

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: P588997

Luminaire Tested: **FMR-24-2-LD4-2HI-35-UNV-82-84-EDD**

Issue Date: 12/8/2021



**Test Information**

Test Method: LM-79-08  
Report Number: P588997  
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-82-84-EDD  
Description: 2X2 FMR TROFFER WITH .187 CLEAR PC FIXTURE SIDE AND .125 CLEAR PC ENVIRONMENTAL SIDE LENSES WITH, 80 CRI AND 3500K CCT LEDS  
Light Source: -  
Ballast/Driver: -

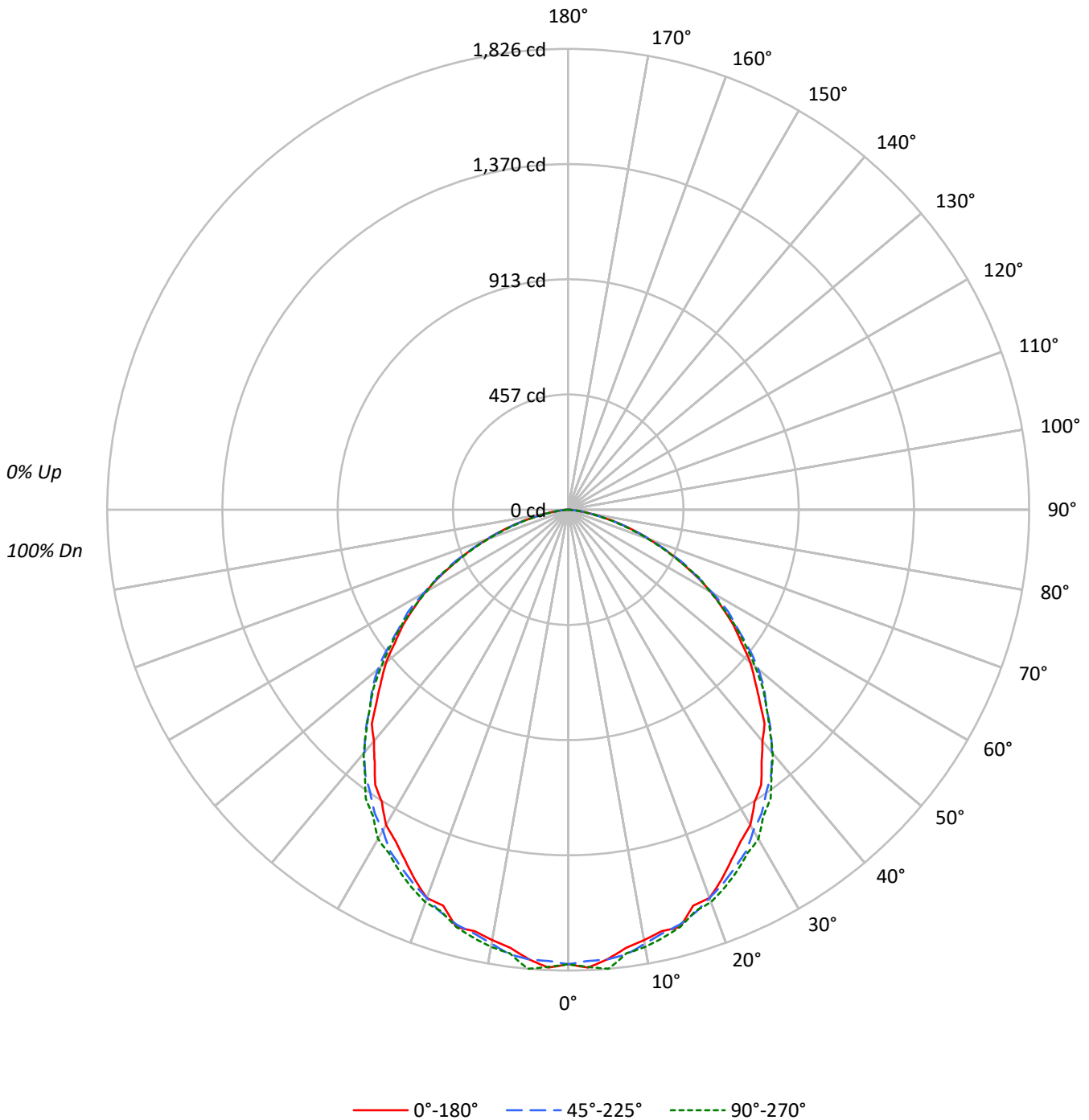
**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 4538.0 lumens  
Efficiency: N/A  
Efficacy: 105.0 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°	4845	4845	4845
5°	4829	4831	4933
10°	4731	4773	4806
15°	4769	4743	4769
20°	4688	4688	4738
25°	4544	4643	4695
30°	4482	4561	4682
35°	4376	4491	4592
40°	4206	4408	4428
45°	4078	4224	4230
50°	3944	4123	4044
55°	3758	3832	3804
60°	3514	3549	3486
65°	3134	3214	3112
70°	2688	2698	2623
75°	2129	2125	2042
80°	1427	1387	1333
85°	775	769	716



