

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: P589379

Luminaire Tested: **FMR-24-2-LD4-3LO-35-UNV-81-96-EDD**

Issue Date: 12/8/2021



**Test Information**

Test Method: LM-79-08  
Report Number: P589379  
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-LD4-3LO-35-UNV-81-96-EDD  
Description: 2X2 FMR TROFFER WITH .156 CLEAR PC FIXTURE SIDE AND .250 CLEAR  
TEMPERED GLASS ENVIRONMENTAL SIDE LENSES WITH, 80 CRI AND 3500K CCT LEDS  
Light Source: -  
Ballast/Driver: -

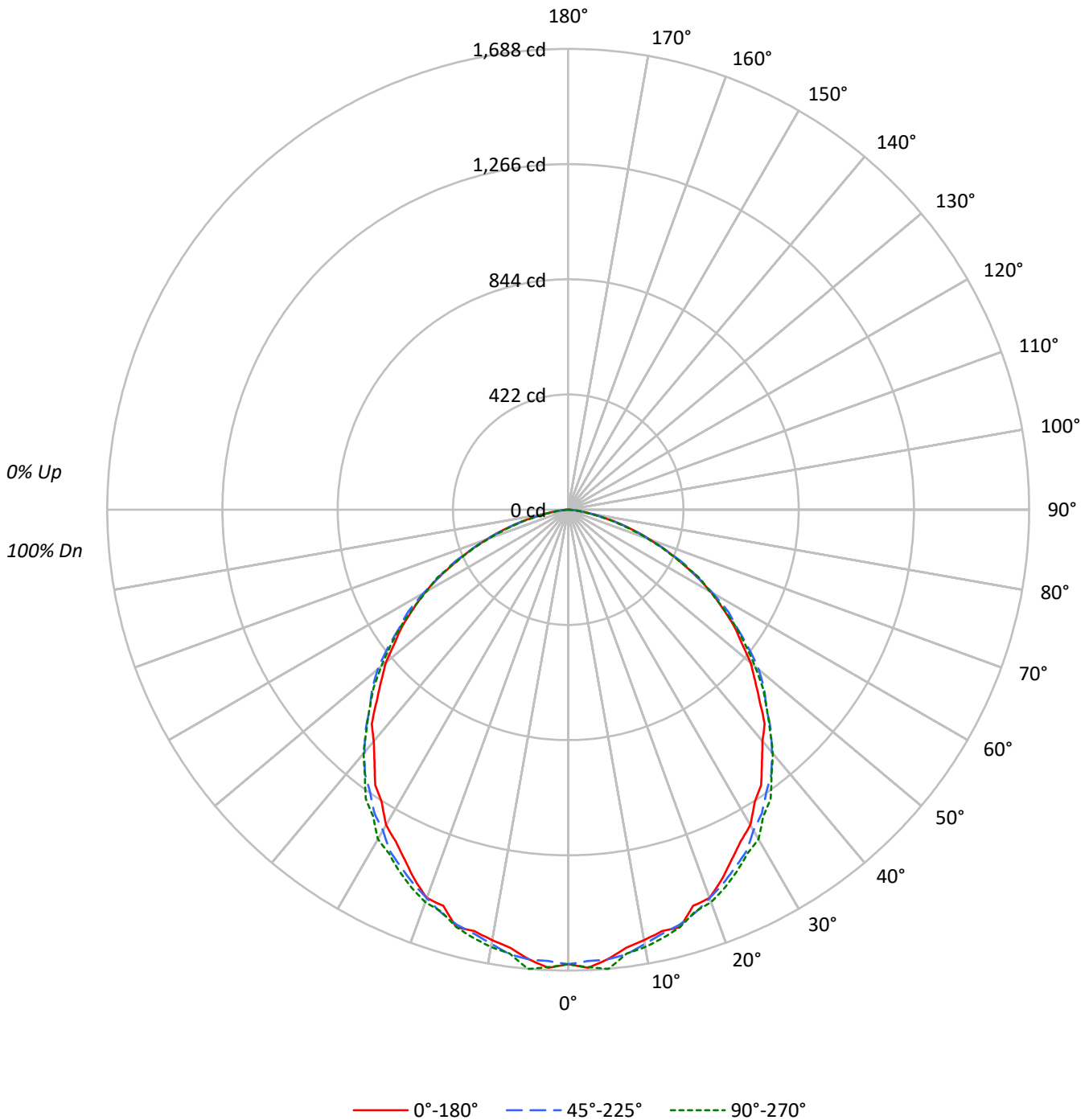
**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 4196.0 lumens  
Efficiency: N/A  
Efficacy: 119.5 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): 35.1  
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: P589379

