

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: P589061

Luminaire Tested: **FMR-24-2-LD4-2HI-50-UNV-82-84-EDD**

Issue Date: 12/8/2021



**Test Information**

Test Method: LM-79-08  
Report Number: P589061  
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-50-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 5000K CCT LEDS  
Light Source: -  
Ballast/Driver: -

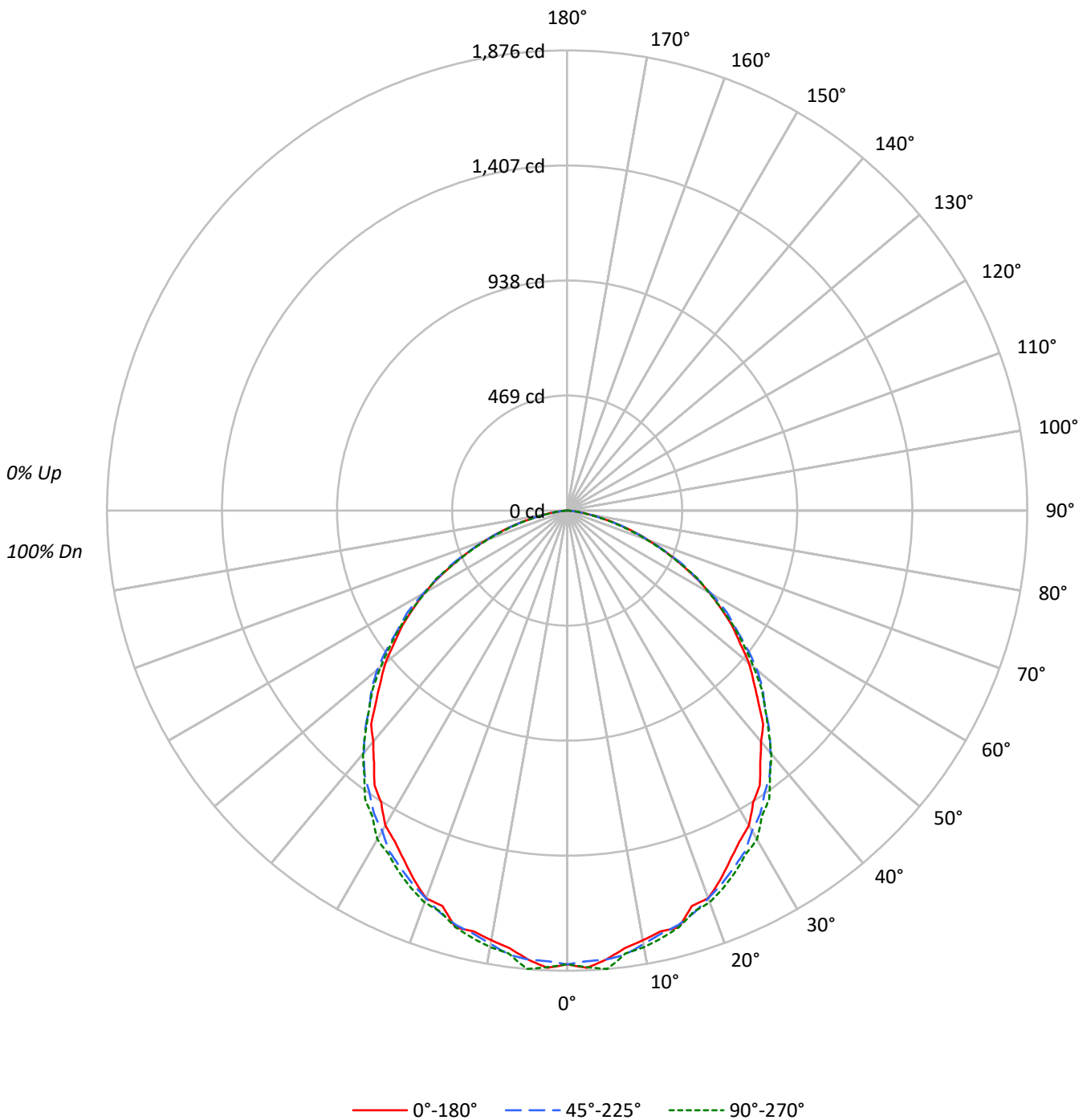
**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 4662.0 lumens  
Efficiency: N/A  
Efficacy: 107.9 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°	4978	4978	4978
5°	4961	4963	5068
10°	4861	4903	4938
15°	4899	4873	4900
20°	4816	4816	4868
25°	4668	4770	4823
30°	4604	4685	4810
35°	4496	4613	4717
40°	4321	4529	4549
45°	4190	4339	4346
50°	4052	4235	4155
55°	3861	3936	3909
60°	3611	3647	3581
65°	3219	3301	3196
70°	2762	2772	2695
75°	2188	2182	2098
80°	1466	1426	1370
85°	797	790	738



