

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: P588813

Luminaire Tested: **FMR-24-2-LD4-1LO-35-UNV-93-84-EDD**

Issue Date: 12/8/2021



**Test Information**

Test Method: LM-79-08  
Report Number: P588813  
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-93-84-EDD  
Description: 2X2 FMR TROFFER WITH .156 CLEAR TEMPERED GLASS FIXTURE SIDE AND .125 CLEAR PC ENVIRONMENTAL SIDE LENSES WITH, 80 CRI AND 3500K CCT LEDS  
Light Source: -  
Ballast/Driver: -

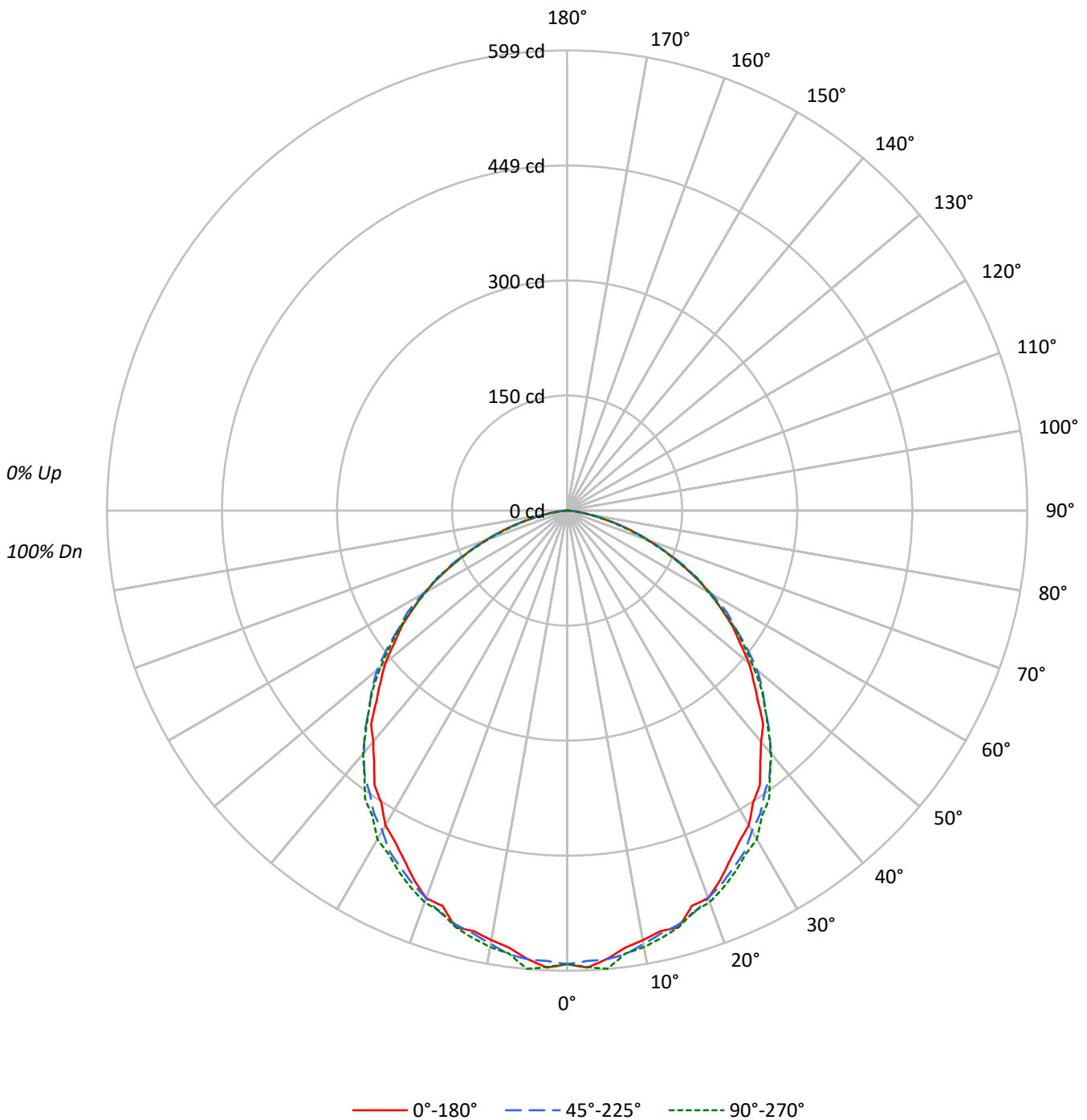
**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 1488.0 lumens  
Efficiency: N/A  
Efficacy: 127.2 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	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°	1589	1589	1589
5°	1583	1584	1618
10°	1552	1565	1576
15°	1564	1555	1564
20°	1537	1537	1554
25°	1490	1523	1539
30°	1469	1495	1535
35°	1435	1472	1506
40°	1379	1446	1452
45°	1337	1385	1387
50°	1294	1352	1326
55°	1232	1256	1247
60°	1152	1164	1143
65°	1028	1054	1020
70°	882	884	860
75°	699	697	670
80°	468	454	437
85°	253	253	235



