

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: P588878

Luminaire Tested: **FMR-24-2-LD4-1LO-50-UNV-93-85-EDD**

Issue Date: 12/8/2021



**Test Information**

Test Method: LM-79-08  
Report Number: P588878  
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-93-85-EDD  
Description: 2X2 FMR TROFFER WITH .156 CLEAR TEMPERED GLASS FIXTURE SIDE AND .187 CLEAR PC ENVIRONMENTAL SIDE LENSES WITH, 80 CRI AND 5000K CCT LEDS  
Light Source: -  
Ballast/Driver: -

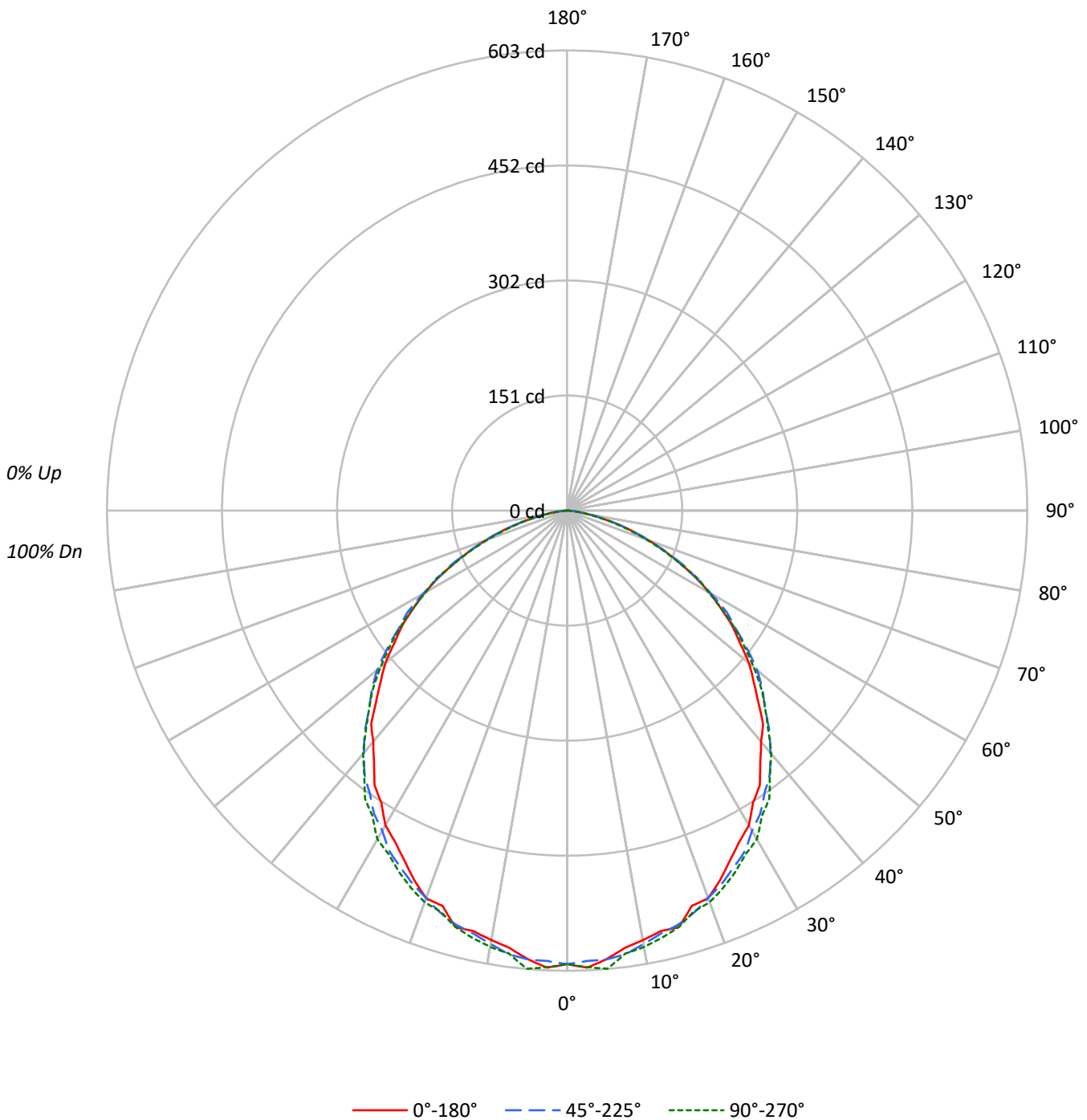
**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 1498.0 lumens  
Efficiency: N/A  
Efficacy: 128.0 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	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					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°	1600	1600	1600
5°	1594	1595	1628
10°	1562	1576	1586
15°	1574	1566	1574
20°	1548	1548	1564
25°	1500	1533	1550
30°	1479	1505	1546
35°	1444	1482	1516
40°	1388	1455	1462
45°	1346	1394	1396
50°	1302	1361	1335
55°	1241	1265	1256
60°	1160	1172	1151
65°	1035	1061	1027
70°	887	891	865
75°	703	702	674
80°	471	457	440
85°	256	253	238



