

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: P547369

Luminaire Tested: **FMR-24-4-LD4-4LO-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: P547369
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-LD4-4LO-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

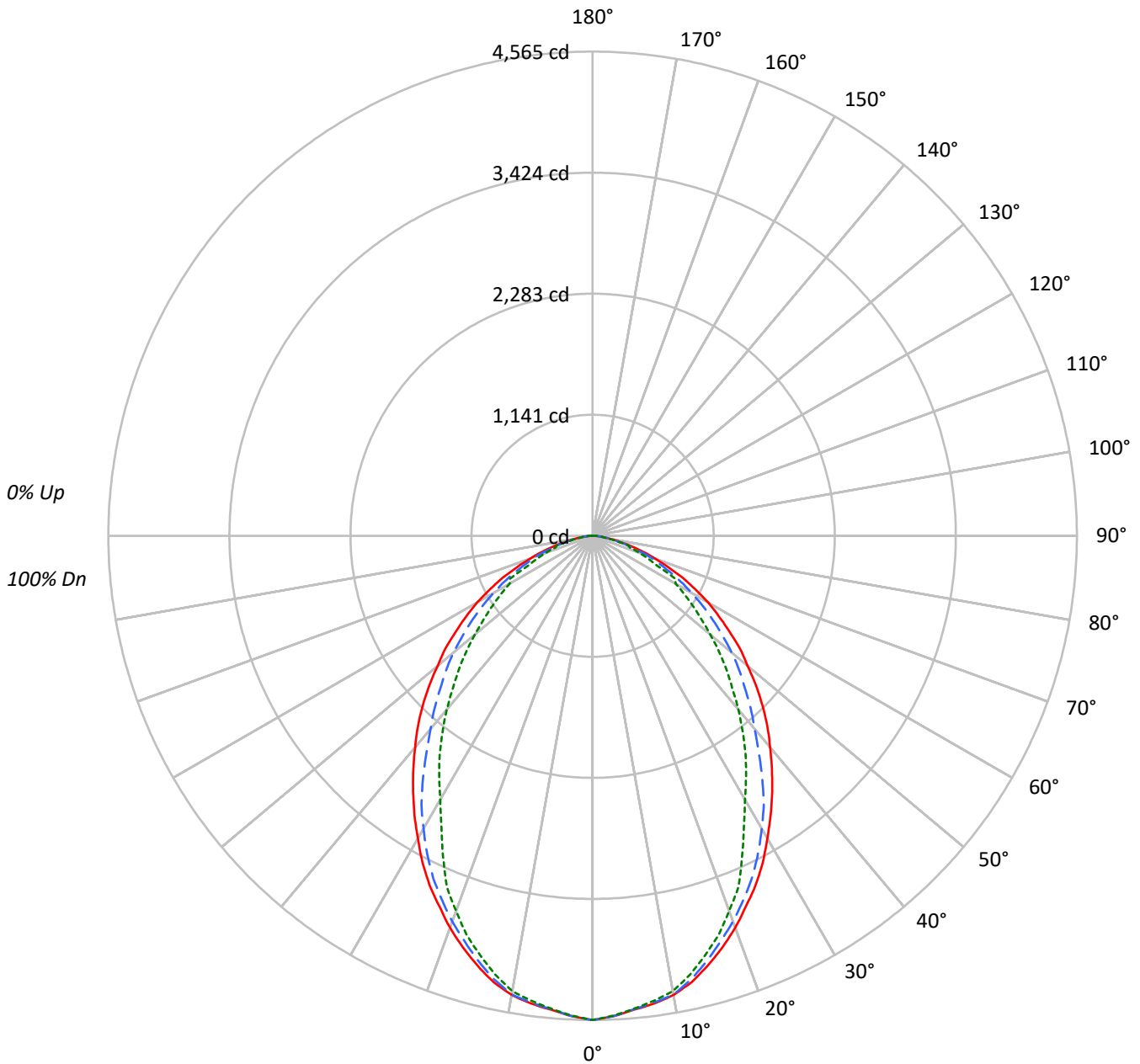
Lumens per Lamp: N/A
Luminaire Lumens: 8962.0 lumens
Efficiency: N/A
Efficacy: 95.7 lumens/watt
Spacing Criteria (0/90/45): 1.1 / 1 / 1.15
Luminous Opening: Rectangular (W 2' x L: 4' x H: 0')
CIE Type: Direct

