

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: P589714

Luminaire Tested: **FMR-24-2-LD4-4LO-40-UNV-93-94-EDD**

Issue Date: 12/8/2021



Test Information

Test Method: LM-79-08
Report Number: P589714
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-93-94-EDD
Description: 2X2 FMR TROFFER WITH .156 CLEAR TEMPERED GLASS FIXTURE SIDE AND .187 CLEAR TEMPERED GLASS ENVIRONMENTAL SIDE LENSES WITH, 80 CRI AND 4000K CCT LEDS
Light Source: -
Ballast/Driver: -

Summary

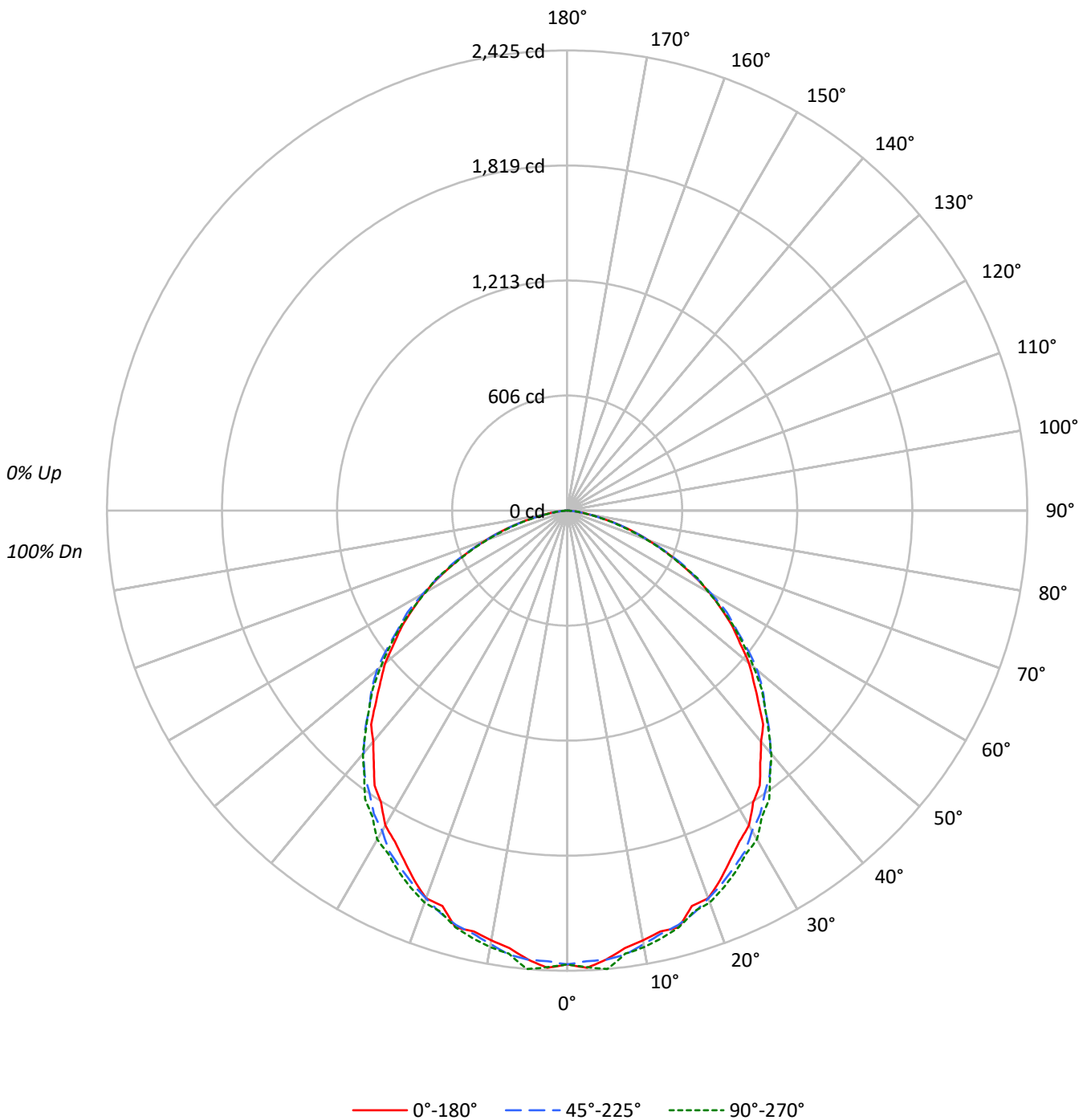
Lumens per Lamp: N/A
Luminaire Lumens: 6027.0 lumens
Efficiency: N/A
Efficacy: 128.8 lumens/watt
Spacing Criteria (0/90/45): 1.19 / 1.23 / 1.33
Luminous Opening: Rectangular (W 2' x L: 2' x H: 0')
CIE Type: Direct

