

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: P546854

Luminaire Tested: **FMR-24-4-LD4-2LO-50-UNV-81-97-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: P546854
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-50-UNV-81-97-EDD
Description: 2X4 FMR TROFFER WITH .156 CLEAR PC FIXTURE SIDE AND .375 CLEAR
TEMPERED GLASS ENVIRONMENTAL SIDE LENSES WITH, 90 CRI AND 5000K CCT LEDS
Light Source: -
Ballast/Driver: -

Luminaire Equipment: Sample No. Condition Description

Summary

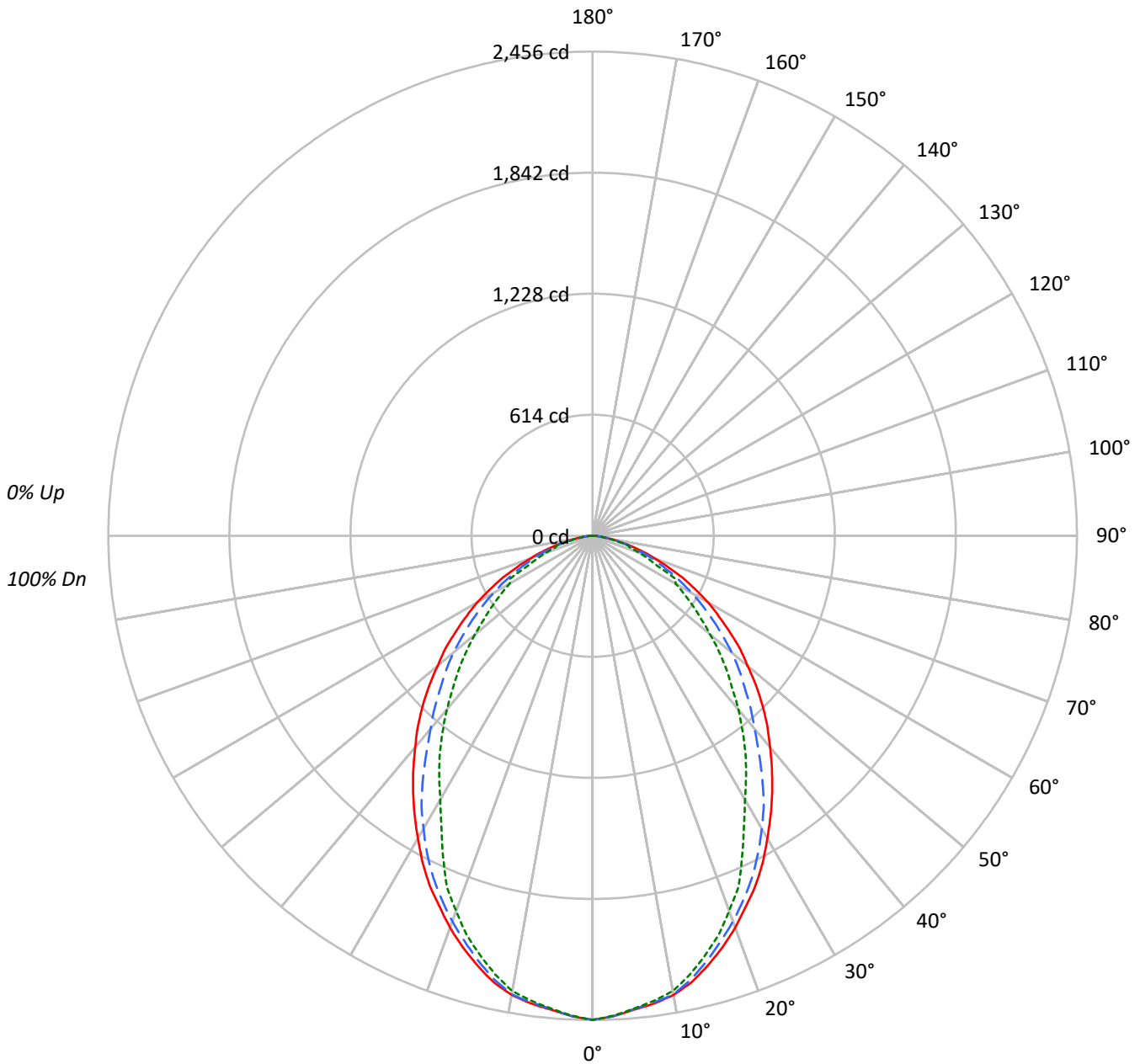
Lumens per Lamp: N/A
Luminaire Lumens: 4821.0 lumens
Efficiency: N/A
Efficacy: 103.0 lumens/watt
Spacing Criteria (0/90/45): 1.1 / 1 / 1.15
Luminous Opening: Rectangular (W 2' x L: 4' x H: 0')
CIE Type: Direct

