

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: P588841

Luminaire Tested: **FMR-24-2-LD4-1LO-40-UNV-82-88-EDD**

Issue Date: 12/8/2021



**Test Information**

Test Method: LM-79-08  
Report Number: P588841  
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-82-88-EDD  
Description: 2X2 FMR TROFFER WITH .187 CLEAR PC FIXTURE SIDE AND .500 CLEAR PC ENVIRONMENTAL SIDE LENSES WITH, 80 CRI AND 4000K CCT LEDS  
Light Source: -  
Ballast/Driver: -

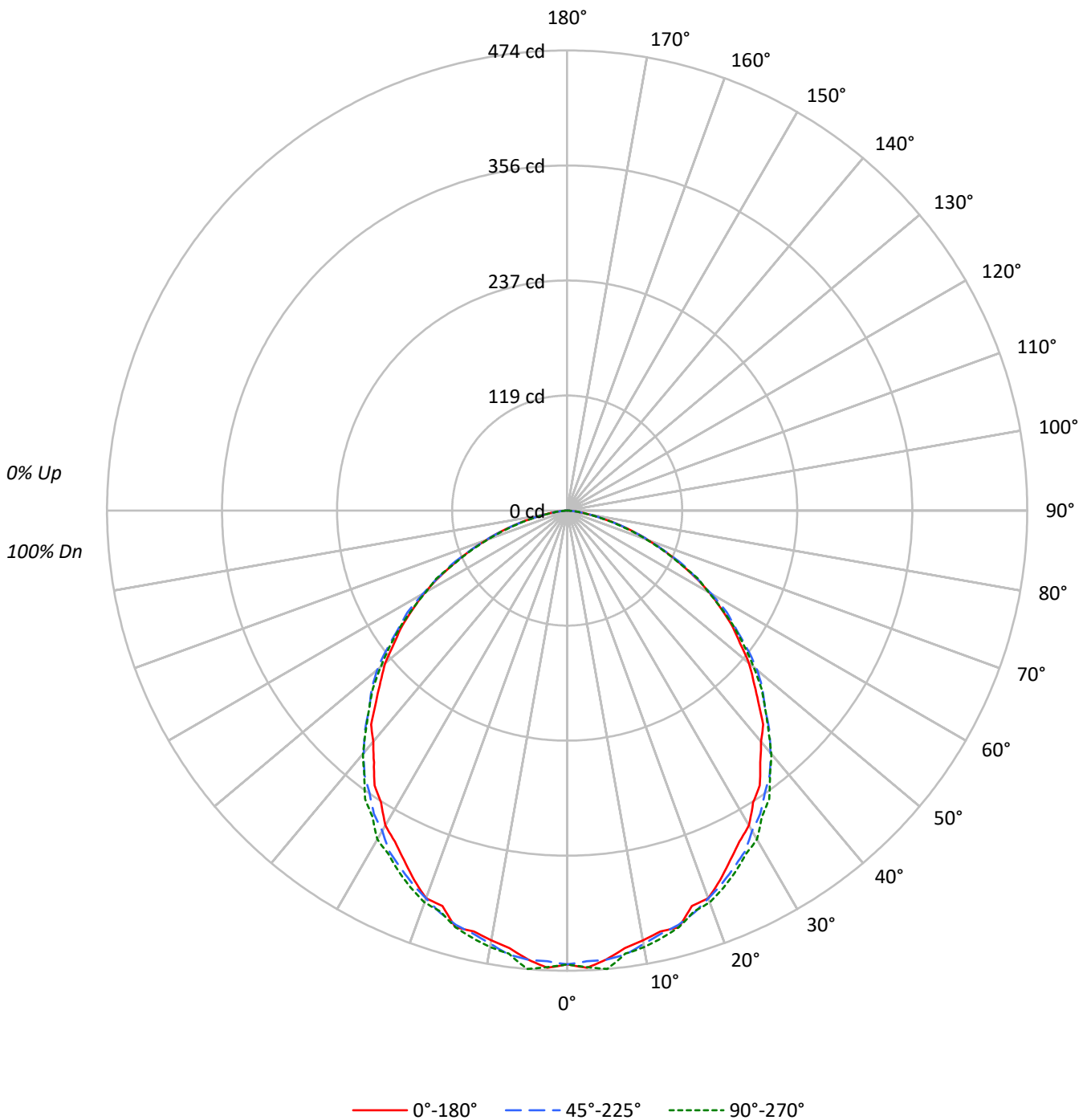
**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 1178.0 lumens  
Efficiency: N/A  
Efficacy: 100.7 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°	1258	1258	1258
5°	1254	1254	1280
10°	1228	1239	1248
15°	1238	1231	1238
20°	1217	1217	1230
25°	1180	1205	1219
30°	1163	1184	1215
35°	1136	1166	1192
40°	1092	1144	1149
45°	1059	1096	1098
50°	1024	1070	1050
55°	976	995	988
60°	912	921	905
65°	814	834	808
70°	698	700	681
75°	553	551	530
80°	370	360	346
85°	201	201	185



