

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: P589241

Luminaire Tested: **FMR-24-2-LD4-2STD-50-UNV-80-88-EDD**

Issue Date: 12/8/2021



**Test Information**

Test Method: LM-79-08  
Report Number: P589241  
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-LD4-2STD-50-UNV-80-88-EDD  
Description: 2X2 FMR TROFFER WITH .125 PRISMATIC ACRYLIC FIXTURE SIDE AND .500 CLEAR PC ENVIRONMENTAL SIDE LENSES WITH, 80 CRI AND 5000K CCT LEDS  
Light Source: -  
Ballast/Driver: -

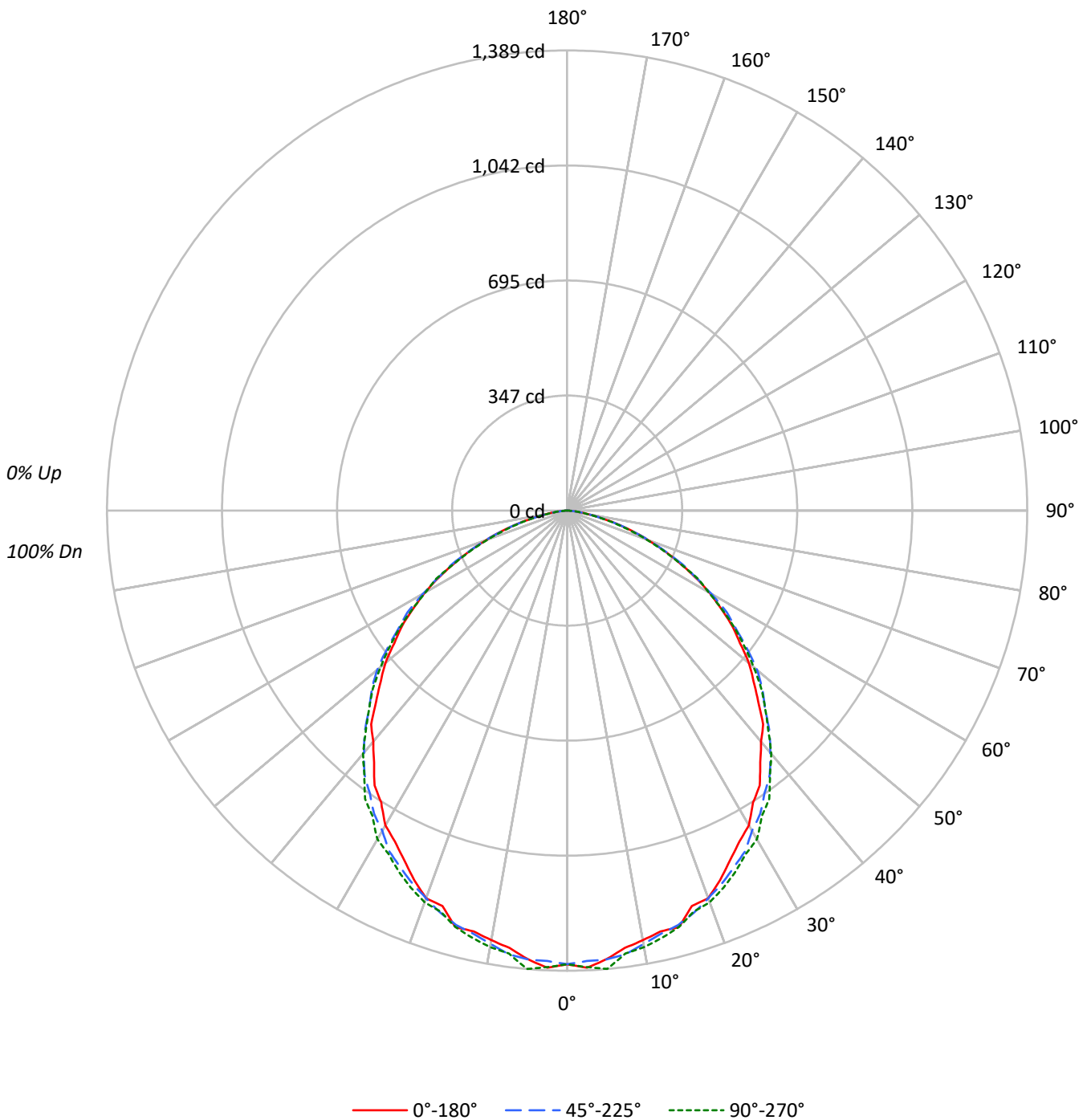
**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 3451.0 lumens  
Efficiency: N/A  
Efficacy: 103.6 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): 33.3  
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°	3685	3685	3685
5°	3672	3674	3751
10°	3598	3630	3655
15°	3626	3607	3627
20°	3565	3565	3603
25°	3456	3531	3570
30°	3408	3468	3560
35°	3328	3415	3492
40°	3198	3352	3367
45°	3102	3212	3217
50°	3000	3135	3075
55°	2858	2914	2893
60°	2673	2700	2651
65°	2383	2444	2366
70°	2045	2052	1995
75°	1620	1616	1553
80°	1085	1055	1013
85°	590	584	546



