

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: P588993

Luminaire Tested: **FMR-24-2-LD4-2HI-35-UNV-81-88-EDD**

Issue Date: 12/8/2021



**Test Information**

Test Method: LM-79-08  
Report Number: P588993  
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-35-UNV-81-88-EDD  
Description: 2X2 FMR TROFFER WITH .156 CLEAR PC FIXTURE SIDE AND .500 CLEAR PC ENVIRONMENTAL SIDE LENSES WITH, 80 CRI AND 3500K CCT LEDS  
Light Source: -  
Ballast/Driver: -

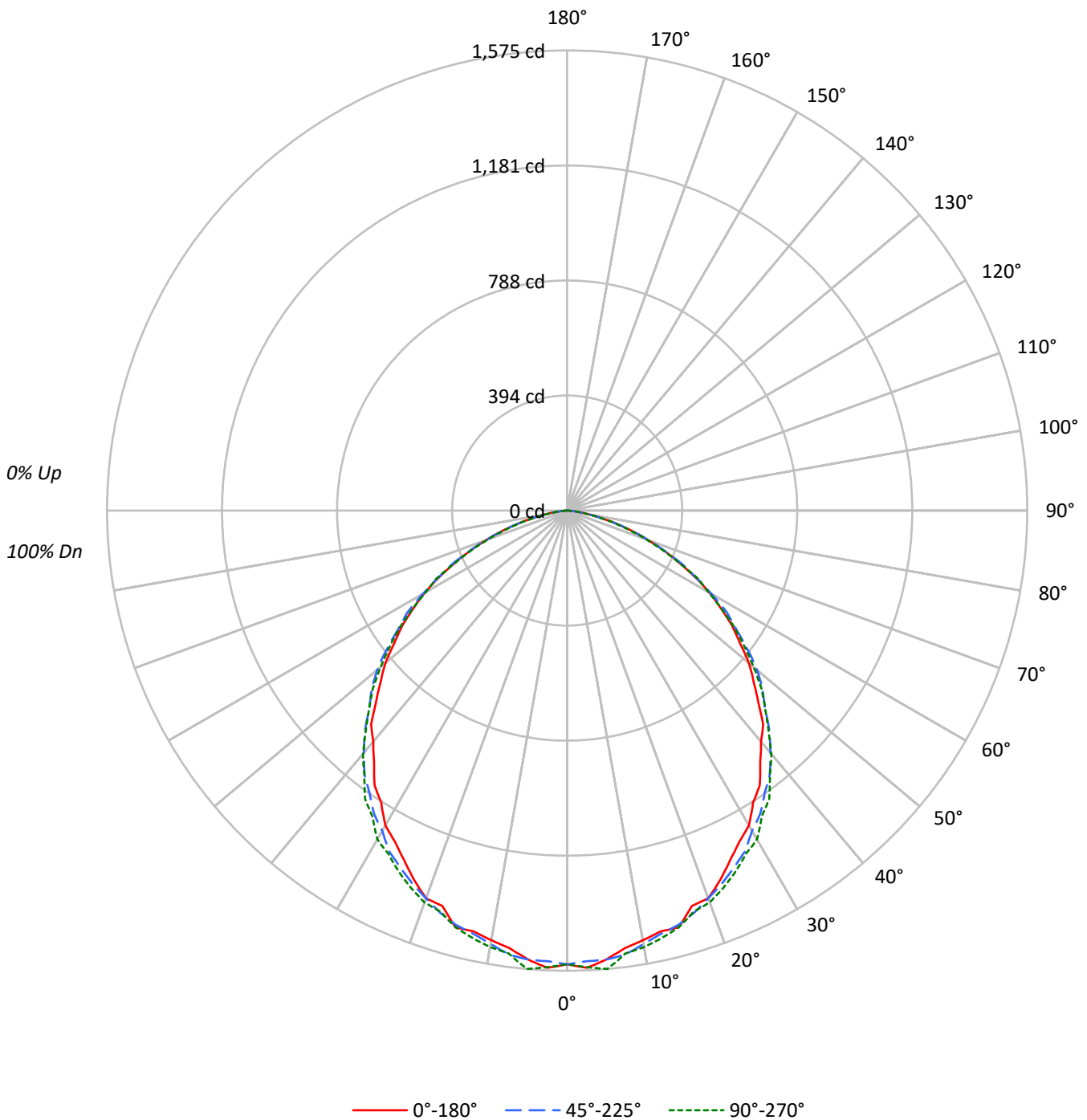
**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 3914.0 lumens  
Efficiency: N/A  
Efficacy: 90.6 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°	4179	4179	4179
5°	4165	4167	4254
10°	4081	4116	4145
15°	4113	4091	4114
20°	4044	4044	4087
25°	3919	4005	4049
30°	3865	3933	4038
35°	3774	3873	3960
40°	3627	3802	3819
45°	3518	3643	3648
50°	3402	3556	3488
55°	3242	3305	3281
60°	3031	3062	3006
65°	2703	2772	2684
70°	2319	2327	2262
75°	1837	1833	1761
80°	1230	1196	1150
85°	670	664	621



