

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: P547512

Luminaire Tested: **FMR-24-4-LD4-4STD-50-UNV-80-85-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: P547512
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-80-85-EDD
Description: 2X4 FMR TROFFER WITH .125 PRISMATIC ACRYLIC FIXTURE SIDE AND .187 CLEAR PC ENVIRONMENTAL SIDE LENSES WITH, 90 CRI AND 5000K CCT LEDS
Light Source: -
Ballast/Driver: -

Luminaire Equipment: Sample No. Condition Description

Summary

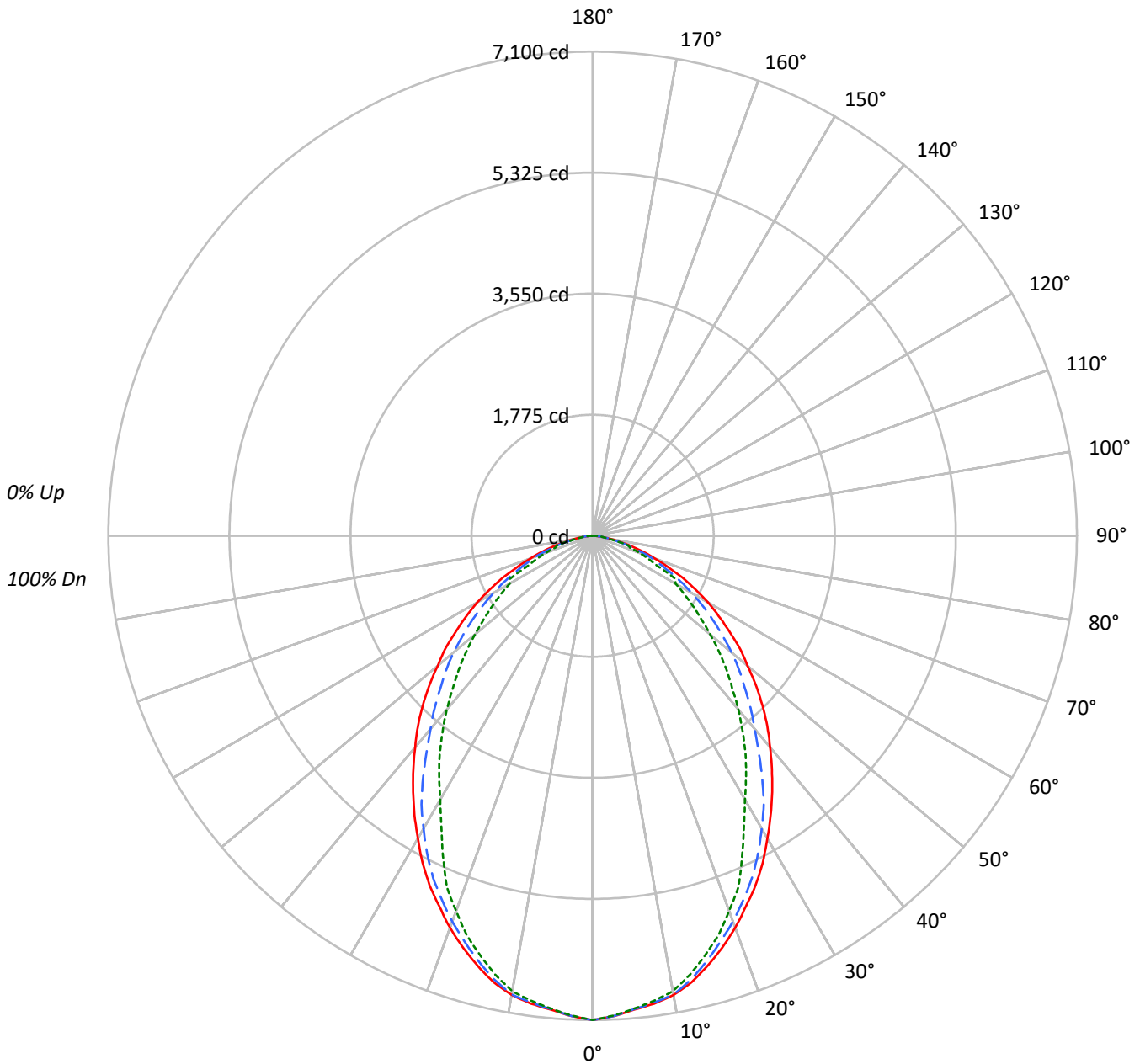
Lumens per Lamp: N/A
Luminaire Lumens: 13939.0 lumens
Efficiency: N/A
Efficacy: 104.6 lumens/watt
Spacing Criteria (0/90/45): 1.1 / 1 / 1.15
Luminous Opening: Rectangular (W 2' x L: 4' x H: 0')
CIE Type: Direct

