

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: P588998

Luminaire Tested: **FMR-24-2-LD4-2HI-35-UNV-82-85-EDD**

Issue Date: 12/8/2021



**Test Information**

Test Method: LM-79-08  
Report Number: P588998  
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-LD4-2HI-35-UNV-82-85-EDD  
Description: 2X2 FMR TROFFER WITH .187 CLEAR PC FIXTURE SIDE AND .187 CLEAR PC ENVIRONMENTAL SIDE LENSES WITH, 80 CRI AND 3500K CCT LEDS  
Light Source: -  
Ballast/Driver: -

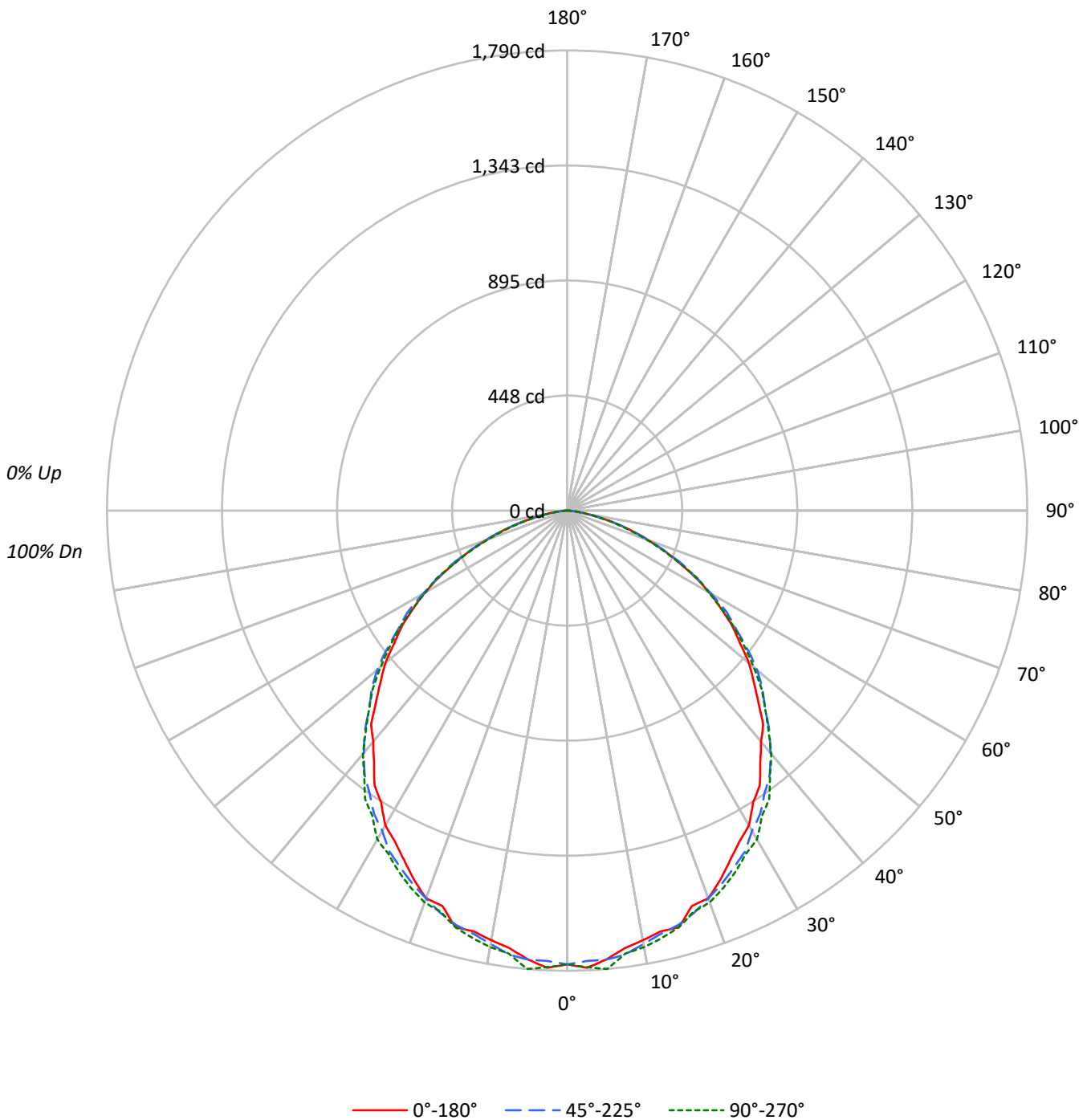
**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 4448.0 lumens  
Efficiency: N/A  
Efficacy: 103.0 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): 43.2  
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°	4749	4749	4749
5°	4733	4735	4835
10°	4638	4678	4711
15°	4674	4649	4675
20°	4595	4595	4644
25°	4454	4551	4601
30°	4393	4470	4589
35°	4289	4402	4501
40°	4122	4321	4340
45°	3998	4140	4146
50°	3867	4041	3964
55°	3684	3756	3729
60°	3445	3479	3416
65°	3072	3150	3050
70°	2636	2644	2571
75°	2088	2083	2002
80°	1398	1359	1306
85°	760	753	704