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	146.1	3.7
10°-20°	414.0	10.6
20°-30°	620.3	15.8
30°-40°	735.2	18.8
40°-50°	736.5	18.8
50°-60°	625.2	16.0
60°-70°	421.5	10.8
70°-80°	185.2	4.7
80°-90°	30.1	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°	1180.4	30.2
0°-40°	1915.5	48.9
0°-60°	3277.2	83.7
0°-90°	3914.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	3914.0	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	1553	1553	1553	1553	1553	
5°	1542	1538	1542	1538	1575	145
15°	1476	1459	1468	1476	1477	411
25°	1320	1327	1349	1366	1364	610
35°	1149	1152	1179	1206	1206	713
45°	924	942	957	982	959	715
55°	691	686	704	700	699	615
65°	424	419	435	419	422	422
75°	177	173	176	164	169	189
85°	22	21	22	21	20	31
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	1553.0	1553.0	1553.0	1553.0	1553.0
2.5°	1566.4	1554.6	1543.6	1556.4	1564.2
5°	1541.9	1538.3	1542.5	1537.9	1575.0
7.5°	1510.3	1524.1	1532.1	1527.1	1529.3
10°	1493.4	1488.6	1506.5	1518.9	1517.1
12.5°	1475.4	1482.6	1483.6	1497.0	1498.2
15°	1476.4	1459.3	1468.4	1476.0	1476.6
17.5°	1419.0	1437.5	1443.7	1461.1	1439.5
20°	1412.0	1398.6	1412.0	1429.9	1427.1
22.5°	1368.9	1353.9	1382.7	1398.6	1397.6
25°	1320.0	1327.2	1348.9	1366.5	1363.7
27.5°	1277.1	1285.5	1316.4	1340.6	1325.0
30°	1244.0	1239.8	1265.8	1287.5	1299.5
32.5°	1184.8	1200.1	1230.6	1252.0	1240.6
35°	1148.9	1152.4	1179.0	1206.3	1205.5
37.5°	1086.2	1102.0	1139.5	1147.1	1140.1
40°	1032.6	1048.5	1082.4	1090.6	1087.2
42.5°	993.1	996.0	1025.0	1034.4	1019.4
45°	924.4	941.6	957.3	981.9	958.7
47.5°	865.8	873.8	907.5	914.1	901.9
50°	812.7	815.5	849.4	841.2	833.1
52.5°	745.9	757.7	776.8	775.2	765.8
55°	691.0	686.4	704.4	699.6	699.4
57.5°	625.0	633.0	647.9	640.2	628.0
60°	563.2	563.4	568.9	560.2	558.6
62.5°	494.5	496.9	498.1	487.4	504.7
65°	424.5	418.9	435.3	418.7	421.5
67.5°	360.1	362.9	361.3	350.9	354.9
70°	294.8	298.4	295.8	283.9	287.5
72.5°	235.0	230.6	233.4	218.6	225.4
75°	176.7	173.0	176.3	163.8	169.4
77.5°	120.3	123.1	121.1	114.5	118.3
80°	79.4	77.2	77.2	73.4	74.2
82.5°	46.3	44.1	43.5	42.3	44.1
85°	21.7	21.1	21.5	20.9	20.1
87.5°	7.8	8.0	8.0	7.6	7.2
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)