

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: P588838

Luminaire Tested: **FMR-24-2-LD4-1LO-40-UNV-82-85-EDD**

Issue Date: 12/8/2021



**Test Information**

Test Method: LM-79-08  
Report Number: P588838  
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-40-UNV-82-85-EDD  
Description: 2X2 FMR TROFFER WITH .187 CLEAR PC FIXTURE SIDE AND .187 CLEAR PC ENVIRONMENTAL SIDE LENSES WITH, 80 CRI AND 4000K CCT LEDS  
Light Source: -  
Ballast/Driver: -

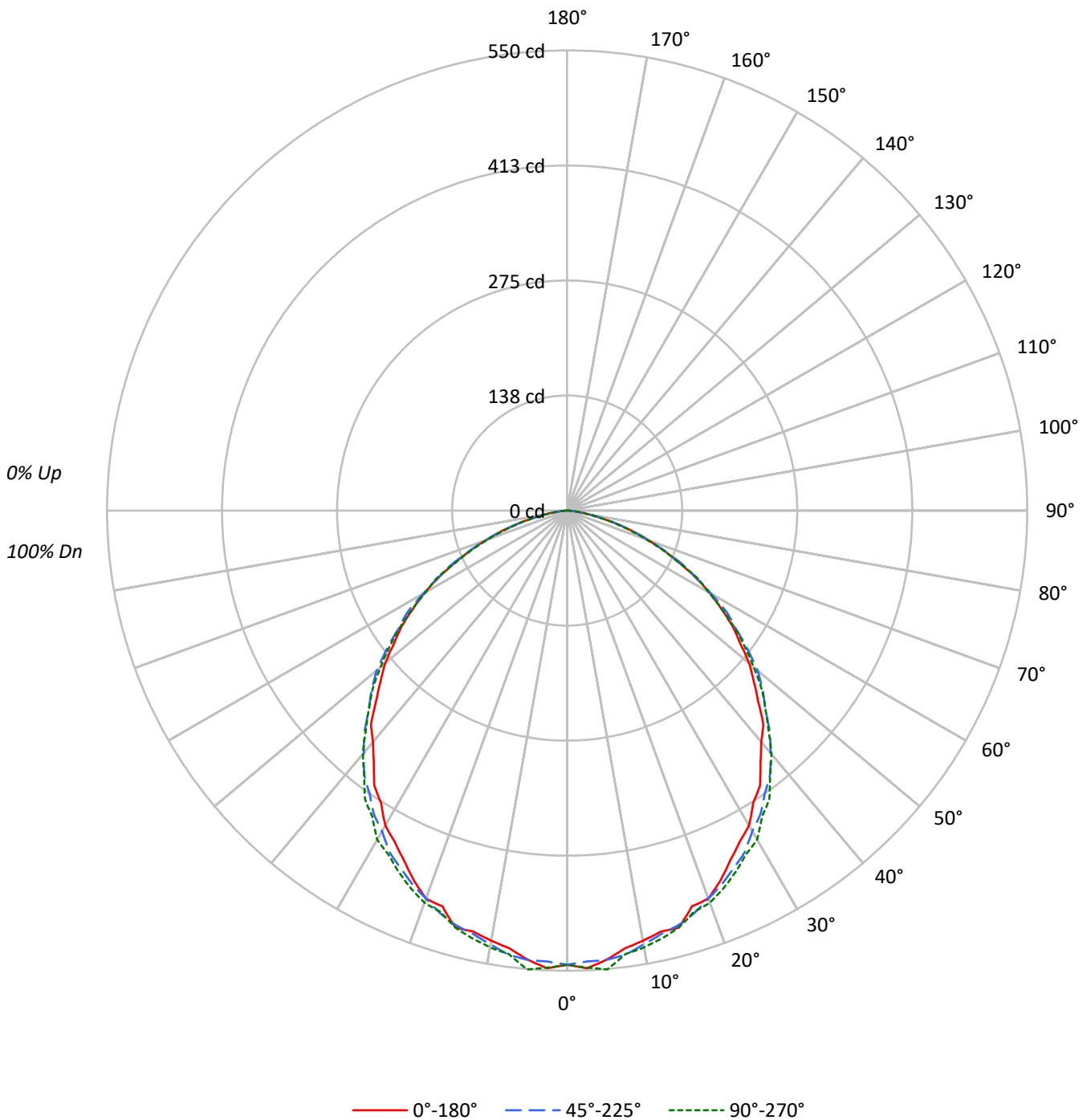
**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 1368.0 lumens  
Efficiency: N/A  
Efficacy: 116.9 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°	1461	1461	1461
5°	1456	1456	1487
10°	1426	1439	1449
15°	1438	1430	1438
20°	1413	1413	1428
25°	1370	1400	1415
30°	1351	1375	1411
35°	1319	1354	1384
40°	1268	1329	1335
45°	1230	1273	1275
50°	1189	1243	1219
55°	1133	1155	1147
60°	1060	1070	1051
65°	945	968	938
70°	810	814	791
75°	642	640	616
80°	431	418	401
85°	235	232	216



