

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: P546914

Luminaire Tested: **FMR-24-4-LD4-2STD-40-UNV-81-87-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: P546914
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-81-87-EDD
Description: 2X4 FMR TROFFER WITH .156 CLEAR PC FIXTURE SIDE AND .375 CLEAR PC ENVIRONMENTAL SIDE LENSES WITH, 90 CRI AND 4000K CCT LEDS
Light Source: -
Ballast/Driver: -

Luminaire Equipment: Sample No. Condition Description

Summary

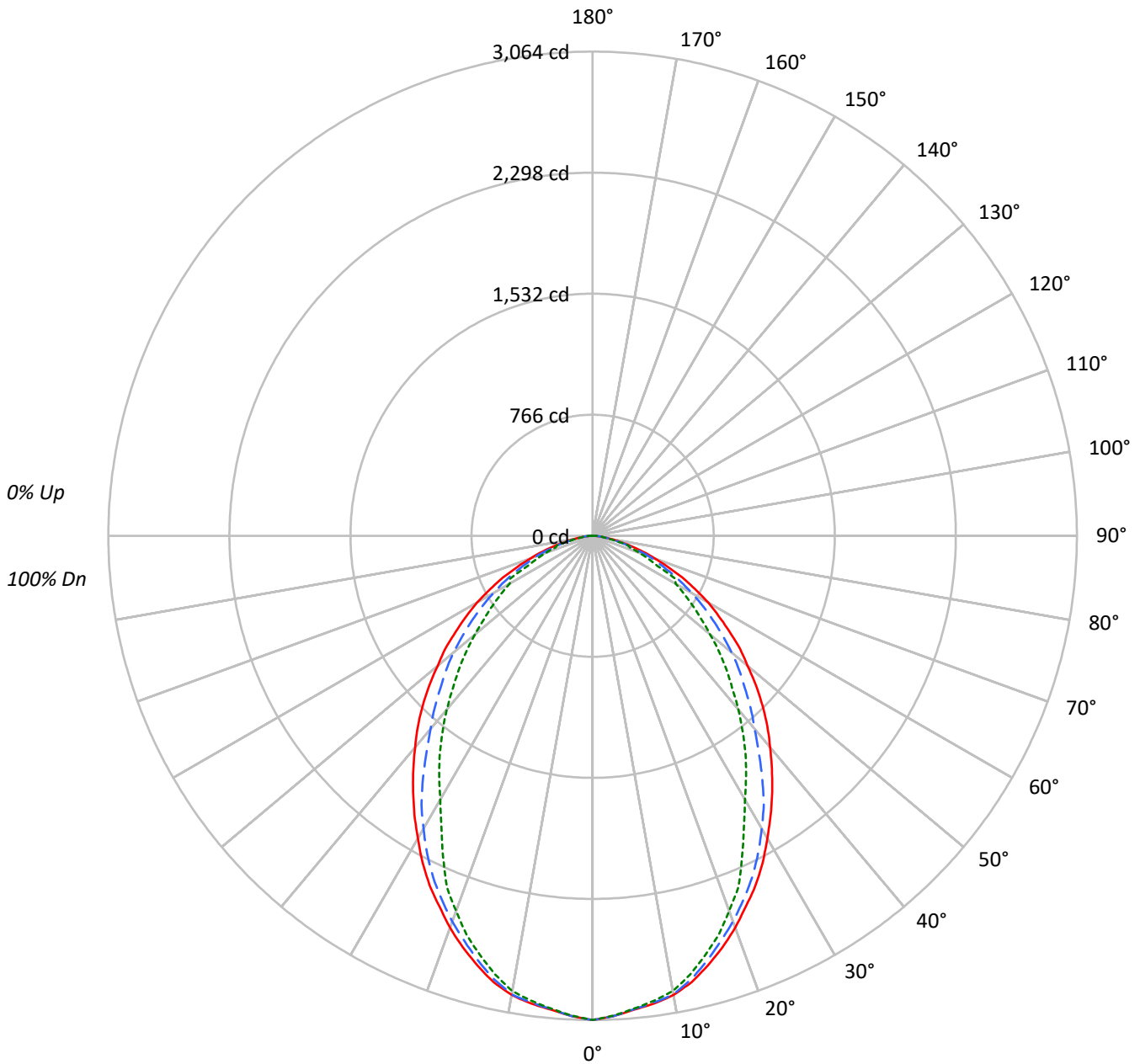
Lumens per Lamp: N/A
Luminaire Lumens: 6015.0 lumens
Efficiency: N/A
Efficacy: 90.3 lumens/watt
Spacing Criteria (0/90/45): 1.1 / 1 / 1.15
Luminous Opening: Rectangular (W 2' x L: 4' x H: 0')
CIE Type: Direct