Input Watts (W): 93.6
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: P547369

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

Luminous Intensity Polar Plot





TEST NUMBER: P547369

CATALOG NUMBER: FMR-24-4-LD4-4LO-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°	6142	6142	6142
5°	6059	6052	6045
10°	6006	5999	5956
15°	5844	5786	5705
20°	5630	5539	5388
25°	5398	5281	4952
30°	5116	4953	4460
35°	4846	4577	4126
40°	4570	4171	3754
45°	4308	3856	3394
50°	3988	3579	3027
55°	3689	3244	2711
60°	3380	2897	2429
65°	2974	2537	2151
70°	2450	2222	1827
75°	1948	1701	1783
80°	1309	1227	1145
85°	815	977	1141



TEST NUMBER: P547369

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

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	425.0	4.7
10°-20°	1166.2	13.0
20°-30°	1614.6	18.0
30°-40°	1721.6	19.2
40°-50°	1570.6	17.5
50°-60°	1230.5	13.7
60°-70°	802.0	8.9
70°-80°	355.3	4.0
80°-90°	76.3	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°	3205.8	35.8
0°-40°	4927.4	55.0
0°-60°	7728.5	86.2
0°-90°	8962.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	8962.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	4565	4565	4565	4565	4565	
5°	4486	4481	4481	4475	4475	426
15°	4196	4196	4154	4111	4095	1180
25°	3636	3615	3557	3430	3335	1669
35°	2950	2929	2787	2576	2512	1844
45°	2264	2217	2027	1858	1784	1744
55°	1573	1525	1383	1219	1156	1411
65°	934	881	797	813	676	921
75°	375	348	327	311	343	402
85°	53	58	63	69	74	73
90°	0	0	0	0	0	



TEST NUMBER: P547369

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

CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	4565.1	4565.1	4565.1	4565.1	4565.1
2.5°	4533.5	4533.5	4533.5	4528.2	4528.2
5°	4486.0	4480.7	4480.7	4475.4	4475.4
7.5°	4449.0	4443.7	4438.5	4433.2	4422.6
10°	4396.2	4396.2	4391.0	4364.6	4359.3
12.5°	4311.8	4306.5	4285.4	4248.5	4237.9
15°	4195.7	4195.7	4153.5	4111.2	4095.4
17.5°	4069.0	4063.8	4011.0	3968.8	3947.6
20°	3931.8	3921.3	3868.5	3799.9	3762.9
22.5°	3778.8	3778.8	3715.4	3625.7	3588.8
25°	3636.3	3615.2	3557.1	3430.4	3335.4
27.5°	3472.7	3441.0	3377.7	3198.2	3087.4
30°	3293.2	3277.4	3187.7	2955.5	2871.0
32.5°	3124.3	3098.0	3003.0	2760.2	2691.6
35°	2950.2	2929.1	2786.6	2575.5	2512.1
37.5°	2776.0	2749.6	2570.2	2401.3	2322.1
40°	2601.9	2570.2	2374.9	2221.9	2137.4
42.5°	2438.3	2396.0	2206.0	2042.4	1947.4
45°	2264.1	2216.6	2026.6	1857.7	1783.8
47.5°	2089.9	2047.7	1873.5	1699.4	1614.9
50°	1905.2	1868.3	1709.9	1535.8	1446.1
52.5°	1752.2	1694.1	1541.1	1366.9	1293.0
55°	1572.7	1525.2	1382.7	1219.1	1155.8
57.5°	1409.1	1361.6	1229.7	1076.6	1023.9
60°	1256.1	1187.5	1076.6	944.7	902.5
62.5°	1087.2	1034.4	939.4	828.6	881.4
65°	934.1	881.4	796.9	812.8	675.5
67.5°	765.3	738.9	665.0	591.1	570.0
70°	622.8	591.1	564.7	485.5	464.4
72.5°	496.1	464.4	427.5	385.3	369.4
75°	374.7	348.3	327.2	311.4	343.0
77.5°	258.6	248.0	232.2	216.4	211.1
80°	168.9	163.6	158.3	153.1	147.8
82.5°	100.3	100.3	100.3	100.3	100.3
85°	52.8	58.1	63.3	68.6	73.9
87.5°	31.7	31.7	36.9	42.2	47.5
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)