

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: P546957

Luminaire Tested: **FMR-24-4-LD4-2STD-50-UNV-82-96-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: P546957
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-50-UNV-82-96-EDD
Description: 2X4 FMR TROFFER WITH .187 CLEAR PC FIXTURE SIDE AND .250 CLEAR
TEMPERED GLASS ENVIRONMENTAL SIDE LENSES WITH, 90 CRI AND 5000K CCT LEDS
Light Source: -
Ballast/Driver: -

Luminaire Equipment: Sample No. Condition Description

Summary

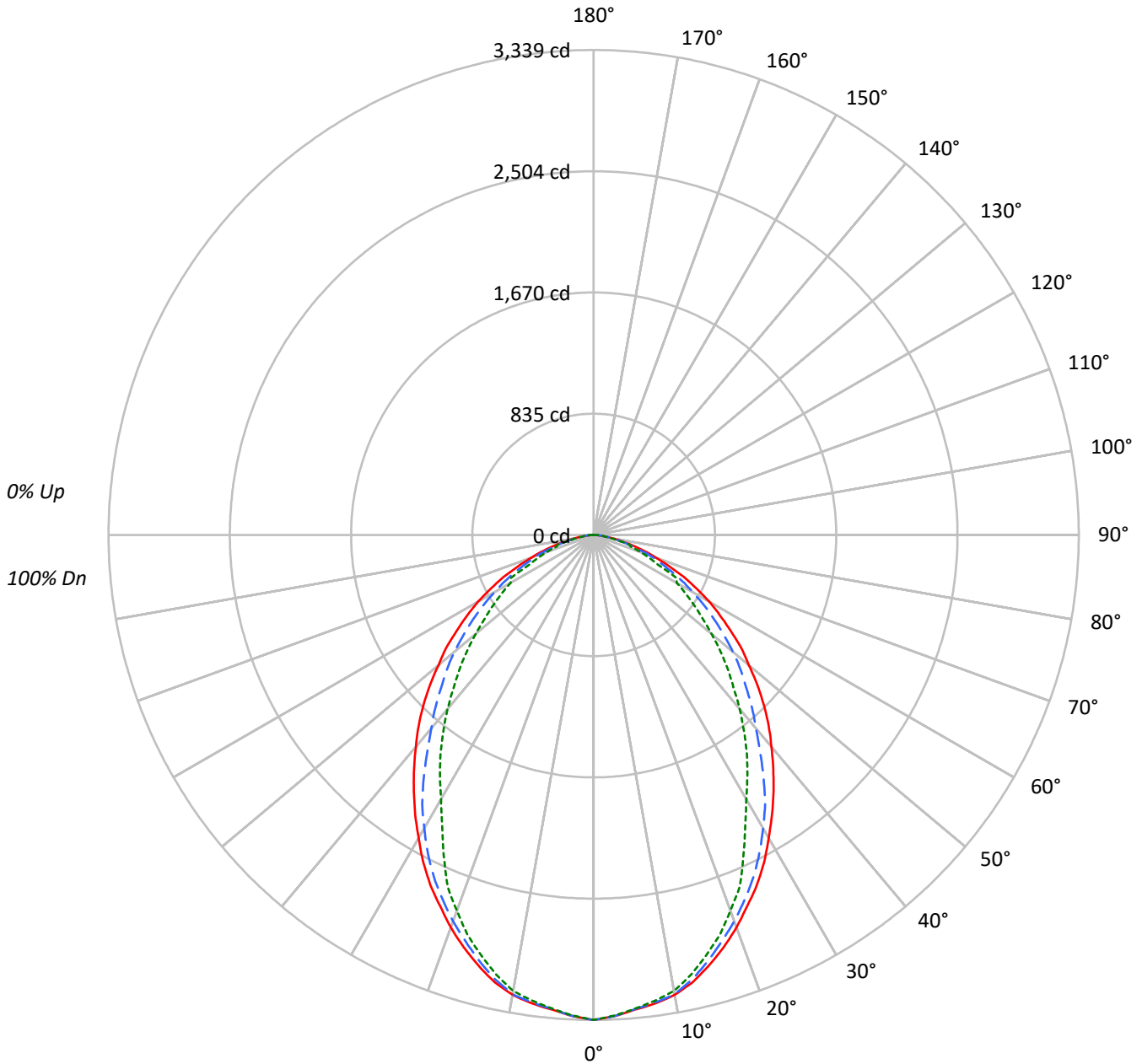
Lumens per Lamp: N/A
Luminaire Lumens: 6555.0 lumens
Efficiency: N/A
Efficacy: 98.4 lumens/watt
Spacing Criteria (0/90/45): 1.1 / 1 / 1.15
Luminous Opening: Rectangular (W 2' x L: 4' x H: 0')
CIE Type: Direct

