

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: P546683

Luminaire Tested: **FMR-24-4-LD4-2HI-35-UNV-80-88-EDD**

Issue Date: 6/15/2021

This test was performed under the Supervised Manufacturer's Testing Program. The results of this test have not been influenced by sources from within Cooper Lighting Solutions or from external interests.



Test Information

Test Method: LM-79-08
Report Number: P546683
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-2102-135-5)
Test Lab: INNOVATION CENTER
Issue Date: 6/15/2021
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: FAIL-SAFE
Catalog Number: FMR-24-4-LD4-2HI-35-UNV-80-88-EDD
Description: 2X4 FMR TROFFER WITH .125 PRISMATIC ACRYLIC FIXTURE SIDE AND .500 CLEAR PC ENVIRONMENTAL SIDE LENSES WITH, 90 CRI AND 3500K CCT LEDS
Light Source: -
Ballast/Driver: -

Luminaire Equipment: Sample No. Condition Description

Summary

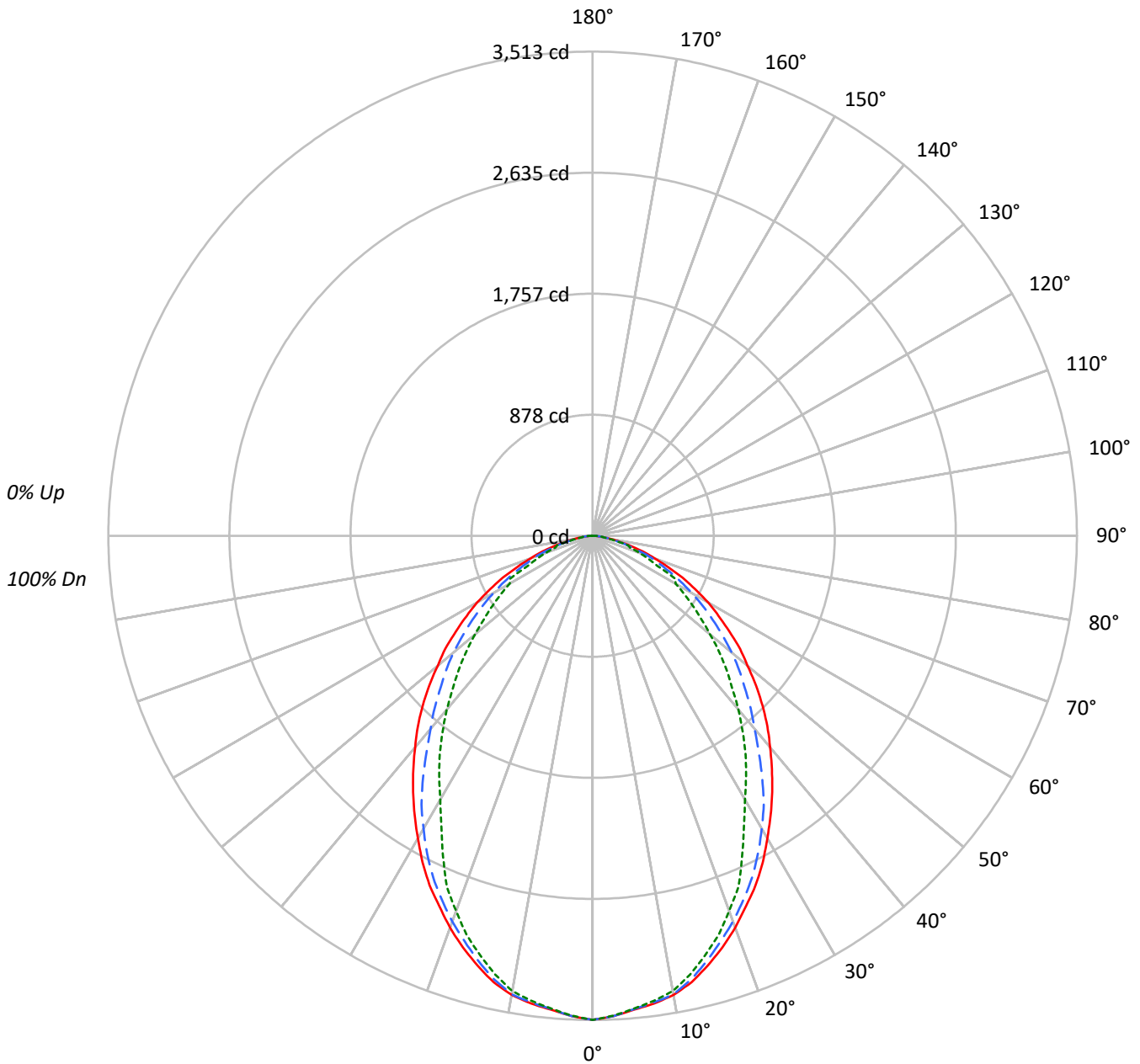
Lumens per Lamp: N/A
Luminaire Lumens: 6896.0 lumens
Efficiency: N/A
Efficacy: 79.8 lumens/watt
Spacing Criteria (0/90/45): 1.1 / 1 / 1.15
Luminous Opening: Rectangular (W 2' x L: 4' x H: 0')
CIE Type: Direct

