

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: P588823

Luminaire Tested: **FMR-24-2-LD4-1LO-40-UNV-80-86-EDD**

Issue Date: 12/8/2021



**Test Information**

Test Method: LM-79-08  
Report Number: P588823  
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-80-86-EDD  
Description: 2X2 FMR TROFFER WITH .125 PRISMATIC ACRYLIC FIXTURE SIDE AND .250 CLEAR PC ENVIRONMENTAL SIDE LENSES WITH, 80 CRI AND 4000K CCT LEDS  
Light Source: -  
Ballast/Driver: -

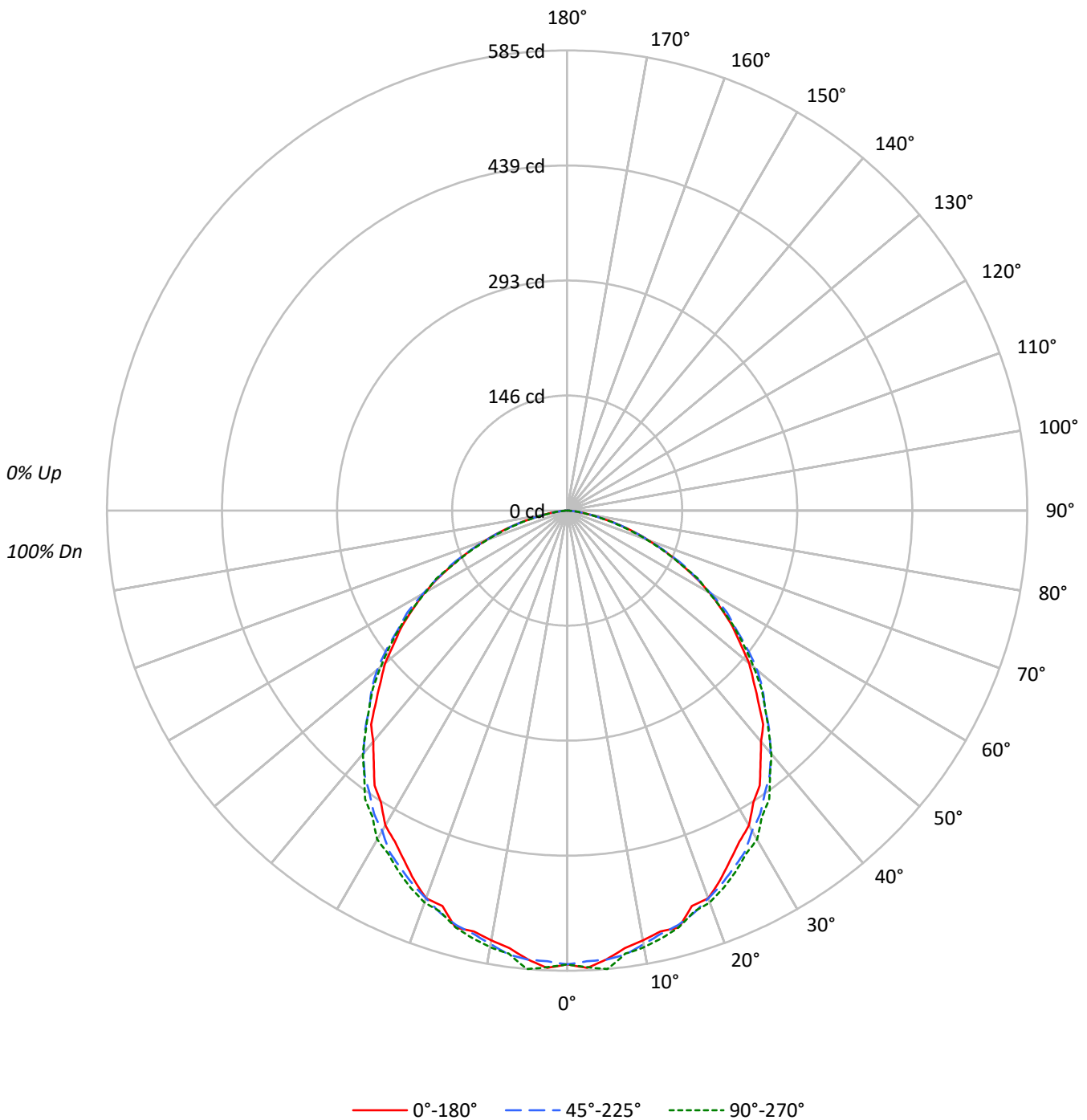
**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 1454.0 lumens  
Efficiency: N/A  
Efficacy: 124.3 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°	1552	1552	1552
5°	1547	1548	1581
10°	1516	1529	1540
15°	1528	1520	1528
20°	1502	1502	1518
25°	1456	1488	1504
30°	1436	1461	1500
35°	1402	1439	1471
40°	1348	1413	1419
45°	1307	1353	1355
50°	1264	1321	1296
55°	1204	1228	1219
60°	1126	1137	1117
65°	1004	1030	997
70°	862	865	840
75°	682	681	654
80°	457	445	428
85°	247	247	228



