

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: P546783

Luminaire Tested: **FMR-24-4-LD4-2LO-35-UNV-81-84-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: P546783
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-LD4-2LO-35-UNV-81-84-EDD
Description: 2X4 FMR TROFFER WITH .156 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

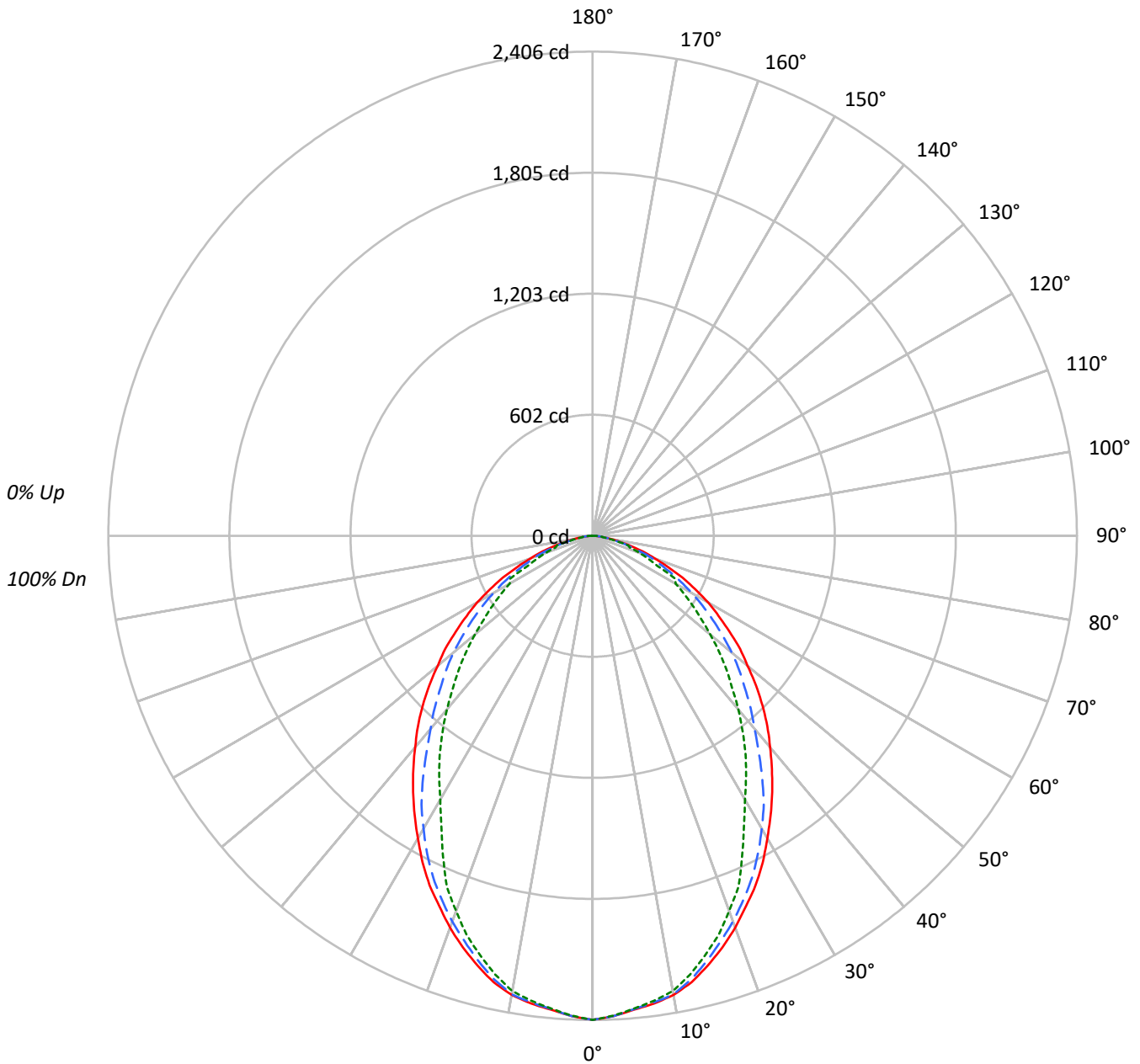
Lumens per Lamp: N/A
Luminaire Lumens: 4723.0 lumens
Efficiency: N/A
Efficacy: 100.9 lumens/watt
Spacing Criteria (0/90/45): 1.1 / 1 / 1.15
Luminous Opening: Rectangular (W 2' x L: 4' x H: 0')
CIE Type: Direct

Input Watts (W): 46.8
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: P546783

