

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: P589447

Luminaire Tested: **FMR-24-2-LD4-3LO-50-UNV-82-86-EDD**

Issue Date: 12/8/2021



**Test Information**

Test Method: LM-79-08  
Report Number: P589447  
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-LD4-3LO-50-UNV-82-86-EDD  
Description: 2X2 FMR TROFFER WITH .187 CLEAR PC FIXTURE SIDE AND .250 CLEAR PC ENVIRONMENTAL SIDE LENSES WITH, 80 CRI AND 5000K CCT LEDS  
Light Source: -  
Ballast/Driver: -

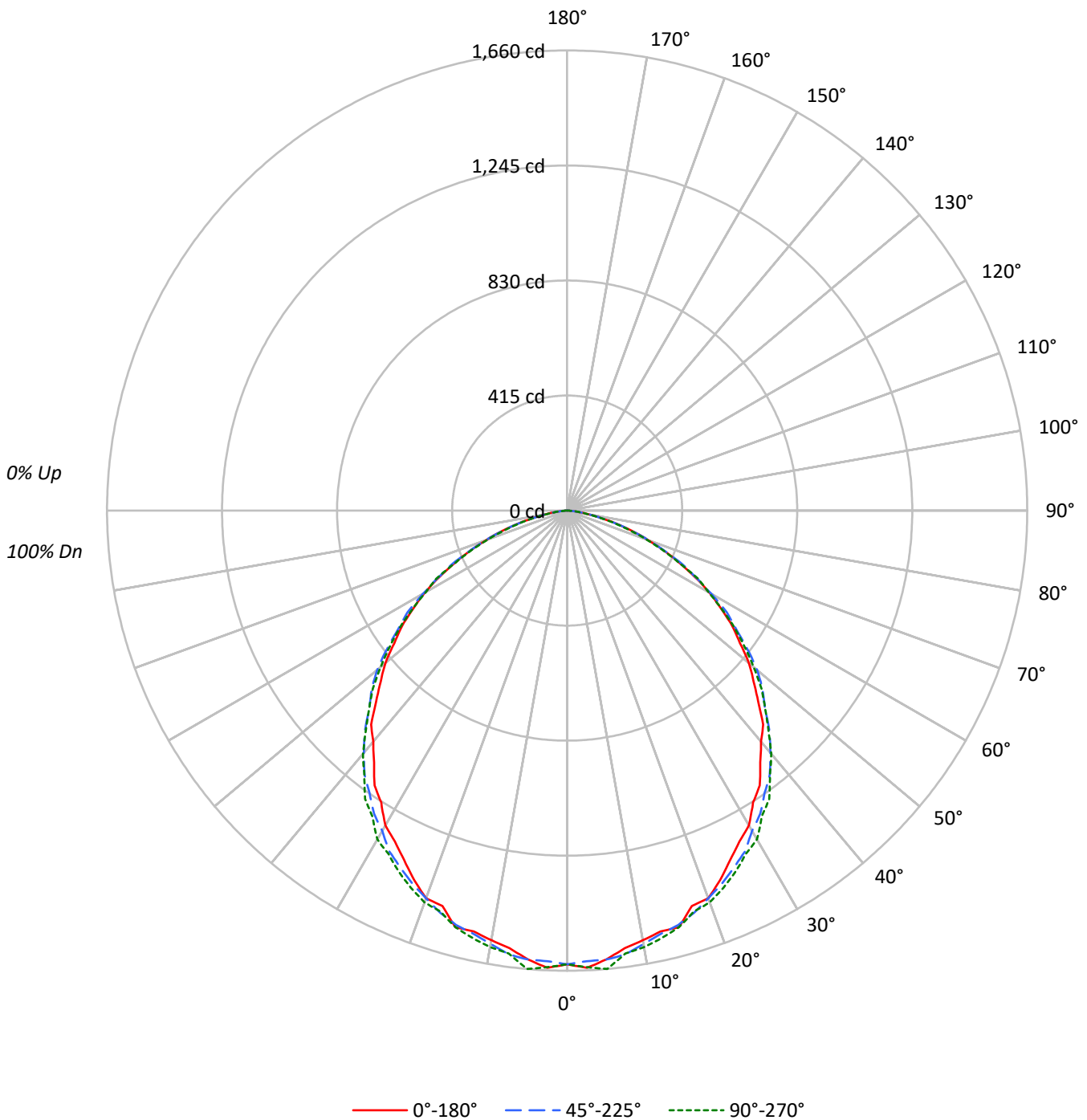
**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 4125.0 lumens  
Efficiency: N/A  
Efficacy: 117.5 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): 35.1  
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°	4404	4404	4404
5°	4390	4391	4484
10°	4301	4338	4369
15°	4335	4311	4335
20°	4261	4261	4307
25°	4130	4221	4267
30°	4074	4145	4256
35°	3978	4082	4174
40°	3823	4007	4025
45°	3707	3839	3845
50°	3586	3748	3676
55°	3416	3483	3458
60°	3195	3226	3168
65°	2849	2921	2828
70°	2444	2452	2384
75°	1936	1932	1857
80°	1297	1261	1212
85°	704	698	651



