

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: P589737

Luminaire Tested: **FMR-24-2-LD4-4LO-50-UNV-82-88-EDD**

Issue Date: 12/8/2021



Test Information

Test Method: LM-79-08
Report Number: P589737
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-50-UNV-82-88-EDD
Description: 2X2 FMR TROFFER WITH .187 CLEAR PC FIXTURE SIDE AND .500 CLEAR PC ENVIRONMENTAL SIDE LENSES WITH, 80 CRI AND 5000K CCT LEDS
Light Source: -
Ballast/Driver: -

Summary

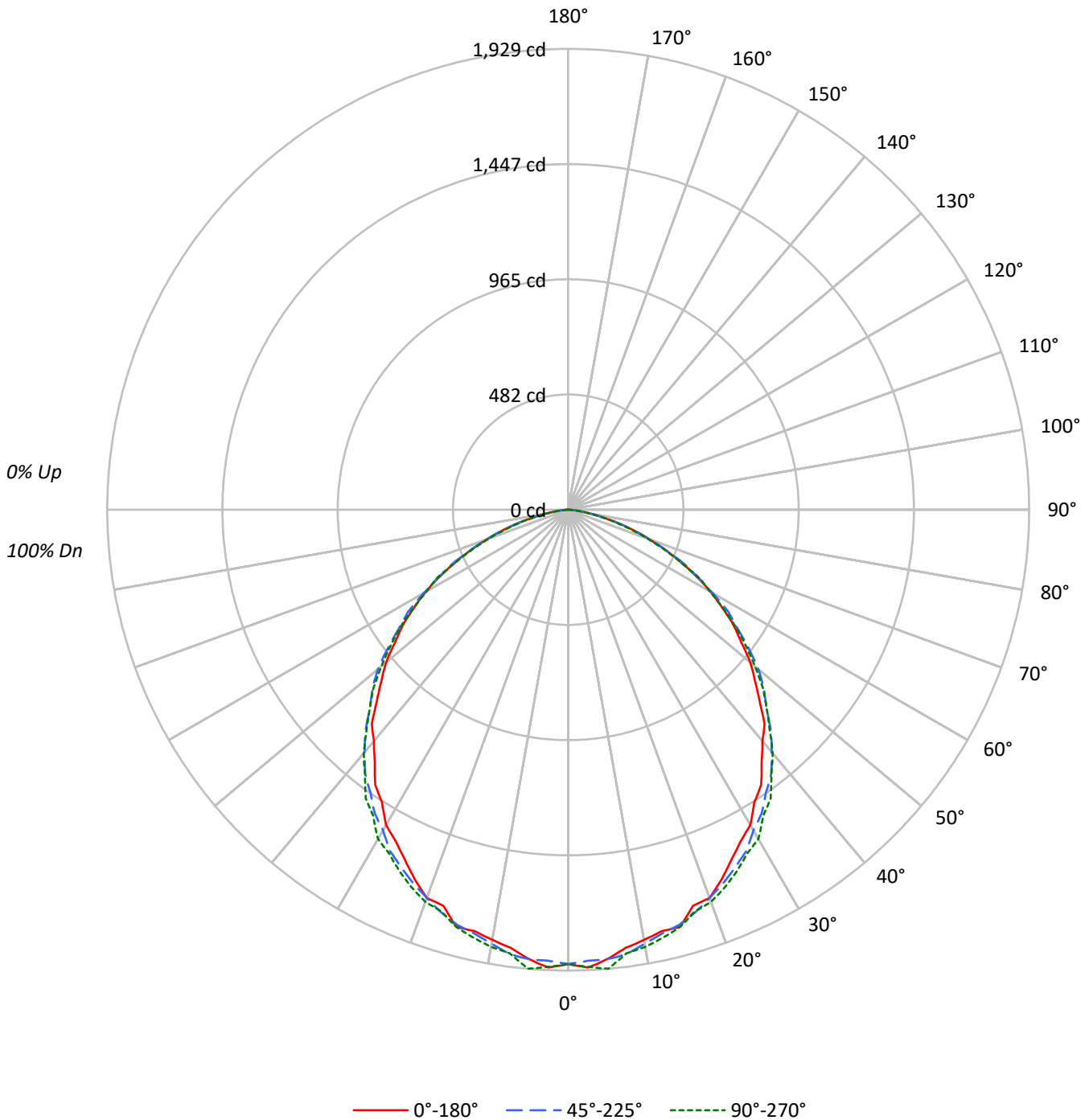
Lumens per Lamp: N/A
Luminaire Lumens: 4793.0 lumens
Efficiency: N/A
Efficacy: 102.4 lumens/watt
Spacing Criteria (0/90/45): 1.19 / 1.23 / 1.33
Luminous Opening: Rectangular (W 2' x L: 2' x H: 0')
CIE Type: Direct