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	169.4	3.7
10°-20°	480.0	10.6
20°-30°	719.2	15.8
30°-40°	852.4	18.8
40°-50°	853.9	18.8
50°-60°	724.8	16.0
60°-70°	488.7	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°	1368.6	30.2
0°-40°	2220.9	48.9
0°-60°	3799.7	83.7
0°-90°	4538.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	4538.0	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	1801	1801	1801	1801	1801	
5°	1788	1784	1788	1783	1826	169
15°	1712	1692	1702	1711	1712	477
25°	1530	1539	1564	1584	1581	708
35°	1332	1336	1367	1399	1398	827
45°	1072	1092	1110	1138	1112	829
55°	801	796	817	811	811	713
65°	492	486	505	485	489	489
75°	205	201	204	190	196	220
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°	1800.6	1800.6	1800.6	1800.6	1800.6
2.5°	1816.1	1802.4	1789.6	1804.5	1813.6
5°	1787.8	1783.6	1788.5	1783.1	1826.1
7.5°	1751.0	1767.1	1776.4	1770.6	1773.1
10°	1731.5	1725.9	1746.6	1761.0	1758.9
12.5°	1710.6	1719.0	1720.1	1735.7	1737.1
15°	1711.8	1692.0	1702.5	1711.3	1712.0
17.5°	1645.3	1666.7	1673.9	1694.1	1669.0
20°	1637.1	1621.6	1637.1	1657.8	1654.6
22.5°	1587.1	1569.7	1603.2	1621.6	1620.4
25°	1530.4	1538.8	1563.9	1584.4	1581.1
27.5°	1480.7	1490.4	1526.2	1554.4	1536.2
30°	1442.3	1437.4	1467.7	1492.8	1506.7
32.5°	1373.7	1391.4	1426.7	1451.6	1438.4
35°	1332.1	1336.1	1367.0	1398.6	1397.7
37.5°	1259.3	1277.7	1321.2	1330.0	1321.9
40°	1197.3	1215.6	1254.9	1264.5	1260.5
42.5°	1151.5	1154.7	1188.4	1199.4	1181.9
45°	1071.7	1091.7	1109.9	1138.5	1111.5
47.5°	1003.9	1013.2	1052.2	1059.9	1045.7
50°	942.2	945.5	984.8	975.3	966.0
52.5°	864.8	878.5	900.6	898.8	887.8
55°	801.1	795.8	816.7	811.1	810.9
57.5°	724.6	733.9	751.1	742.3	728.1
60°	653.0	653.3	659.5	649.6	647.7
62.5°	573.3	576.1	577.5	565.2	585.2
65°	492.2	485.7	504.7	485.4	488.7
67.5°	417.5	420.8	418.9	406.8	411.5
70°	341.7	345.9	342.9	329.2	333.4
72.5°	272.5	267.4	270.6	253.4	261.3
75°	204.8	200.6	204.4	189.9	196.4
77.5°	139.5	142.7	140.4	132.7	137.2
80°	92.1	89.5	89.5	85.1	86.0
82.5°	53.7	51.1	50.4	49.1	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)