

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: P546814

Luminaire Tested: **FMR-24-4-LD4-2LO-40-UNV-80-97-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: P546814
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-LD4-2LO-40-UNV-80-97-EDD
Description: 2X4 FMR TROFFER WITH .125 PRISMATIC ACRYLIC FIXTURE SIDE AND .375 CLEAR TEMPERED GLASS ENVIRONMENTAL SIDE LENSES WITH, 90 CRI AND 4000K CCT LEDS
Light Source: -
Ballast/Driver: -

Luminaire Equipment: Sample No. Condition Description

Summary

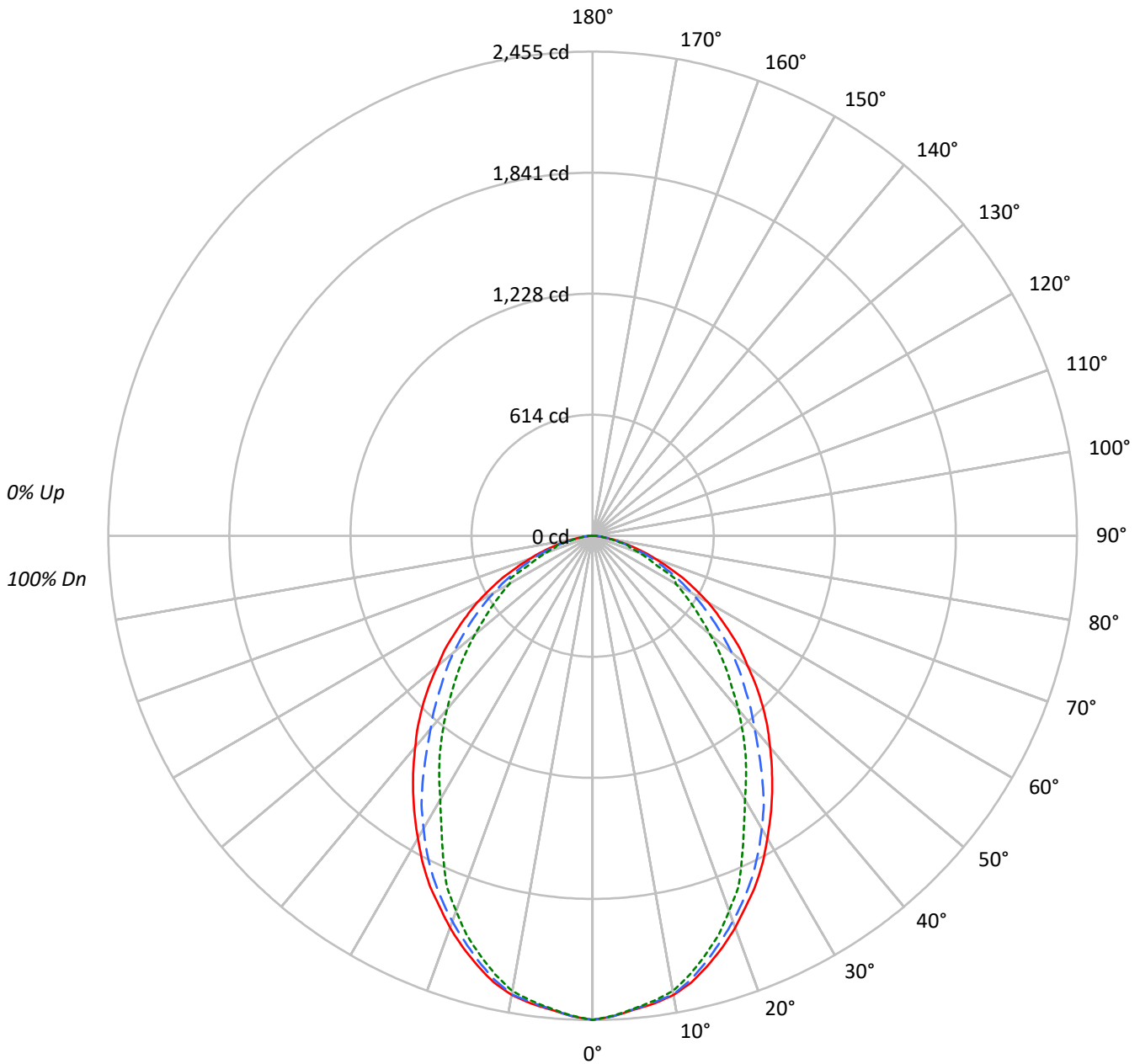
Lumens per Lamp: N/A
Luminaire Lumens: 4819.0 lumens
Efficiency: N/A
Efficacy: 103.0 lumens/watt
Spacing Criteria (0/90/45): 1.1 / 1 / 1.15
Luminous Opening: Rectangular (W 2' x L: 4' x H: 0')
CIE Type: Direct

