

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: P546895

Luminaire Tested: **FMR-24-4-LD4-2STD-35-UNV-93-84-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: P546895
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-LD4-2STD-35-UNV-93-84-EDD
Description: 2X4 FMR TROFFER WITH .156 CLEAR TEMPERED GLASS FIXTURE SIDE AND .125 CLEAR PC ENVIRONMENTAL SIDE LENSES WITH, 90 CRI AND 3500K CCT LEDS
Light Source: -
Ballast/Driver: -

Luminaire Equipment: Sample No. Condition Description

Summary

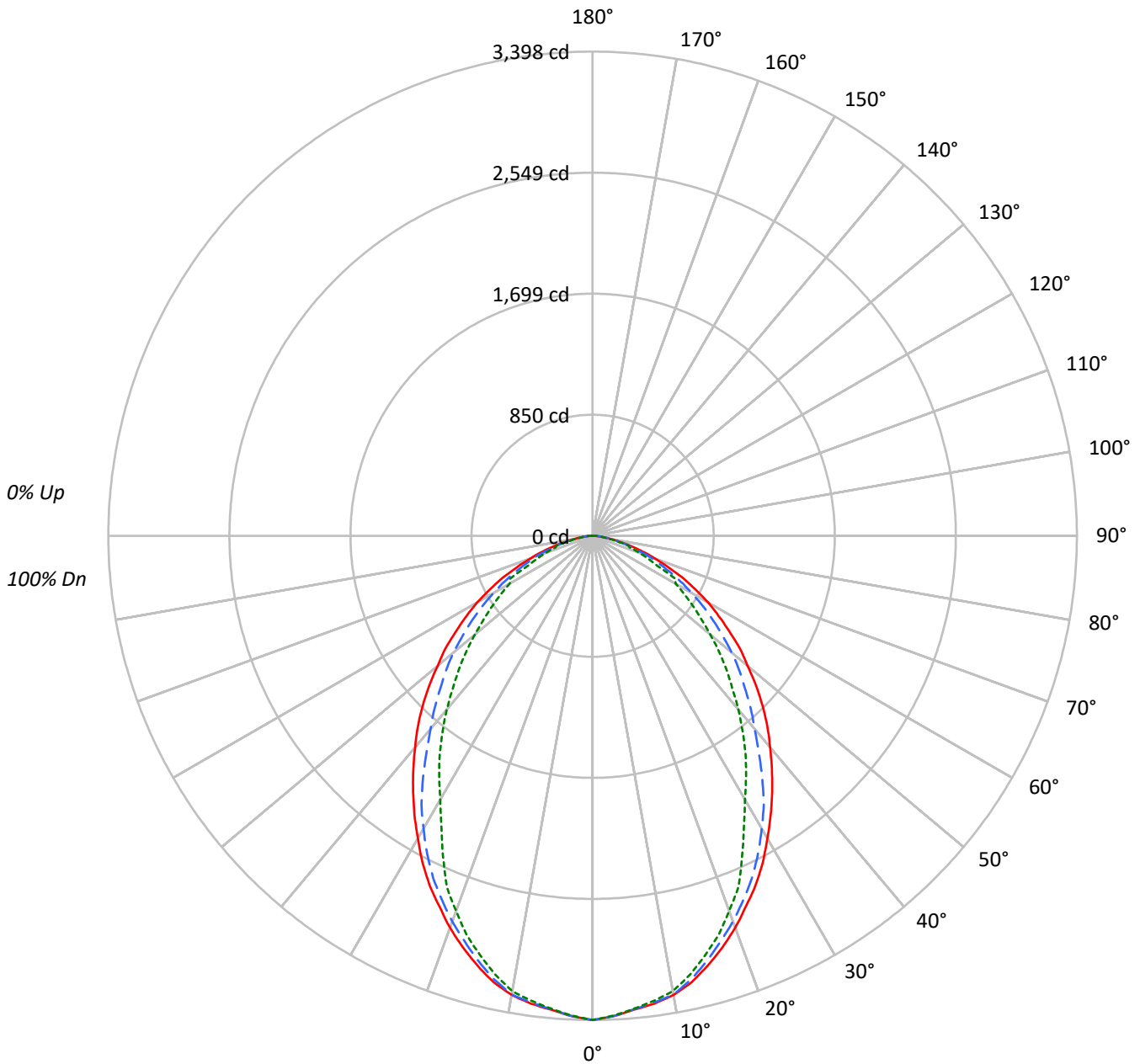
Lumens per Lamp: N/A
Luminaire Lumens: 6671.0 lumens
Efficiency: N/A
Efficacy: 100.2 lumens/watt
Spacing Criteria (0/90/45): 1.1 / 1 / 1.15
Luminous Opening: Rectangular (W 2' x L: 4' x H: 0')
CIE Type: Direct

