

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: P547158

Luminaire Tested: **FMR-24-4-LD4-3LO-50-UNV-93-97-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: P547158
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-LD4-3LO-50-UNV-93-97-EDD
Description: 2X4 FMR TROFFER WITH .156 CLEAR TEMPERED GLASS 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

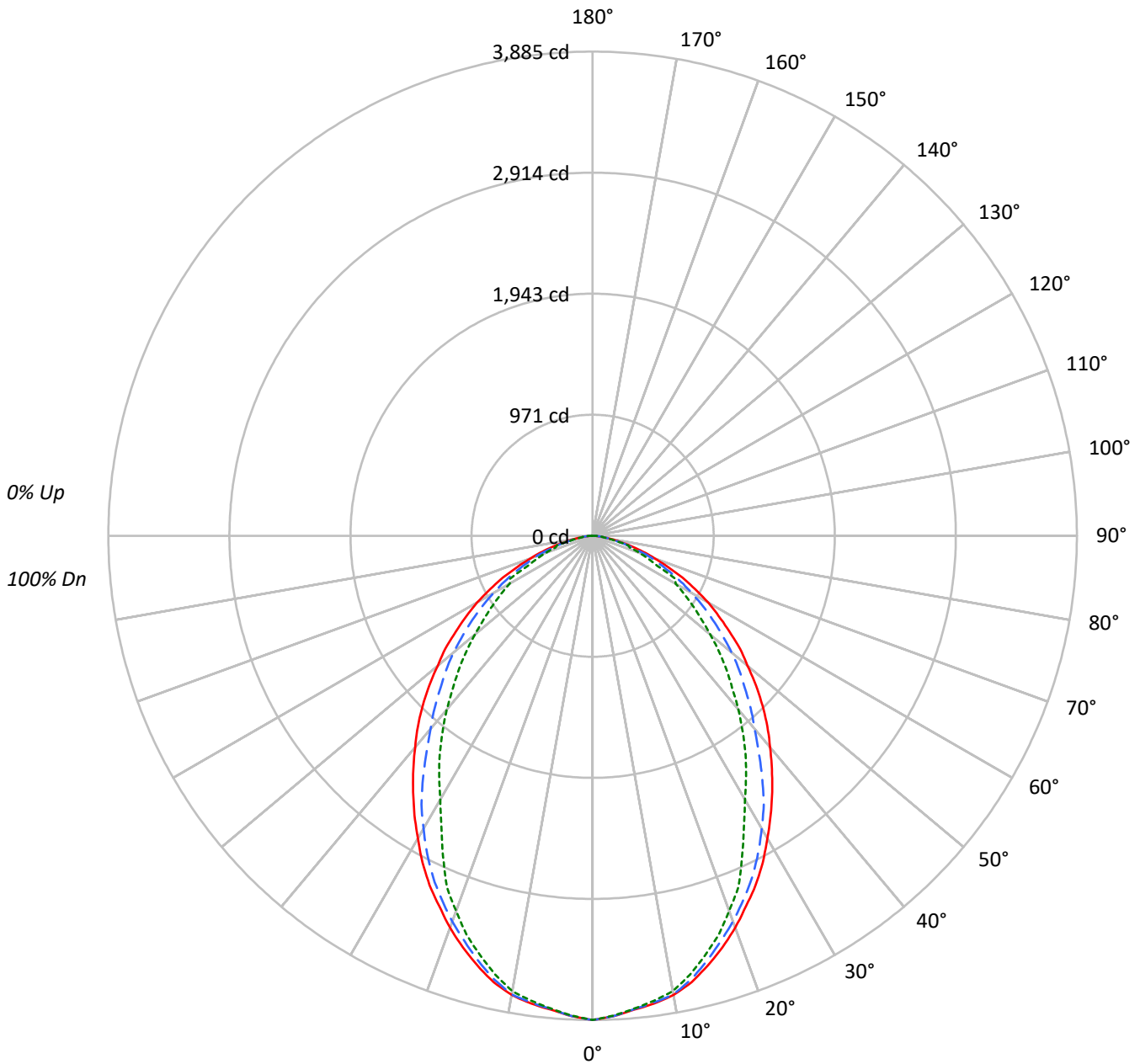
Lumens per Lamp: N/A
Luminaire Lumens: 7627.0 lumens
Efficiency: N/A
Efficacy: 108.6 lumens/watt
Spacing Criteria (0/90/45): 1.1 / 1 / 1.15
Luminous Opening: Rectangular (W 2' x L: 4' x H: 0')
CIE Type: Direct

