

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: P547531

Luminaire Tested: **FMR-24-4-LD4-4STD-50-UNV-82-88-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: P547531
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-50-UNV-82-88-EDD
Description: 2X4 FMR TROFFER WITH .187 CLEAR PC FIXTURE SIDE AND .500 CLEAR PC ENVIRONMENTAL SIDE LENSES WITH, 90 CRI AND 5000K CCT LEDS
Light Source: -
Ballast/Driver: -

Luminaire Equipment: Sample No. Condition Description

Summary

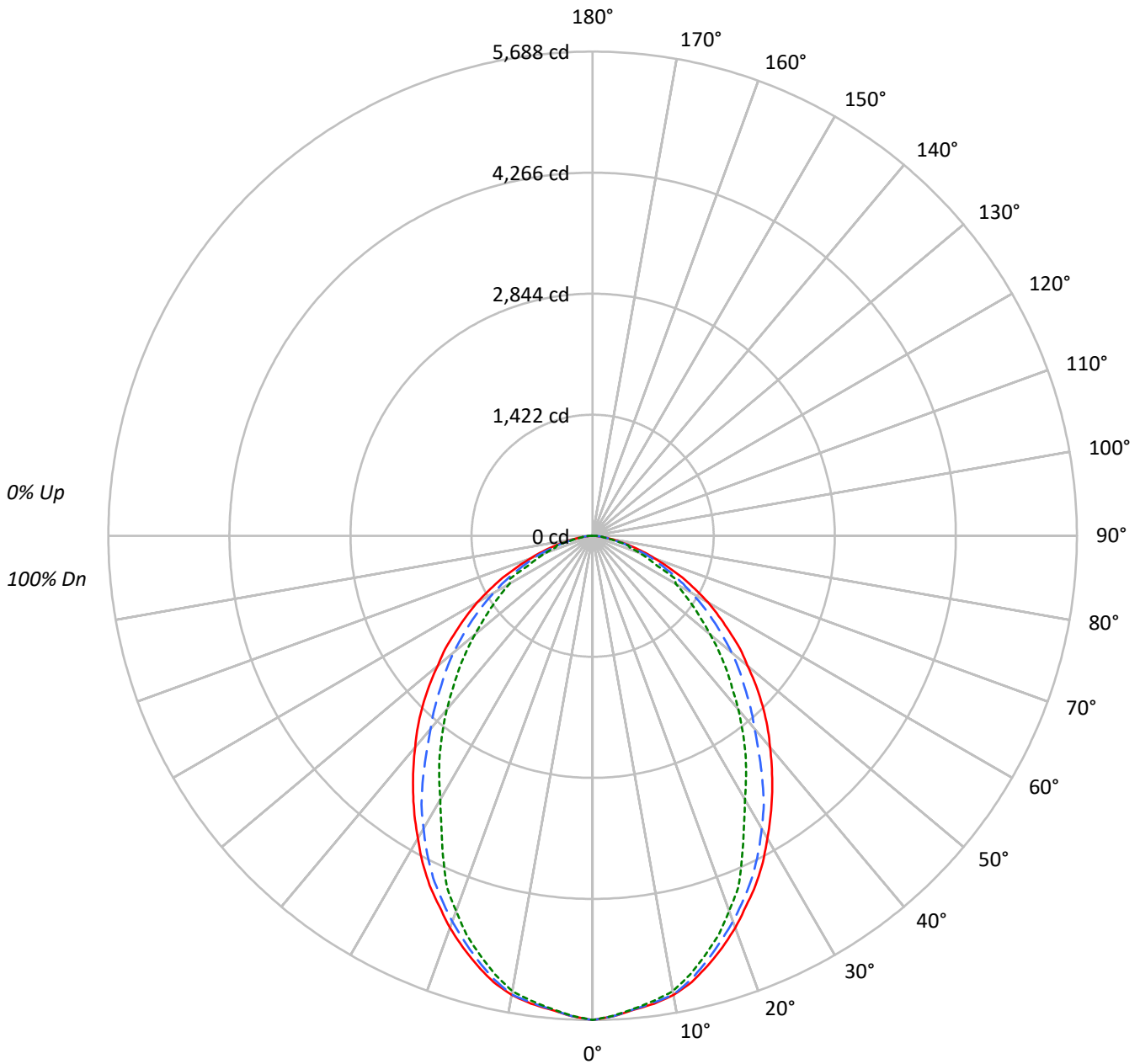
Lumens per Lamp: N/A
Luminaire Lumens: 11167.0 lumens
Efficiency: N/A
Efficacy: 83.8 lumens/watt
Spacing Criteria (0/90/45): 1.1 / 1 / 1.15
Luminous Opening: Rectangular (W 2' x L: 4' x H: 0')
CIE Type: Direct