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

TEST NUMBER: P589737

CATALOG NUMBER: FMR-24-2-LD4-4LO-50-UNV-82-88-EDD

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°	5117	5117	5117
5°	5101	5103	5210
10°	4997	5041	5076
15°	5037	5009	5037
20°	4952	4952	5004
25°	4799	4904	4958
30°	4734	4817	4945
35°	4622	4743	4849
40°	4442	4656	4677
45°	4308	4461	4467
50°	4166	4354	4271
55°	3970	4047	4018
60°	3712	3749	3682
65°	3310	3394	3286
70°	2840	2850	2770
75°	2249	2244	2157
80°	1506	1464	1409
85°	818	812	760



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	178.9	3.7
10°-20°	507.0	10.6
20°-30°	759.6	15.8
30°-40°	900.2	18.8
40°-50°	901.9	18.8
50°-60°	765.6	16.0
60°-70°	516.2	10.8
70°-80°	226.8	4.7
80°-90°	36.8	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°	1445.5	30.2
0°-40°	2345.7	48.9
0°-60°	4013.2	83.7
0°-90°	4793.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	4793.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1902	1902	1902	1902	1902	
5°	1888	1884	1889	1883	1929	178
15°	1808	1787	1798	1808	1808	504
25°	1616	1625	1652	1673	1670	747
35°	1407	1411	1444	1477	1476	874
45°	1132	1153	1172	1202	1174	876
55°	846	840	863	857	856	753
65°	520	513	533	513	516	517
75°	216	212	216	201	208	232
85°	26	26	26	26	25	38
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1901.7	1901.7	1901.7	1901.7	1901.7
2.5°	1918.2	1903.7	1890.2	1905.9	1915.5
5°	1888.2	1883.8	1889.0	1883.3	1928.8
7.5°	1849.4	1866.4	1876.2	1870.1	1872.8
10°	1828.8	1822.9	1844.8	1860.0	1857.8
12.5°	1806.7	1815.6	1816.8	1833.2	1834.7
15°	1807.9	1787.1	1798.1	1807.5	1808.2
17.5°	1737.7	1760.3	1767.9	1789.3	1762.8
20°	1729.1	1712.7	1729.1	1751.0	1747.5
22.5°	1676.3	1657.9	1693.3	1712.7	1711.4
25°	1616.4	1625.3	1651.8	1673.4	1669.9
27.5°	1563.9	1574.2	1612.0	1641.7	1622.6
30°	1523.4	1518.2	1550.1	1576.6	1591.4
32.5°	1450.9	1469.6	1506.9	1533.2	1519.2
35°	1407.0	1411.1	1443.8	1477.2	1476.2
37.5°	1330.1	1349.5	1395.4	1404.8	1396.2
40°	1264.6	1284.0	1325.4	1335.5	1331.3
42.5°	1216.2	1219.6	1255.2	1266.8	1248.3
45°	1132.0	1153.1	1172.2	1202.4	1173.9
47.5°	1060.3	1070.1	1111.3	1119.4	1104.5
50°	995.2	998.6	1040.1	1030.1	1020.2
52.5°	913.4	927.9	951.2	949.3	937.7
55°	846.1	840.5	862.6	856.7	856.5
57.5°	765.4	775.2	793.4	784.0	769.0
60°	689.7	690.0	696.6	686.1	684.1
62.5°	605.5	608.5	609.9	596.9	618.0
65°	519.8	512.9	533.1	512.7	516.1
67.5°	441.0	444.4	442.5	429.7	434.6
70°	361.0	365.4	362.2	347.7	352.1
72.5°	287.8	282.4	285.8	267.6	276.0
75°	216.3	211.9	215.8	200.6	207.5
77.5°	147.3	150.8	148.3	140.2	144.9
80°	97.2	94.5	94.5	89.9	90.9
82.5°	56.7	54.0	53.3	51.8	54.0
85°	26.5	25.8	26.3	25.5	24.6
87.5°	9.6	9.8	9.8	9.3	8.8
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)