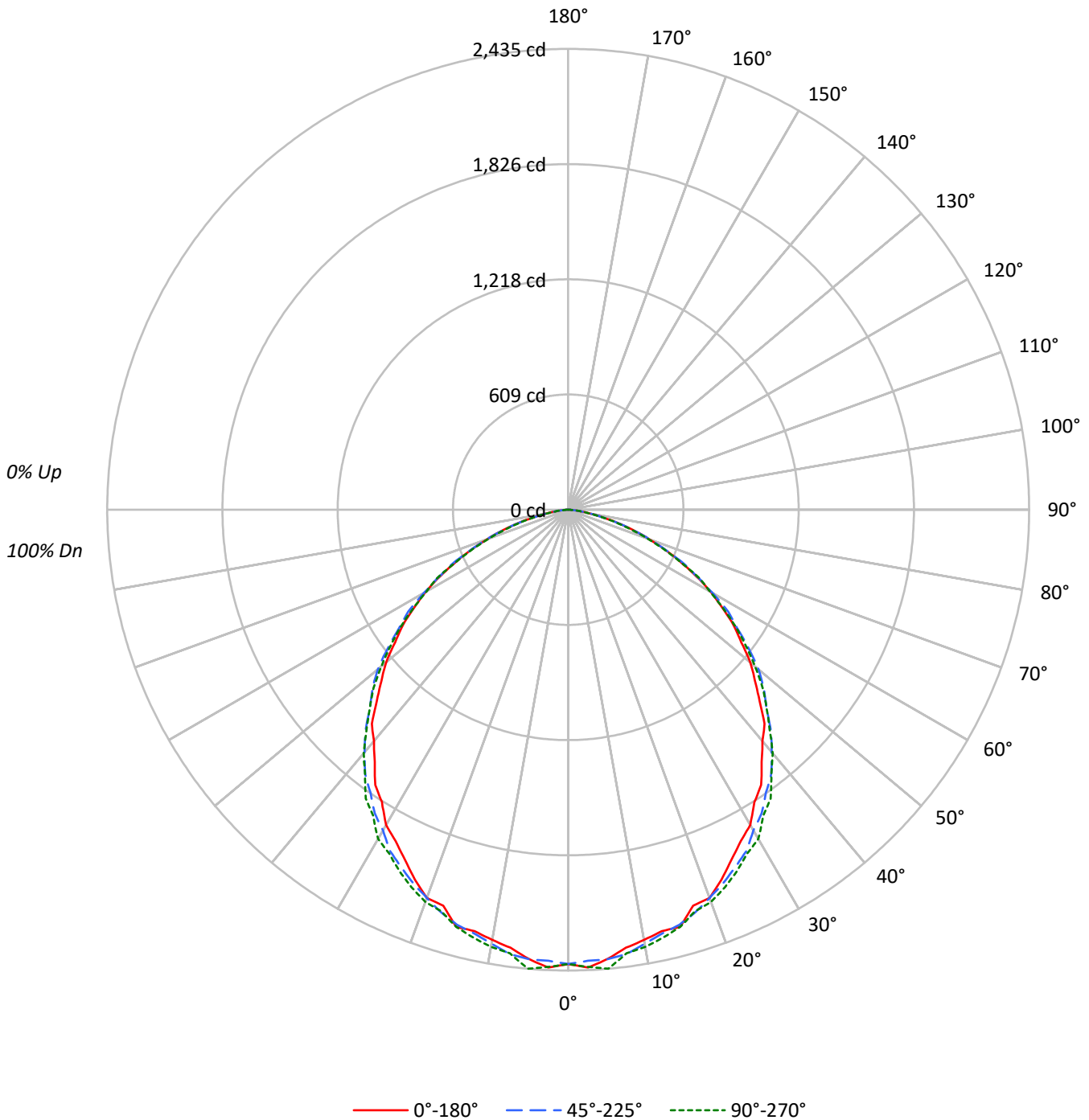
**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 6050.0 lumens  
Efficiency: N/A  
Efficacy: 129.3 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): 46.8  
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°	6460	6460	6460
5°	6438	6441	6576
10°	6308	6363	6408
15°	6358	6323	6359
20°	6250	6250	6317
25°	6058	6191	6259
30°	5975	6080	6242
35°	5834	5987	6121
40°	5607	5877	5903
45°	5437	5631	5639
50°	5259	5496	5391
55°	5011	5108	5072
60°	4686	4732	4647
65°	4178	4285	4148
70°	3585	3597	3497
75°	2839	2832	2723
80°	1901	1849	1777
85°	1034	1025	957



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	225.8	3.7
10°-20°	639.9	10.6
20°-30°	958.8	15.8
30°-40°	1136.3	18.8
40°-50°	1138.5	18.8
50°-60°	966.4	16.0
60°-70°	651.5	10.8
70°-80°	286.3	4.7
80°-90°	46.5	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°	1824.5	30.2
0°-40°	2960.9	48.9
0°-60°	5065.7	83.7
0°-90°	6050.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	6050.0	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	2400	2400	2400	2400	2400	
5°	2383	2378	2384	2377	2435	225
15°	2282	2256	2270	2282	2282	636
25°	2040	2052	2085	2112	2108	943
35°	1776	1781	1822	1865	1863	1103
45°	1429	1456	1480	1518	1482	1105
55°	1068	1061	1089	1081	1081	950
65°	656	648	673	647	652	653
75°	273	268	272	253	262	293
85°	34	32	33	32	31	49
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	2400.5	2400.5	2400.5	2400.5	2400.5
