

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: P546887

Luminaire Tested: **FMR-24-4-LD4-2STD-35-UNV-82-84-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: P546887
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-82-84-EDD
Description: 2X4 FMR TROFFER WITH .187 CLEAR PC 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

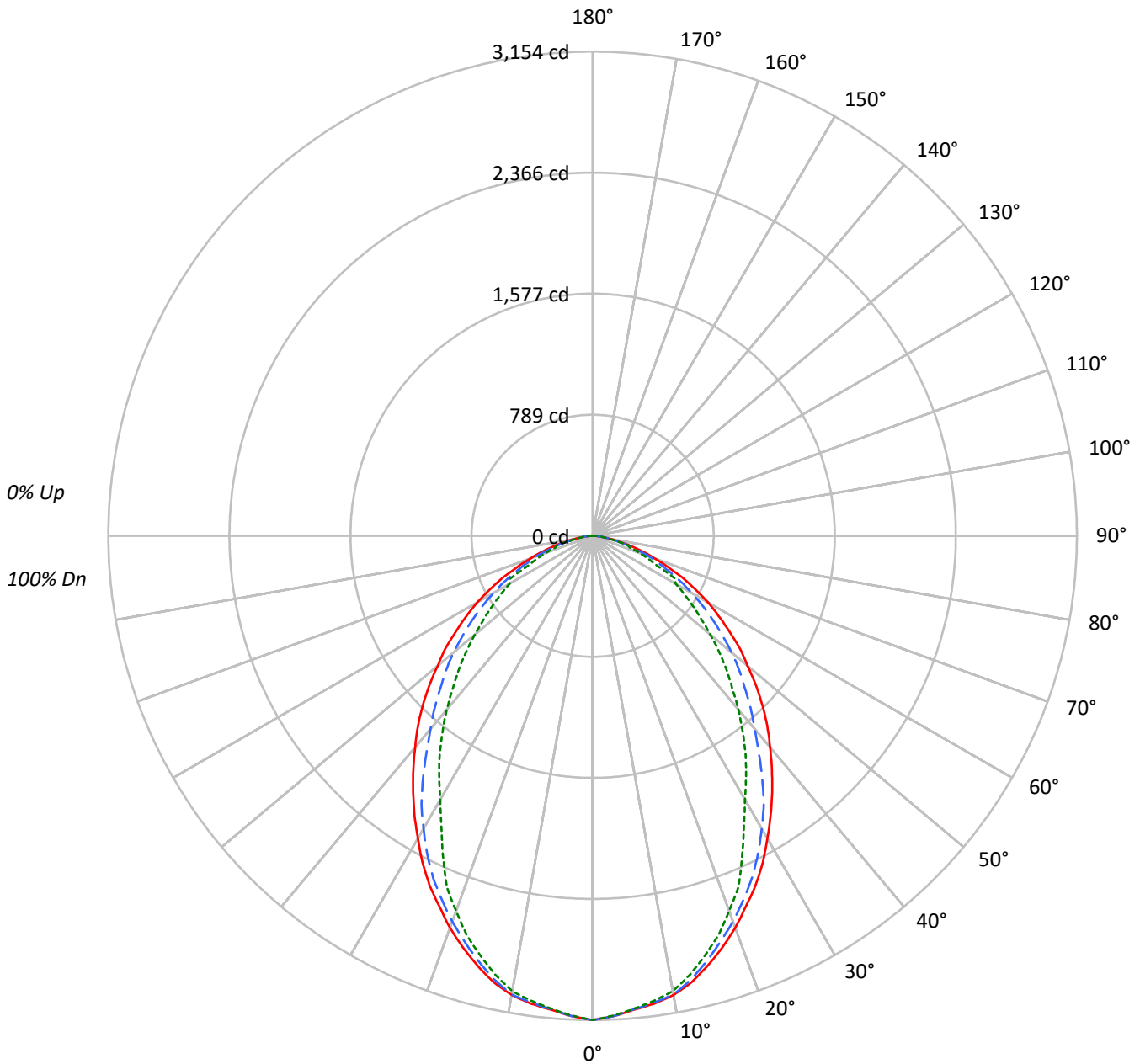
Lumens per Lamp: N/A
Luminaire Lumens: 6192.0 lumens
Efficiency: N/A
Efficacy: 93.0 lumens/watt
Spacing Criteria (0/90/45): 1.1 / 1 / 1.15
Luminous Opening: Rectangular (W 2' x L: 4' x H: 0')
CIE Type: Direct

