

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: P547205

Luminaire Tested: **FMR-24-4-LD4-3STD-40-UNV-81-96-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: P547205
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-LD4-3STD-40-UNV-81-96-EDD
Description: 2X4 FMR TROFFER WITH .156 CLEAR PC FIXTURE SIDE AND .250 CLEAR
TEMPERED GLASS ENVIRONMENTAL SIDE LENSES WITH, 90 CRI AND 4000K CCT LEDS
Light Source: -
Ballast/Driver: -

Luminaire Equipment: Sample No. Condition Description

Summary

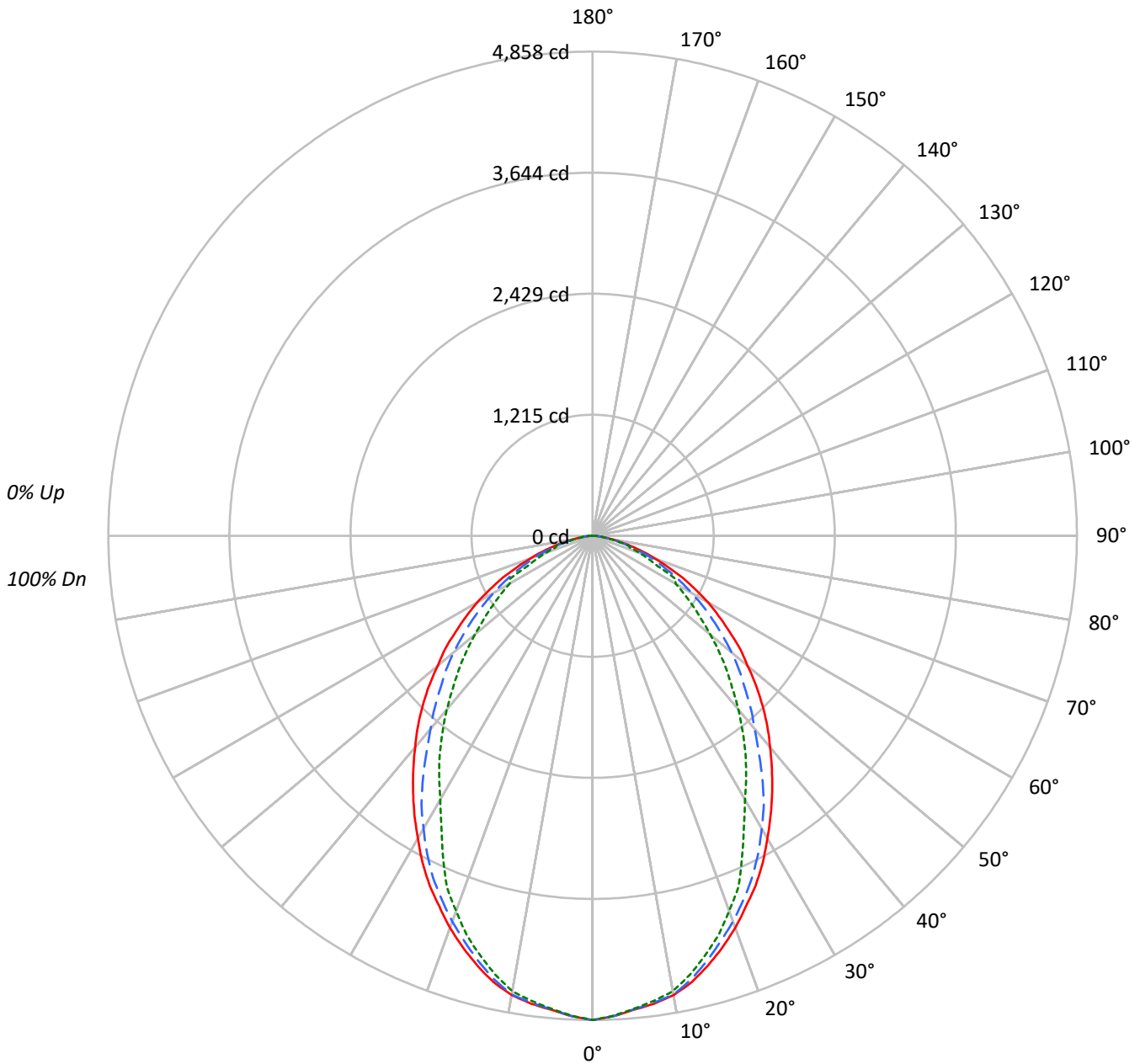
Lumens per Lamp: N/A
Luminaire Lumens: 9538.0 lumens
Efficiency: N/A
Efficacy: 95.5 lumens/watt
Spacing Criteria (0/90/45): 1.1 / 1 / 1.15
Luminous Opening: Rectangular (W 2' x L: 4' x H: 0')
CIE Type: Direct

