

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: P589807

Luminaire Tested: **FMR-24-2-LD4-4STD-40-UNV-93-86-EDD**

Issue Date: 12/8/2021



Test Information

Test Method: LM-79-08
Report Number: P589807
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-LD4-4STD-40-UNV-93-86-EDD
Description: 2X2 FMR TROFFER WITH .156 CLEAR TEMPERED GLASS FIXTURE SIDE AND .250 CLEAR PC ENVIRONMENTAL SIDE LENSES WITH, 80 CRI AND 4000K CCT LEDS
Light Source: -
Ballast/Driver: -

Summary

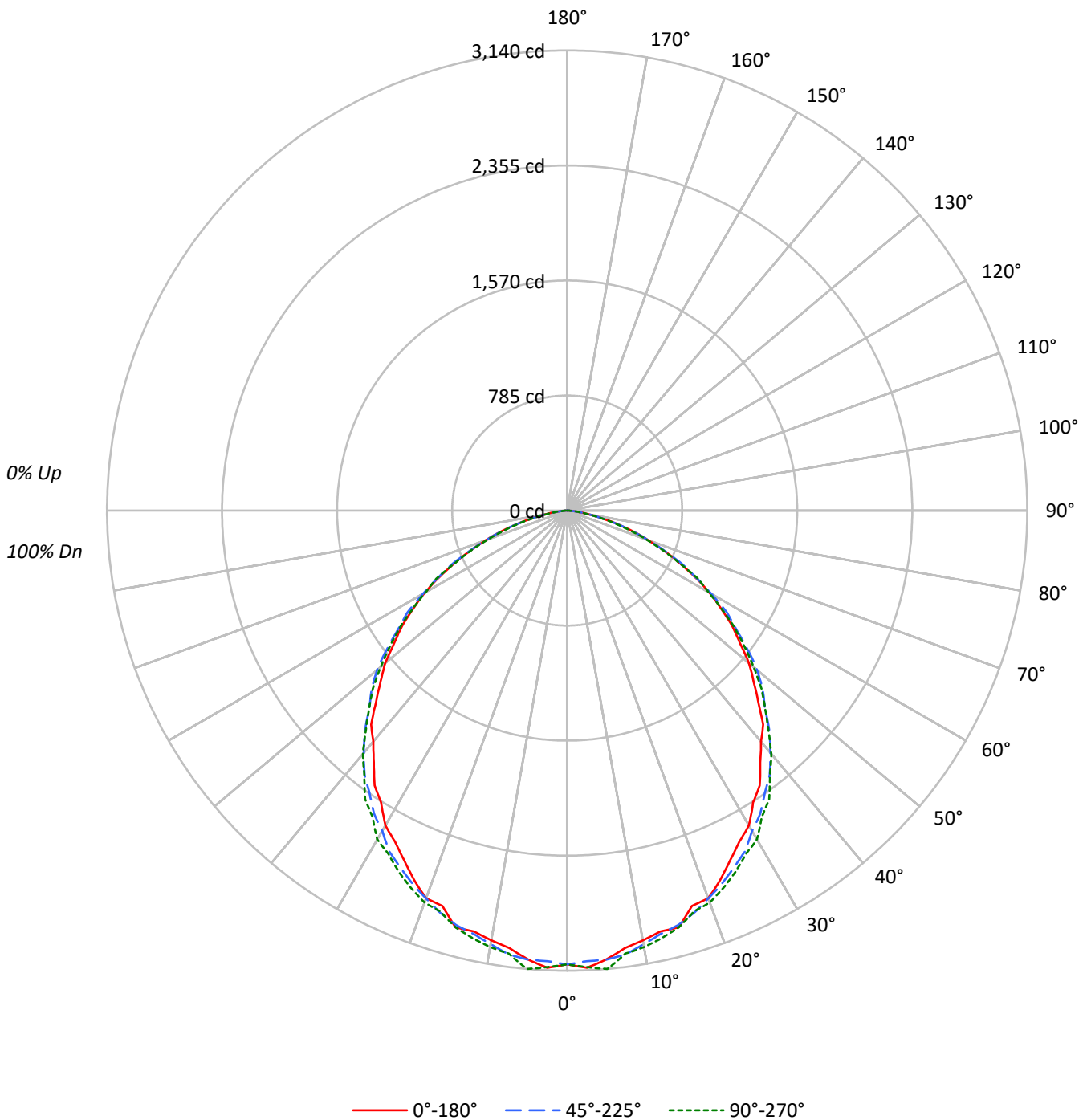
Lumens per Lamp: N/A
Luminaire Lumens: 7804.0 lumens
Efficiency: N/A
Efficacy: 117.2 lumens/watt
Spacing Criteria (0/90/45): 1.19 / 1.23 / 1.33
Luminous Opening: Rectangular (W 2' x L: 2' x H: 0')
CIE Type: Direct

