

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: P547187

Luminaire Tested: **FMR-24-4-LD4-3STD-35-UNV-93-88-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: P547187
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-LD4-3STD-35-UNV-93-88-EDD
Description: 2X4 FMR TROFFER WITH .156 CLEAR TEMPERED GLASS FIXTURE SIDE AND .500 CLEAR PC ENVIRONMENTAL SIDE LENSES WITH, 90 CRI AND 3500K CCT LEDS
Light Source: -
Ballast/Driver: -

Luminaire Equipment: Sample No. Condition Description

Summary

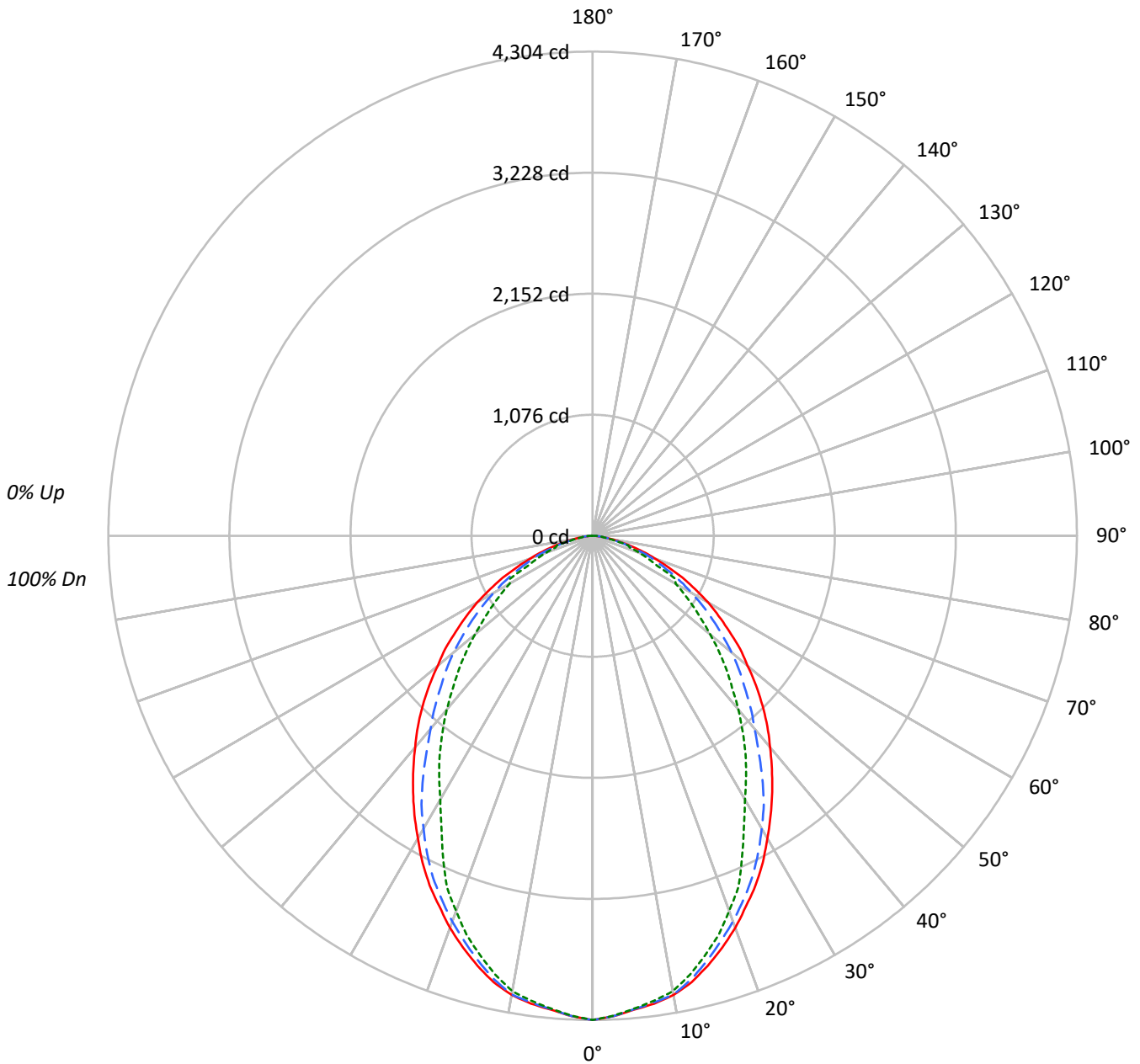
Lumens per Lamp: N/A
Luminaire Lumens: 8450.0 lumens
Efficiency: N/A
Efficacy: 84.6 lumens/watt
Spacing Criteria (0/90/45): 1.1 / 1 / 1.15
Luminous Opening: Rectangular (W 2' x L: 4' x H: 0')
CIE Type: Direct

