

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: P547465

Luminaire Tested: **FMR-24-4-LD4-4STD-35-UNV-82-86-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: P547465
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-LD4-4STD-35-UNV-82-86-EDD
Description: 2X4 FMR TROFFER WITH .187 CLEAR PC FIXTURE SIDE AND .250 CLEAR PC ENVIRONMENTAL SIDE LENSES WITH, 90 CRI AND 3500K CCT LEDS
Light Source: -
Ballast/Driver: -

Luminaire Equipment: Sample No. Condition Description

Summary

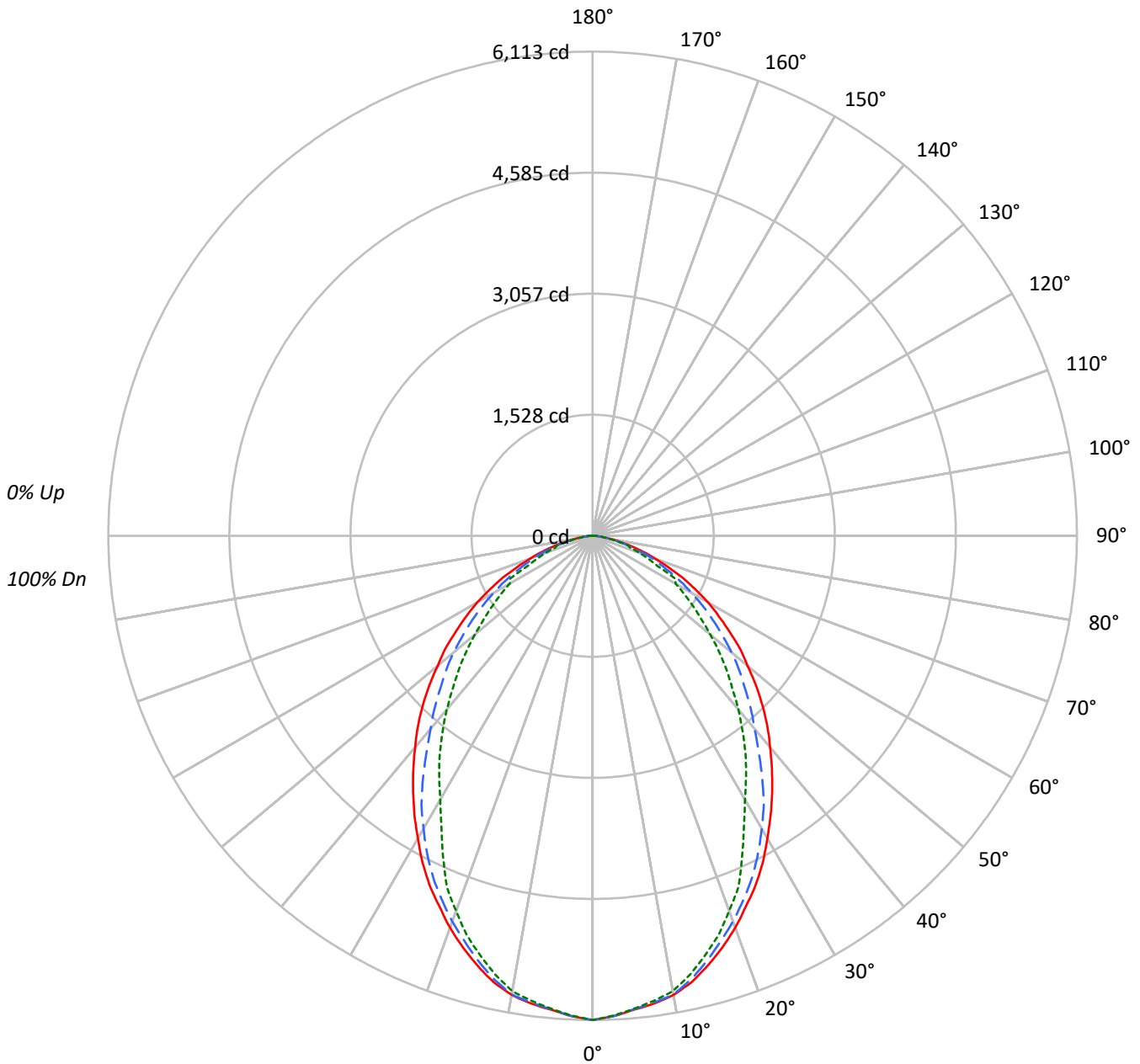
Lumens per Lamp: N/A
Luminaire Lumens: 12001.0 lumens
Efficiency: N/A
Efficacy: 90.1 lumens/watt
Spacing Criteria (0/90/45): 1.1 / 1 / 1.15
Luminous Opening: Rectangular (W 2' x L: 4' x H: 0')
CIE Type: Direct