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	55.5	3.7
10°-20°	157.4	10.6
20°-30°	235.8	15.8
30°-40°	279.5	18.8
40°-50°	280.0	18.8
50°-60°	237.7	16.0
60°-70°	160.2	10.8
70°-80°	70.4	4.7
80°-90°	11.4	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°	448.7	30.2
0°-40°	728.2	48.9
0°-60°	1245.9	83.7
0°-90°	1488.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1488.0	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	590	590	590	590	590	
5°	586	585	586	585	599	55
15°	561	555	558	561	561	156
25°	502	505	513	520	518	232
35°	437	438	448	459	458	271
45°	351	358	364	373	364	272
55°	263	261	268	266	266	234
65°	161	159	166	159	160	161
75°	67	66	67	62	64	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°	590.4	590.4	590.4	590.4	590.4
2.5°	595.5	591.0	586.8	591.7	594.7
5°	586.2	584.8	586.4	584.7	598.8
7.5°	574.2	579.4	582.5	580.6	581.4
10°	567.8	565.9	572.7	577.4	576.8
12.5°	560.9	563.6	564.0	569.1	569.6
15°	561.3	554.8	558.2	561.1	561.4
17.5°	539.5	546.5	548.9	555.5	547.3
20°	536.8	531.7	536.8	543.6	542.5
22.5°	520.4	514.7	525.7	531.7	531.3
25°	501.8	504.6	512.8	519.5	518.4
27.5°	485.5	488.7	500.4	509.7	503.7
30°	472.9	471.3	481.2	489.5	494.0
32.5°	450.4	456.2	467.8	476.0	471.6
35°	436.8	438.1	448.2	458.6	458.3
37.5°	412.9	419.0	433.2	436.1	433.4
40°	392.6	398.6	411.5	414.6	413.3
42.5°	377.6	378.6	389.7	393.3	387.6
45°	351.4	358.0	363.9	373.3	364.5
47.5°	329.2	332.2	345.0	347.5	342.9
50°	309.0	310.0	322.9	319.8	316.7
52.5°	283.6	288.1	295.3	294.7	291.1
55°	262.7	260.9	267.8	266.0	265.9
57.5°	237.6	240.7	246.3	243.4	238.8
60°	214.1	214.2	216.3	213.0	212.4
62.5°	188.0	188.9	189.4	185.3	191.9
65°	161.4	159.2	165.5	159.2	160.2
67.5°	136.9	138.0	137.4	133.4	134.9
70°	112.1	113.4	112.4	107.9	109.3
72.5°	89.3	87.7	88.7	83.1	85.7
75°	67.2	65.8	67.0	62.3	64.4
77.5°	45.7	46.8	46.0	43.5	45.0
80°	30.2	29.3	29.3	27.9	28.2
82.5°	17.6	16.8	16.5	16.1	16.8
85°	8.2	8.0	8.2	7.9	7.6
87.5°	3.0	3.0	3.0	2.9	2.7
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)