Input Watts (W): 66.6
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°	8332	8332	8332
5°	8305	8308	8483
10°	8137	8208	8266
15°	8201	8156	8202
20°	8062	8062	8148
25°	7815	7985	8073
30°	7707	7842	8051
35°	7525	7723	7896
40°	7233	7581	7615
45°	7014	7263	7274
50°	6784	7090	6954
55°	6464	6589	6542
60°	6044	6104	5994
65°	5389	5527	5351
70°	4624	4640	4511
75°	3662	3654	3512
80°	2453	2385	2292
85°	1334	1321	1235



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	291.3	3.7
10°-20°	825.5	10.6
20°-30°	1236.7	15.8
30°-40°	1465.8	18.8
40°-50°	1468.5	18.8
50°-60°	1246.5	16.0
60°-70°	840.4	10.8
70°-80°	369.3	4.7
80°-90°	60.0	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°	2353.5	30.2
0°-40°	3819.3	48.9
0°-60°	6534.3	83.7
0°-90°	7804.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	7804.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	3096	3096	3096	3096	3096	
5°	3074	3067	3076	3066	3140	290
15°	2944	2910	2928	2943	2944	820
25°	2632	2646	2689	2725	2719	1217
35°	2291	2298	2351	2405	2404	1422
45°	1843	1877	1909	1958	1911	1426
55°	1378	1368	1404	1395	1394	1226
65°	846	835	868	835	840	842
75°	352	345	351	327	338	377
85°	43	42	43	42	40	63
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	3096.4	3096.4	3096.4	3096.4	3096.4
2.5°	3123.2	3099.6	3077.6	3103.2	3118.8
5°	3074.4	3067.2	3075.6	3066.4	3140.4
7.5°	3011.3	3038.9	3054.9	3044.9	3049.3
10°	2977.7	2968.1	3003.7	3028.5	3024.9
12.5°	2941.7	2956.1	2958.1	2984.9	2987.3
15°	2943.7	2909.7	2927.7	2942.9	2944.1
17.5°	2829.4	2866.1	2878.5	2913.3	2870.1
20°	2815.4	2788.6	2815.4	2851.0	2845.4
22.5°	2729.4	2699.4	2757.0	2788.6	2786.6
25°	2631.9	2646.3	2689.4	2724.6	2719.0
27.5°	2546.3	2563.1	2624.7	2673.0	2641.9
30°	2480.3	2471.9	2523.9	2567.1	2591.1
32.5°	2362.4	2392.8	2453.6	2496.3	2473.5
35°	2290.8	2297.6	2350.8	2405.2	2403.6
37.5°	2165.7	2197.3	2272.0	2287.2	2273.2
40°	2059.0	2090.5	2158.1	2174.5	2167.7
42.5°	1980.2	1985.8	2043.8	2062.6	2032.6
45°	1843.1	1877.4	1908.6	1957.8	1911.4
47.5°	1726.3	1742.3	1809.5	1822.7	1798.3
50°	1620.4	1626.0	1693.5	1677.1	1661.2
52.5°	1487.2	1510.8	1548.8	1545.6	1526.8
55°	1377.7	1368.5	1404.5	1394.9	1394.5
57.5°	1246.2	1262.2	1291.7	1276.6	1252.2
60°	1123.0	1123.4	1134.2	1117.0	1113.8
62.5°	985.9	990.7	993.1	971.9	1006.3
65°	846.4	835.2	868.0	834.8	840.4
67.5°	718.0	723.6	720.4	699.6	707.6
70°	587.7	594.9	589.7	566.1	573.3
72.5°	468.6	459.8	465.4	435.8	449.4
75°	352.2	345.0	351.4	326.6	337.8
77.5°	239.9	245.5	241.5	228.3	235.9
80°	158.3	153.9	153.9	146.3	147.9
82.5°	92.4	88.0	86.8	84.4	88.0
85°	43.2	42.0	42.8	41.6	40.0
87.5°	15.6	16.0	16.0	15.2	14.4
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)