Input Watts (W): 46.8
Input Voltage (V): NR
Input Current (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

TEST NUMBER: P546854

CATALOG NUMBER: FMR-24-4-LD4-2LO-50-UNV-81-97-EDD

Luminous Intensity Polar Plot





TEST NUMBER: P546854

CATALOG NUMBER: FMR-24-4-LD4-2LO-50-UNV-81-97-EDD

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°	3304	3304	3304
5°	3259	3255	3252
10°	3231	3227	3204
15°	3144	3112	3069
20°	3028	2980	2898
25°	2904	2841	2664
30°	2752	2664	2399
35°	2607	2462	2220
40°	2458	2244	2020
45°	2317	2074	1826
50°	2145	1925	1628
55°	1985	1745	1458
60°	1818	1559	1306
65°	1600	1365	1157
70°	1318	1195	983
75°	1048	915	959
80°	704	660	616
85°	438	526	613



TEST NUMBER: P546854

CATALOG NUMBER: FMR-24-4-LD4-2LO-50-UNV-81-97-EDD

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	228.6	4.7
10°-20°	627.4	13.0
20°-30°	868.5	18.0
30°-40°	926.1	19.2
40°-50°	844.9	17.5
50°-60°	661.9	13.7
60°-70°	431.4	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°	1724.5	35.8
0°-40°	2650.6	55.0
0°-60°	4157.4	86.2
0°-90°	4821.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	4821.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	2456	2456	2456	2456	2456	
5°	2413	2410	2410	2408	2408	229
15°	2257	2257	2234	2212	2203	635
25°	1956	1945	1914	1845	1794	898
35°	1587	1576	1499	1385	1351	992
45°	1218	1192	1090	999	960	938
55°	846	820	744	656	622	759
65°	502	474	429	437	363	495
75°	202	187	176	168	184	216
85°	28	31	34	37	40	39
90°	0	0	0	0	0	



TEST NUMBER: P546854

CATALOG NUMBER: FMR-24-4-LD4-2LO-50-UNV-81-97-EDD

CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	2455.8	2455.8	2455.8	2455.8	2455.8
2.5°	2438.7	2438.7	2438.7	2435.9	2435.9
5°	2413.2	2410.3	2410.3	2407.5	2407.5
7.5°	2393.3	2390.5	2387.6	2384.8	2379.1
10°	2364.9	2364.9	2362.1	2347.9	2345.0
12.5°	2319.5	2316.6	2305.3	2285.4	2279.7
15°	2257.0	2257.0	2234.3	2211.6	2203.1
17.5°	2188.9	2186.0	2157.7	2134.9	2123.6
20°	2115.1	2109.4	2081.0	2044.1	2024.2
22.5°	2032.7	2032.7	1998.7	1950.4	1930.5
25°	1956.1	1944.7	1913.5	1845.4	1794.3
27.5°	1868.1	1851.0	1817.0	1720.4	1660.8
30°	1771.5	1763.0	1714.8	1589.9	1544.4
32.5°	1680.7	1666.5	1615.4	1484.8	1447.9
35°	1587.0	1575.7	1499.0	1385.4	1351.4
37.5°	1493.3	1479.1	1382.6	1291.8	1249.2
40°	1399.6	1382.6	1277.6	1195.2	1149.8
42.5°	1311.6	1288.9	1186.7	1098.7	1047.6
45°	1217.9	1192.4	1090.2	999.3	959.6
47.5°	1124.3	1101.5	1007.9	914.2	868.7
50°	1024.9	1005.0	919.8	826.2	777.9
52.5°	942.6	911.3	829.0	735.3	695.6
55°	846.0	820.5	743.8	655.8	621.7
57.5°	758.0	732.5	661.5	579.2	550.8
60°	675.7	638.8	579.2	508.2	485.5
62.5°	584.8	556.4	505.3	445.7	474.1
65°	502.5	474.1	428.7	437.2	363.4
67.5°	411.7	397.5	357.7	318.0	306.6
70°	335.0	318.0	303.8	261.2	249.8
72.5°	266.9	249.8	230.0	207.2	198.7
75°	201.6	187.4	176.0	167.5	184.5
77.5°	139.1	133.4	124.9	116.4	113.6
80°	90.8	88.0	85.2	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	25.6
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)