

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: P589822

Luminaire Tested: **FMR-24-2-LD4-4STD-50-UNV-81-85-EDD**

Issue Date: 12/8/2021



Test Information

Test Method: LM-79-08
Report Number: P589822
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-50-UNV-81-85-EDD
Description: 2X2 FMR TROFFER WITH .156 CLEAR PC FIXTURE SIDE AND .187 CLEAR PC ENVIRONMENTAL SIDE LENSES WITH, 80 CRI AND 5000K CCT LEDS
Light Source: -
Ballast/Driver: -

Summary

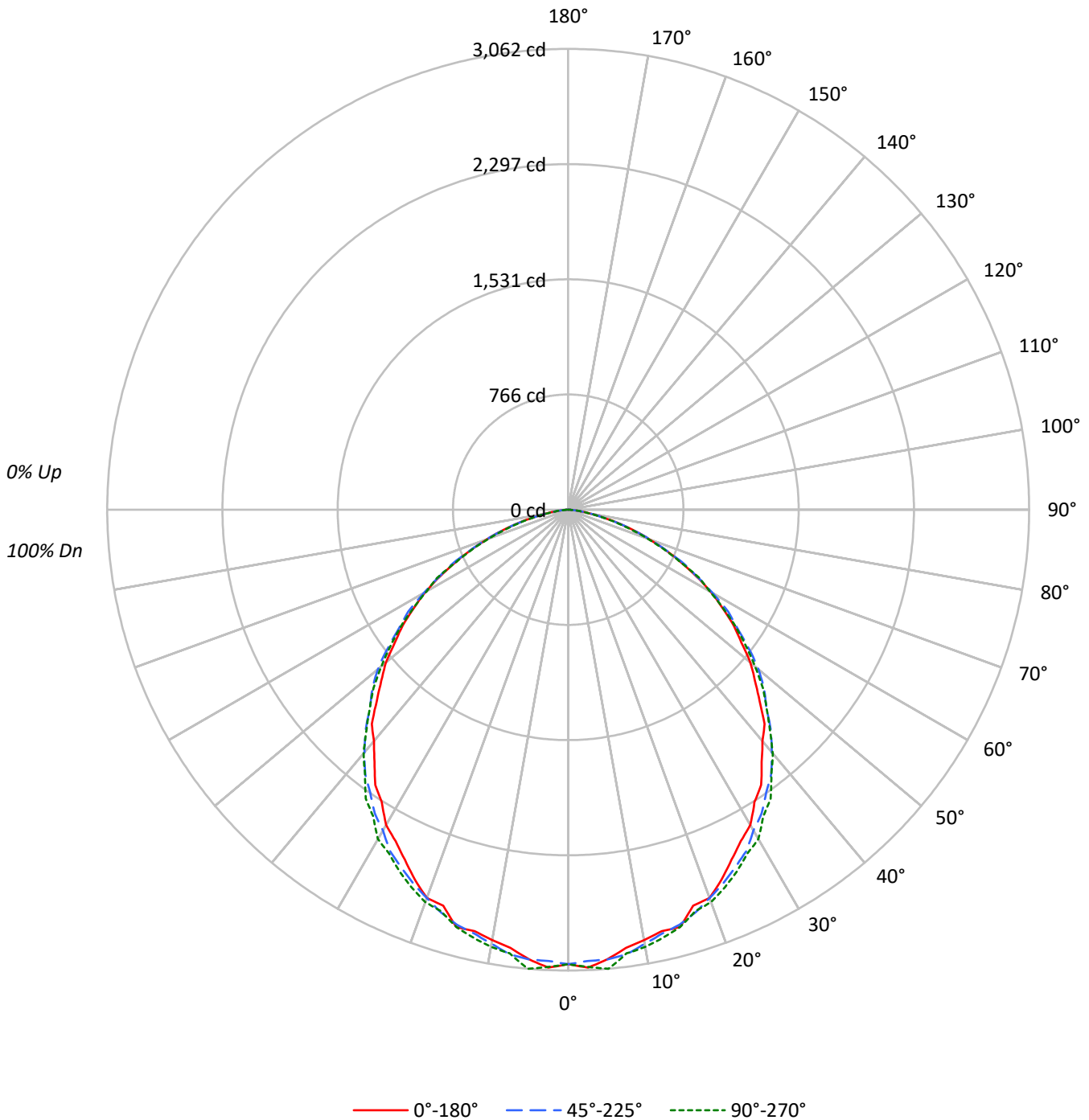
Lumens per Lamp: N/A
Luminaire Lumens: 7610.0 lumens
Efficiency: N/A
Efficacy: 114.3 lumens/watt
Spacing Criteria (0/90/45): 1.19 / 1.23 / 1.33
Luminous Opening: Rectangular (W 2' x L: 2' x H: 0')
CIE Type: Direct