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	174.0	3.7
10°-20°	493.1	10.6
20°-30°	738.8	15.8
30°-40°	875.6	18.8
40°-50°	877.3	18.8
50°-60°	744.7	16.0
60°-70°	502.0	10.8
70°-80°	220.6	4.7
80°-90°	35.9	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°	1405.9	30.2
0°-40°	2281.6	48.9
0°-60°	3903.5	83.7
0°-90°	4662.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	4662.0	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	1850	1850	1850	1850	1850	
5°	1837	1832	1837	1832	1876	173
15°	1758	1738	1749	1758	1759	490
25°	1572	1581	1607	1628	1624	727
35°	1368	1373	1404	1437	1436	850
45°	1101	1122	1140	1170	1142	852
55°	823	818	839	833	833	732
65°	506	499	518	499	502	503
75°	210	206	210	195	202	225
85°	26	25	26	25	24	37
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	1849.8	1849.8	1849.8	1849.8	1849.8
2.5°	1865.8	1851.7	1838.5	1853.8	1863.1
5°	1836.6	1832.3	1837.3	1831.9	1876.0
7.5°	1798.9	1815.4	1824.9	1819.0	1821.6
10°	1778.8	1773.1	1794.4	1809.2	1807.0
12.5°	1757.3	1765.9	1767.1	1783.1	1784.6
15°	1758.5	1738.2	1749.0	1758.1	1758.8
17.5°	1690.2	1712.2	1719.6	1740.4	1714.6
20°	1681.9	1665.9	1681.9	1703.1	1699.8
22.5°	1630.5	1612.6	1647.0	1665.9	1664.7
25°	1572.2	1580.8	1606.6	1627.6	1624.3
27.5°	1521.1	1531.2	1567.9	1596.8	1578.2
30°	1481.7	1476.7	1507.8	1533.5	1547.9
32.5°	1411.3	1429.4	1465.7	1491.3	1477.7
35°	1368.5	1372.6	1404.3	1436.8	1435.9
37.5°	1293.8	1312.6	1357.3	1366.4	1358.0
40°	1230.0	1248.9	1289.2	1299.0	1295.0
42.5°	1182.9	1186.3	1220.9	1232.1	1214.2
45°	1101.0	1121.6	1140.2	1169.6	1141.9
47.5°	1031.3	1040.8	1081.0	1088.8	1074.3
50°	968.0	971.3	1011.7	1001.9	992.4
52.5°	888.5	902.6	925.2	923.3	912.1
55°	823.0	817.5	839.0	833.3	833.1
57.5°	744.4	754.0	771.7	762.6	748.0
60°	670.9	671.1	677.6	667.3	665.4
62.5°	589.0	591.8	593.3	580.6	601.1
65°	505.6	498.9	518.5	498.7	502.0
67.5°	428.9	432.3	430.4	418.0	422.7
70°	351.1	355.4	352.3	338.2	342.5
72.5°	279.9	274.7	278.0	260.3	268.4
75°	210.4	206.1	209.9	195.1	201.8
77.5°	143.3	146.6	144.3	136.4	140.9
80°	94.6	92.0	92.0	87.4	88.4
82.5°	55.2	52.5	51.8	50.4	52.5
85°	25.8	25.1	25.6	24.8	23.9
87.5°	9.3	9.6	9.6	9.1	8.6
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)