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	44.0	3.7
10°-20°	124.6	10.6
20°-30°	186.7	15.8
30°-40°	221.3	18.8
40°-50°	221.7	18.8
50°-60°	188.2	16.0
60°-70°	126.9	10.8
70°-80°	55.7	4.7
80°-90°	9.1	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°	355.3	30.2
0°-40°	576.5	48.9
0°-60°	986.3	83.7
0°-90°	1178.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1178.0	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	467	467	467	467	467	
5°	464	463	464	463	474	44
15°	444	439	442	444	444	124
25°	397	399	406	411	410	184
35°	346	347	355	363	363	215
45°	278	283	288	296	288	215
55°	208	207	212	211	210	185
65°	128	126	131	126	127	127
75°	53	52	53	49	51	57
85°	6	6	6	6	6	9
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	467.4	467.4	467.4	467.4	467.4
2.5°	471.4	467.9	464.6	468.4	470.8
5°	464.1	463.0	464.3	462.9	474.0
7.5°	454.5	458.7	461.1	459.6	460.3
10°	449.5	448.0	453.4	457.1	456.6
12.5°	444.0	446.2	446.5	450.6	450.9
15°	444.3	439.2	441.9	444.2	444.4
17.5°	427.1	432.6	434.5	439.8	433.2
20°	425.0	420.9	425.0	430.3	429.5
22.5°	412.0	407.5	416.2	420.9	420.6
25°	397.3	399.4	406.0	411.3	410.4
27.5°	384.4	386.9	396.2	403.5	398.8
30°	374.4	373.1	381.0	387.5	391.1
32.5°	356.6	361.2	370.4	376.8	373.4
35°	345.8	346.8	354.9	363.1	362.8
37.5°	326.9	331.7	343.0	345.3	343.1
40°	310.8	315.6	325.8	328.2	327.2
42.5°	298.9	299.8	308.5	311.3	306.8
45°	278.2	283.4	288.1	295.5	288.5
47.5°	260.6	263.0	273.1	275.1	271.4
50°	244.6	245.4	255.6	253.2	250.7
52.5°	224.5	228.1	233.8	233.3	230.5
55°	208.0	206.6	212.0	210.6	210.5
57.5°	188.1	190.5	195.0	192.7	189.0
60°	169.5	169.6	171.2	168.6	168.1
62.5°	148.8	149.5	149.9	146.7	151.9
65°	127.8	126.1	131.0	126.0	126.9
67.5°	108.4	109.2	108.7	105.6	106.8
70°	88.7	89.8	89.0	85.5	86.5
72.5°	70.7	69.4	70.2	65.8	67.8
75°	53.2	52.1	53.0	49.3	51.0
77.5°	36.2	37.1	36.5	34.5	35.6
80°	23.9	23.2	23.2	22.1	22.3
82.5°	13.9	13.3	13.1	12.7	13.3
85°	6.5	6.3	6.5	6.3	6.0
87.5°	2.4	2.4	2.4	2.3	2.2
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)