Input Watts (W): 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: P546887

CATALOG NUMBER: FMR-24-4-LD4-2STD-35-UNV-82-84-EDD

Luminous Intensity Polar Plot





TEST NUMBER: P546887

CATALOG NUMBER: FMR-24-4-LD4-2STD-35-UNV-82-84-EDD

COEFFICIENT OF UTILIZATION - ZONAL CAVITY METHOD:

RF	20					20					20					20					20					
RC	80					70					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°	4244	4244	4244
5°	4186	4181	4176
10°	4150	4145	4115
15°	4038	3997	3942
20°	3890	3827	3723
25°	3730	3649	3421
30°	3535	3422	3082
35°	3348	3162	2851
40°	3158	2882	2594
45°	2977	2664	2345
50°	2755	2473	2091
55°	2549	2241	1873
60°	2335	2002	1678
65°	2055	1753	1486
70°	1693	1535	1262
75°	1346	1175	1232
80°	904	848	791
85°	563	676	787



TEST NUMBER: P546887

CATALOG NUMBER: FMR-24-4-LD4-2STD-35-UNV-82-84-EDD

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	293.6	4.7
10°-20°	805.8	13.0
20°-30°	1115.5	18.0
30°-40°	1189.5	19.2
40°-50°	1085.2	17.5
50°-60°	850.1	13.7
60°-70°	554.1	8.9
70°-80°	245.5	4.0
80°-90°	52.7	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°	2214.9	35.8
0°-40°	3404.4	55.0
0°-60°	5339.7	86.2
0°-90°	6192.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	6192.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	3154	3154	3154	3154	3154	
5°	3099	3096	3096	3092	3092	294
15°	2899	2899	2870	2840	2830	815
25°	2512	2498	2458	2370	2304	1153
35°	2038	2024	1925	1779	1736	1274
45°	1564	1532	1400	1284	1232	1205
55°	1087	1054	955	842	799	975
65°	645	609	551	562	467	636
75°	259	241	226	215	237	277
85°	36	40	44	47	51	51
90°	0	0	0	0	0	



TEST NUMBER: P546887

CATALOG NUMBER: FMR-24-4-LD4-2STD-35-UNV-82-84-EDD

CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	3154.1	3154.1	3154.1	3154.1	3154.1
2.5°	3132.2	3132.2	3132.2	3128.6	3128.6
5°	3099.4	3095.8	3095.8	3092.1	3092.1
7.5°	3073.9	3070.3	3066.6	3063.0	3055.7
10°	3037.4	3037.4	3033.8	3015.6	3011.9
12.5°	2979.1	2975.4	2960.9	2935.3	2928.0
15°	2898.9	2898.9	2869.7	2840.5	2829.6
17.5°	2811.4	2807.7	2771.3	2742.1	2727.5
20°	2716.6	2709.3	2672.8	2625.4	2599.9
22.5°	2610.8	2610.8	2567.1	2505.1	2479.5
25°	2512.4	2497.8	2457.7	2370.1	2304.5
27.5°	2399.3	2377.4	2333.7	2209.7	2133.1
30°	2275.3	2264.4	2202.4	2042.0	1983.6
32.5°	2158.7	2140.4	2074.8	1907.1	1859.7
35°	2038.3	2023.7	1925.3	1779.4	1735.7
37.5°	1918.0	1899.8	1775.8	1659.1	1604.4
40°	1797.7	1775.8	1640.9	1535.1	1476.8
42.5°	1684.6	1655.5	1524.2	1411.2	1345.5
45°	1564.3	1531.5	1400.2	1283.5	1232.5
47.5°	1444.0	1414.8	1294.5	1174.1	1115.8
50°	1316.3	1290.8	1181.4	1061.1	999.1
52.5°	1210.6	1170.5	1064.7	944.4	893.4
55°	1086.6	1053.8	955.4	842.3	798.6
57.5°	973.6	940.8	849.6	743.9	707.4
60°	867.8	820.4	743.9	652.7	623.5
62.5°	751.2	714.7	649.1	572.5	608.9
65°	645.4	608.9	550.6	561.5	466.7
67.5°	528.7	510.5	459.4	408.4	393.8
70°	430.3	408.4	390.2	335.5	320.9
72.5°	342.8	320.9	295.4	266.2	255.2
75°	258.9	240.7	226.1	215.1	237.0
77.5°	178.7	171.4	160.4	149.5	145.9
80°	116.7	113.0	109.4	105.7	102.1
82.5°	69.3	69.3	69.3	69.3	69.3
85°	36.5	40.1	43.8	47.4	51.0
87.5°	21.9	21.9	25.5	29.2	32.8
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)