

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: P588815

Luminaire Tested: **FMR-24-2-LD4-1LO-35-UNV-93-86-EDD**

Issue Date: 12/8/2021



**Test Information**

Test Method: LM-79-08  
Report Number: P588815  
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-35-UNV-93-86-EDD  
Description: 2X2 FMR TROFFER WITH .156 CLEAR TEMPERED GLASS FIXTURE SIDE AND .250 CLEAR PC ENVIRONMENTAL SIDE LENSES WITH, 80 CRI AND 3500K CCT LEDS  
Light Source: -  
Ballast/Driver: -

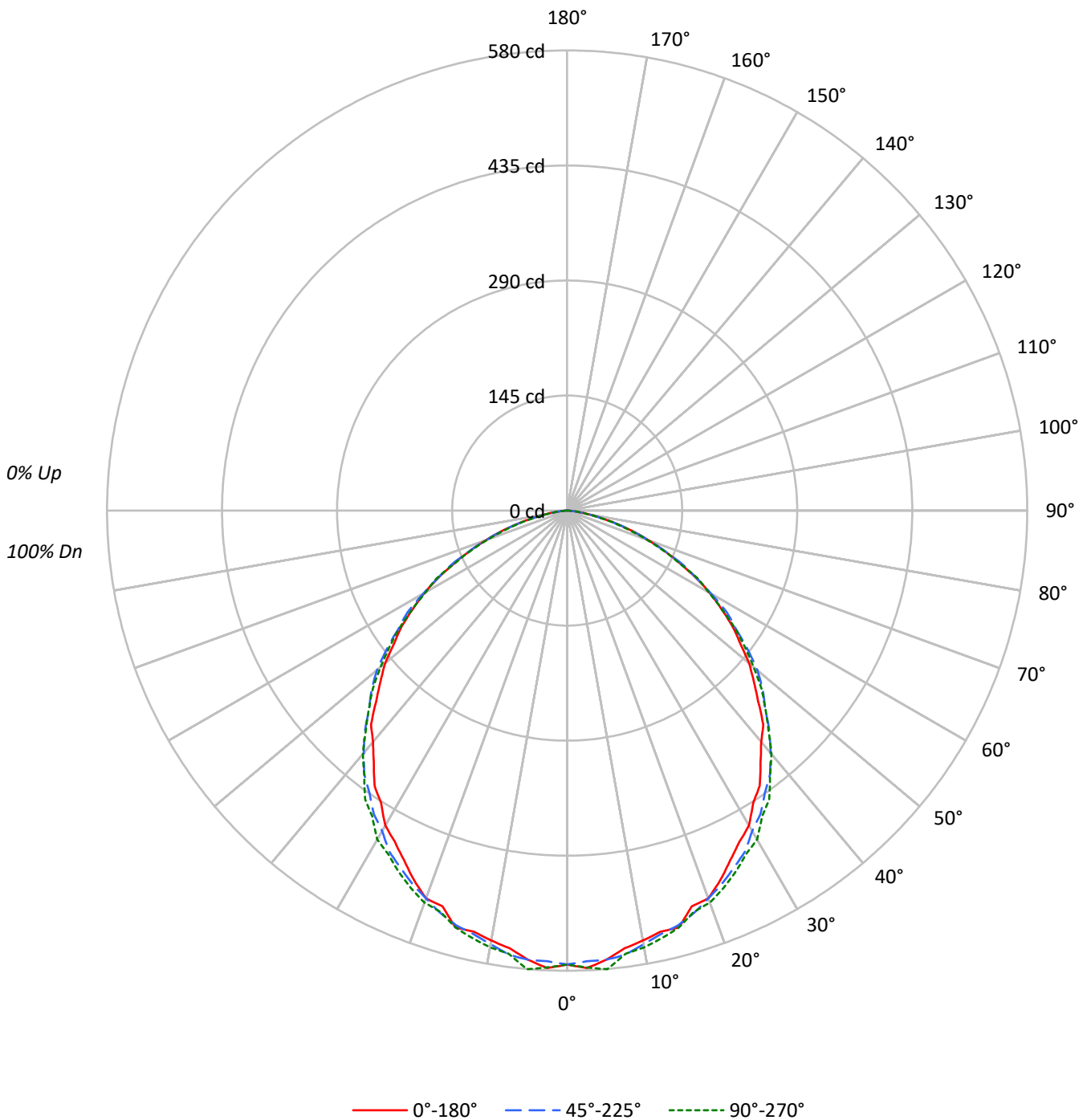
**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 1442.0 lumens  
Efficiency: N/A  
Efficacy: 123.3 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°	1540	1540	1540
5°	1535	1535	1568
10°	1503	1517	1527
15°	1515	1507	1516
20°	1490	1490	1506
25°	1444	1475	1492
30°	1424	1449	1488
35°	1391	1427	1459
40°	1336	1401	1407
45°	1296	1342	1344
50°	1253	1310	1285
55°	1194	1217	1209
60°	1117	1128	1108
65°	996	1021	989
70°	854	858	833
75°	677	675	649
80°	454	440	423
85°	247	244	228