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: P546957

CATALOG NUMBER: FMR-24-4-LD4-2STD-50-UNV-82-96-EDD

Luminous Intensity Polar Plot





TEST NUMBER: P546957

CATALOG NUMBER: FMR-24-4-LD4-2STD-50-UNV-82-96-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°	4493	4493	4493
5°	4432	4426	4421
10°	4393	4388	4356
15°	4275	4232	4173
20°	4118	4051	3941
25°	3948	3862	3622
30°	3742	3622	3262
35°	3544	3348	3018
40°	3343	3051	2746
45°	3151	2821	2483
50°	2917	2618	2214
55°	2698	2373	1983
60°	2472	2119	1776
65°	2175	1856	1573
70°	1792	1625	1336
75°	1425	1244	1304
80°	957	897	838
85°	596	715	834



TEST NUMBER: P546957

CATALOG NUMBER: FMR-24-4-LD4-2STD-50-UNV-82-96-EDD

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	310.8	4.7
10°-20°	853.0	13.0
20°-30°	1180.9	18.0
30°-40°	1259.2	19.2
40°-50°	1148.8	17.5
50°-60°	900.0	13.7
60°-70°	586.6	8.9
70°-80°	259.9	4.0
80°-90°	55.8	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°	2344.8	35.8
0°-40°	3604.0	55.0
0°-60°	5652.8	86.2
0°-90°	6555.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	6555.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	3339	3339	3339	3339	3339	
5°	3281	3277	3277	3273	3273	311
15°	3069	3069	3038	3007	2996	863
25°	2660	2644	2602	2509	2440	1221
35°	2158	2142	2038	1884	1837	1349
45°	1656	1621	1482	1359	1305	1276
55°	1150	1116	1011	892	845	1032
65°	683	645	583	594	494	673
75°	274	255	239	228	251	294
85°	39	42	46	50	54	54
90°	0	0	0	0	0	



TEST NUMBER: P546957

CATALOG NUMBER: FMR-24-4-LD4-2STD-50-UNV-82-96-EDD

CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	3339.0	3339.0	3339.0	3339.0	3339.0
2.5°	3315.9	3315.9	3315.9	3312.0	3312.0
5°	3281.1	3277.3	3277.3	3273.4	3273.4
7.5°	3254.1	3250.2	3246.4	3242.5	3234.8
10°	3215.5	3215.5	3211.6	3192.3	3188.5
12.5°	3153.7	3149.9	3134.4	3107.4	3099.7
15°	3068.8	3068.8	3037.9	3007.1	2995.5
17.5°	2976.2	2972.3	2933.7	2902.8	2887.4
20°	2875.8	2868.1	2829.5	2779.3	2752.3
22.5°	2763.9	2763.9	2717.5	2651.9	2624.9
25°	2659.6	2644.2	2601.7	2509.1	2439.6
27.5°	2540.0	2516.8	2470.5	2339.3	2258.2
30°	2408.7	2397.2	2331.5	2161.7	2099.9
32.5°	2285.2	2265.9	2196.4	2018.9	1968.7
35°	2157.8	2142.4	2038.2	1883.8	1837.4
37.5°	2030.4	2011.1	1879.9	1756.4	1698.5
40°	1903.1	1879.9	1737.1	1625.1	1563.4
42.5°	1783.4	1752.5	1613.5	1493.9	1424.4
45°	1656.0	1621.3	1482.3	1358.8	1304.7
47.5°	1528.6	1497.7	1370.4	1243.0	1181.2
50°	1393.5	1366.5	1250.7	1123.3	1057.7
52.5°	1281.6	1239.1	1127.2	999.8	945.7
55°	1150.3	1115.6	1011.4	891.7	845.4
57.5°	1030.7	995.9	899.4	787.5	748.9
60°	918.7	868.5	787.5	691.0	660.1
62.5°	795.2	756.6	687.1	606.0	644.6
65°	683.2	644.6	582.9	594.5	494.1
67.5°	559.7	540.4	486.4	432.3	416.9
70°	455.5	432.3	413.0	355.1	339.7
72.5°	362.9	339.7	312.7	281.8	270.2
75°	274.1	254.8	239.3	227.7	250.9
77.5°	189.1	181.4	169.8	158.3	154.4
80°	123.5	119.7	115.8	111.9	108.1
82.5°	73.3	73.3	73.3	73.3	73.3
85°	38.6	42.5	46.3	50.2	54.0
87.5°	23.2	23.2	27.0	30.9	34.7
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)