

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: P589555

Luminaire Tested: **FMR-24-2-LD4-3STD-50-UNV-93-96-EDD**

Issue Date: 12/8/2021



**Test Information**

Test Method: LM-79-08  
Report Number: P589555  
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-50-UNV-93-96-EDD  
Description: 2X2 FMR TROFFER WITH .156 CLEAR TEMPERED GLASS FIXTURE SIDE AND .250 CLEAR TEMPERED GLASS ENVIRONMENTAL SIDE LENSES WITH, 80 CRI AND 5000K CCT LEDS  
Light Source: -  
Ballast/Driver: -

**Summary**

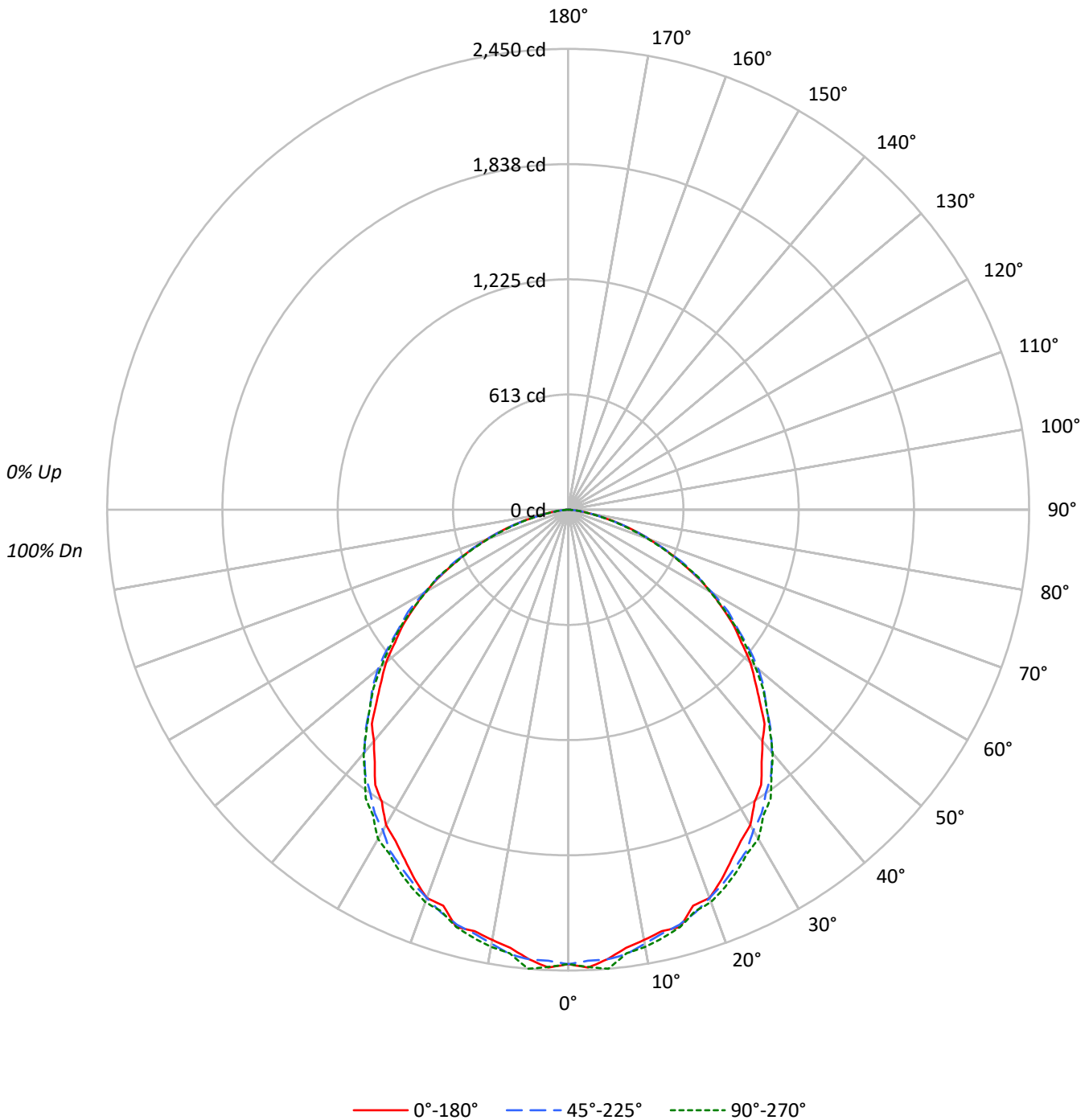
Lumens per Lamp: N/A  
Luminaire Lumens: 6088.0 lumens  
Efficiency: N/A  
Efficacy: 121.8 lumens/watt  
Spacing Criteria (0/90/45): 1.19 / 1.23 / 1.33  
Luminous Opening: Rectangular (W 2' x L: 2' x H: 0')  
CIE Type: Direct

