

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: P589435

Luminaire Tested: **FMR-24-2-LD4-3LO-50-UNV-80-96-EDD**

Issue Date: 12/8/2021



**Test Information**

Test Method: LM-79-08  
Report Number: P589435  
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-80-96-EDD  
Description: 2X2 FMR TROFFER WITH .125 PRISMATIC ACRYLIC FIXTURE SIDE AND .250 CLEAR TEMPERED GLASS ENVIRONMENTAL SIDE LENSES WITH, 80 CRI AND 5000K CCT LEDS  
Light Source: -  
Ballast/Driver: -

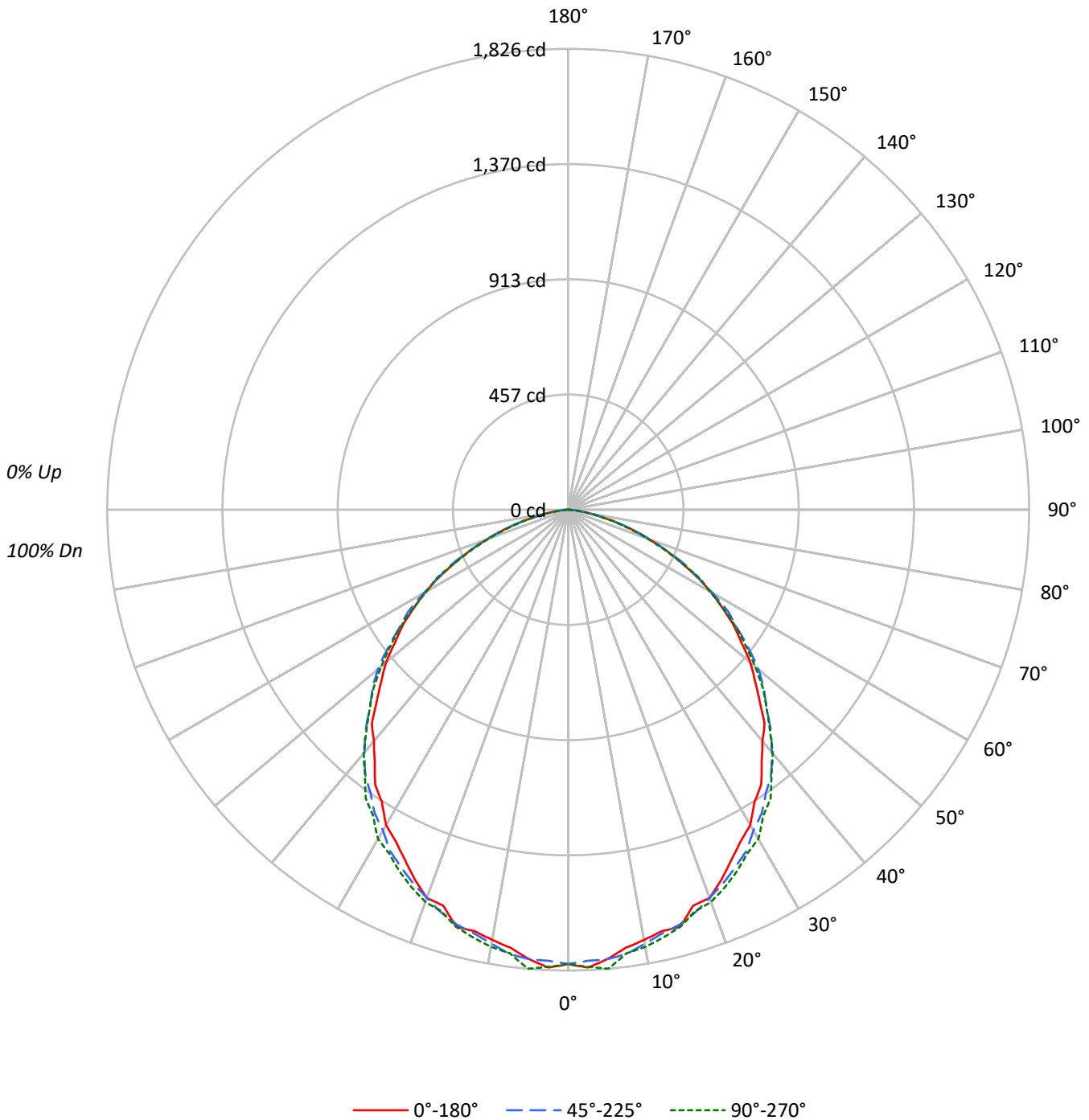
**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 4537.0 lumens  
Efficiency: N/A  
Efficacy: 129.3 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): 35.1  
Input Voltage (V): NR  
Input Current (A<sub>in</sub>): 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°	4844	4844	4844
5°	4828	4830	4932
10°	4730	4771	4805
15°	4768	4742	4768
20°	4687	4687	4737
25°	4543	4643	4694
30°	4481	4559	4681
35°	4375	4490	4591
40°	4205	4408	4427
45°	4078	4223	4229
50°	3944	4122	4043
55°	3758	3831	3803
60°	3514	3549	3485
65°	3133	3213	3111
70°	2688	2697	2622
75°	2129	2124	2042
80°	1426	1387	1333
85°	775	769	716