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					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°	9553	9553	9553
5°	9424	9413	9401
10°	9342	9331	9263
15°	9090	8999	8873
20°	8756	8615	8380
25°	8396	8213	7702
30°	7958	7703	6938
35°	7537	7119	6418
40°	7108	6488	5839
45°	6701	5998	5279
50°	6203	5567	4708
55°	5738	5045	4217
60°	5257	4506	3777
65°	4626	3946	3345
70°	3810	3455	2841
75°	3030	2646	2774
80°	2035	1908	1781
85°	1267	1521	1774



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	660.9	4.7
10°-20°	1813.9	13.0
20°-30°	2511.2	18.0
30°-40°	2677.7	19.2
40°-50°	2442.9	17.5
50°-60°	1913.8	13.7
60°-70°	1247.3	8.9
70°-80°	552.6	4.0
80°-90°	118.7	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°	4986.1	35.8
0°-40°	7663.8	55.0
0°-60°	12020.4	86.2
0°-90°	13939.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	13939.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	7100	7100	7100	7100	7100	
5°	6977	6969	6969	6961	6961	662
15°	6526	6526	6460	6394	6370	1835
25°	5656	5623	5532	5336	5188	2597
35°	4588	4556	4334	4006	3907	2869
45°	3521	3448	3152	2889	2774	2713
55°	2446	2372	2151	1896	1798	2194
65°	1453	1371	1240	1264	1051	1432
75°	583	542	509	484	534	625
85°	82	90	98	107	115	114
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	7100.3	7100.3	7100.3	7100.3	7100.3
2.5°	7051.1	7051.1	7051.1	7042.9	7042.9
5°	6977.2	6969.0	6969.0	6960.8	6960.8
7.5°	6919.8	6911.5	6903.3	6895.1	6878.7
10°	6837.7	6837.7	6829.5	6788.4	6780.2
12.5°	6706.3	6698.1	6665.3	6607.8	6591.4
15°	6525.7	6525.7	6460.1	6394.4	6369.8
17.5°	6328.7	6320.5	6238.4	6172.8	6139.9
20°	6115.3	6098.9	6016.8	5910.1	5852.7
22.5°	5877.3	5877.3	5778.8	5639.2	5581.8
25°	5655.6	5622.8	5532.5	5335.5	5187.8
27.5°	5401.2	5351.9	5253.4	4974.3	4802.0
30°	5122.1	5097.5	4957.9	4596.8	4465.4
32.5°	4859.4	4818.4	4670.6	4293.0	4186.3
35°	4588.5	4555.7	4334.1	4005.7	3907.2
37.5°	4317.7	4276.6	3997.5	3734.9	3611.7
40°	4046.8	3997.5	3693.8	3455.8	3324.4
42.5°	3792.3	3726.7	3431.1	3176.7	3028.9
45°	3521.4	3447.6	3152.1	2889.4	2774.5
47.5°	3250.6	3184.9	2914.0	2643.1	2511.8
50°	2963.3	2905.8	2659.5	2388.7	2249.1
52.5°	2725.2	2634.9	2396.9	2126.0	2011.1
55°	2446.1	2372.3	2150.6	1896.2	1797.7
57.5°	2191.7	2117.8	1912.6	1674.5	1592.4
60°	1953.6	1846.9	1674.5	1469.3	1403.7
62.5°	1690.9	1608.9	1461.1	1288.7	1370.8
65°	1452.9	1370.8	1239.5	1264.1	1050.7
67.5°	1190.2	1149.2	1034.3	919.4	886.5
70°	968.6	919.4	878.3	755.2	722.3
72.5°	771.6	722.3	664.9	599.2	574.6
75°	582.8	541.8	508.9	484.3	533.6
77.5°	402.2	385.8	361.2	336.5	328.3
80°	262.7	254.5	246.3	238.0	229.8
82.5°	156.0	156.0	156.0	156.0	156.0
85°	82.1	90.3	98.5	106.7	114.9
87.5°	49.3	49.3	57.5	65.7	73.9
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)