CATALOG NUMBER: FMR-24-2-LD4-3LO-35-UNV-81-96-EDD

### Luminous Intensity Polar Plot





TEST NUMBER: P589379

CATALOG NUMBER: FMR-24-2-LD4-3LO-35-UNV-81-96-EDD

**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°	4480	4480	4480
5°	4465	4467	4561
10°	4375	4413	4444
15°	4410	4386	4410
20°	4335	4335	4381
25°	4202	4293	4341
30°	4144	4217	4329
35°	4046	4152	4245
40°	3889	4076	4094
45°	3771	3905	3911
50°	3647	3812	3739
55°	3476	3543	3518
60°	3250	3282	3223
65°	2898	2972	2877
70°	2486	2495	2426
75°	1969	1965	1888
80°	1319	1283	1232
85°	716	710	664



TEST NUMBER: P589379

CATALOG NUMBER: FMR-24-2-LD4-3LO-35-UNV-81-96-EDD

**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	156.6	3.7
10°-20°	443.8	10.6
20°-30°	665.0	15.8
30°-40°	788.1	18.8
40°-50°	789.6	18.8
50°-60°	670.2	16.0
60°-70°	451.9	10.8
70°-80°	198.5	4.7
80°-90°	32.3	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°	1265.4	30.2
0°-40°	2053.5	48.9
0°-60°	3513.3	83.7
0°-90°	4196.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	4196.0	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	1665	1665	1665	1665	1665	
5°	1653	1649	1654	1649	1688	156
15°	1583	1564	1574	1582	1583	441
25°	1415	1423	1446	1465	1462	654
35°	1232	1235	1264	1293	1292	765
45°	991	1010	1026	1053	1028	767
55°	741	736	755	750	750	659
65°	455	449	467	449	452	453
75°	189	186	189	176	182	203
85°	23	23	23	22	22	34
90°	0	0	0	0	0	



TEST NUMBER: P589379

CATALOG NUMBER: FMR-24-2-LD4-3LO-35-UNV-81-96-EDD

**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	1664.9	1664.9	1664.9	1664.9	1664.9
2.5°	1679.3	1666.6	1654.8	1668.5	1676.9
5°	1653.0	1649.2	1653.7	1648.7	1688.5
7.5°	1619.1	1633.9	1642.5	1637.1	1639.5
10°	1601.0	1595.9	1615.0	1628.3	1626.4
12.5°	1581.7	1589.4	1590.5	1604.9	1606.2
15°	1582.8	1564.5	1574.2	1582.3	1583.0
17.5°	1521.3	1541.0	1547.7	1566.4	1543.2
20°	1513.7	1499.3	1513.7	1532.9	1529.9
22.5°	1467.5	1451.4	1482.4	1499.3	1498.3
25°	1415.1	1422.8	1446.0	1465.0	1461.9
27.5°	1369.1	1378.1	1411.2	1437.2	1420.5
30°	1333.6	1329.1	1357.0	1380.3	1393.2
32.5°	1270.2	1286.5	1319.2	1342.2	1330.0
35°	1231.7	1235.4	1264.0	1293.2	1292.3
37.5°	1164.4	1181.4	1221.6	1229.8	1222.3
40°	1107.0	1124.0	1160.4	1169.2	1165.5
42.5°	1064.7	1067.7	1098.9	1109.0	1092.9
45°	991.0	1009.5	1026.2	1052.7	1027.7
47.5°	928.2	936.8	972.9	980.0	966.9
50°	871.2	874.2	910.6	901.8	893.2
52.5°	799.7	812.3	832.8	831.0	820.9
55°	740.8	735.8	755.2	750.0	749.8
57.5°	670.0	678.6	694.5	686.4	673.3
60°	603.8	604.0	609.8	600.6	598.9
62.5°	530.1	532.7	534.0	522.6	541.1
65°	455.1	449.1	466.7	448.8	451.8
67.5°	386.1	389.1	387.4	376.2	380.5
70°	316.0	319.9	317.1	304.4	308.3
72.5°	251.9	247.2	250.2	234.3	241.6
75°	189.4	185.5	189.0	175.6	181.6
77.5°	129.0	132.0	129.8	122.7	126.8
80°	85.1	82.8	82.8	78.7	79.5
82.5°	49.7	47.3	46.6	45.4	47.3
85°	23.2	22.6	23.0	22.4	21.5
87.5°	8.4	8.6	8.6	8.2	7.7
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)