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	154.0	3.7
10°-20°	436.3	10.6
20°-30°	653.7	15.8
30°-40°	774.8	18.8
40°-50°	776.2	18.8
50°-60°	658.9	16.0
60°-70°	444.2	10.8
70°-80°	195.2	4.7
80°-90°	31.7	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°	1244.0	30.2
0°-40°	2018.8	48.9
0°-60°	3453.9	83.7
0°-90°	4125.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	4125.0	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	1637	1637	1637	1637	1637	
5°	1625	1621	1626	1621	1660	153
15°	1556	1538	1548	1556	1556	434
25°	1391	1399	1422	1440	1437	643
35°	1211	1214	1243	1271	1270	752
45°	974	992	1009	1035	1010	754
55°	728	723	742	737	737	648
65°	447	442	459	441	444	445
75°	186	182	186	173	179	200
85°	23	22	23	22	21	33
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	1636.7	1636.7	1636.7	1636.7	1636.7
2.5°	1650.9	1638.4	1626.8	1640.3	1648.5
5°	1625.1	1621.3	1625.7	1620.8	1659.9
7.5°	1591.7	1606.3	1614.7	1609.4	1611.8
10°	1573.9	1568.9	1587.7	1600.8	1598.9
12.5°	1554.9	1562.5	1563.6	1577.7	1579.0
15°	1556.0	1538.0	1547.5	1555.5	1556.2
17.5°	1495.5	1515.0	1521.5	1539.9	1517.1
20°	1488.1	1474.0	1488.1	1506.9	1504.0
22.5°	1442.7	1426.9	1457.3	1474.0	1472.9
25°	1391.1	1398.7	1421.6	1440.2	1437.2
27.5°	1345.9	1354.8	1387.3	1412.9	1396.4
30°	1311.0	1306.6	1334.1	1356.9	1369.6
32.5°	1248.7	1264.8	1296.9	1319.5	1307.5
35°	1210.9	1214.5	1242.6	1271.3	1270.5
37.5°	1144.7	1161.4	1200.9	1209.0	1201.6
40°	1088.3	1105.0	1140.7	1149.4	1145.8
42.5°	1046.7	1049.6	1080.3	1090.2	1074.4
45°	974.2	992.4	1008.9	1034.8	1010.3
47.5°	912.5	920.9	956.4	963.4	950.5
50°	856.5	859.5	895.2	886.5	878.0
52.5°	786.1	798.6	818.7	817.0	807.0
55°	728.2	723.4	742.4	737.3	737.1
57.5°	658.7	667.1	682.8	674.8	661.9
60°	593.6	593.8	599.5	590.4	588.7
62.5°	521.1	523.7	524.9	513.7	531.9
65°	447.4	441.5	458.8	441.2	444.2
67.5°	379.5	382.5	380.8	369.8	374.0
70°	310.6	314.4	311.7	299.2	303.0
72.5°	247.7	243.0	246.0	230.3	237.5
75°	186.2	182.4	185.8	172.7	178.6
77.5°	126.8	129.8	127.6	120.7	124.7
80°	83.7	81.4	81.4	77.3	78.2
82.5°	48.8	46.5	45.9	44.6	46.5
85°	22.8	22.2	22.6	22.0	21.1
87.5°	8.2	8.5	8.5	8.0	7.6
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)