

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: P589048

Luminaire Tested: **FMR-24-2-LD4-2HI-50-UNV-80-87-EDD**

Issue Date: 12/8/2021



**Test Information**

Test Method: LM-79-08  
Report Number: P589048  
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-LD4-2HI-50-UNV-80-87-EDD  
Description: 2X2 FMR TROFFER WITH .125 PRISMATIC ACRYLIC FIXTURE SIDE AND .375 CLEAR PC ENVIRONMENTAL SIDE LENSES WITH, 80 CRI AND 5000K CCT LEDS  
Light Source: -  
Ballast/Driver: -

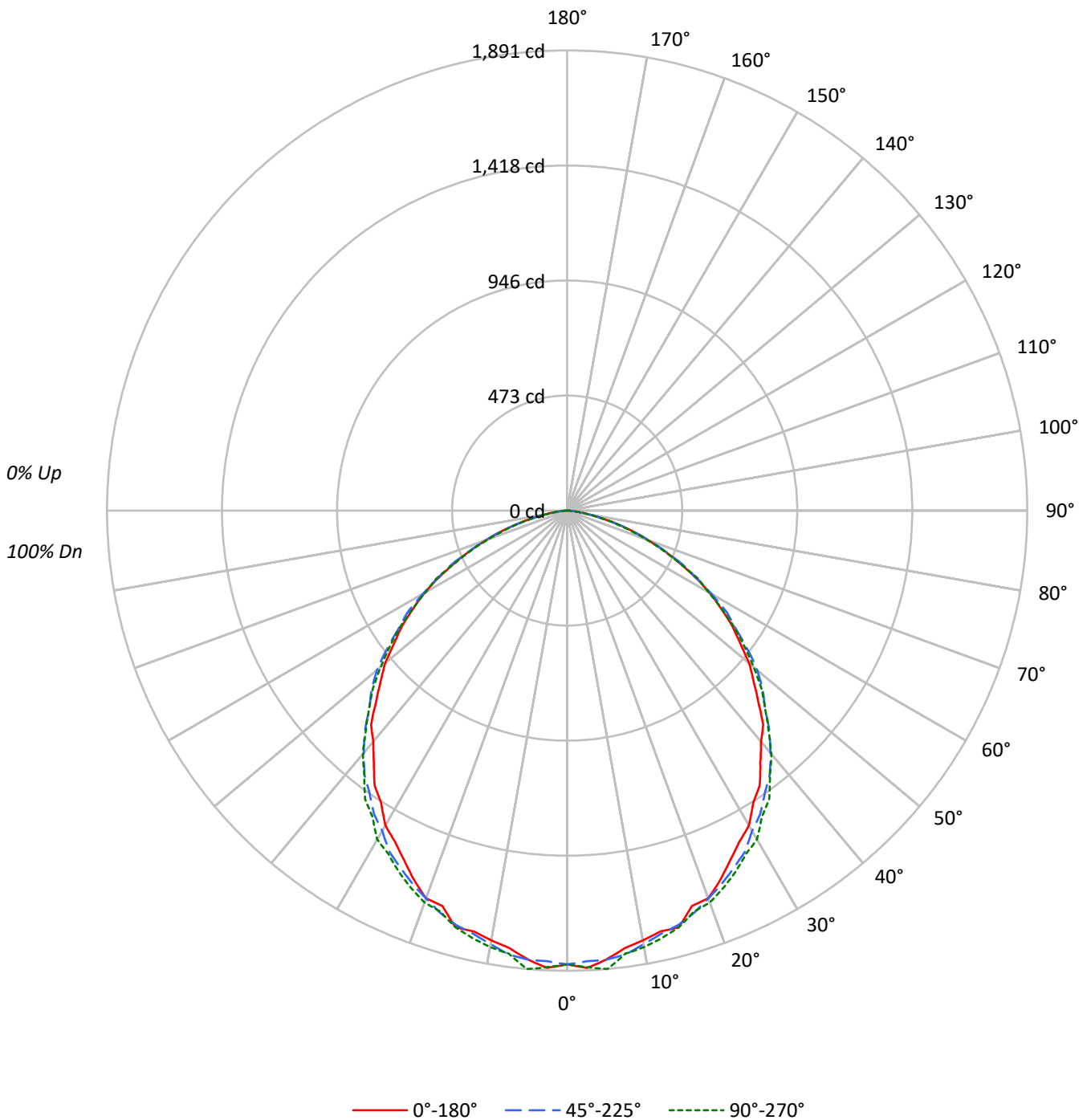
**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 4700.0 lumens  
Efficiency: N/A  
Efficacy: 108.8 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): 43.2  
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°	5018	5018	5018
5°	5002	5004	5109
10°	4900	4943	4978
15°	4939	4912	4940
20°	4856	4856	4907
25°	4706	4809	4862
30°	4642	4723	4849
35°	4532	4651	4755
40°	4356	4566	4586
45°	4224	4375	4381
50°	4086	4270	4188
55°	3893	3969	3940
60°	3640	3676	3610
65°	3245	3328	3223
70°	2784	2795	2717
75°	2205	2200	2116
80°	1477	1437	1381
85°	803	797	744



