

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: P588865

Luminaire Tested: **FMR-24-2-LD4-1LO-50-UNV-81-88-EDD**

Issue Date: 12/8/2021



**Test Information**

Test Method: LM-79-08  
Report Number: P588865  
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-81-88-EDD  
Description: 2X2 FMR TROFFER WITH .156 CLEAR PC FIXTURE SIDE AND .500 CLEAR PC ENVIRONMENTAL SIDE LENSES WITH, 80 CRI AND 5000K CCT LEDS  
Light Source: -  
Ballast/Driver: -

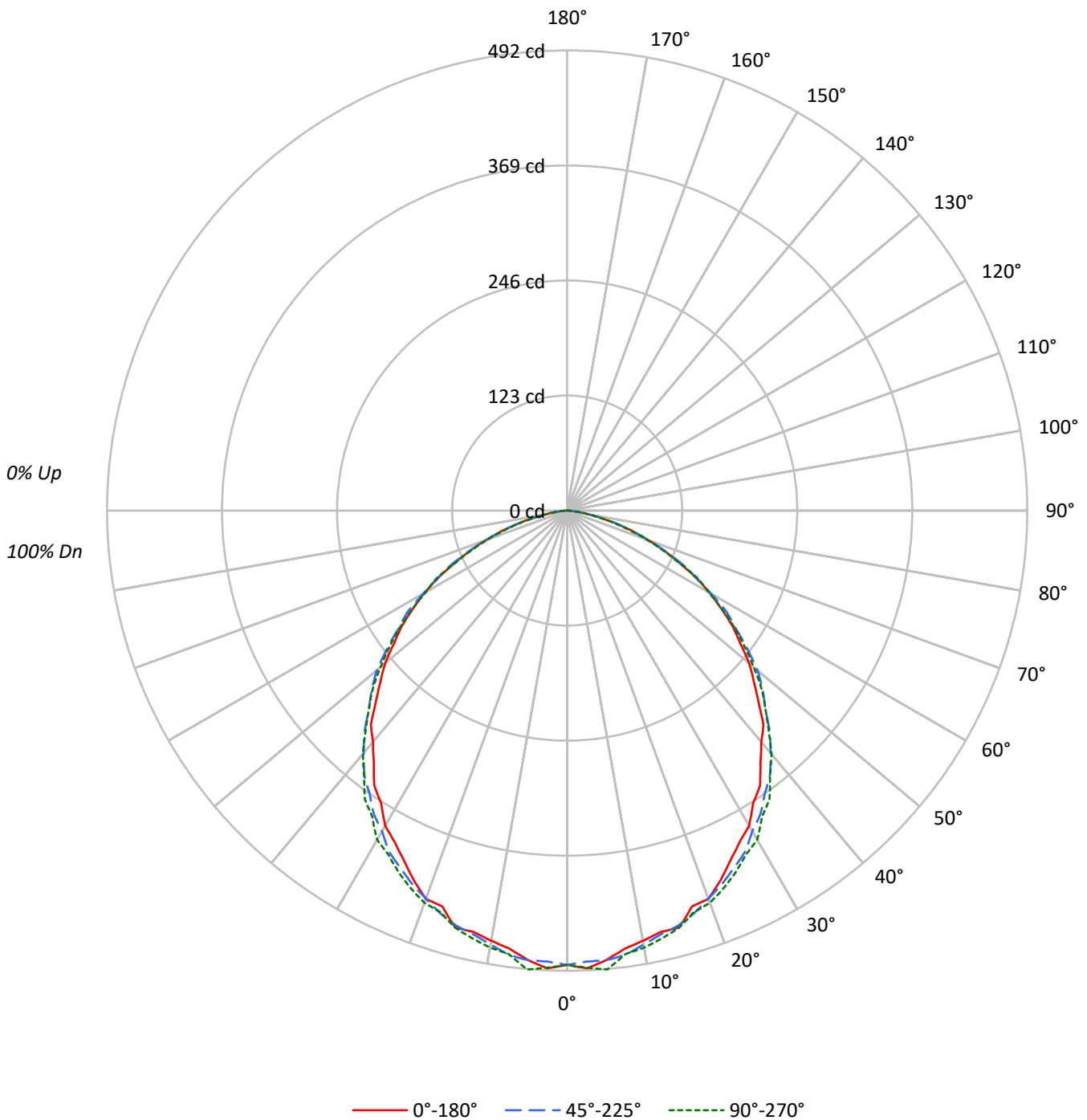
**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 1224.0 lumens  
Efficiency: N/A  
Efficacy: 104.6 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°	1307	1307	1307
5°	1303	1303	1330
10°	1276	1287	1296
15°	1286	1279	1287
20°	1265	1265	1278
25°	1226	1252	1266
30°	1209	1230	1263
35°	1180	1211	1238
40°	1134	1189	1194
45°	1100	1139	1141
50°	1064	1112	1091
55°	1014	1034	1026
60°	948	957	940
65°	845	867	839
70°	725	728	707
75°	574	573	551
80°	384	373	360
85°	210	207	195



