

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: P589110

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

Issue Date: 12/8/2021



**Test Information**

Test Method: LM-79-08  
Report Number: P589110  
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-LD4-2LO-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: -

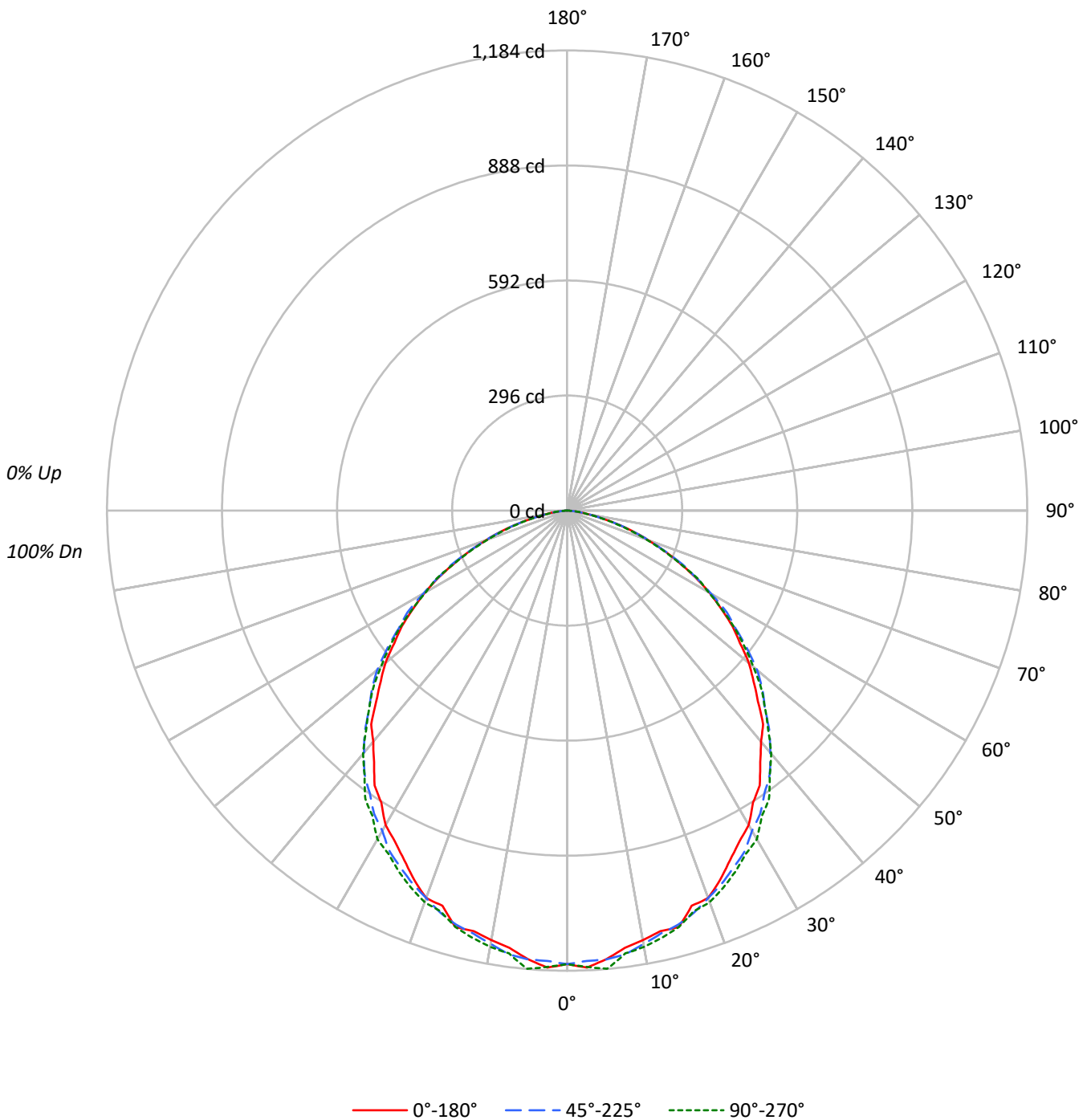
**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 2941.0 lumens  
Efficiency: N/A  
Efficacy: 125.7 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): 23.4  
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: P589110