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°	7654	7654	7654
5°	7550	7541	7532
10°	7484	7475	7421
15°	7282	7209	7108
20°	7015	6902	6714
25°	6726	6580	6170
30°	6375	6171	5558
35°	6038	5703	5141
40°	5694	5198	4678
45°	5368	4805	4229
50°	4969	4460	3772
55°	4597	4042	3378
60°	4212	3610	3026
65°	3706	3161	2680
70°	3053	2768	2277
75°	2427	2119	2222
80°	1630	1529	1426
85°	1016	1218	1422



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	529.5	4.7
10°-20°	1453.2	13.0
20°-30°	2011.8	18.0
30°-40°	2145.2	19.2
40°-50°	1957.0	17.5
50°-60°	1533.2	13.7
60°-70°	999.2	8.9
70°-80°	442.7	4.0
80°-90°	95.0	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°	3994.5	35.8
0°-40°	6139.7	55.0
0°-60°	9630.0	86.2
0°-90°	11167.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	11167.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	5688	5688	5688	5688	5688	
5°	5590	5583	5583	5576	5576	531
15°	5228	5228	5175	5123	5103	1470
25°	4531	4505	4432	4274	4156	2080
35°	3676	3650	3472	3209	3130	2298
45°	2821	2762	2525	2315	2223	2173
55°	1960	1900	1723	1519	1440	1758
65°	1164	1098	993	1013	842	1147
75°	467	434	408	388	427	500
85°	66	72	79	86	92	91
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	5688.3	5688.3	5688.3	5688.3	5688.3
2.5°	5648.9	5648.9	5648.9	5642.3	5642.3
5°	5589.7	5583.1	5583.1	5576.5	5576.5
7.5°	5543.6	5537.1	5530.5	5523.9	5510.8
10°	5477.9	5477.9	5471.3	5438.4	5431.9
12.5°	5372.7	5366.1	5339.8	5293.8	5280.6
15°	5228.0	5228.0	5175.4	5122.8	5103.0
17.5°	5070.2	5063.6	4997.8	4945.2	4918.9
20°	4899.2	4886.0	4820.3	4734.8	4688.8
22.5°	4708.5	4708.5	4629.6	4517.8	4471.7
25°	4530.9	4504.6	4432.3	4274.5	4156.1
27.5°	4327.1	4287.6	4208.7	3985.1	3847.0
30°	4103.5	4083.8	3972.0	3682.6	3577.4
32.5°	3893.0	3860.2	3741.8	3439.3	3353.8
35°	3676.0	3649.7	3472.2	3209.1	3130.2
37.5°	3459.0	3426.1	3202.6	2992.1	2893.5
40°	3242.0	3202.6	2959.2	2768.5	2663.3
42.5°	3038.2	2985.5	2748.8	2544.9	2426.6
45°	2821.1	2762.0	2525.2	2314.8	2222.7
47.5°	2604.1	2551.5	2334.5	2117.5	2012.3
50°	2374.0	2327.9	2130.7	1913.6	1801.8
52.5°	2183.3	2110.9	1920.2	1703.2	1611.1
55°	1959.7	1900.5	1722.9	1519.1	1440.2
57.5°	1755.8	1696.6	1532.2	1341.5	1275.8
60°	1565.1	1479.6	1341.5	1177.1	1124.5
62.5°	1354.7	1288.9	1170.5	1032.4	1098.2
65°	1164.0	1098.2	993.0	1012.7	841.7
67.5°	953.5	920.7	828.6	736.5	710.2
70°	776.0	736.5	703.6	605.0	578.7
72.5°	618.2	578.7	532.7	480.1	460.3
75°	466.9	434.0	407.7	388.0	427.4
77.5°	322.2	309.1	289.3	269.6	263.0
80°	210.4	203.9	197.3	190.7	184.1
82.5°	124.9	124.9	124.9	124.9	124.9
85°	65.8	72.3	78.9	85.5	92.1
87.5°	39.5	39.5	46.0	52.6	59.2
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)