

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: P588937

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

Issue Date: 12/8/2021



**Test Information**

Test Method: LM-79-08  
Report Number: P588937  
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-LD4-1STD-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: -

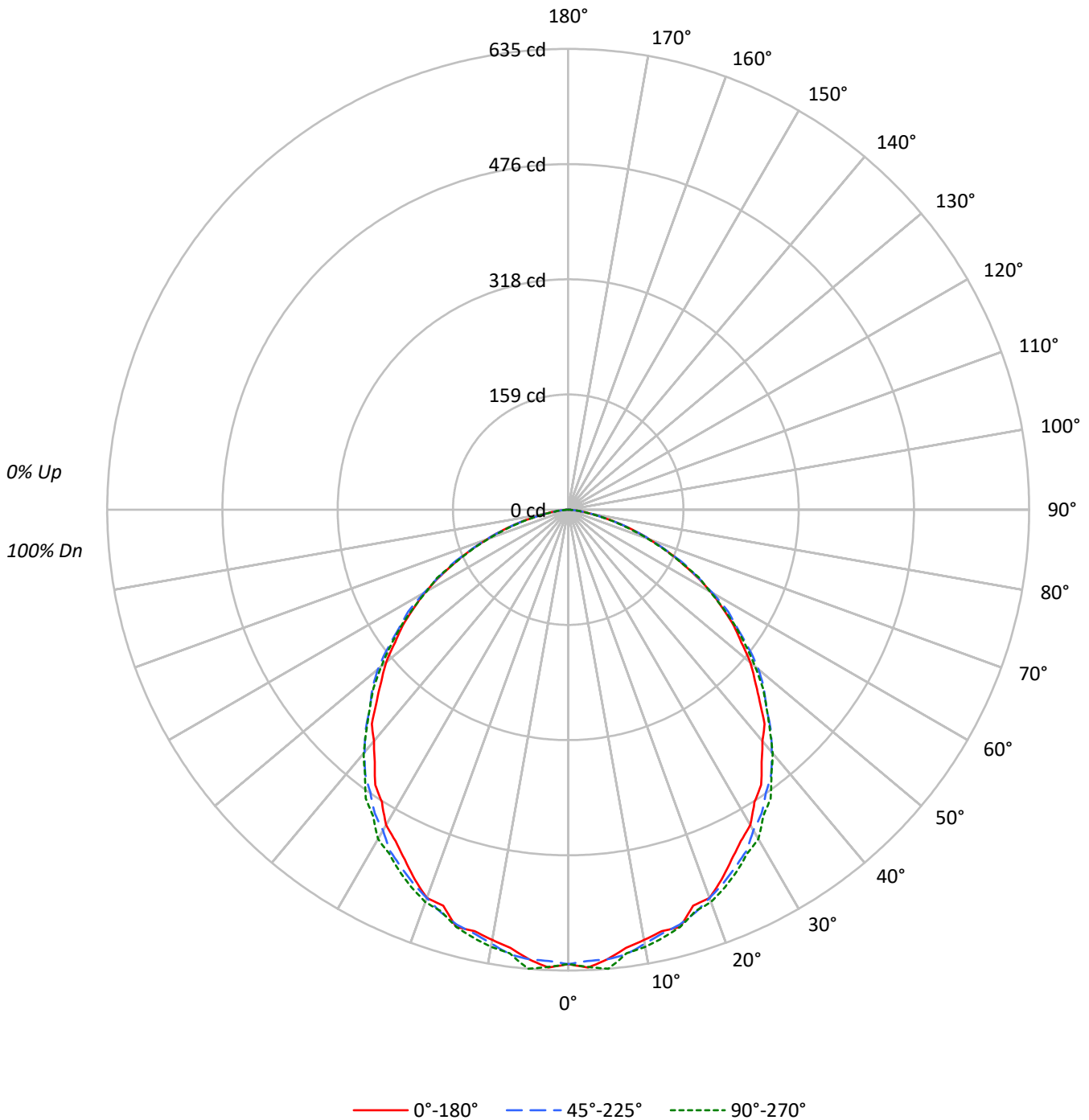
**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 1578.0 lumens  
Efficiency: N/A  
Efficacy: 95.1 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): 16.6  
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°	1685	1685	1685
5°	1679	1680	1715
10°	1645	1660	1671
15°	1658	1649	1658
20°	1630	1630	1647
25°	1580	1615	1632
30°	1558	1586	1628
35°	1522	1561	1597
40°	1462	1533	1540
45°	1418	1469	1471
50°	1371	1433	1406
55°	1307	1332	1323
60°	1222	1234	1212
65°	1089	1117	1082
70°	935	938	912
75°	740	739	710
80°	496	482	463
85°	269	266	250



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	58.9	3.7
10°-20°	166.9	10.6
20°-30°	250.1	15.8
30°-40°	296.4	18.8
40°-50°	296.9	18.8
50°-60°	252.1	16.0
60°-70°	169.9	10.8
70°-80°	74.7	4.7
80°-90°	12.1	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°	475.9	30.2
0°-40°	772.3	48.9
0°-60°	1321.3	83.7
0°-90°	1578.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1578.0	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	626	626	626	626	626	
5°	622	620	622	620	635	59
15°	595	588	592	595	595	166
25°	532	535	544	551	550	246
35°	463	465	475	486	486	288
45°	373	380	386	396	386	288
55°	279	277	284	282	282	248
65°	171	169	176	169	170	170
75°	71	70	71	66	68	76
85°	9	8	9	8	8	13
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	626.1	626.1	626.1	626.1	626.1
2.5°	631.5	626.8	622.3	627.5	630.6
5°	621.7	620.2	621.9	620.0	635.0
7.5°	608.9	614.5	617.7	615.7	616.6
10°	602.1	600.2	607.4	612.4	611.6
12.5°	594.8	597.7	598.1	603.6	604.0
15°	595.2	588.4	592.0	595.1	595.3
17.5°	572.1	579.5	582.1	589.1	580.4
20°	569.3	563.9	569.3	576.5	575.3
22.5°	551.9	545.8	557.5	563.9	563.5
25°	532.2	535.1	543.8	550.9	549.8
27.5°	514.9	518.3	530.7	540.5	534.2
30°	501.5	499.8	510.3	519.1	523.9
32.5°	477.7	483.8	496.1	504.8	500.2
35°	463.2	464.6	475.3	486.3	486.0
37.5°	437.9	444.3	459.4	462.5	459.7
40°	416.3	422.7	436.4	439.7	438.3
42.5°	400.4	401.5	413.3	417.1	411.0
45°	372.7	379.6	385.9	395.9	386.5
47.5°	349.1	352.3	365.9	368.6	363.6
50°	327.6	328.8	342.4	339.1	335.9
52.5°	300.7	305.5	313.2	312.5	308.7
55°	278.6	276.7	284.0	282.1	282.0
57.5°	252.0	255.2	261.2	258.1	253.2
60°	227.1	227.2	229.3	225.9	225.2
62.5°	199.4	200.3	200.8	196.5	203.5
65°	171.1	168.9	175.5	168.8	169.9
67.5°	145.2	146.3	145.7	141.5	143.1
70°	118.8	120.3	119.2	114.5	115.9
72.5°	94.7	93.0	94.1	88.1	90.9
75°	71.2	69.8	71.1	66.0	68.3
77.5°	48.5	49.6	48.8	46.2	47.7
80°	32.0	31.1	31.1	29.6	29.9
82.5°	18.7	17.8	17.5	17.1	17.8
85°	8.7	8.5	8.6	8.4	8.1
87.5°	3.2	3.2	3.2	3.1	2.9
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)