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	128.8	3.7
10°-20°	365.0	10.6
20°-30°	546.9	15.8
30°-40°	648.2	18.8
40°-50°	649.4	18.8
50°-60°	551.2	16.0
60°-70°	371.6	10.8
70°-80°	163.3	4.7
80°-90°	26.5	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°	1040.7	30.2
0°-40°	1688.9	48.9
0°-60°	2889.5	83.7
0°-90°	3451.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	3451.0	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	1369	1369	1369	1369	1369	
5°	1360	1356	1360	1356	1389	128
15°	1302	1287	1295	1301	1302	363
25°	1164	1170	1189	1205	1202	538
35°	1013	1016	1040	1064	1063	629
45°	815	830	844	866	845	630
55°	609	605	621	617	617	542
65°	374	369	384	369	372	372
75°	156	153	155	144	149	167
85°	19	19	19	18	18	28
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	1369.3	1369.3	1369.3	1369.3	1369.3
2.5°	1381.1	1370.7	1361.0	1372.3	1379.2
5°	1359.5	1356.4	1360.1	1356.0	1388.7
7.5°	1331.6	1343.8	1350.9	1346.5	1348.4
10°	1316.8	1312.5	1328.3	1339.2	1337.6
12.5°	1300.9	1307.2	1308.1	1319.9	1321.0
15°	1301.7	1286.7	1294.7	1301.4	1301.9
17.5°	1251.2	1267.4	1272.9	1288.3	1269.2
20°	1245.0	1233.1	1245.0	1260.7	1258.2
22.5°	1207.0	1193.7	1219.2	1233.1	1232.3
25°	1163.8	1170.2	1189.3	1204.9	1202.4
27.5°	1126.0	1133.4	1160.7	1182.0	1168.3
30°	1096.8	1093.1	1116.1	1135.2	1145.8
32.5°	1044.7	1058.1	1085.0	1103.9	1093.8
35°	1013.0	1016.0	1039.5	1063.6	1062.9
37.5°	957.7	971.7	1004.7	1011.4	1005.3
40°	910.5	924.5	954.3	961.6	958.6
42.5°	875.7	878.1	903.8	912.1	898.8
45°	815.0	830.2	844.0	865.8	845.3
47.5°	763.4	770.5	800.2	806.0	795.2
50°	716.5	719.0	748.9	741.7	734.6
52.5°	657.7	668.1	684.9	683.5	675.2
55°	609.2	605.2	621.1	616.8	616.7
57.5°	551.1	558.1	571.2	564.5	553.7
60°	496.6	496.8	501.6	494.0	492.5
62.5°	436.0	438.1	439.2	429.8	445.0
65°	374.3	369.3	383.8	369.1	371.6
67.5°	317.5	320.0	318.6	309.4	312.9
70°	259.9	263.1	260.8	250.3	253.5
72.5°	207.2	203.3	205.8	192.7	198.7
75°	155.8	152.6	155.4	144.4	149.4
77.5°	106.1	108.6	106.8	100.9	104.3
80°	70.0	68.1	68.1	64.7	65.4
82.5°	40.8	38.9	38.4	37.3	38.9
85°	19.1	18.6	18.9	18.4	17.7
87.5°	6.9	7.1	7.1	6.7	6.4
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)