Input Watts (W): 46.8
Input Voltage (V): NR
Input Current (A_{in}): 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°	6435	6435	6435
5°	6414	6416	6551
10°	6284	6339	6383
15°	6333	6299	6334
20°	6226	6226	6293
25°	6035	6167	6235
30°	5952	6057	6218
35°	5812	5964	6098
40°	5586	5855	5881
45°	5417	5609	5618
50°	5239	5475	5371
55°	4992	5089	5053
60°	4668	4715	4630
65°	4162	4268	4132
70°	3571	3583	3484
75°	2828	2822	2713
80°	1895	1843	1770
85°	1028	1019	954



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	224.9	3.7
10°-20°	637.5	10.6
20°-30°	955.1	15.8
30°-40°	1132.0	18.8
40°-50°	1134.1	18.8
50°-60°	962.7	16.0
60°-70°	649.0	10.8
70°-80°	285.2	4.7
80°-90°	46.3	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°	1817.6	30.2
0°-40°	2949.6	48.9
0°-60°	5046.4	83.7
0°-90°	6027.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	6027.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	2391	2391	2391	2391	2391	
5°	2374	2369	2375	2368	2425	224
15°	2273	2247	2261	2273	2274	633
25°	2033	2044	2077	2104	2100	940
35°	1769	1774	1816	1858	1856	1098
45°	1423	1450	1474	1512	1476	1101
55°	1064	1057	1085	1077	1077	946
65°	654	645	670	645	649	650
75°	272	266	271	252	261	292
85°	33	32	33	32	31	48
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	2391.4	2391.4	2391.4	2391.4	2391.4
2.5°	2412.0	2393.8	2376.8	2396.6	2408.7
5°	2374.4	2368.8	2375.3	2368.2	2425.3
7.5°	2325.6	2346.9	2359.3	2351.5	2354.9
10°	2299.7	2292.2	2319.7	2338.9	2336.1
12.5°	2271.9	2283.0	2284.5	2305.2	2307.1
15°	2273.4	2247.2	2261.1	2272.8	2273.7
17.5°	2185.1	2213.5	2223.1	2249.9	2216.6
20°	2174.3	2153.6	2174.3	2201.8	2197.5
22.5°	2107.9	2084.8	2129.2	2153.6	2152.1
25°	2032.6	2043.7	2077.0	2104.2	2099.9
27.5°	1966.5	1979.5	2027.0	2064.4	2040.3
30°	1915.6	1909.1	1949.2	1982.6	2001.1
32.5°	1824.5	1847.9	1894.9	1927.9	1910.3
35°	1769.2	1774.5	1815.5	1857.5	1856.3
37.5°	1672.6	1697.0	1754.7	1766.4	1755.6
40°	1590.1	1614.5	1666.7	1679.4	1674.1
42.5°	1529.3	1533.6	1578.4	1592.9	1569.7
45°	1423.4	1449.9	1474.0	1512.0	1476.2
47.5°	1333.2	1345.6	1397.5	1407.6	1388.8
50°	1251.4	1255.7	1307.9	1295.3	1282.9
52.5°	1148.6	1166.8	1196.1	1193.7	1179.2
55°	1064.0	1056.9	1084.7	1077.3	1077.0
57.5°	962.4	974.8	997.6	985.9	967.0
60°	867.3	867.6	876.0	862.7	860.2
62.5°	761.4	765.1	767.0	750.6	777.2
65°	653.6	645.0	670.3	644.7	649.0
67.5°	554.5	558.9	556.4	540.3	546.5
70°	453.9	459.4	455.4	437.2	442.8
72.5°	361.9	355.1	359.4	336.6	347.0
75°	272.0	266.5	271.4	252.3	260.9
77.5°	185.3	189.6	186.5	176.3	182.2
80°	122.3	118.9	118.9	113.0	114.2
82.5°	71.3	67.9	67.0	65.1	67.9
85°	33.3	32.4	33.0	32.1	30.9
87.5°	12.0	12.4	12.4	11.7	11.1
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)