

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: P546928

Luminaire Tested: **FMR-24-4-LD4-2STD-40-UNV-93-85-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: P546928
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-40-UNV-93-85-EDD
Description: 2X4 FMR TROFFER WITH .156 CLEAR TEMPERED GLASS 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

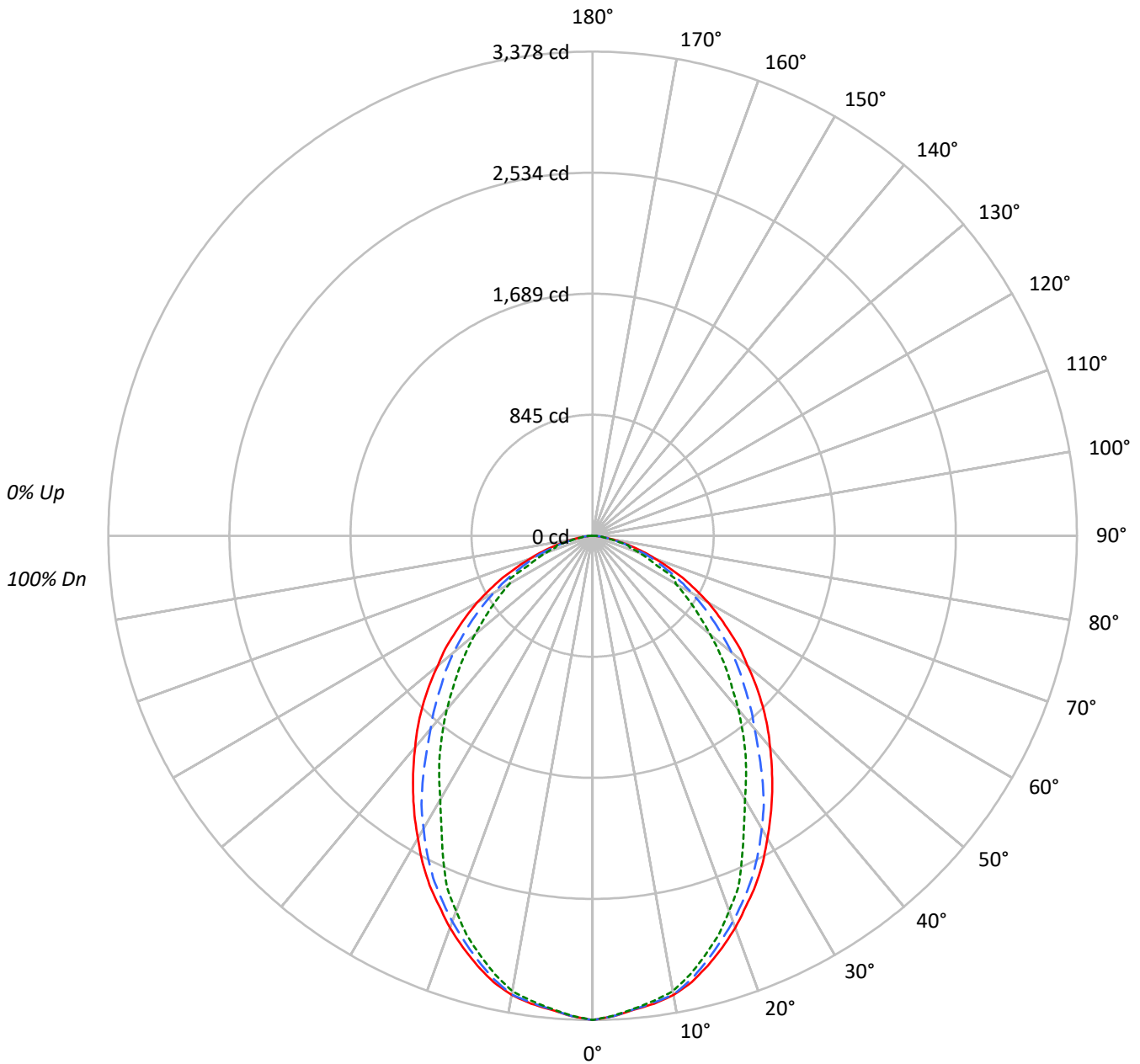
Lumens per Lamp: N/A
Luminaire Lumens: 6632.0 lumens
Efficiency: N/A
Efficacy: 99.6 lumens/watt
Spacing Criteria (0/90/45): 1.1 / 1 / 1.15
Luminous Opening: Rectangular (W 2' x L: 4' x H: 0')
CIE Type: Direct

