

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: P589051

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

Issue Date: 12/8/2021



**Test Information**

Test Method: LM-79-08  
Report Number: P589051  
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-80-96-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: -

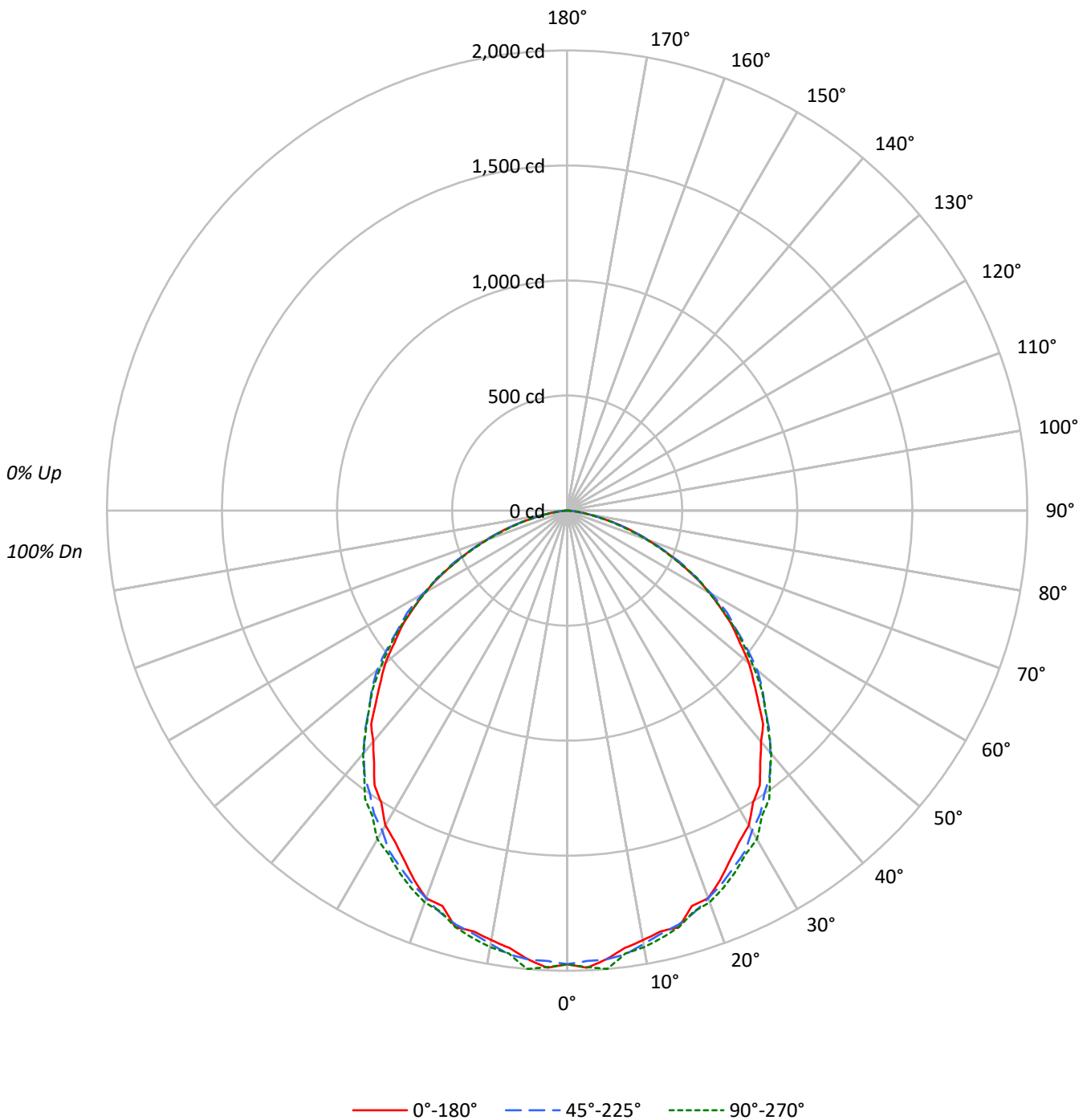
**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 4969.0 lumens  
Efficiency: N/A  
Efficacy: 115.0 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°	5306	5306	5306
5°	5288	5290	5401
10°	5181	5226	5263
15°	5222	5193	5222
20°	5133	5133	5188
25°	4976	5084	5141
30°	4907	4993	5126
35°	4792	4917	5027
40°	4605	4827	4848
45°	4466	4625	4632
50°	4319	4514	4428
55°	4115	4196	4166
60°	3849	3887	3817
65°	3431	3519	3407
70°	2944	2954	2872
75°	2332	2327	2236
80°	1562	1519	1460
85°	849	840	787



