

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: P589499

Luminaire Tested: **FMR-24-2-LD4-3STD-40-UNV-80-96-EDD**

Issue Date: 12/8/2021



**Test Information**

Test Method: LM-79-08  
Report Number: P589499  
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-LD4-3STD-40-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 4000K CCT LEDS  
Light Source: -  
Ballast/Driver: -

**Summary**

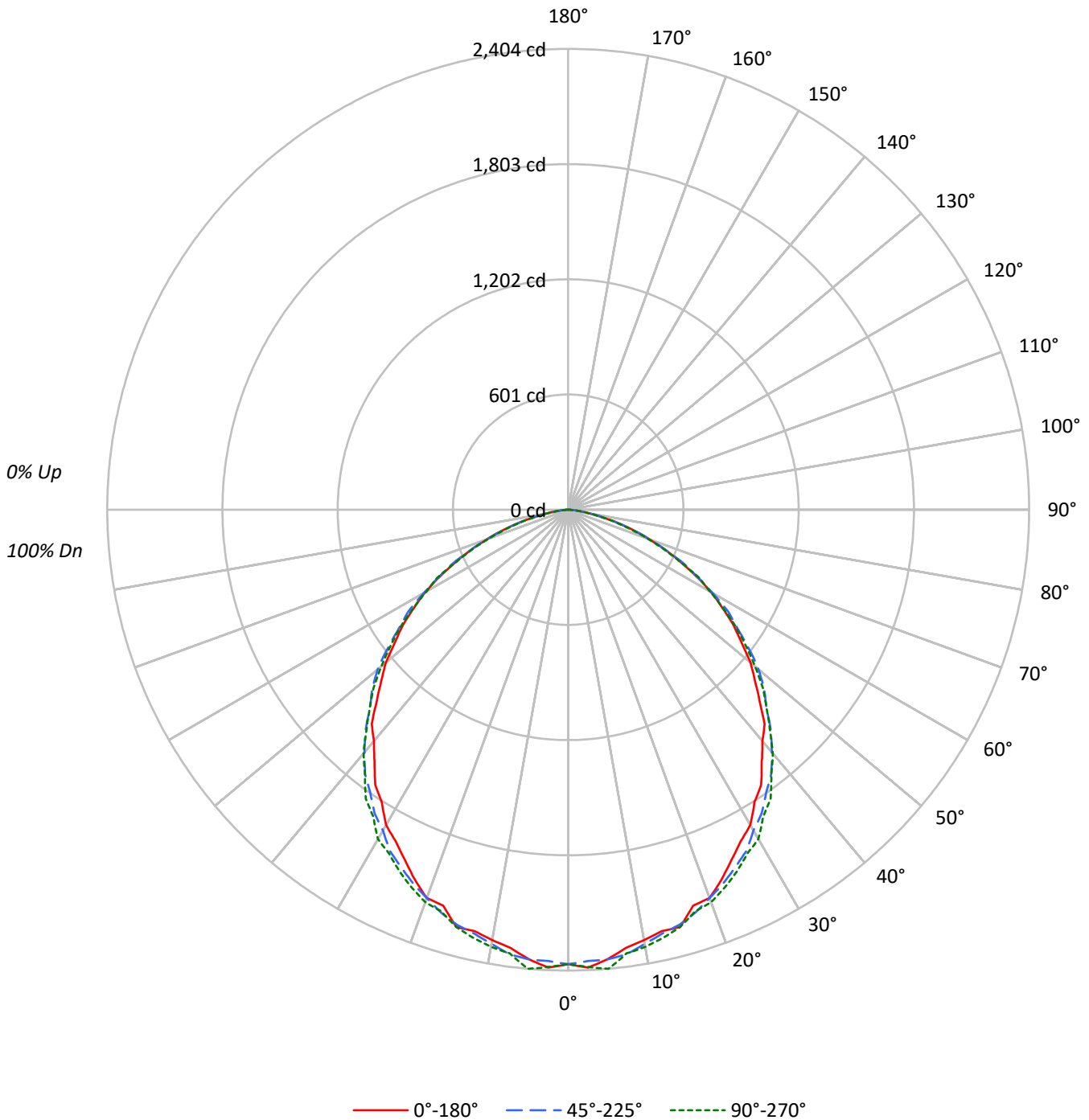
Lumens per Lamp: N/A  
Luminaire Lumens: 5975.0 lumens  
Efficiency: N/A  
Efficacy: 119.5 lumens/watt  
Spacing Criteria (0/90/45): 1.19 / 1.23 / 1.33  
Luminous Opening: Rectangular (W 2' x L: 2' x H: 0')  
CIE Type: Direct