Input Watts (W): 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: P546928

CATALOG NUMBER: FMR-24-4-LD4-2STD-40-UNV-93-85-EDD

Luminous Intensity Polar Plot





TEST NUMBER: P546928

CATALOG NUMBER: FMR-24-4-LD4-2STD-40-UNV-93-85-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°	4545	4545	4545
5°	4484	4478	4473
10°	4445	4439	4407
15°	4325	4281	4222
20°	4166	4099	3987
25°	3995	3908	3664
30°	3786	3665	3301
35°	3586	3387	3053
40°	3382	3087	2778
45°	3188	2854	2512
50°	2951	2649	2240
55°	2730	2400	2006
60°	2501	2144	1797
65°	2201	1877	1592
70°	1813	1644	1352
75°	1442	1259	1320
80°	969	908	848
85°	604	724	844



TEST NUMBER: P546928

CATALOG NUMBER: FMR-24-4-LD4-2STD-40-UNV-93-85-EDD

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	314.5	4.7
10°-20°	863.0	13.0
20°-30°	1194.8	18.0
30°-40°	1274.0	19.2
40°-50°	1162.3	17.5
50°-60°	910.5	13.7
60°-70°	593.5	8.9
70°-80°	262.9	4.0
80°-90°	56.5	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°	2372.3	35.8
0°-40°	3646.3	55.0
0°-60°	5719.2	86.2
0°-90°	6632.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	6632.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	3378	3378	3378	3378	3378	
5°	3320	3316	3316	3312	3312	315
15°	3105	3105	3074	3042	3031	873
25°	2691	2675	2632	2539	2468	1235
35°	2183	2168	2062	1906	1859	1365
45°	1676	1640	1500	1375	1320	1291
55°	1164	1129	1023	902	855	1044
65°	691	652	590	601	500	681
75°	277	258	242	230	254	297
85°	39	43	47	51	55	54
90°	0	0	0	0	0	



TEST NUMBER: P546928

CATALOG NUMBER: FMR-24-4-LD4-2STD-40-UNV-93-85-EDD

CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	3378.3	3378.3	3378.3	3378.3	3378.3
2.5°	3354.8	3354.8	3354.8	3350.9	3350.9
5°	3319.7	3315.8	3315.8	3311.9	3311.9
7.5°	3292.3	3288.4	3284.5	3280.6	3272.8
10°	3253.3	3253.3	3249.4	3229.8	3225.9
12.5°	3190.8	3186.9	3171.3	3143.9	3136.1
15°	3104.9	3104.9	3073.6	3042.4	3030.7
17.5°	3011.1	3007.2	2968.2	2936.9	2921.3
20°	2909.6	2901.8	2862.7	2812.0	2784.6
22.5°	2796.3	2796.3	2749.5	2683.1	2655.7
25°	2690.9	2675.3	2632.3	2538.6	2468.3
27.5°	2569.8	2546.4	2499.5	2366.7	2284.7
30°	2437.0	2425.3	2358.9	2187.1	2124.6
32.5°	2312.1	2292.5	2222.2	2042.6	1991.8
35°	2183.2	2167.5	2062.1	1905.9	1859.0
37.5°	2054.3	2034.8	1902.0	1777.0	1718.4
40°	1925.4	1902.0	1757.5	1644.2	1581.7
42.5°	1804.3	1773.1	1632.5	1511.4	1441.1
45°	1675.5	1640.3	1499.7	1374.7	1320.1
47.5°	1546.6	1515.3	1386.5	1257.6	1195.1
50°	1409.9	1382.5	1265.4	1136.5	1070.1
52.5°	1296.6	1253.7	1140.4	1011.5	956.8
55°	1163.8	1128.7	1023.2	902.2	855.3
57.5°	1042.8	1007.6	910.0	796.7	757.7
60°	929.5	878.7	796.7	699.1	667.8
62.5°	804.5	765.5	695.2	613.2	652.2
65°	691.3	652.2	589.7	601.4	499.9
67.5°	566.3	546.8	492.1	437.4	421.8
70°	460.8	437.4	417.9	359.3	343.7
72.5°	367.1	343.7	316.3	285.1	273.4
75°	277.3	257.8	242.1	230.4	253.9
77.5°	191.4	183.6	171.8	160.1	156.2
80°	125.0	121.1	117.2	113.3	109.4
82.5°	74.2	74.2	74.2	74.2	74.2
85°	39.1	43.0	46.9	50.8	54.7
87.5°	23.4	23.4	27.3	31.2	35.1
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)