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	185.5	3.7
10°-20°	525.6	10.6
20°-30°	787.5	15.8
30°-40°	933.3	18.8
40°-50°	935.0	18.8
50°-60°	793.7	16.0
60°-70°	535.1	10.8
70°-80°	235.1	4.7
80°-90°	38.2	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°	1498.5	30.2
0°-40°	2431.8	48.9
0°-60°	4160.6	83.7
0°-90°	4969.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	4969.0	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	1972	1972	1972	1972	1972	
5°	1958	1953	1958	1952	2000	185
15°	1874	1853	1864	1874	1875	522
25°	1676	1685	1712	1735	1731	775
35°	1459	1463	1497	1531	1530	906
45°	1174	1195	1215	1247	1217	908
55°	877	871	894	888	888	780
65°	539	532	553	532	535	536
75°	224	220	224	208	215	240
85°	28	27	27	26	26	40
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	1971.6	1971.6	1971.6	1971.6	1971.6
2.5°	1988.6	1973.6	1959.6	1975.9	1985.8
5°	1957.6	1953.0	1958.3	1952.5	1999.6
7.5°	1917.4	1934.9	1945.1	1938.7	1941.5
10°	1896.0	1889.9	1912.5	1928.3	1926.0
12.5°	1873.1	1882.2	1883.5	1900.6	1902.1
15°	1874.3	1852.7	1864.1	1873.8	1874.6
17.5°	1801.5	1824.9	1832.8	1855.0	1827.5
20°	1792.6	1775.6	1792.6	1815.3	1811.7
22.5°	1737.9	1718.8	1755.5	1775.6	1774.3
25°	1675.8	1684.9	1712.4	1734.8	1731.3
27.5°	1621.3	1632.0	1671.2	1702.0	1682.1
30°	1579.3	1573.9	1607.0	1634.5	1649.8
32.5°	1504.2	1523.5	1562.2	1589.5	1575.0
35°	1458.6	1463.0	1496.8	1531.4	1530.4
37.5°	1379.0	1399.1	1446.7	1456.3	1447.4
40°	1311.0	1331.1	1374.1	1384.6	1380.2
42.5°	1260.8	1264.4	1301.3	1313.3	1294.2
45°	1173.5	1195.4	1215.3	1246.6	1217.1
47.5°	1099.2	1109.4	1152.1	1160.5	1145.0
50°	1031.7	1035.3	1078.3	1067.9	1057.7
52.5°	947.0	962.0	986.2	984.1	972.2
55°	877.2	871.4	894.3	888.2	887.9
57.5°	793.5	803.6	822.5	812.8	797.3
60°	715.1	715.3	722.2	711.2	709.2
62.5°	627.7	630.8	632.3	618.8	640.7
65°	538.9	531.8	552.7	531.5	535.1
67.5°	457.2	460.8	458.7	445.5	450.6
70°	374.2	378.8	375.5	360.5	365.0
72.5°	298.3	292.7	296.3	277.5	286.1
75°	224.3	219.7	223.8	208.0	215.1
77.5°	152.7	156.3	153.8	145.4	150.2
80°	100.8	98.0	98.0	93.2	94.2
82.5°	58.8	56.0	55.2	53.7	56.0
85°	27.5	26.7	27.2	26.5	25.5
87.5°	9.9	10.2	10.2	9.7	9.2
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)