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	53.8	3.7
10°-20°	152.5	10.6
20°-30°	228.5	15.8
30°-40°	270.8	18.8
40°-50°	271.3	18.8
50°-60°	230.3	16.0
60°-70°	155.3	10.8
70°-80°	68.2	4.7
80°-90°	11.1	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°	434.9	30.2
0°-40°	705.7	48.9
0°-60°	1207.4	83.7
0°-90°	1442.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1442.0	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	572	572	572	572	572	
5°	568	567	568	567	580	54
15°	544	538	541	544	544	152
25°	486	489	497	503	502	225
35°	423	425	434	444	444	263
45°	341	347	353	362	353	263
55°	255	253	260	258	258	226
65°	156	154	160	154	155	156
75°	65	64	65	60	62	70
85°	8	8	8	8	7	12
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	572.1	572.1	572.1	572.1	572.1
2.5°	577.1	572.7	568.7	573.4	576.3
5°	568.1	566.8	568.3	566.6	580.3
7.5°	556.4	561.5	564.5	562.6	563.4
10°	550.2	548.4	555.0	559.6	558.9
12.5°	543.6	546.2	546.6	551.5	552.0
15°	543.9	537.7	541.0	543.8	544.0
17.5°	522.8	529.6	531.9	538.3	530.3
20°	520.2	515.3	520.2	526.8	525.8
22.5°	504.3	498.8	509.4	515.3	514.9
25°	486.3	489.0	496.9	503.4	502.4
27.5°	470.5	473.6	485.0	493.9	488.2
30°	458.3	456.8	466.4	474.3	478.8
32.5°	436.5	442.1	453.4	461.3	457.1
35°	423.3	424.6	434.4	444.4	444.1
37.5°	400.2	406.0	419.8	422.6	420.0
40°	380.4	386.3	398.8	401.8	400.5
42.5°	365.9	366.9	377.6	381.1	375.6
45°	340.6	346.9	352.7	361.8	353.2
47.5°	319.0	321.9	334.4	336.8	332.3
50°	299.4	300.4	312.9	309.9	306.9
52.5°	274.8	279.2	286.2	285.6	282.1
55°	254.6	252.9	259.5	257.7	257.7
57.5°	230.3	233.2	238.7	235.9	231.4
60°	207.5	207.6	209.6	206.4	205.8
62.5°	182.2	183.1	183.5	179.6	185.9
65°	156.4	154.3	160.4	154.2	155.3
67.5°	132.7	133.7	133.1	129.3	130.8
70°	108.6	109.9	109.0	104.6	105.9
72.5°	86.6	85.0	86.0	80.5	83.0
75°	65.1	63.8	64.9	60.4	62.4
77.5°	44.3	45.4	44.6	42.2	43.6
80°	29.3	28.4	28.4	27.0	27.3
82.5°	17.1	16.3	16.0	15.6	16.3
85°	8.0	7.8	7.9	7.7	7.4
87.5°	2.9	3.0	3.0	2.8	2.7
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)