Input Watts (W): 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									
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°	3303	3303	3303
5°	3258	3254	3250
10°	3230	3226	3203
15°	3143	3111	3068
20°	3027	2978	2897
25°	2903	2840	2663
30°	2751	2663	2399
35°	2606	2461	2219
40°	2457	2243	2019
45°	2316	2073	1825
50°	2144	1925	1628
55°	1984	1744	1458
60°	1817	1558	1306
65°	1599	1364	1156
70°	1317	1194	982
75°	1048	914	959
80°	704	659	616
85°	438	526	613



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	228.5	4.7
10°-20°	627.1	13.0
20°-30°	868.2	18.0
30°-40°	925.7	19.2
40°-50°	844.5	17.5
50°-60°	661.6	13.7
60°-70°	431.2	8.9
70°-80°	191.1	4.0
80°-90°	41.0	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°	1723.8	35.8
0°-40°	2649.5	55.0
0°-60°	4155.7	86.2
0°-90°	4819.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	4819.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	2455	2455	2455	2455	2455	
5°	2412	2409	2409	2406	2406	229
15°	2256	2256	2233	2211	2202	634
25°	1955	1944	1913	1845	1794	898
35°	1586	1575	1498	1385	1351	992
45°	1217	1192	1090	999	959	938
55°	846	820	744	656	622	759
65°	502	474	428	437	363	495
75°	202	187	176	167	184	216
85°	28	31	34	37	40	39
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	2454.7	2454.7	2454.7	2454.7	2454.7
2.5°	2437.7	2437.7	2437.7	2434.9	2434.9
5°	2412.2	2409.3	2409.3	2406.5	2406.5
7.5°	2392.3	2389.5	2386.6	2383.8	2378.1
10°	2363.9	2363.9	2361.1	2346.9	2344.1
12.5°	2318.5	2315.7	2304.3	2284.5	2278.8
15°	2256.1	2256.1	2233.4	2210.7	2202.2
17.5°	2188.0	2185.1	2156.8	2134.1	2122.7
20°	2114.2	2108.5	2080.1	2043.2	2023.4
22.5°	2031.9	2031.9	1997.8	1949.6	1929.7
25°	1955.3	1943.9	1912.7	1844.6	1793.5
27.5°	1867.3	1850.3	1816.2	1719.7	1660.1
30°	1770.8	1762.3	1714.1	1589.2	1543.8
32.5°	1680.0	1665.8	1614.7	1484.2	1447.3
35°	1586.4	1575.0	1498.4	1384.9	1350.8
37.5°	1492.7	1478.5	1382.0	1291.2	1248.7
40°	1399.1	1382.0	1277.0	1194.7	1149.3
42.5°	1311.1	1288.4	1186.2	1098.2	1047.2
45°	1217.4	1191.9	1089.7	998.9	959.2
47.5°	1123.8	1101.1	1007.4	913.8	868.4
50°	1024.5	1004.6	919.5	825.8	777.6
52.5°	942.2	910.9	828.7	735.0	695.3
55°	845.7	820.1	743.5	655.5	621.5
57.5°	757.7	732.2	661.2	578.9	550.5
60°	675.4	638.5	578.9	508.0	485.3
62.5°	584.6	556.2	505.1	445.5	473.9
65°	502.3	473.9	428.5	437.0	363.2
67.5°	411.5	397.3	357.6	317.8	306.5
70°	334.9	317.8	303.6	261.1	249.7
72.5°	266.8	249.7	229.9	207.2	198.6
75°	201.5	187.3	175.9	167.4	184.5
77.5°	139.1	133.4	124.9	116.4	113.5
80°	90.8	88.0	85.1	82.3	79.5
82.5°	53.9	53.9	53.9	53.9	53.9
85°	28.4	31.2	34.1	36.9	39.7
87.5°	17.0	17.0	19.9	22.7	25.5
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)