

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: P589681

Luminaire Tested: **FMR-24-2-LD4-4LO-35-UNV-93-88-EDD**

Issue Date: 12/8/2021



Test Information

Test Method: LM-79-08
Report Number: P589681
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-LD4-4LO-35-UNV-93-88-EDD
Description: 2X2 FMR TROFFER WITH .156 CLEAR TEMPERED GLASS FIXTURE SIDE AND .500 CLEAR PC ENVIRONMENTAL SIDE LENSES WITH, 80 CRI AND 3500K CCT LEDS
Light Source: -
Ballast/Driver: -

Summary

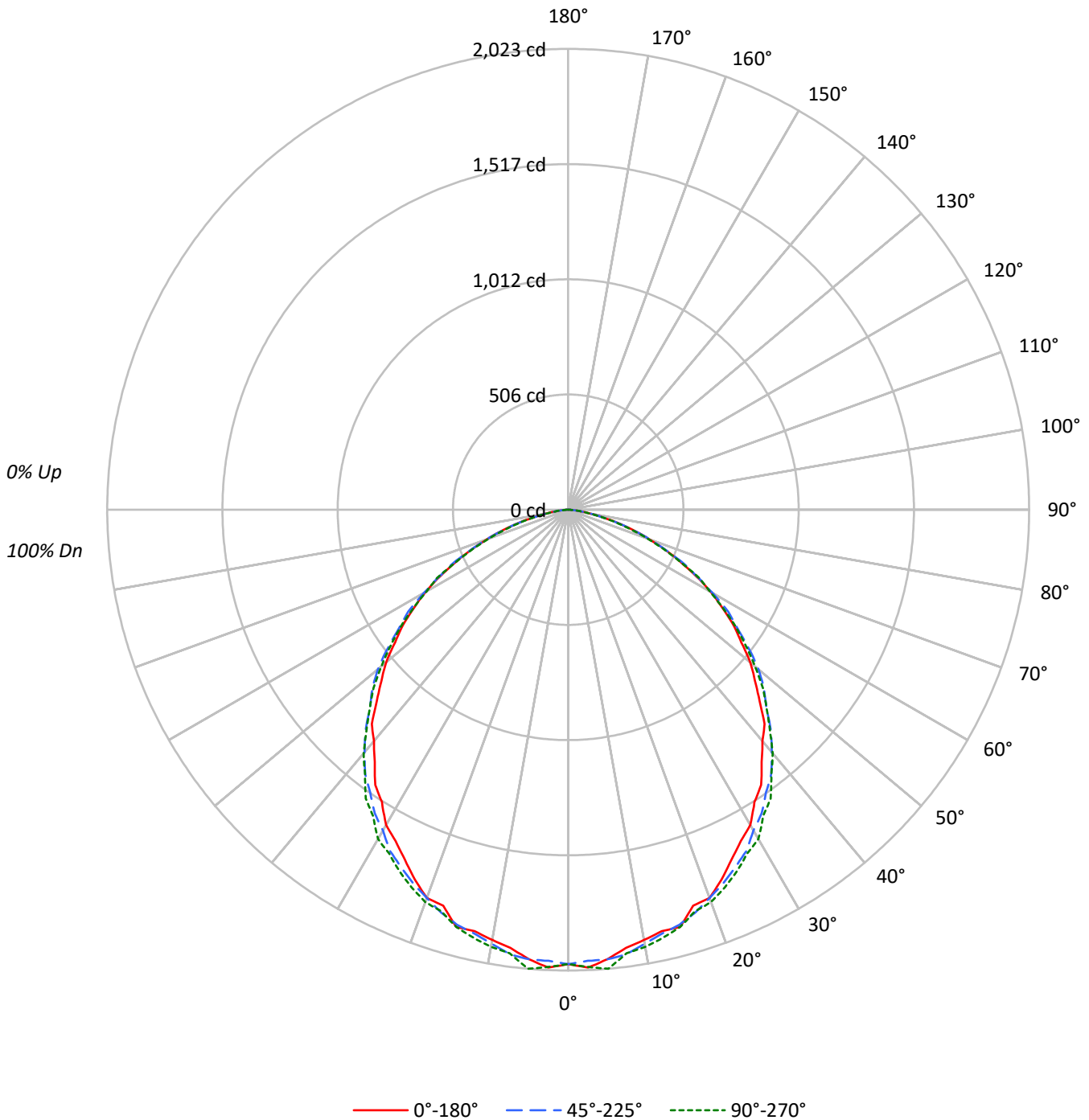
Lumens per Lamp: N/A
Luminaire Lumens: 5027.0 lumens
Efficiency: N/A
Efficacy: 107.4 lumens/watt
Spacing Criteria (0/90/45): 1.19 / 1.23 / 1.33
Luminous Opening: Rectangular (W 2' x L: 2' x H: 0')
CIE Type: Direct