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: P546914

CATALOG NUMBER: FMR-24-4-LD4-2STD-40-UNV-81-87-EDD

Luminous Intensity Polar Plot





TEST NUMBER: P546914

CATALOG NUMBER: FMR-24-4-LD4-2STD-40-UNV-81-87-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°	4123	4123	4123
5°	4066	4062	4057
10°	4031	4026	3997
15°	3923	3883	3829
20°	3778	3718	3616
25°	3623	3544	3323
30°	3434	3324	2994
35°	3252	3072	2769
40°	3067	2800	2520
45°	2892	2588	2278
50°	2677	2402	2031
55°	2476	2177	1820
60°	2268	1945	1630
65°	1996	1703	1443
70°	1644	1491	1226
75°	1307	1142	1197
80°	878	824	769
85°	546	656	766



TEST NUMBER: P546914

CATALOG NUMBER: FMR-24-4-LD4-2STD-40-UNV-81-87-EDD

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	285.2	4.7
10°-20°	782.7	13.0
20°-30°	1083.7	18.0
30°-40°	1155.5	19.2
40°-50°	1054.1	17.5
50°-60°	825.8	13.7
60°-70°	538.2	8.9
70°-80°	238.5	4.0
80°-90°	51.2	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°	2151.6	35.8
0°-40°	3307.1	55.0
0°-60°	5187.1	86.2
0°-90°	6015.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	6015.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	3064	3064	3064	3064	3064	
5°	3011	3007	3007	3004	3004	286
15°	2816	2816	2788	2759	2749	792
25°	2440	2426	2387	2302	2239	1120
35°	1980	1966	1870	1729	1686	1238
45°	1520	1488	1360	1247	1197	1171
55°	1056	1024	928	818	776	947
65°	627	592	535	546	453	618
75°	252	234	220	209	230	270
85°	35	39	42	46	50	49
90°	0	0	0	0	0	



TEST NUMBER: P546914

CATALOG NUMBER: FMR-24-4-LD4-2STD-40-UNV-81-87-EDD

CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	3064.0	3064.0	3064.0	3064.0	3064.0
2.5°	3042.7	3042.7	3042.7	3039.2	3039.2
5°	3010.8	3007.3	3007.3	3003.7	3003.7
7.5°	2986.0	2982.5	2978.9	2975.4	2968.3
10°	2950.6	2950.6	2947.1	2929.4	2925.8
12.5°	2893.9	2890.4	2876.2	2851.4	2844.3
15°	2816.0	2816.0	2787.7	2759.3	2748.7
17.5°	2731.0	2727.5	2692.0	2663.7	2649.5
20°	2638.9	2631.8	2596.4	2550.3	2525.6
22.5°	2536.2	2536.2	2493.7	2433.5	2408.7
25°	2440.5	2426.4	2387.4	2302.4	2238.6
27.5°	2330.7	2309.5	2267.0	2146.5	2072.2
30°	2210.3	2199.7	2139.5	1983.6	1926.9
32.5°	2097.0	2079.2	2015.5	1852.5	1806.5
35°	1980.1	1965.9	1870.3	1728.6	1686.1
37.5°	1863.2	1845.5	1725.0	1611.7	1558.5
40°	1746.3	1725.0	1594.0	1491.2	1434.6
42.5°	1636.5	1608.1	1480.6	1370.8	1307.1
45°	1519.6	1487.7	1360.2	1246.8	1197.2
47.5°	1402.7	1374.4	1257.5	1140.6	1083.9
50°	1278.7	1253.9	1147.7	1030.8	970.5
52.5°	1176.0	1137.0	1034.3	917.4	867.8
55°	1055.6	1023.7	928.0	818.2	775.7
57.5°	945.8	913.9	825.3	722.6	687.2
60°	843.0	797.0	722.6	634.0	605.7
62.5°	729.7	694.3	630.5	556.1	591.5
65°	627.0	591.5	534.9	545.5	453.4
67.5°	513.6	495.9	446.3	396.7	382.6
70°	418.0	396.7	379.0	325.9	311.7
72.5°	333.0	311.7	286.9	258.6	248.0
75°	251.5	233.8	219.6	209.0	230.2
77.5°	173.6	166.5	155.9	145.2	141.7
80°	113.3	109.8	106.3	102.7	99.2
82.5°	67.3	67.3	67.3	67.3	67.3
85°	35.4	39.0	42.5	46.0	49.6
87.5°	21.3	21.3	24.8	28.3	31.9
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)