

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: P589014

Luminaire Tested: **FMR-24-2-LD4-2HI-40-UNV-80-85-EDD**

Issue Date: 12/8/2021



**Test Information**

Test Method: LM-79-08  
Report Number: P589014  
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-40-UNV-80-85-EDD  
Description: 2X2 FMR TROFFER WITH .125 PRISMATIC ACRYLIC FIXTURE SIDE AND .187 CLEAR PC ENVIRONMENTAL SIDE LENSES WITH, 80 CRI AND 4000K CCT LEDS  
Light Source: -  
Ballast/Driver: -

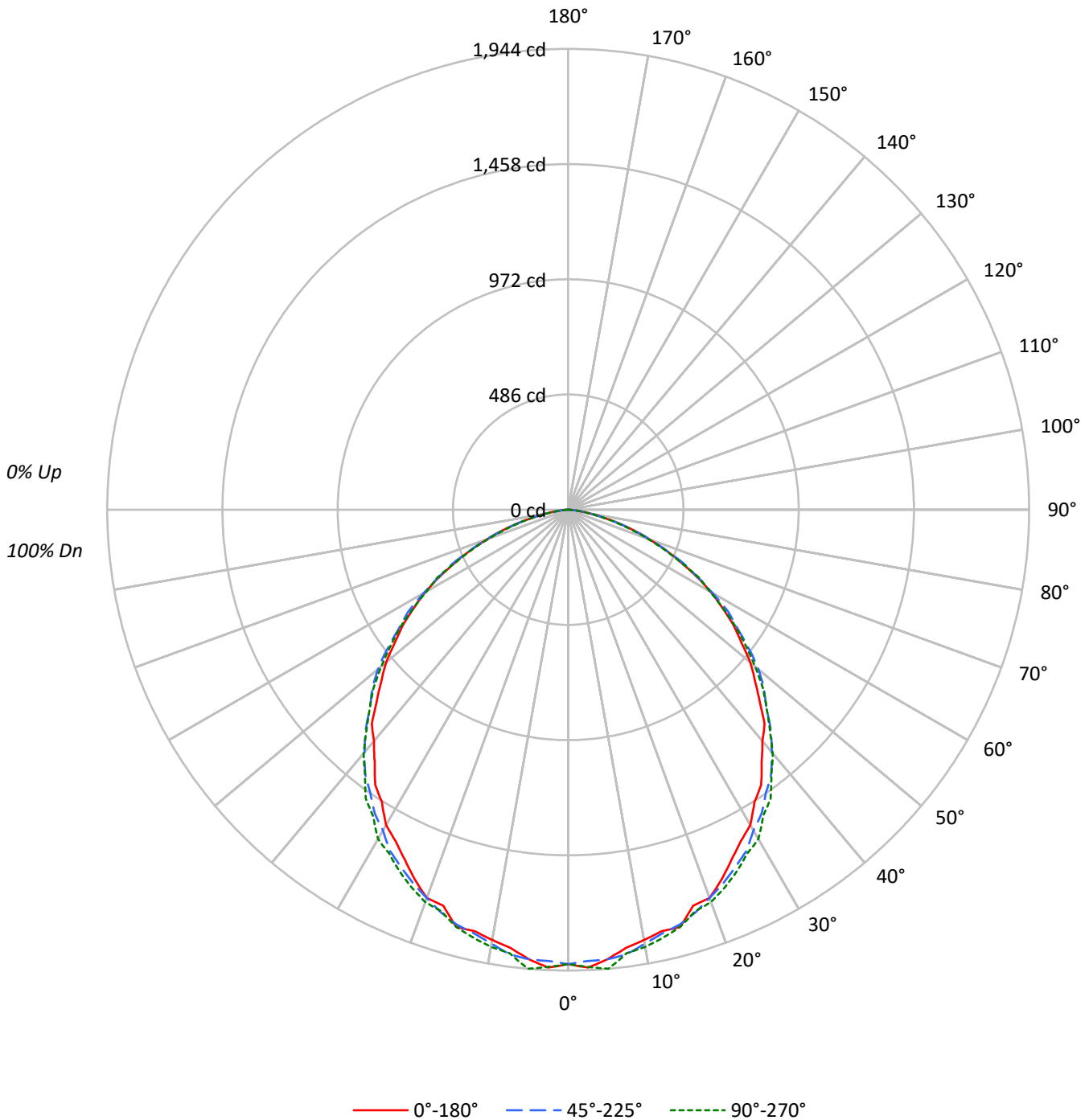
**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 4831.0 lumens  
Efficiency: N/A  
Efficacy: 111.8 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°	5158	5158	5158
5°	5141	5143	5251
10°	5037	5081	5117
15°	5077	5049	5077
20°	4991	4991	5044
25°	4837	4943	4998
30°	4771	4855	4984
35°	4659	4780	4888
40°	4477	4693	4714
45°	4342	4496	4503
50°	4199	4389	4305
55°	4001	4079	4050
60°	3742	3779	3711
65°	3336	3421	3312
70°	2862	2872	2792
75°	2267	2261	2174
80°	1519	1477	1420
85°	824	818	763