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	175.4	3.7
10°-20°	497.2	10.6
20°-30°	744.8	15.8
30°-40°	882.8	18.8
40°-50°	884.4	18.8
50°-60°	750.7	16.0
60°-70°	506.1	10.8
70°-80°	222.4	4.7
80°-90°	36.1	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°	1417.4	30.2
0°-40°	2300.2	48.9
0°-60°	3935.3	83.7
0°-90°	4700.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	4700.0	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	1865	1865	1865	1865	1865	
5°	1852	1847	1852	1847	1891	175
15°	1773	1752	1763	1772	1773	494
25°	1585	1594	1620	1641	1638	733
35°	1380	1384	1416	1448	1448	857
45°	1110	1131	1150	1179	1151	859
55°	830	824	846	840	840	738
65°	510	503	523	503	506	507
75°	212	208	212	197	204	227
85°	26	25	26	25	24	38
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	1864.8	1864.8	1864.8	1864.8	1864.8
2.5°	1881.0	1866.8	1853.5	1868.9	1878.3
5°	1851.6	1847.3	1852.3	1846.8	1891.3
7.5°	1813.6	1830.2	1839.8	1833.8	1836.4
10°	1793.3	1787.6	1809.0	1823.9	1821.7
12.5°	1771.7	1780.3	1781.5	1797.7	1799.1
15°	1772.9	1752.4	1763.2	1772.4	1773.1
17.5°	1704.0	1726.2	1733.6	1754.6	1728.6
20°	1695.6	1679.4	1695.6	1717.0	1713.6
22.5°	1643.8	1625.7	1660.4	1679.4	1678.2
25°	1585.1	1593.7	1619.7	1640.9	1637.5
27.5°	1533.5	1543.6	1580.7	1609.9	1591.1
30°	1493.8	1488.7	1520.0	1546.0	1560.5
32.5°	1422.8	1441.1	1477.7	1503.4	1489.7
35°	1379.7	1383.8	1415.8	1448.5	1447.6
37.5°	1304.3	1323.3	1368.4	1377.5	1369.1
40°	1240.0	1259.0	1299.7	1309.6	1305.5
42.5°	1192.6	1196.0	1230.9	1242.2	1224.1
45°	1110.0	1130.7	1149.5	1179.1	1151.2
47.5°	1039.7	1049.3	1089.8	1097.7	1083.0
50°	975.9	979.3	1019.9	1010.1	1000.4
52.5°	895.7	909.9	932.8	930.9	919.5
55°	829.7	824.2	845.9	840.1	839.8
57.5°	750.5	760.1	778.0	768.8	754.1
60°	676.4	676.6	683.1	672.7	670.8
62.5°	593.8	596.7	598.1	585.3	606.0
65°	509.7	503.0	522.7	502.7	506.1
67.5°	432.4	435.8	433.9	421.4	426.2
70°	353.9	358.3	355.2	340.9	345.3
72.5°	282.2	276.9	280.3	262.5	270.6
75°	212.1	207.8	211.6	196.7	203.5
77.5°	144.5	147.8	145.4	137.5	142.1
80°	95.3	92.7	92.7	88.1	89.1
82.5°	55.6	53.0	52.2	50.8	53.0
85°	26.0	25.3	25.8	25.0	24.1
87.5°	9.4	9.6	9.6	9.1	8.7
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)