Input Watts (W): 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	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°	6500	6500	6500
5°	6479	6481	6618
10°	6347	6403	6448
15°	6398	6363	6398
20°	6289	6289	6357
25°	6096	6230	6298
30°	6012	6118	6281
35°	5871	6025	6160
40°	5642	5914	5941
45°	5472	5666	5675
50°	5292	5531	5425
55°	5043	5141	5104
60°	4715	4762	4676
65°	4204	4311	4174
70°	3607	3619	3519
75°	2857	2850	2740
80°	1914	1861	1788
85°	1041	1031	963



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	227.2	3.7
10°-20°	644.0	10.6
20°-30°	964.8	15.8
30°-40°	1143.5	18.8
40°-50°	1145.6	18.8
50°-60°	972.4	16.0
60°-70°	655.6	10.8
70°-80°	288.1	4.7
80°-90°	46.8	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°	1836.0	30.2
0°-40°	2979.5	48.9
0°-60°	5097.5	83.7
0°-90°	6088.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	6088.0	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	2416	2416	2416	2416	2416	
5°	2398	2393	2399	2392	2450	226
15°	2296	2270	2284	2296	2297	640
25°	2053	2064	2098	2126	2121	949
35°	1787	1792	1834	1876	1875	1110
45°	1438	1465	1489	1527	1491	1112
55°	1075	1068	1096	1088	1088	956
65°	660	652	677	651	656	657
75°	275	269	274	255	264	294
85°	34	33	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°	2415.6	2415.6	2415.6	2415.6	2415.6
2.5°	2436.5	2418.1	2400.9	2420.9	2433.0
5°	2398.4	2392.8	2399.3	2392.2	2449.9
7.5°	2349.1	2370.7	2383.1	2375.3	2378.8
10°	2322.9	2315.4	2343.2	2362.5	2359.7
12.5°	2294.9	2306.1	2307.7	2328.5	2330.4
15°	2296.4	2269.9	2283.9	2295.8	2296.7
17.5°	2207.2	2235.9	2245.6	2272.7	2239.0
20°	2196.3	2175.4	2196.3	2224.1	2219.7
22.5°	2129.3	2105.9	2150.8	2175.4	2173.9
25°	2053.2	2064.4	2098.1	2125.5	2121.1
27.5°	1986.4	1999.5	2047.5	2085.3	2060.9
30°	1934.9	1928.4	1968.9	2002.6	2021.3
32.5°	1842.9	1866.6	1914.1	1947.4	1929.6
35°	1787.1	1792.4	1833.9	1876.3	1875.1
37.5°	1689.5	1714.1	1772.5	1784.3	1773.4
40°	1606.2	1630.9	1683.6	1696.4	1691.1
42.5°	1544.8	1549.1	1594.4	1609.0	1585.6
45°	1437.8	1464.6	1488.9	1527.3	1491.1
47.5°	1346.7	1359.2	1411.6	1421.9	1402.9
50°	1264.1	1268.4	1321.2	1308.4	1295.9
52.5°	1160.2	1178.6	1208.3	1205.8	1191.1
55°	1074.8	1067.6	1095.7	1088.2	1087.9
57.5°	972.2	984.6	1007.7	995.9	976.8
60°	876.1	876.4	884.8	871.4	868.9
62.5°	769.1	772.9	774.7	758.2	785.0
65°	660.3	651.5	677.1	651.2	655.6
67.5°	560.1	564.5	562.0	545.8	552.0
70°	458.5	464.1	460.0	441.6	447.2
72.5°	365.5	358.7	363.0	340.0	350.6
75°	274.8	269.2	274.1	254.8	263.5
77.5°	187.1	191.5	188.4	178.1	184.0
80°	123.5	120.1	120.1	114.2	115.4
82.5°	72.0	68.6	67.7	65.8	68.6
85°	33.7	32.7	33.4	32.4	31.2
87.5°	12.2	12.5	12.5	11.9	11.2
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)