

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: P547461

Luminaire Tested: **FMR-24-4-LD4-4STD-35-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: P547461
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-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 3500K CCT LEDS
Light Source: -
Ballast/Driver: -

Luminaire Equipment: Sample No. Condition Description

Summary

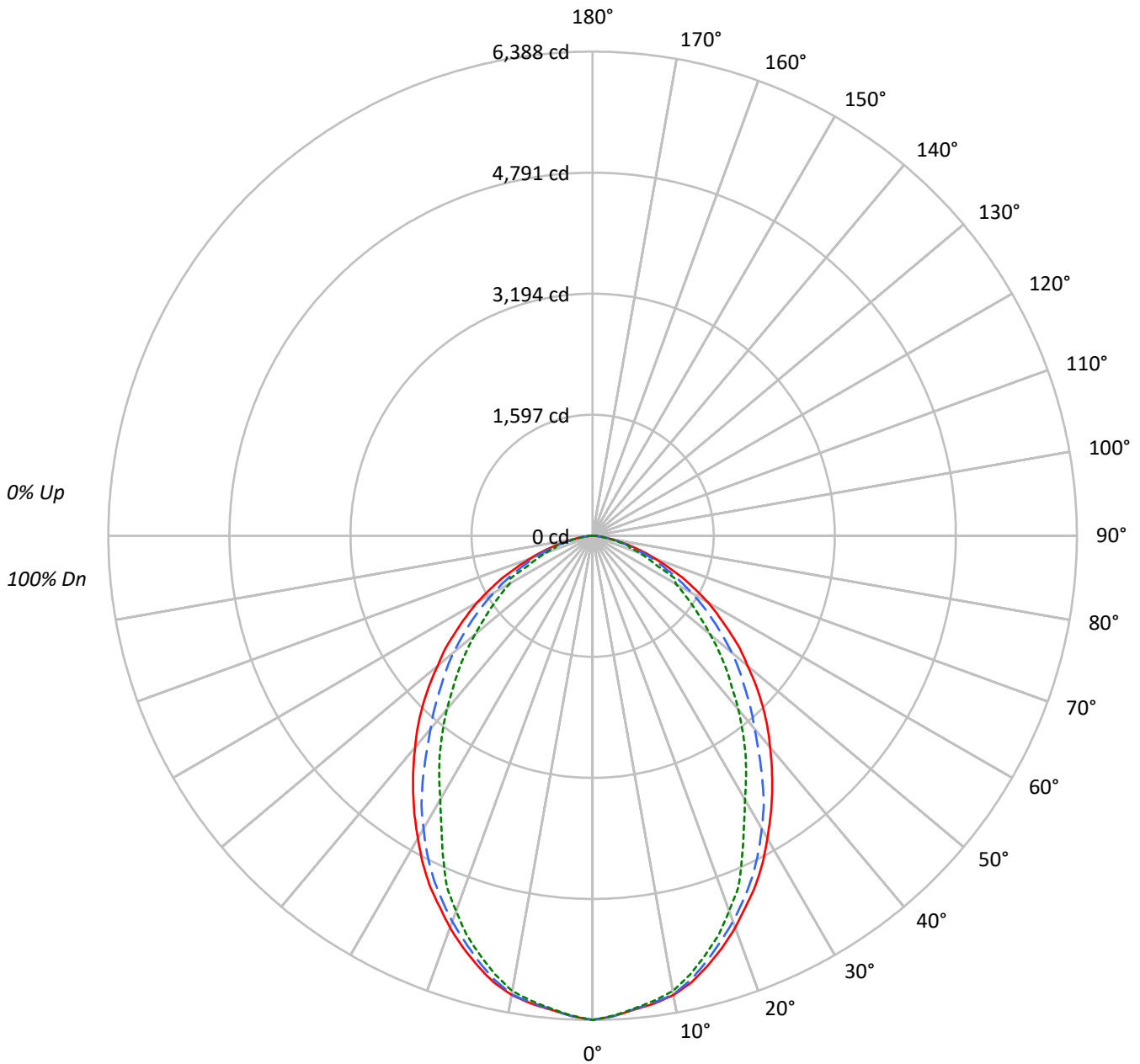
Lumens per Lamp: N/A
Luminaire Lumens: 12540.0 lumens
Efficiency: N/A
Efficacy: 94.1 lumens/watt
Spacing Criteria (0/90/45): 1.1 / 1 / 1.15
Luminous Opening: Rectangular (W 2' x L: 4' x H: 0')
CIE Type: Direct