Input Watts (W): 50  
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°	6380	6380	6380
5°	6358	6361	6495
10°	6230	6284	6328
15°	6279	6245	6280
20°	6173	6173	6239
25°	5983	6114	6181
30°	5901	6004	6164
35°	5762	5913	6046
40°	5538	5804	5830
45°	5370	5561	5570
50°	5194	5428	5324
55°	4949	5045	5009
60°	4627	4674	4590
65°	4126	4231	4097
70°	3541	3552	3453
75°	2804	2798	2690
80°	1878	1826	1756
85°	1022	1013	945



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	223.0	3.7
10°-20°	632.0	10.6
20°-30°	946.9	15.8
30°-40°	1122.3	18.8
40°-50°	1124.3	18.8
50°-60°	954.4	16.0
60°-70°	643.4	10.8
70°-80°	282.7	4.7
80°-90°	45.9	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°	1801.9	30.2
0°-40°	2924.2	48.9
0°-60°	5002.9	83.7
0°-90°	5975.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	5975.0	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	2371	2371	2371	2371	2371	
5°	2354	2348	2355	2348	2404	222
15°	2254	2228	2242	2253	2254	628
25°	2015	2026	2059	2086	2082	932
35°	1754	1759	1800	1842	1840	1089
45°	1411	1437	1461	1499	1464	1092
55°	1055	1048	1075	1068	1068	938
65°	648	639	664	639	643	644
75°	270	264	269	250	259	289
85°	33	32	33	32	31	48
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	2370.7	2370.7	2370.7	2370.7	2370.7
2.5°	2391.2	2373.2	2356.3	2375.9	2387.9
5°	2353.9	2348.4	2354.8	2347.8	2404.4
7.5°	2305.5	2326.7	2338.9	2331.2	2334.6
10°	2279.8	2272.5	2299.7	2318.7	2315.9
12.5°	2252.3	2263.3	2264.8	2285.3	2287.2
15°	2253.8	2227.8	2241.6	2253.2	2254.1
17.5°	2166.3	2194.4	2203.9	2230.5	2197.5
20°	2155.5	2135.0	2155.5	2182.8	2178.5
22.5°	2089.7	2066.8	2110.9	2135.0	2133.5
25°	2015.0	2026.1	2059.1	2086.1	2081.8
27.5°	1949.5	1962.4	2009.5	2046.6	2022.7
30°	1899.0	1892.6	1932.4	1965.5	1983.8
32.5°	1808.7	1832.0	1878.5	1911.3	1893.8
35°	1753.9	1759.1	1799.9	1841.5	1840.3
37.5°	1658.1	1682.3	1739.6	1751.2	1740.5
40°	1576.4	1600.6	1652.3	1664.9	1659.7
42.5°	1516.1	1520.4	1564.8	1579.2	1556.2
45°	1411.1	1437.4	1461.3	1499.0	1463.5
47.5°	1321.7	1334.0	1385.4	1395.5	1376.8
50°	1240.6	1244.9	1296.6	1284.1	1271.8
52.5°	1138.7	1156.7	1185.8	1183.4	1169.0
55°	1054.8	1047.8	1075.3	1068.0	1067.7
57.5°	954.1	966.4	989.0	977.4	958.7
60°	859.8	860.1	868.4	855.2	852.8
62.5°	754.8	758.5	760.3	744.1	770.4
65°	648.0	639.4	664.5	639.1	643.4
67.5°	549.8	554.0	551.6	535.7	541.8
70°	450.0	455.5	451.5	433.4	438.9
72.5°	358.7	352.0	356.3	333.6	344.1
75°	269.7	264.2	269.1	250.1	258.7
77.5°	183.7	187.9	184.9	174.8	180.6
80°	121.2	117.8	117.8	112.0	113.3
82.5°	70.7	67.3	66.4	64.6	67.3
85°	33.1	32.1	32.8	31.8	30.6
87.5°	11.9	12.2	12.2	11.6	11.0
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)