

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: P547112

Luminaire Tested: **FMR-24-4-LD4-3LO-40-UNV-82-85-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: P547112
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-40-UNV-82-85-EDD
Description: 2X4 FMR TROFFER WITH .187 CLEAR PC FIXTURE SIDE AND .187 CLEAR PC ENVIRONMENTAL SIDE LENSES WITH, 90 CRI AND 4000K CCT LEDS
Light Source: -
Ballast/Driver: -

Luminaire Equipment: Sample No. Condition Description

Summary

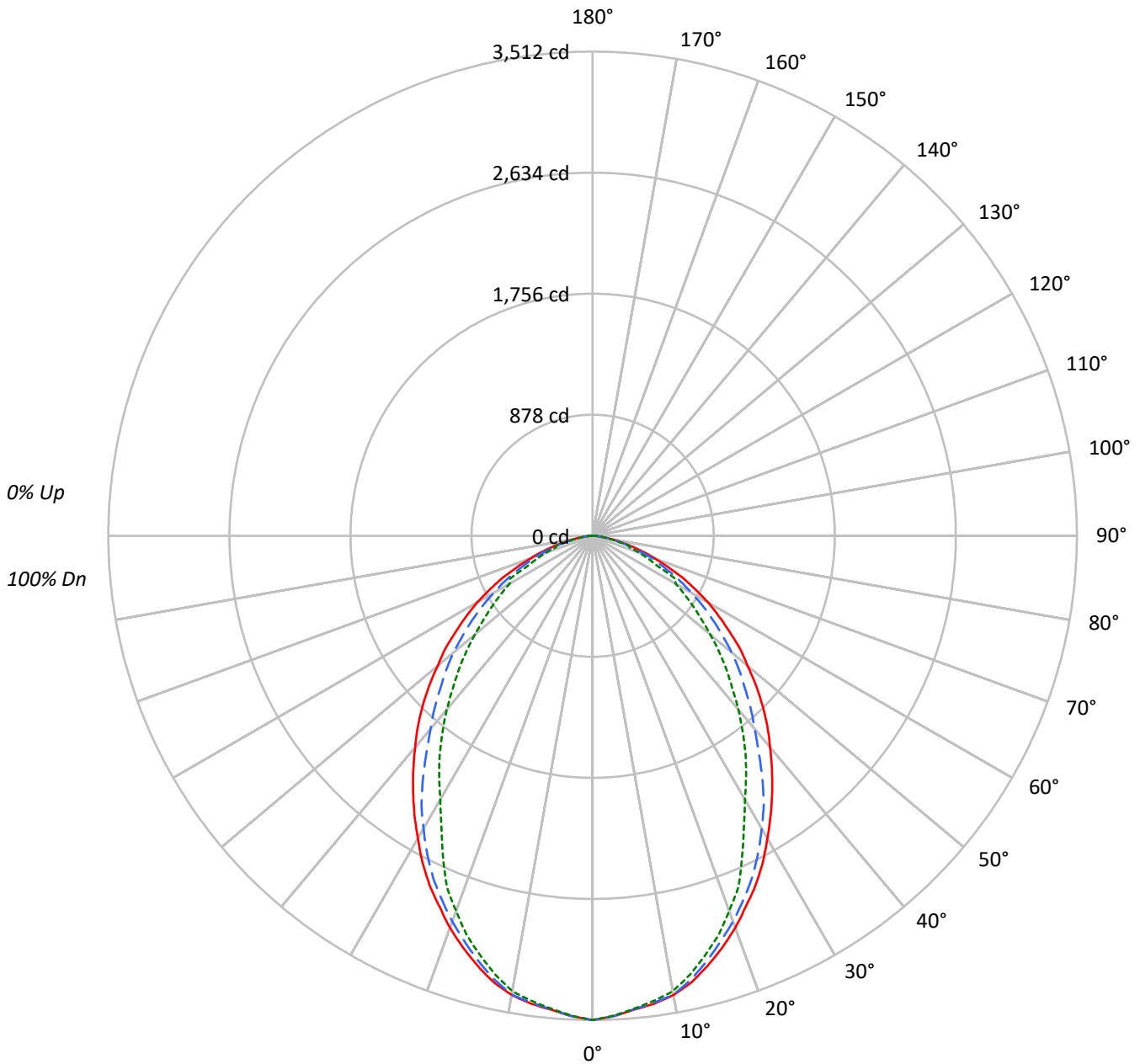
Lumens per Lamp: N/A
Luminaire Lumens: 6895.0 lumens
Efficiency: N/A
Efficacy: 98.2 lumens/watt
Spacing Criteria (0/90/45): 1.1 / 1 / 1.15
Luminous Opening: Rectangular (W 2' x L: 4' x H: 0')
CIE Type: Direct