Input Watts (W): 46.8
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°	5367	5367	5367
5°	5350	5352	5464
10°	5241	5287	5324
15°	5283	5254	5283
20°	5193	5193	5249
25°	5034	5144	5200
30°	4964	5052	5186
35°	4848	4975	5086
40°	4659	4884	4905
45°	4518	4679	4686
50°	4370	4567	4479
55°	4164	4244	4214
60°	3893	3932	3862
65°	3472	3560	3447
70°	2979	2989	2906
75°	2359	2354	2262
80°	1581	1536	1477
85°	858	852	797



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	187.6	3.7
10°-20°	531.7	10.6
20°-30°	796.7	15.8
30°-40°	944.2	18.8
40°-50°	945.9	18.8
50°-60°	802.9	16.0
60°-70°	541.4	10.8
70°-80°	237.9	4.7
80°-90°	38.7	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°	1516.0	30.2
0°-40°	2460.2	48.9
0°-60°	4209.1	83.7
0°-90°	5027.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	5027.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1995	1995	1995	1995	1995	
5°	1980	1976	1981	1975	2023	187
15°	1896	1874	1886	1896	1896	528
25°	1695	1705	1732	1755	1752	784
35°	1476	1480	1514	1549	1548	916
45°	1187	1209	1230	1261	1231	918
55°	888	882	905	898	898	789
65°	545	538	559	538	541	542
75°	227	222	226	210	218	243
85°	28	27	28	27	26	40
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1994.6	1994.6	1994.6	1994.6	1994.6
2.5°	2011.8	1996.6	1982.5	1999.0	2009.0
5°	1980.4	1975.8	1981.2	1975.3	2022.9
7.5°	1939.7	1957.5	1967.8	1961.4	1964.2
10°	1918.1	1911.9	1934.8	1950.8	1948.5
12.5°	1894.9	1904.2	1905.5	1922.7	1924.3
15°	1896.2	1874.3	1885.9	1895.7	1896.5
17.5°	1822.6	1846.2	1854.2	1876.6	1848.8
20°	1813.5	1796.3	1813.5	1836.5	1832.9
22.5°	1758.2	1738.9	1775.9	1796.3	1795.0
25°	1695.3	1704.6	1732.4	1755.1	1751.5
27.5°	1640.2	1651.0	1690.7	1721.9	1701.8
30°	1597.7	1592.3	1625.8	1653.6	1669.1
32.5°	1521.8	1541.3	1580.5	1608.0	1593.4
35°	1475.7	1480.0	1514.3	1549.3	1548.3
37.5°	1395.1	1415.4	1463.6	1473.3	1464.3
40°	1326.3	1346.6	1390.2	1400.7	1396.3
42.5°	1275.6	1279.2	1316.5	1328.6	1309.3
45°	1187.2	1209.4	1229.5	1261.1	1231.3
47.5°	1112.0	1122.3	1165.6	1174.1	1158.4
50°	1043.8	1047.4	1090.9	1080.3	1070.0
52.5°	958.0	973.2	997.7	995.6	983.5
55°	887.5	881.5	904.7	898.5	898.3
57.5°	802.7	813.0	832.1	822.3	806.6
60°	723.4	723.7	730.6	719.5	717.5
62.5°	635.1	638.2	639.7	626.1	648.2
65°	545.2	538.0	559.1	537.7	541.3
67.5°	462.5	466.1	464.1	450.7	455.8
70°	378.6	383.2	379.9	364.7	369.3
72.5°	301.8	296.2	299.8	280.7	289.5
75°	226.9	222.3	226.4	210.4	217.6
77.5°	154.5	158.1	155.5	147.1	151.9
80°	102.0	99.1	99.1	94.3	95.3
82.5°	59.5	56.7	55.9	54.3	56.7
85°	27.8	27.0	27.6	26.8	25.8
87.5°	10.0	10.3	10.3	9.8	9.3
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)