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	54.3	3.7
10°-20°	153.8	10.6
20°-30°	230.4	15.8
30°-40°	273.1	18.8
40°-50°	273.6	18.8
50°-60°	232.3	16.0
60°-70°	156.6	10.8
70°-80°	68.8	4.7
80°-90°	11.2	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°	438.5	30.2
0°-40°	711.6	48.9
0°-60°	1217.4	83.7
0°-90°	1454.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1454.0	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	577	577	577	577	577	
5°	573	572	573	571	585	54
15°	548	542	546	548	548	153
25°	490	493	501	508	507	227
35°	427	428	438	448	448	265
45°	343	350	356	365	356	266
55°	257	255	262	260	260	228
65°	158	156	162	156	157	157
75°	66	64	66	61	63	70
85°	8	8	8	8	7	12
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	576.9	576.9	576.9	576.9	576.9
2.5°	581.9	577.5	573.4	578.2	581.1
5°	572.8	571.5	573.0	571.3	585.1
7.5°	561.0	566.2	569.2	567.3	568.1
10°	554.8	553.0	559.6	564.2	563.6
12.5°	548.1	550.8	551.1	556.1	556.6
15°	548.5	542.1	545.5	548.3	548.5
17.5°	527.2	534.0	536.3	542.8	534.8
20°	524.5	519.6	524.5	531.2	530.1
22.5°	508.5	502.9	513.7	519.6	519.2
25°	490.4	493.0	501.1	507.6	506.6
27.5°	474.4	477.5	489.0	498.0	492.2
30°	462.1	460.6	470.2	478.3	482.8
32.5°	440.2	445.8	457.1	465.1	460.9
35°	426.8	428.1	438.0	448.1	447.8
37.5°	403.5	409.4	423.3	426.1	423.5
40°	383.6	389.5	402.1	405.1	403.9
42.5°	368.9	370.0	380.8	384.3	378.7
45°	343.4	349.8	355.6	364.8	356.1
47.5°	321.6	324.6	337.1	339.6	335.0
50°	301.9	302.9	315.5	312.5	309.5
52.5°	277.1	281.5	288.6	288.0	284.5
55°	256.7	255.0	261.7	259.9	259.8
57.5°	232.2	235.2	240.7	237.8	233.3
60°	209.2	209.3	211.3	208.1	207.5
62.5°	183.7	184.6	185.0	181.1	187.5
65°	157.7	155.6	161.7	155.5	156.6
67.5°	133.8	134.8	134.2	130.4	131.8
70°	109.5	110.8	109.9	105.5	106.8
72.5°	87.3	85.7	86.7	81.2	83.7
75°	65.6	64.3	65.5	60.9	62.9
77.5°	44.7	45.7	45.0	42.5	43.9
80°	29.5	28.7	28.7	27.3	27.6
82.5°	17.2	16.4	16.2	15.7	16.4
85°	8.0	7.8	8.0	7.7	7.4
87.5°	2.9	3.0	3.0	2.8	2.7
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)