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	169.3	3.7
10°-20°	479.9	10.6
20°-30°	719.0	15.8
30°-40°	852.2	18.8
40°-50°	853.7	18.8
50°-60°	724.7	16.0
60°-70°	488.6	10.8
70°-80°	214.7	4.7
80°-90°	34.9	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°	1368.3	30.2
0°-40°	2220.4	48.9
0°-60°	3798.8	83.7
0°-90°	4537.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	4537.0	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	1800	1800	1800	1800	1800	
5°	1787	1783	1788	1783	1826	169
15°	1711	1692	1702	1711	1712	477
25°	1530	1538	1564	1584	1581	707
35°	1332	1336	1367	1398	1397	827
45°	1072	1092	1110	1138	1111	829
55°	801	796	816	811	811	712
65°	492	486	505	485	489	489
75°	205	201	204	190	196	219
85°	25	24	25	24	23	36
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	1800.2	1800.2	1800.2	1800.2	1800.2
2.5°	1815.7	1802.0	1789.2	1804.1	1813.2
5°	1787.4	1783.2	1788.1	1782.7	1825.7
7.5°	1750.7	1766.7	1776.0	1770.2	1772.7
10°	1731.1	1725.6	1746.2	1760.7	1758.6
12.5°	1710.2	1718.6	1719.7	1735.3	1736.7
15°	1711.4	1691.6	1702.1	1710.9	1711.6
17.5°	1644.9	1666.3	1673.5	1693.7	1668.6
20°	1636.8	1621.2	1636.8	1657.5	1654.2
22.5°	1586.8	1569.4	1602.8	1621.2	1620.0
25°	1530.1	1538.5	1563.6	1584.0	1580.8
27.5°	1480.3	1490.1	1525.9	1554.0	1535.9
30°	1442.0	1437.1	1467.3	1492.4	1506.4
32.5°	1373.4	1391.1	1426.4	1451.3	1438.0
35°	1331.8	1335.8	1366.7	1398.3	1397.4
37.5°	1259.1	1277.4	1320.9	1329.7	1321.6
40°	1197.0	1215.4	1254.7	1264.2	1260.2
42.5°	1151.2	1154.5	1188.2	1199.1	1181.7
45°	1071.5	1091.5	1109.6	1138.2	1111.2
47.5°	1003.6	1012.9	1052.0	1059.6	1045.5
50°	942.0	945.3	984.6	975.0	965.7
52.5°	864.6	878.4	900.4	898.6	887.6
55°	801.0	795.6	816.5	810.9	810.7
57.5°	724.5	733.8	751.0	742.1	728.0
60°	652.9	653.1	659.4	649.4	647.5
62.5°	573.2	576.0	577.4	565.0	585.0
65°	492.1	485.5	504.6	485.3	488.6
67.5°	417.4	420.7	418.8	406.8	411.4
70°	341.7	345.9	342.8	329.1	333.3
72.5°	272.4	267.3	270.5	253.3	261.3
75°	204.8	200.6	204.3	189.9	196.4
77.5°	139.5	142.7	140.4	132.7	137.1
80°	92.0	89.5	89.5	85.1	86.0
82.5°	53.7	51.1	50.4	49.0	51.1
85°	25.1	24.4	24.9	24.2	23.2
87.5°	9.1	9.3	9.3	8.8	8.4
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)