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: P547112

CATALOG NUMBER: FMR-24-4-LD4-3LO-40-UNV-82-85-EDD

Luminous Intensity Polar Plot





TEST NUMBER: P547112

CATALOG NUMBER: FMR-24-4-LD4-3LO-40-UNV-82-85-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°	4726	4726	4726
5°	4661	4656	4650
10°	4621	4615	4582
15°	4496	4451	4389
20°	4331	4262	4145
25°	4153	4063	3810
30°	3936	3810	3432
35°	3728	3521	3175
40°	3516	3209	2888
45°	3315	2967	2611
50°	3068	2754	2329
55°	2838	2495	2086
60°	2601	2229	1868
65°	2288	1952	1655
70°	1885	1709	1406
75°	1499	1308	1372
80°	1007	944	881
85°	627	752	877



TEST NUMBER: P547112

CATALOG NUMBER: FMR-24-4-LD4-3LO-40-UNV-82-85-EDD

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	326.9	4.7
10°-20°	897.3	13.0
20°-30°	1242.2	18.0
30°-40°	1324.6	19.2
40°-50°	1208.4	17.5
50°-60°	946.7	13.7
60°-70°	617.0	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°	2466.4	35.8
0°-40°	3791.0	55.0
0°-60°	5946.0	86.2
0°-90°	6895.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	6895.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	3512	3512	3512	3512	3512	
5°	3451	3447	3447	3443	3443	328
15°	3228	3228	3196	3163	3151	907
25°	2798	2781	2737	2639	2566	1284
35°	2270	2254	2144	1982	1933	1419
45°	1742	1705	1559	1429	1372	1342
55°	1210	1173	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	



TEST NUMBER: P547112

CATALOG NUMBER: FMR-24-4-LD4-3LO-40-UNV-82-85-EDD

CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	3512.2	3512.2	3512.2	3512.2	3512.2
2.5°	3487.9	3487.9	3487.9	3483.8	3483.8
5°	3451.3	3447.3	3447.3	3443.2	3443.2
7.5°	3422.9	3418.8	3414.8	3410.7	3402.6
10°	3382.3	3382.3	3378.2	3357.9	3353.9
12.5°	3317.3	3313.3	3297.0	3268.6	3260.5
15°	3228.0	3228.0	3195.5	3163.0	3150.8
17.5°	3130.5	3126.5	3085.9	3053.4	3037.2
20°	3025.0	3016.9	2976.3	2923.5	2895.0
22.5°	2907.2	2907.2	2858.5	2789.5	2761.1
25°	2797.6	2781.4	2736.7	2639.2	2566.2
27.5°	2671.7	2647.4	2598.6	2460.6	2375.3
30°	2533.7	2521.5	2452.5	2273.8	2208.8
32.5°	2403.7	2383.4	2310.4	2123.6	2070.8
35°	2269.7	2253.5	2143.9	1981.5	1932.7
37.5°	2135.8	2115.5	1977.4	1847.5	1786.6
40°	2001.8	1977.4	1827.2	1709.4	1644.5
42.5°	1875.9	1843.4	1697.2	1571.4	1498.3
45°	1741.9	1705.4	1559.2	1429.3	1372.4
47.5°	1607.9	1575.4	1441.4	1307.4	1242.5
50°	1465.8	1437.4	1315.6	1181.6	1112.5
52.5°	1348.0	1303.4	1185.6	1051.6	994.8
55°	1210.0	1173.4	1063.8	937.9	889.2
57.5°	1084.1	1047.6	946.1	828.3	787.7
60°	966.4	913.6	828.3	726.8	694.3
62.5°	836.4	795.8	722.7	637.5	678.1
65°	718.7	678.1	613.1	625.3	519.7
67.5°	588.8	568.5	511.6	454.8	438.5
70°	479.1	454.8	434.5	373.6	357.3
72.5°	381.7	357.3	328.9	296.4	284.2
75°	288.3	268.0	251.7	239.6	263.9
77.5°	199.0	190.8	178.7	166.5	162.4
80°	129.9	125.9	121.8	117.8	113.7
82.5°	77.1	77.1	77.1	77.1	77.1
85°	40.6	44.7	48.7	52.8	56.8
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)