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°	8125	8125	8125
5°	8098	8102	8272
10°	7934	8003	8060
15°	7997	7953	7998
20°	7862	7862	7946
25°	7620	7787	7872
30°	7516	7648	7851
35°	7339	7531	7700
40°	7053	7393	7425
45°	6839	7083	7093
50°	6615	6913	6782
55°	6303	6426	6380
60°	5894	5952	5845
65°	5255	5389	5218
70°	4509	4524	4399
75°	3571	3563	3425
80°	2393	2326	2235
85°	1300	1288	1204



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	284.0	3.7
10°-20°	805.0	10.6
20°-30°	1206.0	15.8
30°-40°	1429.4	18.8
40°-50°	1432.0	18.8
50°-60°	1215.5	16.0
60°-70°	819.5	10.8
70°-80°	360.1	4.7
80°-90°	58.5	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°	2295.0	30.2
0°-40°	3724.4	48.9
0°-60°	6371.9	83.7
0°-90°	7610.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	7610.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	3020	3020	3020	3020	3020	
5°	2998	2991	2999	2990	3062	283
15°	2870	2837	2855	2870	2871	800
25°	2566	2580	2623	2657	2651	1186
35°	2234	2240	2292	2345	2344	1387
45°	1797	1831	1861	1909	1864	1390
55°	1344	1334	1370	1360	1360	1195
65°	825	814	846	814	820	821
75°	344	336	343	318	329	368
85°	42	41	42	40	39	61
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	3019.5	3019.5	3019.5	3019.5	3019.5
2.5°	3045.6	3022.6	3001.1	3026.1	3041.3
5°	2998.0	2991.0	2999.2	2990.2	3062.3
7.5°	2936.4	2963.3	2978.9	2969.2	2973.5
10°	2903.7	2894.3	2929.0	2953.2	2949.7
12.5°	2868.6	2882.6	2884.6	2910.7	2913.0
15°	2870.5	2837.4	2854.9	2869.8	2870.9
17.5°	2759.0	2794.9	2807.0	2840.9	2798.8
20°	2745.4	2719.3	2745.4	2780.1	2774.6
22.5°	2661.6	2632.3	2688.5	2719.3	2717.3
25°	2566.4	2580.5	2622.6	2656.9	2651.4
27.5°	2483.0	2499.4	2559.4	2606.6	2576.2
30°	2418.7	2410.5	2461.2	2503.3	2526.7
32.5°	2303.7	2333.3	2392.6	2434.3	2412.1
35°	2233.9	2240.5	2292.4	2345.4	2343.8
37.5°	2111.9	2142.7	2215.6	2230.4	2216.7
40°	2007.8	2038.6	2104.5	2120.4	2113.8
42.5°	1931.0	1936.4	1993.0	2011.3	1982.0
45°	1797.2	1830.8	1861.2	1909.1	1863.9
47.5°	1683.4	1699.0	1764.5	1777.4	1753.6
50°	1580.1	1585.6	1651.4	1635.5	1619.9
52.5°	1450.3	1473.3	1510.3	1507.2	1488.9
55°	1343.5	1334.5	1369.6	1360.2	1359.8
57.5°	1215.2	1230.8	1259.6	1244.8	1221.0
60°	1095.1	1095.5	1106.0	1089.3	1086.1
62.5°	961.4	966.1	968.4	947.7	981.3
65°	825.3	814.4	846.4	814.0	819.5
67.5°	700.2	705.6	702.5	682.3	690.0
70°	573.1	580.1	575.0	552.0	559.1
72.5°	456.9	448.3	453.8	424.9	438.2
75°	343.5	336.4	342.7	318.5	329.4
77.5°	233.9	239.4	235.5	222.6	230.0
80°	154.4	150.1	150.1	142.7	144.2
82.5°	90.1	85.8	84.6	82.3	85.8
85°	42.1	40.9	41.7	40.5	39.0
87.5°	15.2	15.6	15.6	14.8	14.0
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)