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	55.9	3.7
10°-20°	158.5	10.6
20°-30°	237.4	15.8
30°-40°	281.4	18.8
40°-50°	281.9	18.8
50°-60°	239.3	16.0
60°-70°	161.3	10.8
70°-80°	70.9	4.7
80°-90°	11.5	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°	451.8	30.2
0°-40°	733.1	48.9
0°-60°	1254.3	83.7
0°-90°	1498.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1498.0	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	594	594	594	594	594	
5°	590	589	590	589	603	56
15°	565	558	562	565	565	157
25°	505	508	516	523	522	234
35°	440	441	451	462	461	273
45°	354	360	366	376	367	274
55°	264	263	270	268	268	235
65°	162	160	167	160	161	162
75°	68	66	68	63	65	72
85°	8	8	8	8	8	12
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	594.4	594.4	594.4	594.4	594.4
2.5°	599.5	595.0	590.8	595.7	598.7
5°	590.1	588.8	590.4	588.6	602.8
7.5°	578.0	583.3	586.4	584.5	585.3
10°	571.6	569.7	576.6	581.3	580.6
12.5°	564.7	567.4	567.8	573.0	573.4
15°	565.1	558.5	562.0	564.9	565.1
17.5°	543.1	550.2	552.5	559.2	550.9
20°	540.4	535.3	540.4	547.2	546.2
22.5°	523.9	518.2	529.2	535.3	534.9
25°	505.2	508.0	516.2	523.0	521.9
27.5°	488.8	492.0	503.8	513.1	507.1
30°	476.1	474.5	484.5	492.8	497.4
32.5°	453.5	459.3	471.0	479.2	474.8
35°	439.7	441.0	451.2	461.7	461.4
37.5°	415.7	421.8	436.1	439.0	436.4
40°	395.2	401.3	414.3	417.4	416.1
42.5°	380.1	381.2	392.3	395.9	390.2
45°	353.8	360.4	366.4	375.8	366.9
47.5°	331.4	334.4	347.3	349.9	345.2
50°	311.0	312.1	325.1	321.9	318.9
52.5°	285.5	290.0	297.3	296.7	293.1
55°	264.5	262.7	269.6	267.8	267.7
57.5°	239.2	242.3	248.0	245.0	240.4
60°	215.6	215.6	217.7	214.4	213.8
62.5°	189.2	190.2	190.6	186.6	193.2
65°	162.5	160.3	166.6	160.2	161.3
67.5°	137.8	138.9	138.3	134.3	135.8
70°	112.8	114.2	113.2	108.7	110.0
72.5°	89.9	88.3	89.3	83.6	86.3
75°	67.6	66.2	67.5	62.7	64.8
77.5°	46.0	47.1	46.4	43.8	45.3
80°	30.4	29.5	29.5	28.1	28.4
82.5°	17.7	16.9	16.7	16.2	16.9
85°	8.3	8.1	8.2	8.0	7.7
87.5°	3.0	3.1	3.1	2.9	2.8
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)