Input Watts (W): 86.4
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									
RC	80									50									30									10									0
RW	70	50	30	10	70	50	30	10	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	106	102	99	108	104	100	97	100	97	94	96	94	91	92	90	89	87																			
2	101	94	88	83	99	92	87	82	89	84	80	86	82	78	83	79	77	75																			
3	93	84	77	71	91	82	76	70	79	74	69	77	72	68	74	70	67	65																			
4	86	75	67	61	84	74	66	61	72	65	60	69	64	59	67	62	58	56																			
5	80	68	60	54	78	67	59	53	65	58	53	63	57	52	61	56	52	50																			
6	74	62	53	48	72	61	53	47	59	52	47	57	51	47	56	50	46	44																			
7	69	56	48	43	67	56	48	42	54	47	42	53	46	42	51	46	42	40																			
8	65	52	44	38	63	51	44	38	50	43	38	49	42	38	48	42	38	36																			
9	61	48	40	35	59	47	40	35	46	39	35	45	39	34	44	38	34	33																			
10	57	44	37	32	56	44	37	32	43	36	32	42	36	32	41	36	32	30																			

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	4726	4726	4726
5°	4662	4657	4651
10°	4622	4616	4583
15°	4497	4452	4390
20°	4332	4262	4146
25°	4154	4063	3810
30°	3937	3811	3432
35°	3729	3522	3175
40°	3517	3210	2889
45°	3315	2967	2612
50°	3069	2754	2329
55°	2839	2496	2086
60°	2601	2229	1869
65°	2288	1952	1655
70°	1885	1709	1406
75°	1499	1309	1372
80°	1007	944	881
85°	627	752	878



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	327.0	4.7
10°-20°	897.4	13.0
20°-30°	1242.4	18.0
30°-40°	1324.7	19.2
40°-50°	1208.6	17.5
50°-60°	946.8	13.7
60°-70°	617.1	8.9
70°-80°	273.4	4.0
80°-90°	58.7	0.9
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°	2466.8	35.8
0°-40°	3791.5	55.0
0°-60°	5946.8	86.2
0°-90°	6896.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	6896.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	3513	3513	3513	3513	3513	
5°	3452	3448	3448	3444	3444	328
15°	3228	3228	3196	3164	3151	908
25°	2798	2782	2737	2640	2566	1285
35°	2270	2254	2144	1982	1933	1419
45°	1742	1706	1559	1430	1373	1342
55°	1210	1174	1064	938	889	1085
65°	719	678	613	625	520	708
75°	288	268	252	240	264	309
85°	41	45	49	53	57	56
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	3512.7	3512.7	3512.7	3512.7	3512.7
2.5°	3488.4	3488.4	3488.4	3484.3	3484.3
5°	3451.8	3447.8	3447.8	3443.7	3443.7
7.5°	3423.4	3419.3	3415.3	3411.2	3403.1
10°	3382.8	3382.8	3378.7	3358.4	3354.4
12.5°	3317.8	3313.7	3297.5	3269.1	3261.0
15°	3228.5	3228.5	3196.0	3163.5	3151.3
17.5°	3131.0	3126.9	3086.3	3053.8	3037.6
20°	3025.4	3017.3	2976.7	2923.9	2895.5
22.5°	2907.6	2907.6	2858.9	2789.9	2761.5
25°	2798.0	2781.8	2737.1	2639.6	2566.5
27.5°	2672.1	2647.7	2599.0	2460.9	2375.7
30°	2534.0	2521.9	2452.8	2274.1	2209.2
32.5°	2404.1	2383.8	2310.7	2123.9	2071.1
35°	2270.1	2253.8	2144.2	1981.7	1933.0
37.5°	2136.1	2115.8	1977.7	1847.7	1786.8
40°	2002.1	1977.7	1827.4	1709.7	1644.7
42.5°	1876.2	1843.7	1697.5	1571.6	1498.5
45°	1742.2	1705.6	1559.4	1429.5	1372.6
47.5°	1608.1	1575.7	1441.6	1307.6	1242.7
50°	1466.0	1437.6	1315.8	1181.7	1112.7
52.5°	1348.2	1303.6	1185.8	1051.8	994.9
55°	1210.2	1173.6	1064.0	938.1	889.4
57.5°	1084.3	1047.7	946.2	828.4	787.8
60°	966.5	913.7	828.4	726.9	694.4
62.5°	836.6	795.9	722.9	637.6	678.2
65°	718.8	678.2	613.2	625.4	519.8
67.5°	588.8	568.5	511.7	454.8	438.6
70°	479.2	454.8	434.5	373.6	357.4
72.5°	381.7	357.4	328.9	296.5	284.3
75°	288.3	268.0	251.8	239.6	264.0
77.5°	199.0	190.9	178.7	166.5	162.4
80°	130.0	125.9	121.8	117.8	113.7
82.5°	77.2	77.2	77.2	77.2	77.2
85°	40.6	44.7	48.7	52.8	56.9
87.5°	24.4	24.4	28.4	32.5	36.5
90°	0.0	0.0	0.0	0.0	0.0



Report Generated By 670246072 / DESKTOP-MV3F9LC





— 0°-180° - - 45°-225° - - - - 90°-270°







(END OF REPORT)