2.5°	2421.3	2403.0	2385.9	2405.8	2417.8
5°	2383.4	2377.9	2384.4	2377.2	2434.6
7.5°	2334.5	2355.9	2368.3	2360.5	2363.9
10°	2308.4	2301.0	2328.6	2347.8	2345.0
12.5°	2280.5	2291.7	2293.2	2314.0	2315.9
15°	2282.1	2255.7	2269.7	2281.5	2282.4
17.5°	2193.4	2222.0	2231.6	2258.5	2225.1
20°	2182.6	2161.8	2182.6	2210.2	2205.8
22.5°	2116.0	2092.7	2137.3	2161.8	2160.3
25°	2040.3	2051.5	2085.0	2112.2	2107.9
27.5°	1974.0	1987.0	2034.8	2072.3	2048.1
30°	1922.9	1916.4	1956.7	1990.1	2008.7
32.5°	1831.4	1855.0	1902.1	1935.3	1917.6
35°	1776.0	1781.2	1822.4	1864.6	1863.4
37.5°	1678.9	1703.4	1761.4	1773.2	1762.3
40°	1596.2	1620.7	1673.1	1685.8	1680.5
42.5°	1535.1	1539.5	1584.4	1599.0	1575.7
45°	1428.8	1455.5	1479.7	1517.8	1481.8
47.5°	1338.3	1350.7	1402.8	1413.0	1394.1
50°	1256.2	1260.5	1312.9	1300.2	1287.8
52.5°	1153.0	1171.3	1200.7	1198.2	1183.7
55°	1068.1	1060.9	1088.8	1081.4	1081.1
57.5°	966.1	978.5	1001.4	989.6	970.7
60°	870.6	870.9	879.3	866.0	863.5
62.5°	764.3	768.0	769.9	753.5	780.1
65°	656.1	647.5	672.9	647.2	651.5
67.5°	556.7	561.0	558.5	542.4	548.6
70°	455.6	461.2	457.2	438.9	444.5
72.5°	363.2	356.4	360.8	337.8	348.4
75°	273.1	267.5	272.4	253.2	261.9
77.5°	186.0	190.3	187.2	177.0	182.9
80°	122.7	119.3	119.3	113.4	114.7
82.5°	71.6	68.2	67.3	65.4	68.2
85°	33.5	32.5	33.2	32.2	31.0
87.5°	12.1	12.4	12.4	11.8	11.2
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)