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	45.7	3.7
10°-20°	129.5	10.6
20°-30°	194.0	15.8
30°-40°	229.9	18.8
40°-50°	230.3	18.8
50°-60°	195.5	16.0
60°-70°	131.8	10.8
70°-80°	57.9	4.7
80°-90°	9.4	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°	369.1	30.2
0°-40°	599.0	48.9
0°-60°	1024.9	83.7
0°-90°	1224.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1224.0	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	486	486	486	486	486	
5°	482	481	482	481	492	45
15°	462	456	459	462	462	129
25°	413	415	422	427	426	191
35°	359	360	369	377	377	223
45°	289	294	299	307	300	224
55°	216	215	220	219	219	192
65°	133	131	136	131	132	132
75°	55	54	55	51	53	59
85°	7	7	7	6	6	10
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	485.7	485.7	485.7	485.7	485.7
2.5°	489.9	486.2	482.7	486.7	489.2
5°	482.2	481.1	482.4	480.9	492.5
7.5°	472.3	476.6	479.1	477.6	478.3
10°	467.0	465.5	471.1	475.0	474.4
12.5°	461.4	463.6	464.0	468.2	468.5
15°	461.7	456.4	459.2	461.6	461.8
17.5°	443.8	449.5	451.5	456.9	450.2
20°	441.6	437.4	441.6	447.2	446.3
22.5°	428.1	423.4	432.4	437.4	437.1
25°	412.8	415.0	421.8	427.3	426.5
27.5°	399.4	402.0	411.7	419.2	414.4
30°	389.0	387.7	395.9	402.6	406.4
32.5°	370.5	375.3	384.8	391.5	388.0
35°	359.3	360.4	368.7	377.2	377.0
37.5°	339.7	344.6	356.4	358.7	356.5
40°	322.9	327.9	338.5	341.1	340.0
42.5°	310.6	311.5	320.5	323.5	318.8
45°	289.1	294.5	299.4	307.1	299.8
47.5°	270.8	273.3	283.8	285.9	282.0
50°	254.1	255.0	265.6	263.0	260.5
52.5°	233.3	237.0	242.9	242.4	239.5
55°	216.1	214.6	220.3	218.8	218.7
57.5°	195.5	198.0	202.6	200.2	196.4
60°	176.1	176.2	177.9	175.2	174.7
62.5°	154.6	155.4	155.8	152.4	157.8
65°	132.7	131.0	136.1	130.9	131.8
67.5°	112.6	113.5	113.0	109.7	111.0
70°	92.2	93.3	92.5	88.8	89.9
72.5°	73.5	72.1	73.0	68.3	70.5
75°	55.2	54.1	55.1	51.2	53.0
77.5°	37.6	38.5	37.9	35.8	37.0
80°	24.8	24.1	24.1	23.0	23.2
82.5°	14.5	13.8	13.6	13.2	13.8
85°	6.8	6.6	6.7	6.5	6.3
87.5°	2.4	2.5	2.5	2.4	2.3
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)