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	180.3	3.7
10°-20°	511.0	10.6
20°-30°	765.6	15.8
30°-40°	907.4	18.8
40°-50°	909.1	18.8
50°-60°	771.6	16.0
60°-70°	520.3	10.8
70°-80°	228.6	4.7
80°-90°	37.1	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°	1456.9	30.2
0°-40°	2364.3	48.9
0°-60°	4045.0	83.7
0°-90°	4831.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	4831.0	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	1917	1917	1917	1917	1917	
5°	1903	1899	1904	1898	1944	179
15°	1822	1801	1812	1822	1822	508
25°	1629	1638	1665	1687	1683	753
35°	1418	1422	1455	1489	1488	880
45°	1141	1162	1182	1212	1183	883
55°	853	847	869	864	863	759
65°	524	517	537	517	520	521
75°	218	214	218	202	209	234
85°	27	26	26	26	25	39
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	1916.8	1916.8	1916.8	1916.8	1916.8
2.5°	1933.4	1918.8	1905.2	1921.0	1930.7
5°	1903.2	1898.8	1903.9	1898.3	1944.0
7.5°	1864.1	1881.2	1891.1	1884.9	1887.6
10°	1843.3	1837.4	1859.4	1874.7	1872.5
12.5°	1821.0	1829.9	1831.2	1847.8	1849.3
15°	1822.3	1801.2	1812.4	1821.8	1822.5
17.5°	1751.5	1774.3	1781.9	1803.5	1776.7
20°	1742.8	1726.3	1742.8	1764.9	1761.4
22.5°	1689.6	1671.1	1706.7	1726.3	1725.0
25°	1629.2	1638.1	1664.9	1686.7	1683.2
27.5°	1576.3	1586.7	1624.8	1654.7	1635.4
30°	1535.4	1530.2	1562.4	1589.1	1604.0
32.5°	1462.4	1481.2	1518.9	1545.3	1531.2
35°	1418.1	1422.3	1455.2	1488.9	1487.9
37.5°	1340.7	1360.2	1406.5	1415.9	1407.2
40°	1274.6	1294.1	1336.0	1346.1	1341.9
42.5°	1225.8	1229.3	1265.2	1276.8	1258.2
45°	1140.9	1162.2	1181.5	1212.0	1183.3
47.5°	1068.7	1078.6	1120.1	1128.3	1113.2
50°	1003.1	1006.5	1048.4	1038.2	1028.3
52.5°	920.7	935.3	958.8	956.8	945.2
55°	852.9	847.2	869.4	863.5	863.2
57.5°	771.4	781.3	799.6	790.2	775.1
60°	695.2	695.5	702.1	691.5	689.5
62.5°	610.3	613.3	614.8	601.7	622.9
65°	523.9	517.0	537.3	516.8	520.2
67.5°	444.5	448.0	446.0	433.1	438.1
70°	363.8	368.3	365.0	350.4	354.9
72.5°	290.1	284.6	288.1	269.8	278.2
75°	218.0	213.6	217.5	202.2	209.1
77.5°	148.5	152.0	149.5	141.3	146.0
80°	98.0	95.3	95.3	90.6	91.6
82.5°	57.2	54.4	53.7	52.2	54.4
85°	26.7	26.0	26.5	25.7	24.7
87.5°	9.7	9.9	9.9	9.4	8.9
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)