Input Watts (W): 133.2
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: P547465

CATALOG NUMBER: FMR-24-4-LD4-4STD-35-UNV-82-86-EDD

Luminous Intensity Polar Plot





TEST NUMBER: P547465

CATALOG NUMBER: FMR-24-4-LD4-4STD-35-UNV-82-86-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°	8225	8225	8225
5°	8113	8104	8094
10°	8043	8033	7975
15°	7826	7747	7639
20°	7539	7417	7215
25°	7229	7072	6631
30°	6851	6632	5973
35°	6489	6129	5526
40°	6120	5586	5027
45°	5769	5164	4545
50°	5340	4793	4053
55°	4940	4343	3631
60°	4526	3880	3252
65°	3982	3398	2880
70°	3281	2975	2447
75°	2609	2278	2388
80°	1753	1643	1533
85°	1091	1309	1527



TEST NUMBER: P547465

CATALOG NUMBER: FMR-24-4-LD4-4STD-35-UNV-82-86-EDD

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	569.1	4.7
10°-20°	1561.7	13.0
20°-30°	2162.1	18.0
30°-40°	2305.4	19.2
40°-50°	2103.2	17.5
50°-60°	1647.7	13.7
60°-70°	1073.9	8.9
70°-80°	475.8	4.0
80°-90°	102.2	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°	4292.8	35.8
0°-40°	6598.3	55.0
0°-60°	10349.2	86.2
0°-90°	12001.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	12001.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	6113	6113	6113	6113	6113	
5°	6007	6000	6000	5993	5993	570
15°	5618	5618	5562	5505	5484	1579
25°	4869	4841	4763	4594	4466	2235
35°	3951	3922	3732	3449	3364	2470
45°	3032	2968	2714	2488	2389	2335
55°	2106	2042	1852	1632	1548	1889
65°	1251	1180	1067	1088	905	1233
75°	502	466	438	417	459	538
85°	71	78	85	92	99	98
90°	0	0	0	0	0	



TEST NUMBER: P547465

CATALOG NUMBER: FMR-24-4-LD4-4STD-35-UNV-82-86-EDD

CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	6113.1	6113.1	6113.1	6113.1	6113.1
2.5°	6070.7	6070.7	6070.7	6063.7	6063.7
5°	6007.1	6000.1	6000.1	5993.0	5993.0
7.5°	5957.7	5950.6	5943.5	5936.5	5922.3
10°	5887.0	5887.0	5879.9	5844.6	5837.5
12.5°	5773.9	5766.9	5738.6	5689.1	5675.0
15°	5618.4	5618.4	5561.9	5505.4	5484.2
17.5°	5448.8	5441.8	5371.1	5314.6	5286.3
20°	5265.1	5250.9	5180.3	5088.4	5038.9
22.5°	5060.1	5060.1	4975.3	4855.2	4805.7
25°	4869.3	4841.0	4763.3	4593.7	4466.5
27.5°	4650.2	4607.8	4523.0	4282.7	4134.3
30°	4409.9	4388.7	4268.6	3957.6	3844.6
32.5°	4183.8	4148.5	4021.3	3696.2	3604.3
35°	3950.6	3922.3	3731.5	3448.8	3364.0
37.5°	3717.4	3682.0	3441.7	3215.6	3109.6
40°	3484.1	3441.7	3180.3	2975.3	2862.2
42.5°	3265.1	3208.5	2954.1	2735.0	2607.8
45°	3031.8	2968.2	2713.8	2487.7	2388.7
47.5°	2798.6	2742.1	2508.9	2275.6	2162.6
50°	2551.3	2501.8	2289.8	2056.6	1936.4
52.5°	2346.3	2268.6	2063.6	1830.4	1731.5
55°	2106.0	2042.4	1851.6	1632.5	1547.7
57.5°	1886.9	1823.3	1646.7	1441.7	1371.0
60°	1682.0	1590.1	1441.7	1265.0	1208.5
62.5°	1455.8	1385.2	1258.0	1109.6	1180.2
65°	1250.9	1180.2	1067.2	1088.4	904.6
67.5°	1024.7	989.4	890.5	791.5	763.3
70°	833.9	791.5	756.2	650.2	621.9
72.5°	664.3	621.9	572.4	515.9	494.7
75°	501.8	466.4	438.2	417.0	459.4
77.5°	346.3	332.2	311.0	289.8	282.7
80°	226.2	219.1	212.0	204.9	197.9
82.5°	134.3	134.3	134.3	134.3	134.3
85°	70.7	77.7	84.8	91.9	98.9
87.5°	42.4	42.4	49.5	56.5	63.6
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)