

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: P588881

Luminaire Tested: **FMR-24-2-LD4-1LO-50-UNV-93-88-EDD**

Issue Date: 12/8/2021



**Test Information**

Test Method: LM-79-08  
Report Number: P588881  
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-LD4-1LO-50-UNV-93-88-EDD  
Description: 2X2 FMR TROFFER WITH .156 CLEAR TEMPERED GLASS FIXTURE SIDE AND .500 CLEAR PC ENVIRONMENTAL SIDE LENSES WITH, 80 CRI AND 5000K CCT LEDS  
Light Source: -  
Ballast/Driver: -

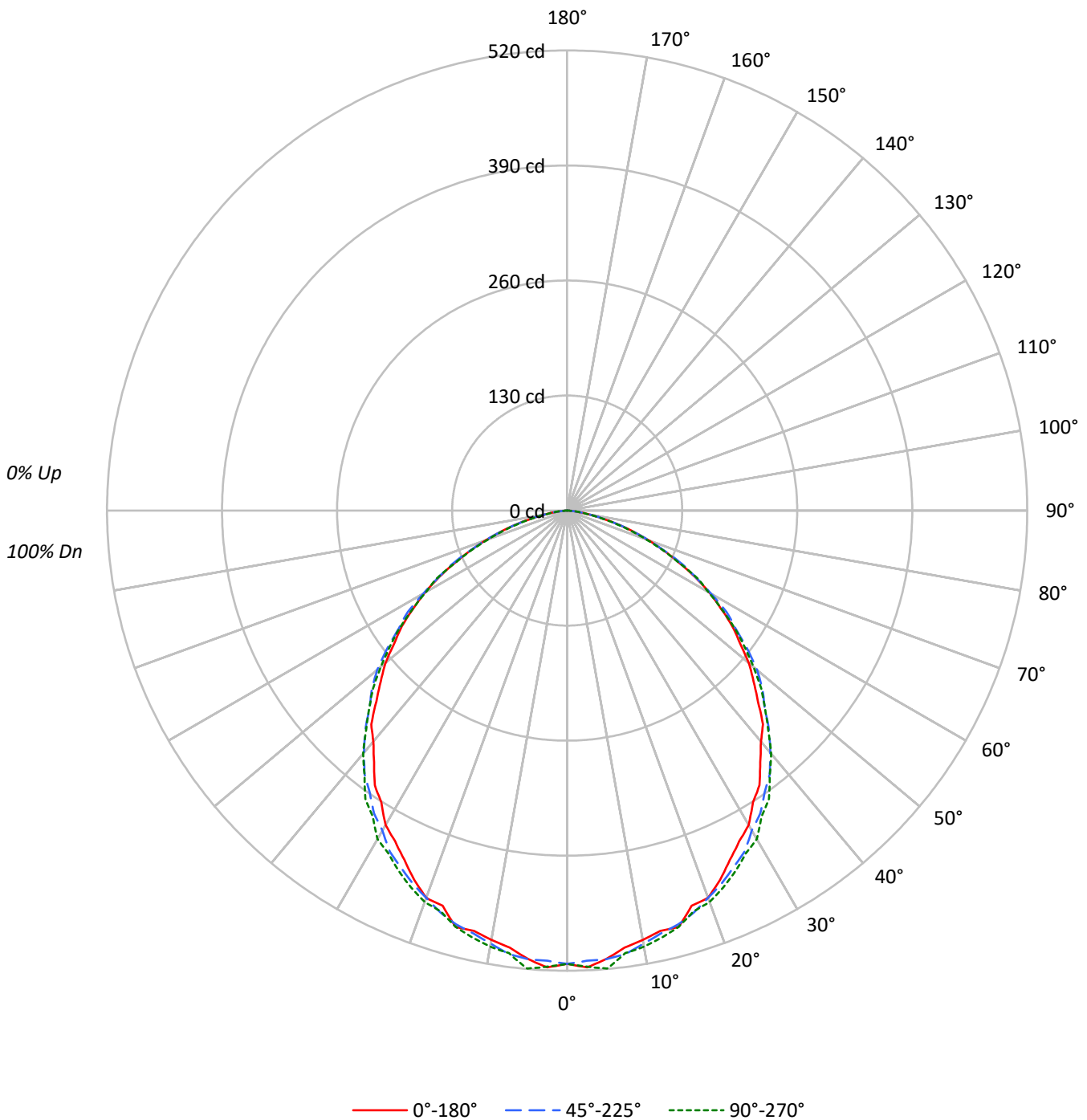
**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 1291.0 lumens  
Efficiency: N/A  
Efficacy: 110.3 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): 11.7  
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°	1378	1378	1378
5°	1374	1374	1403
10°	1346	1358	1367
15°	1357	1349	1357
20°	1334	1334	1348
25°	1293	1321	1336
30°	1275	1297	1332
35°	1245	1278	1306
40°	1196	1254	1260
45°	1160	1201	1203
50°	1122	1173	1150
55°	1069	1090	1082
60°	1000	1010	992
65°	891	914	885
70°	765	768	746
75°	606	604	581
80°	406	395	380
85°	219	219	204