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	166.0	3.7
10°-20°	470.5	10.6
20°-30°	704.9	15.8
30°-40°	835.4	18.8
40°-50°	837.0	18.8
50°-60°	710.5	16.0
60°-70°	479.0	10.8
70°-80°	210.5	4.7
80°-90°	34.2	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°	1341.4	30.2
0°-40°	2176.9	48.9
0°-60°	3724.3	83.7
0°-90°	4448.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	4448.0	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	1765	1765	1765	1765	1765	
5°	1752	1748	1753	1748	1790	165
15°	1678	1658	1669	1677	1678	467
25°	1500	1508	1533	1553	1550	693
35°	1306	1310	1340	1371	1370	811
45°	1050	1070	1088	1116	1089	813
55°	785	780	800	795	795	699
65°	482	476	495	476	479	480
75°	201	197	200	186	193	215
85°	25	24	24	24	23	36
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	1764.9	1764.9	1764.9	1764.9	1764.9
2.5°	1780.1	1766.7	1754.1	1768.7	1777.6
5°	1752.3	1748.2	1753.0	1747.8	1789.9
7.5°	1716.3	1732.0	1741.2	1735.5	1738.0
10°	1697.2	1691.7	1712.0	1726.1	1724.1
12.5°	1676.7	1684.9	1686.0	1701.3	1702.6
15°	1677.8	1658.4	1668.7	1677.4	1678.0
17.5°	1612.6	1633.6	1640.7	1660.5	1635.9
20°	1604.7	1589.4	1604.7	1624.9	1621.8
22.5°	1555.7	1538.6	1571.4	1589.4	1588.3
25°	1500.1	1508.3	1532.9	1552.9	1549.7
27.5°	1451.3	1460.9	1496.0	1523.5	1505.8
30°	1413.7	1408.9	1438.5	1463.2	1476.8
32.5°	1346.5	1363.8	1398.4	1422.8	1409.8
35°	1305.7	1309.6	1339.9	1370.9	1370.0
37.5°	1234.4	1252.4	1295.0	1303.6	1295.7
40°	1173.5	1191.5	1230.0	1239.4	1235.5
42.5°	1128.6	1131.8	1164.9	1175.6	1158.5
45°	1050.5	1070.1	1087.9	1115.9	1089.4
47.5°	983.9	993.1	1031.3	1038.9	1025.0
50°	923.6	926.7	965.3	955.9	946.8
52.5°	847.7	861.1	882.8	880.9	870.2
55°	785.2	780.0	800.5	795.0	794.8
57.5°	710.3	719.4	736.2	727.6	713.7
60°	640.1	640.3	646.5	636.7	634.8
62.5°	561.9	564.7	566.0	554.0	573.5
65°	482.4	476.0	494.7	475.8	479.0
67.5°	409.3	412.4	410.6	398.8	403.3
70°	335.0	339.1	336.1	322.7	326.8
72.5°	267.1	262.1	265.2	248.4	256.1
75°	200.8	196.7	200.3	186.2	192.6
77.5°	136.7	139.9	137.6	130.1	134.4
80°	90.2	87.7	87.7	83.4	84.3
82.5°	52.6	50.1	49.4	48.1	50.1
85°	24.6	23.9	24.4	23.7	22.8
87.5°	8.9	9.1	9.1	8.7	8.2
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)