Input Watts (W): 99.9
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: P547205

CATALOG NUMBER: FMR-24-4-LD4-3STD-40-UNV-81-96-EDD

Luminous Intensity Polar Plot





TEST NUMBER: P547205

CATALOG NUMBER: FMR-24-4-LD4-3STD-40-UNV-81-96-EDD

COEFFICIENT OF UTILIZATION - ZONAL CAVITY METHOD:

RF	20					20					20					20					20					
RC	80					70					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°	6537	6537	6537
5°	6448	6441	6433
10°	6392	6385	6339
15°	6220	6157	6071
20°	5992	5895	5734
25°	5745	5620	5270
30°	5445	5271	4747
35°	5157	4871	4391
40°	4864	4440	3995
45°	4585	4104	3612
50°	4244	3809	3221
55°	3926	3452	2886
60°	3597	3083	2585
65°	3165	2700	2289
70°	2607	2364	1945
75°	2073	1810	1898
80°	1392	1306	1219
85°	868	1041	1213



TEST NUMBER: P547205

CATALOG NUMBER: FMR-24-4-LD4-3STD-40-UNV-81-96-EDD

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	452.3	4.7
10°-20°	1241.2	13.0
20°-30°	1718.4	18.0
30°-40°	1832.3	19.2
40°-50°	1671.6	17.5
50°-60°	1309.5	13.7
60°-70°	853.5	8.9
70°-80°	378.1	4.0
80°-90°	81.2	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°	3411.8	35.8
0°-40°	5244.1	55.0
0°-60°	8225.2	86.2
0°-90°	9538.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	9538.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	4858	4858	4858	4858	4858	
5°	4774	4769	4769	4763	4763	453
15°	4465	4465	4420	4376	4359	1255
25°	3870	3848	3786	3651	3550	1777
35°	3140	3117	2966	2741	2674	1963
45°	2410	2359	2157	1977	1898	1856
55°	1674	1623	1472	1298	1230	1501
65°	994	938	848	865	719	980
75°	399	371	348	331	365	427
85°	56	62	67	73	79	78
90°	0	0	0	0	0	



TEST NUMBER: P547205

CATALOG NUMBER: FMR-24-4-LD4-3STD-40-UNV-81-96-EDD

CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	4858.5	4858.5	4858.5	4858.5	4858.5
2.5°	4824.8	4824.8	4824.8	4819.2	4819.2
5°	4774.3	4768.7	4768.7	4763.0	4763.0
7.5°	4735.0	4729.3	4723.7	4718.1	4706.9
10°	4678.8	4678.8	4673.2	4645.1	4639.5
12.5°	4588.9	4583.3	4560.8	4521.5	4510.3
15°	4465.4	4465.4	4420.4	4375.5	4358.6
17.5°	4330.6	4324.9	4268.8	4223.8	4201.4
20°	4184.5	4173.3	4117.1	4044.1	4004.8
22.5°	4021.6	4021.6	3954.2	3858.7	3819.4
25°	3870.0	3847.5	3785.7	3650.9	3549.8
27.5°	3695.9	3662.2	3594.8	3403.8	3285.8
30°	3504.9	3488.0	3392.5	3145.4	3055.5
32.5°	3325.1	3297.1	3196.0	2937.6	2864.6
35°	3139.8	3117.3	2965.7	2741.0	2673.6
37.5°	2954.4	2926.4	2735.4	2555.6	2471.4
40°	2769.1	2735.4	2527.6	2364.7	2274.8
42.5°	2595.0	2550.0	2347.8	2173.7	2072.6
45°	2409.6	2359.1	2156.9	1977.1	1898.5
47.5°	2224.3	2179.3	1994.0	1808.6	1718.7
50°	2027.7	1988.3	1819.8	1634.5	1539.0
52.5°	1864.8	1803.0	1640.1	1454.8	1376.1
55°	1673.8	1623.3	1471.6	1297.5	1230.1
57.5°	1499.7	1449.1	1308.7	1145.8	1089.7
60°	1336.8	1263.8	1145.8	1005.4	960.5
62.5°	1157.1	1100.9	999.8	881.8	938.0
65°	994.2	938.0	848.1	865.0	719.0
67.5°	814.4	786.4	707.7	629.1	606.6
70°	662.8	629.1	601.0	516.7	494.3
72.5°	528.0	494.3	455.0	410.0	393.2
75°	398.8	370.7	348.2	331.4	365.1
77.5°	275.2	264.0	247.1	230.3	224.7
80°	179.7	174.1	168.5	162.9	157.3
82.5°	106.7	106.7	106.7	106.7	106.7
85°	56.2	61.8	67.4	73.0	78.6
87.5°	33.7	33.7	39.3	44.9	50.6
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)