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

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Luminous Intensity Polar Plot





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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°	8595	8595	8595
5°	8478	8468	8458
10°	8404	8394	8334
15°	8178	8095	7982
20°	7877	7750	7539
25°	7554	7389	6929
30°	7159	6930	6241
35°	6780	6404	5774
40°	6394	5837	5253
45°	6028	5396	4749
50°	5580	5008	4235
55°	5162	4539	3794
60°	4729	4054	3398
65°	4161	3550	3009
70°	3428	3109	2556
75°	2726	2380	2495
80°	1831	1716	1602
85°	1139	1368	1596



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	594.6	4.7
10°-20°	1631.9	13.0
20°-30°	2259.2	18.0
30°-40°	2409.0	19.2
40°-50°	2197.7	17.5
50°-60°	1721.7	13.7
60°-70°	1122.1	8.9
70°-80°	497.1	4.0
80°-90°	106.7	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°	4485.7	35.8
0°-40°	6894.6	55.0
0°-60°	10814.0	86.2
0°-90°	12540.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	12540.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	6388	6388	6388	6388	6388	
5°	6277	6270	6270	6262	6262	596
15°	5871	5871	5812	5753	5730	1650
25°	5088	5058	4977	4800	4667	2336
35°	4128	4098	3899	3604	3515	2581
45°	3168	3102	2836	2599	2496	2440
55°	2201	2134	1935	1706	1617	1974
65°	1307	1233	1115	1137	945	1288
75°	524	487	458	436	480	562
85°	74	81	89	96	103	102
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	6387.7	6387.7	6387.7	6387.7	6387.7
2.5°	6343.4	6343.4	6343.4	6336.0	6336.0
5°	6276.9	6269.6	6269.6	6262.2	6262.2
7.5°	6225.2	6217.9	6210.5	6203.1	6188.3
10°	6151.4	6151.4	6144.0	6107.1	6099.7
12.5°	6033.2	6025.9	5996.3	5944.6	5929.9
15°	5870.8	5870.8	5811.7	5752.6	5730.5
17.5°	5693.6	5686.2	5612.3	5553.2	5523.7
20°	5501.6	5486.8	5412.9	5316.9	5265.2
22.5°	5287.4	5287.4	5198.8	5073.2	5021.6
25°	5088.0	5058.5	4977.2	4800.0	4667.1
27.5°	4859.1	4814.8	4726.2	4475.1	4320.0
30°	4608.0	4585.9	4460.3	4135.4	4017.2
32.5°	4371.7	4334.8	4201.9	3862.2	3766.2
35°	4128.0	4098.5	3899.1	3603.7	3515.1
37.5°	3884.3	3847.4	3596.3	3360.0	3249.2
40°	3640.6	3596.3	3323.1	3108.9	2990.8
42.5°	3411.7	3352.6	3086.8	2857.9	2724.9
45°	3168.0	3101.5	2835.7	2599.4	2496.0
47.5°	2924.3	2865.2	2621.5	2377.9	2259.7
50°	2665.9	2614.2	2392.6	2148.9	2023.4
52.5°	2451.7	2370.5	2156.3	1912.6	1809.2
55°	2200.6	2134.2	1934.8	1705.9	1617.2
57.5°	1971.7	1905.2	1720.6	1506.5	1432.6
60°	1757.5	1661.5	1506.5	1321.8	1262.8
62.5°	1521.2	1447.4	1314.5	1159.4	1233.2
65°	1307.1	1233.2	1115.1	1137.2	945.2
67.5°	1070.8	1033.8	930.5	827.1	797.5
70°	871.4	827.1	790.2	679.4	649.8
72.5°	694.2	649.8	598.2	539.1	516.9
75°	524.3	487.4	457.8	435.7	480.0
77.5°	361.8	347.1	324.9	302.8	295.4
80°	236.3	228.9	221.5	214.2	206.8
82.5°	140.3	140.3	140.3	140.3	140.3
85°	73.8	81.2	88.6	96.0	103.4
87.5°	44.3	44.3	51.7	59.1	66.5
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)