

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: P589704

Luminaire Tested: **FMR-24-2-LD4-4LO-40-UNV-82-87-EDD**

Issue Date: 12/8/2021



Test Information

Test Method: LM-79-08
Report Number: P589704
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-LD4-4LO-40-UNV-82-87-EDD
Description: 2X2 FMR TROFFER WITH .187 CLEAR PC FIXTURE SIDE AND .375 CLEAR PC ENVIRONMENTAL SIDE LENSES WITH, 80 CRI AND 4000K CCT LEDS
Light Source: -
Ballast/Driver: -

Summary

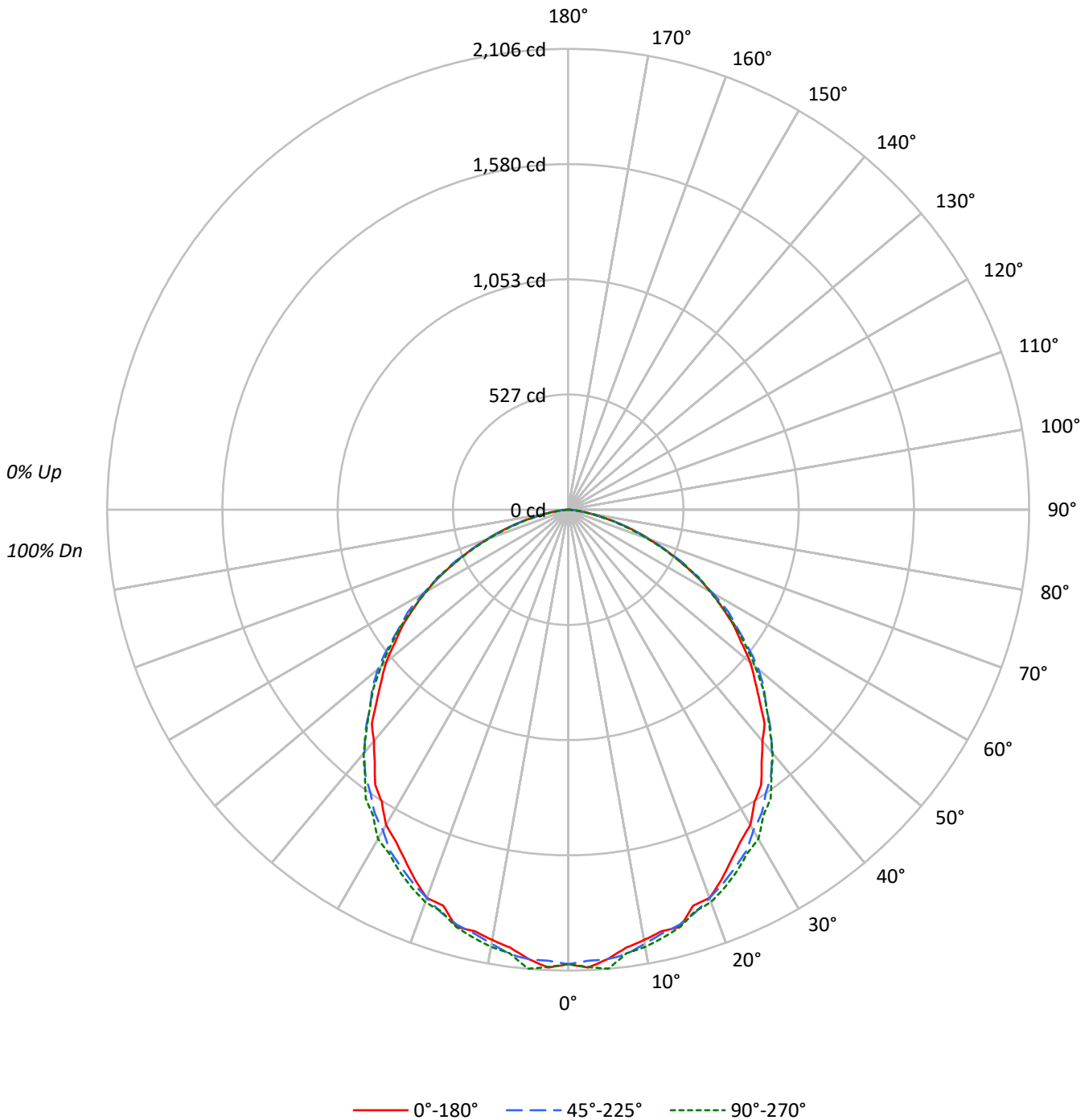
Lumens per Lamp: N/A
Luminaire Lumens: 5233.0 lumens
Efficiency: N/A
Efficacy: 111.8 lumens/watt
Spacing Criteria (0/90/45): 1.19 / 1.23 / 1.33
Luminous Opening: Rectangular (W 2' x L: 2' x H: 0')
CIE Type: Direct