CATALOG NUMBER: FMR-24-2-LD4-2LO-40-UNV-80-85-EDD

### Luminous Intensity Polar Plot





TEST NUMBER: P589110

CATALOG NUMBER: FMR-24-2-LD4-2LO-40-UNV-80-85-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°	3140	3140	3140
5°	3130	3131	3197
10°	3066	3093	3115
15°	3091	3074	3091
20°	3038	3038	3071
25°	2945	3009	3043
30°	2904	2956	3034
35°	2836	2910	2976
40°	2726	2857	2870
45°	2643	2737	2741
50°	2557	2672	2621
55°	2436	2483	2465
60°	2278	2300	2259
65°	2031	2083	2017
70°	1743	1748	1700
75°	1380	1377	1324
80°	925	899	863
85°	503	497	466



TEST NUMBER: P589110

CATALOG NUMBER: FMR-24-2-LD4-2LO-40-UNV-80-85-EDD

**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	109.8	3.7
10°-20°	311.1	10.6
20°-30°	466.1	15.8
30°-40°	552.4	18.8
40°-50°	553.4	18.8
50°-60°	469.8	16.0
60°-70°	316.7	10.8
70°-80°	139.2	4.7
80°-90°	22.6	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°	886.9	30.2
0°-40°	1439.3	48.9
0°-60°	2462.5	83.7
0°-90°	2941.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	2941.0	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	1167	1167	1167	1167	1167	
5°	1159	1156	1159	1156	1184	109
15°	1109	1097	1103	1109	1110	309
25°	992	997	1014	1027	1025	459
35°	863	866	886	906	906	536
45°	695	708	719	738	720	537
55°	519	516	529	526	526	462
65°	319	315	327	315	317	317
75°	133	130	132	123	127	142
85°	16	16	16	16	15	24
90°	0	0	0	0	0	



TEST NUMBER: P589110

CATALOG NUMBER: FMR-24-2-LD4-2LO-40-UNV-80-85-EDD

**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	1166.9	1166.9	1166.9	1166.9	1166.9
2.5°	1177.0	1168.1	1159.8	1169.5	1175.4
5°	1158.6	1155.9	1159.1	1155.6	1183.5
7.5°	1134.8	1145.2	1151.2	1147.5	1149.1
10°	1122.2	1118.6	1132.0	1141.3	1139.9
12.5°	1108.6	1114.0	1114.8	1124.9	1125.8
15°	1109.4	1096.6	1103.3	1109.1	1109.5
17.5°	1066.3	1080.1	1084.8	1097.9	1081.6
20°	1061.0	1050.9	1061.0	1074.4	1072.3
22.5°	1028.6	1017.3	1039.0	1050.9	1050.1
25°	991.8	997.3	1013.5	1026.8	1024.7
27.5°	959.6	965.9	989.1	1007.4	995.6
30°	934.7	931.6	951.2	967.4	976.5
32.5°	890.3	901.7	924.6	940.8	932.2
35°	863.3	865.9	885.9	906.4	905.8
37.5°	816.2	828.1	856.2	862.0	856.7
40°	775.9	787.8	813.3	819.5	816.9
42.5°	746.3	748.4	770.2	777.3	766.0
45°	694.6	707.5	719.3	737.8	720.3
47.5°	650.6	656.6	681.9	686.9	677.7
50°	610.7	612.8	638.2	632.0	626.0
52.5°	560.5	569.4	583.7	582.5	575.4
55°	519.2	515.7	529.3	525.7	525.5
57.5°	469.6	475.7	486.8	481.1	471.9
60°	423.2	423.4	427.4	421.0	419.8
62.5°	371.5	373.4	374.3	366.3	379.2
65°	319.0	314.7	327.1	314.6	316.7
67.5°	270.6	272.7	271.5	263.7	266.7
70°	221.5	224.2	222.2	213.3	216.1
72.5°	176.6	173.3	175.4	164.2	169.3
75°	132.7	130.0	132.4	123.1	127.3
77.5°	90.4	92.5	91.0	86.0	88.9
80°	59.7	58.0	58.0	55.1	55.7
82.5°	34.8	33.1	32.7	31.8	33.1
85°	16.3	15.8	16.1	15.7	15.1
87.5°	5.9	6.0	6.0	5.7	5.4
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)