CATALOG NUMBER: FMR-24-4-LD4-2LO-35-UNV-81-84-EDD

Luminous Intensity Polar Plot





TEST NUMBER: P546783

CATALOG NUMBER: FMR-24-4-LD4-2LO-35-UNV-81-84-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			100																
1	110	106	102	99	108	104	100	97	100	97	94	96	94	91	92	90	89	87			87																
2	101	94	88	83	99	92	87	82	89	84	80	86	82	78	83	79	77	75			75																
3	93	84	77	71	91	82	76	70	79	74	69	77	72	68	74	70	67	65			65																
4	86	75	67	61	84	74	66	61	72	65	60	69	64	59	67	62	58	56			56																
5	80	68	60	54	78	67	59	53	65	58	53	63	57	52	61	56	52	50			50																
6	74	62	53	48	72	61	53	47	59	52	47	57	51	47	56	50	46	44			44																
7	69	56	48	43	67	56	48	42	54	47	42	53	46	42	51	46	42	40			40																
8	65	52	44	38	63	51	44	38	50	43	38	49	42	38	48	42	38	36			36																
9	61	48	40	35	59	47	40	35	46	39	35	45	39	34	44	38	34	33			33																
10	57	44	37	32	56	44	37	32	43	36	32	42	36	32	41	36	32	30			30																

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	3237	3237	3237
5°	3193	3189	3186
10°	3165	3161	3139
15°	3080	3049	3006
20°	2967	2919	2839
25°	2845	2783	2610
30°	2696	2610	2351
35°	2554	2412	2175
40°	2408	2198	1978
45°	2270	2032	1789
50°	2102	1886	1595
55°	1944	1709	1429
60°	1781	1527	1280
65°	1567	1337	1133
70°	1291	1171	963
75°	1027	896	940
80°	690	646	604
85°	429	516	601



TEST NUMBER: P546783

CATALOG NUMBER: FMR-24-4-LD4-2LO-35-UNV-81-84-EDD

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	223.9	4.7
10°-20°	614.6	13.0
20°-30°	850.9	18.0
30°-40°	907.3	19.2
40°-50°	827.7	17.5
50°-60°	648.5	13.7
60°-70°	422.6	8.9
70°-80°	187.2	4.0
80°-90°	40.2	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°	1689.4	35.8
0°-40°	2596.7	55.0
0°-60°	4072.9	86.2
0°-90°	4723.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	4723.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	2406	2406	2406	2406	2406	
5°	2364	2361	2361	2359	2359	224
15°	2211	2211	2189	2167	2158	622
25°	1916	1905	1875	1808	1758	880
35°	1555	1544	1468	1357	1324	972
45°	1193	1168	1068	979	940	919
55°	829	804	729	642	609	743
65°	492	464	420	428	356	485
75°	198	184	172	164	181	212
85°	28	31	33	36	39	39
90°	0	0	0	0	0	



TEST NUMBER: P546783

CATALOG NUMBER: FMR-24-4-LD4-2LO-35-UNV-81-84-EDD

CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	2405.8	2405.8	2405.8	2405.8	2405.8
2.5°	2389.1	2389.1	2389.1	2386.4	2386.4
5°	2364.1	2361.3	2361.3	2358.6	2358.6
7.5°	2344.6	2341.9	2339.1	2336.3	2330.7
10°	2316.8	2316.8	2314.0	2300.1	2297.4
12.5°	2272.3	2269.5	2258.4	2239.0	2233.4
15°	2211.1	2211.1	2188.9	2166.6	2158.3
17.5°	2144.4	2141.6	2113.8	2091.5	2080.4
20°	2072.1	2066.5	2038.7	2002.5	1983.1
22.5°	1991.4	1991.4	1958.0	1910.8	1891.3
25°	1916.3	1905.2	1874.6	1807.9	1757.8
27.5°	1830.1	1813.4	1780.0	1685.5	1627.1
30°	1735.5	1727.2	1679.9	1557.5	1513.0
32.5°	1646.5	1632.6	1582.6	1454.6	1418.5
35°	1554.8	1543.6	1468.5	1357.3	1323.9
37.5°	1463.0	1449.1	1354.5	1265.5	1223.8
40°	1371.2	1354.5	1251.6	1170.9	1126.4
42.5°	1285.0	1262.7	1162.6	1076.4	1026.3
45°	1193.2	1168.2	1068.0	979.0	940.1
47.5°	1101.4	1079.1	987.4	895.6	851.1
50°	1004.1	984.6	901.1	809.4	762.1
52.5°	923.4	892.8	812.1	720.4	681.4
55°	828.8	803.8	728.7	642.5	609.1
57.5°	742.6	717.6	648.0	567.4	539.6
60°	662.0	625.8	567.4	497.9	475.6
62.5°	572.9	545.1	495.1	436.7	464.5
65°	492.3	464.5	420.0	428.3	356.0
67.5°	403.3	389.4	350.4	311.5	300.4
70°	328.2	311.5	297.6	255.9	244.8
72.5°	261.4	244.8	225.3	203.0	194.7
75°	197.5	183.6	172.4	164.1	180.8
77.5°	136.3	130.7	122.4	114.0	111.3
80°	89.0	86.2	83.4	80.7	77.9
82.5°	52.8	52.8	52.8	52.8	52.8
85°	27.8	30.6	33.4	36.2	38.9
87.5°	16.7	16.7	19.5	22.3	25.0
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)