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	48.2	3.7
10°-20°	136.6	10.6
20°-30°	204.6	15.8
30°-40°	242.5	18.8
40°-50°	242.9	18.8
50°-60°	206.2	16.0
60°-70°	139.0	10.8
70°-80°	61.1	4.7
80°-90°	9.9	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°	389.3	30.2
0°-40°	631.8	48.9
0°-60°	1081.0	83.7
0°-90°	1291.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1291.0	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	512	512	512	512	512	
5°	509	507	509	507	520	48
15°	487	481	484	487	487	136
25°	435	438	445	451	450	201
35°	379	380	389	398	398	235
45°	305	311	316	324	316	236
55°	228	226	232	231	231	203
65°	140	138	144	138	139	139
75°	58	57	58	54	56	62
85°	7	7	7	7	7	10
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	512.2	512.2	512.2	512.2	512.2
2.5°	516.7	512.8	509.1	513.4	515.9
5°	508.6	507.4	508.8	507.3	519.5
7.5°	498.1	502.7	505.4	503.7	504.4
10°	492.6	491.0	496.9	501.0	500.4
12.5°	486.6	489.0	489.4	493.8	494.2
15°	487.0	481.3	484.3	486.8	487.0
17.5°	468.1	474.1	476.2	481.9	474.8
20°	465.7	461.3	465.7	471.6	470.7
22.5°	451.5	446.6	456.1	461.3	461.0
25°	435.4	437.8	444.9	450.7	449.8
27.5°	421.2	424.0	434.2	442.2	437.0
30°	410.3	408.9	417.5	424.7	428.6
32.5°	390.8	395.8	405.9	413.0	409.2
35°	379.0	380.1	388.9	397.9	397.6
37.5°	358.3	363.5	375.9	378.4	376.1
40°	340.6	345.8	357.0	359.7	358.6
42.5°	327.6	328.5	338.1	341.2	336.2
45°	304.9	310.6	315.7	323.9	316.2
47.5°	285.6	288.2	299.3	301.5	297.5
50°	268.1	269.0	280.2	277.4	274.8
52.5°	246.0	249.9	256.2	255.7	252.6
55°	227.9	226.4	232.3	230.8	230.7
57.5°	206.2	208.8	213.7	211.2	207.1
60°	185.8	185.8	187.6	184.8	184.3
62.5°	163.1	163.9	164.3	160.8	166.5
65°	140.0	138.2	143.6	138.1	139.0
67.5°	118.8	119.7	119.2	115.7	117.1
70°	97.2	98.4	97.6	93.7	94.8
72.5°	77.5	76.1	77.0	72.1	74.3
75°	58.3	57.1	58.1	54.0	55.9
77.5°	39.7	40.6	39.9	37.8	39.0
80°	26.2	25.5	25.5	24.2	24.5
82.5°	15.3	14.6	14.4	14.0	14.6
85°	7.1	6.9	7.1	6.9	6.6
87.5°	2.6	2.6	2.6	2.5	2.4
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)