Input Watts (W): 66.6
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: P546895

CATALOG NUMBER: FMR-24-4-LD4-2STD-35-UNV-93-84-EDD

Luminous Intensity Polar Plot





TEST NUMBER: P546895

CATALOG NUMBER: FMR-24-4-LD4-2STD-35-UNV-93-84-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°	4572	4572	4572
5°	4510	4505	4499
10°	4471	4466	4433
15°	4350	4307	4246
20°	4191	4123	4011
25°	4018	3931	3686
30°	3809	3686	3320
35°	3607	3407	3071
40°	3402	3105	2794
45°	3207	2870	2527
50°	2969	2664	2253
55°	2746	2415	2018
60°	2516	2157	1808
65°	2214	1889	1601
70°	1824	1653	1360
75°	1450	1266	1327
80°	974	914	852
85°	607	727	849



TEST NUMBER: P546895

CATALOG NUMBER: FMR-24-4-LD4-2STD-35-UNV-93-84-EDD

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	316.3	4.7
10°-20°	868.1	13.0
20°-30°	1201.8	18.0
30°-40°	1281.5	19.2
40°-50°	1169.1	17.5
50°-60°	915.9	13.7
60°-70°	597.0	8.9
70°-80°	264.5	4.0
80°-90°	56.8	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°	2386.3	35.8
0°-40°	3667.8	55.0
0°-60°	5752.8	86.2
0°-90°	6671.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	6671.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	3398	3398	3398	3398	3398	
5°	3339	3335	3335	3331	3331	317
15°	3123	3123	3092	3060	3048	878
25°	2707	2691	2648	2554	2483	1243
35°	2196	2180	2074	1917	1870	1373
45°	1685	1650	1508	1383	1328	1298
55°	1171	1135	1029	908	860	1050
65°	695	656	593	605	503	685
75°	279	259	244	232	255	299
85°	39	43	47	51	55	54
90°	0	0	0	0	0	



TEST NUMBER: P546895

CATALOG NUMBER: FMR-24-4-LD4-2STD-35-UNV-93-84-EDD

CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	3398.1	3398.1	3398.1	3398.1	3398.1
2.5°	3374.5	3374.5	3374.5	3370.6	3370.6
5°	3339.2	3335.3	3335.3	3331.3	3331.3
7.5°	3311.7	3307.8	3303.8	3299.9	3292.0
10°	3272.4	3272.4	3268.5	3248.8	3244.9
12.5°	3209.6	3205.6	3189.9	3162.4	3154.6
15°	3123.1	3123.1	3091.7	3060.3	3048.5
17.5°	3028.8	3024.9	2985.6	2954.2	2938.5
20°	2926.7	2918.8	2879.6	2828.5	2801.0
22.5°	2812.8	2812.8	2765.6	2698.9	2671.4
25°	2706.7	2691.0	2647.8	2553.5	2482.8
27.5°	2584.9	2561.4	2514.2	2380.6	2298.1
30°	2451.4	2439.6	2372.8	2199.9	2137.1
32.5°	2325.6	2306.0	2235.3	2054.6	2003.5
35°	2196.0	2180.3	2074.2	1917.1	1869.9
37.5°	2066.4	2046.7	1913.2	1787.4	1728.5
40°	1936.7	1913.2	1767.8	1653.9	1591.0
42.5°	1814.9	1783.5	1642.1	1520.3	1449.6
45°	1685.3	1650.0	1508.5	1382.8	1327.8
47.5°	1555.7	1524.2	1394.6	1265.0	1202.1
50°	1418.2	1390.7	1272.8	1143.2	1076.4
52.5°	1304.2	1261.0	1147.1	1017.5	962.5
55°	1170.7	1135.3	1029.3	907.5	860.3
57.5°	1048.9	1013.5	915.3	801.4	762.1
60°	935.0	883.9	801.4	703.2	671.8
62.5°	809.3	770.0	699.3	616.8	656.1
65°	695.3	656.1	593.2	605.0	502.8
67.5°	569.6	550.0	495.0	440.0	424.3
70°	463.6	440.0	420.3	361.4	345.7
72.5°	369.3	345.7	318.2	286.8	275.0
75°	278.9	259.3	243.6	231.8	255.3
77.5°	192.5	184.6	172.9	161.1	157.1
80°	125.7	121.8	117.9	113.9	110.0
82.5°	74.6	74.6	74.6	74.6	74.6
85°	39.3	43.2	47.1	51.1	55.0
87.5°	23.6	23.6	27.5	31.4	35.4
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)