Input Watts (W): 70.2
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: P547158

CATALOG NUMBER: FMR-24-4-LD4-3LO-50-UNV-93-97-EDD

Luminous Intensity Polar Plot





TEST NUMBER: P547158

CATALOG NUMBER: FMR-24-4-LD4-3LO-50-UNV-93-97-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°	5227	5227	5227
5°	5156	5150	5144
10°	5112	5106	5069
15°	4974	4924	4855
20°	4791	4714	4585
25°	4594	4494	4214
30°	4354	4215	3796
35°	4124	3895	3512
40°	3889	3550	3195
45°	3666	3282	2889
50°	3394	3046	2576
55°	3140	2761	2307
60°	2877	2466	2067
65°	2531	2159	1830
70°	2085	1891	1555
75°	1658	1448	1517
80°	1113	1044	975
85°	693	832	971



TEST NUMBER: P547158

CATALOG NUMBER: FMR-24-4-LD4-3LO-50-UNV-93-97-EDD

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	361.6	4.7
10°-20°	992.5	13.0
20°-30°	1374.1	18.0
30°-40°	1465.2	19.2
40°-50°	1336.7	17.5
50°-60°	1047.2	13.7
60°-70°	682.5	8.9
70°-80°	302.4	4.0
80°-90°	64.9	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°	2728.2	35.8
0°-40°	4193.4	55.0
0°-60°	6577.2	86.2
0°-90°	7627.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	7627.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	3885	3885	3885	3885	3885	
5°	3818	3813	3813	3809	3809	362
15°	3571	3571	3535	3499	3485	1004
25°	3095	3077	3027	2919	2839	1421
35°	2511	2493	2372	2192	2138	1570
45°	1927	1886	1725	1581	1518	1484
55°	1338	1298	1177	1038	984	1200
65°	795	750	678	692	575	783
75°	319	296	278	265	292	342
85°	45	49	54	58	63	62
90°	0	0	0	0	0	



TEST NUMBER: P547158

CATALOG NUMBER: FMR-24-4-LD4-3LO-50-UNV-93-97-EDD

CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	3885.1	3885.1	3885.1	3885.1	3885.1
2.5°	3858.1	3858.1	3858.1	3853.7	3853.7
5°	3817.7	3813.2	3813.2	3808.7	3808.7
7.5°	3786.3	3781.8	3777.3	3772.8	3763.8
10°	3741.4	3741.4	3736.9	3714.4	3709.9
12.5°	3669.5	3665.0	3647.0	3615.6	3606.6
15°	3570.7	3570.7	3534.8	3498.8	3485.4
17.5°	3462.9	3458.4	3413.5	3377.6	3359.6
20°	3346.1	3337.1	3292.2	3233.8	3202.4
22.5°	3215.9	3215.9	3162.0	3085.6	3054.2
25°	3094.6	3076.6	3027.2	2919.4	2838.6
27.5°	2955.4	2928.4	2874.5	2721.8	2627.5
30°	2802.7	2789.2	2712.8	2515.2	2443.3
32.5°	2658.9	2636.5	2555.6	2349.0	2290.6
35°	2510.7	2492.7	2371.5	2191.8	2137.9
37.5°	2362.5	2340.0	2187.3	2043.6	1976.2
40°	2214.3	2187.3	2021.1	1890.9	1819.0
42.5°	2075.0	2039.1	1877.4	1738.2	1657.3
45°	1926.8	1886.4	1724.7	1581.0	1518.1
47.5°	1778.6	1742.7	1594.5	1446.2	1374.4
50°	1621.4	1590.0	1455.2	1307.0	1230.7
52.5°	1491.2	1441.8	1311.5	1163.3	1100.4
55°	1338.4	1298.0	1176.8	1037.5	983.6
57.5°	1199.2	1158.8	1046.5	916.3	871.3
60°	1069.0	1010.6	916.3	804.0	768.0
62.5°	925.2	880.3	799.5	705.2	750.1
65°	795.0	750.1	678.2	691.7	574.9
67.5°	651.3	628.8	565.9	503.0	485.1
70°	530.0	503.0	480.6	413.2	395.2
72.5°	422.2	395.2	363.8	327.9	314.4
75°	318.9	296.4	278.5	265.0	291.9
77.5°	220.1	211.1	197.6	184.1	179.7
80°	143.7	139.2	134.7	130.3	125.8
82.5°	85.3	85.3	85.3	85.3	85.3
85°	44.9	49.4	53.9	58.4	62.9
87.5°	26.9	26.9	31.4	35.9	40.4
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)