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	51.1	3.7
10°-20°	144.7	10.6
20°-30°	216.8	15.8
30°-40°	256.9	18.8
40°-50°	257.4	18.8
50°-60°	218.5	16.0
60°-70°	147.3	10.8
70°-80°	64.7	4.7
80°-90°	10.5	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°	412.6	30.2
0°-40°	669.5	48.9
0°-60°	1145.4	83.7
0°-90°	1368.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1368.0	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	543	543	543	543	543	
5°	539	538	539	538	550	51
15°	516	510	513	516	516	144
25°	461	464	471	478	477	213
35°	402	403	412	422	421	249
45°	323	329	335	343	335	250
55°	242	240	246	244	244	215
65°	148	146	152	146	147	148
75°	62	60	62	57	59	66
85°	8	7	8	7	7	11
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	542.8	542.8	542.8	542.8	542.8
2.5°	547.5	543.3	539.5	544.0	546.7
5°	538.9	537.7	539.1	537.5	550.5
7.5°	527.9	532.7	535.5	533.7	534.5
10°	522.0	520.3	526.5	530.9	530.2
12.5°	515.7	518.2	518.5	523.2	523.7
15°	516.0	510.1	513.2	515.9	516.1
17.5°	496.0	502.4	504.6	510.7	503.1
20°	493.5	488.8	493.5	499.8	498.8
22.5°	478.5	473.2	483.3	488.8	488.5
25°	461.4	463.9	471.4	477.6	476.6
27.5°	446.4	449.3	460.1	468.6	463.1
30°	434.8	433.3	442.4	450.0	454.2
32.5°	414.1	419.4	430.1	437.6	433.6
35°	401.6	402.8	412.1	421.6	421.3
37.5°	379.6	385.2	398.3	400.9	398.5
40°	360.9	366.5	378.3	381.2	380.0
42.5°	347.1	348.1	358.3	361.6	356.3
45°	323.1	329.1	334.6	343.2	335.1
47.5°	302.6	305.4	317.2	319.5	315.2
50°	284.0	285.0	296.9	294.0	291.2
52.5°	260.7	264.8	271.5	270.9	267.6
55°	241.5	239.9	246.2	244.5	244.4
57.5°	218.4	221.2	226.4	223.8	219.5
60°	196.9	196.9	198.8	195.8	195.2
62.5°	172.8	173.7	174.1	170.4	176.4
65°	148.4	146.4	152.1	146.3	147.3
67.5°	125.9	126.8	126.3	122.6	124.0
70°	103.0	104.3	103.4	99.2	100.5
72.5°	82.1	80.6	81.6	76.4	78.8
75°	61.7	60.5	61.6	57.3	59.2
77.5°	42.0	43.0	42.3	40.0	41.3
80°	27.8	27.0	27.0	25.7	25.9
82.5°	16.2	15.4	15.2	14.8	15.4
85°	7.6	7.4	7.5	7.3	7.0
87.5°	2.7	2.8	2.8	2.7	2.5
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)