Input Watts (W): 99.9
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: P547187

CATALOG NUMBER: FMR-24-4-LD4-3STD-35-UNV-93-88-EDD

Luminous Intensity Polar Plot





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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°	5791	5791	5791
5°	5713	5706	5699
10°	5663	5656	5616
15°	5511	5455	5379
20°	5308	5223	5080
25°	5090	4979	4669
30°	4824	4670	4206
35°	4569	4316	3891
40°	4309	3933	3540
45°	4062	3636	3200
50°	3760	3375	2854
55°	3479	3058	2556
60°	3187	2732	2290
65°	2804	2392	2028
70°	2310	2094	1723
75°	1837	1604	1681
80°	1234	1157	1079
85°	769	922	1076



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	400.7	4.7
10°-20°	1099.6	13.0
20°-30°	1522.3	18.0
30°-40°	1623.3	19.2
40°-50°	1480.9	17.5
50°-60°	1160.1	13.7
60°-70°	756.1	8.9
70°-80°	335.0	4.0
80°-90°	71.9	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°	3022.6	35.8
0°-40°	4645.9	55.0
0°-60°	7286.9	86.2
0°-90°	8450.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	8450.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	4304	4304	4304	4304	4304	
5°	4230	4225	4225	4220	4220	401
15°	3956	3956	3916	3876	3861	1112
25°	3428	3409	3354	3234	3145	1574
35°	2782	2762	2627	2428	2369	1739
45°	2135	2090	1911	1752	1682	1644
55°	1483	1438	1304	1150	1090	1330
65°	881	831	751	766	637	868
75°	353	328	308	294	323	379
85°	50	55	60	65	70	69
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	4304.3	4304.3	4304.3	4304.3	4304.3
2.5°	4274.5	4274.5	4274.5	4269.5	4269.5
5°	4229.7	4224.7	4224.7	4219.7	4219.7
7.5°	4194.8	4189.9	4184.9	4179.9	4170.0
10°	4145.1	4145.1	4140.1	4115.2	4110.2
12.5°	4065.5	4060.5	4040.6	4005.8	3995.8
15°	3956.0	3956.0	3916.2	3876.4	3861.4
17.5°	3836.6	3831.6	3781.8	3742.0	3722.1
20°	3707.2	3697.2	3647.5	3582.8	3548.0
22.5°	3562.9	3562.9	3503.2	3418.6	3383.7
25°	3428.5	3408.6	3353.9	3234.5	3144.9
27.5°	3274.3	3244.4	3184.7	3015.5	2911.0
30°	3105.1	3090.2	3005.6	2786.6	2707.0
32.5°	2945.8	2921.0	2831.4	2602.5	2537.8
35°	2781.6	2761.7	2627.4	2428.3	2368.6
37.5°	2617.4	2592.5	2423.4	2264.1	2189.5
40°	2453.2	2423.4	2239.2	2094.9	2015.3
42.5°	2299.0	2259.1	2080.0	1925.7	1836.2
45°	2134.7	2090.0	1910.8	1751.6	1681.9
47.5°	1970.5	1930.7	1766.5	1602.3	1522.7
50°	1796.4	1761.5	1612.3	1448.0	1363.4
52.5°	1652.1	1597.3	1453.0	1288.8	1219.1
55°	1482.9	1438.1	1303.7	1149.5	1089.8
57.5°	1328.6	1283.8	1159.4	1015.1	965.4
60°	1184.3	1119.6	1015.1	890.7	850.9
62.5°	1025.1	975.3	885.7	781.2	831.0
65°	880.8	831.0	751.4	766.3	636.9
67.5°	721.5	696.7	627.0	557.3	537.4
70°	587.2	557.3	532.4	457.8	437.9
72.5°	467.8	437.9	403.1	363.3	348.3
75°	353.3	328.4	308.5	293.6	323.4
77.5°	243.8	233.9	218.9	204.0	199.0
80°	159.2	154.3	149.3	144.3	139.3
82.5°	94.5	94.5	94.5	94.5	94.5
85°	49.8	54.7	59.7	64.7	69.7
87.5°	29.9	29.9	34.8	39.8	44.8
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)