Input Watts (W): 46.8
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°	5587	5587	5587
5°	5569	5571	5688
10°	5456	5504	5542
15°	5499	5469	5500
20°	5406	5406	5464
25°	5240	5355	5413
30°	5168	5259	5399
35°	5046	5178	5295
40°	4850	5083	5106
45°	4703	4870	4878
50°	4549	4754	4663
55°	4334	4419	4387
60°	4053	4094	4020
65°	3613	3706	3588
70°	3101	3111	3024
75°	2456	2450	2355
80°	1646	1599	1537
85°	895	886	827



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	195.3	3.7
10°-20°	553.5	10.6
20°-30°	829.3	15.8
30°-40°	982.9	18.8
40°-50°	984.7	18.8
50°-60°	835.9	16.0
60°-70°	563.5	10.8
70°-80°	247.6	4.7
80°-90°	40.2	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°	1578.1	30.2
0°-40°	2561.0	48.9
0°-60°	4381.6	83.7
0°-90°	5233.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	5233.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	2076	2076	2076	2076	2076	
5°	2062	2057	2062	2056	2106	194
15°	1974	1951	1963	1973	1974	550
25°	1765	1774	1803	1827	1823	816
35°	1536	1541	1576	1613	1612	954
45°	1236	1259	1280	1313	1282	956
55°	924	918	942	935	935	822
65°	568	560	582	560	564	564
75°	236	231	236	219	226	253
85°	29	28	29	28	27	42
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	2076.3	2076.3	2076.3	2076.3	2076.3
2.5°	2094.3	2078.5	2063.7	2080.9	2091.3
5°	2061.6	2056.8	2062.4	2056.2	2105.8
7.5°	2019.2	2037.7	2048.4	2041.7	2044.7
10°	1996.7	1990.3	2014.1	2030.7	2028.3
12.5°	1972.6	1982.2	1983.6	2001.5	2003.1
15°	1973.9	1951.1	1963.2	1973.4	1974.2
17.5°	1897.2	1921.9	1930.2	1953.5	1924.6
20°	1887.9	1869.9	1887.9	1911.7	1908.0
22.5°	1830.2	1810.1	1848.7	1869.9	1868.6
25°	1764.8	1774.5	1803.4	1827.0	1823.2
27.5°	1707.4	1718.7	1760.0	1792.4	1771.5
30°	1663.2	1657.6	1692.4	1721.4	1737.5
32.5°	1584.1	1604.5	1645.2	1673.9	1658.6
35°	1536.1	1540.7	1576.3	1612.8	1611.7
37.5°	1452.2	1473.4	1523.5	1533.7	1524.3
40°	1380.6	1401.8	1447.1	1458.1	1453.6
42.5°	1327.8	1331.6	1370.5	1383.1	1362.9
45°	1235.9	1258.9	1279.8	1312.8	1281.7
47.5°	1157.6	1168.3	1213.4	1222.2	1205.8
50°	1086.6	1090.3	1135.6	1124.6	1113.9
52.5°	997.3	1013.1	1038.6	1036.4	1023.8
55°	923.8	917.7	941.8	935.4	935.1
57.5°	835.6	846.3	866.2	856.0	839.6
60°	753.1	753.3	760.6	749.0	746.9
62.5°	661.1	664.3	665.9	651.7	674.8
65°	567.5	560.0	582.0	559.8	563.5
67.5°	481.5	485.2	483.1	469.1	474.5
70°	394.1	398.9	395.4	379.6	384.4
72.5°	314.2	308.3	312.1	292.2	301.3
75°	236.2	231.4	235.6	219.0	226.5
77.5°	160.9	164.6	161.9	153.1	158.2
80°	106.2	103.2	103.2	98.1	99.2
82.5°	61.9	59.0	58.2	56.6	59.0
85°	29.0	28.1	28.7	27.9	26.8
87.5°	10.5	10.7	10.7	10.2	9.7
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)