

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: P547347

Luminaire Tested: **FMR-24-4-LD4-4HI-50-UNV-93-88-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: P547347
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-LD4-4HI-50-UNV-93-88-EDD
Description: 2X4 FMR TROFFER WITH .156 CLEAR TEMPERED GLASS 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

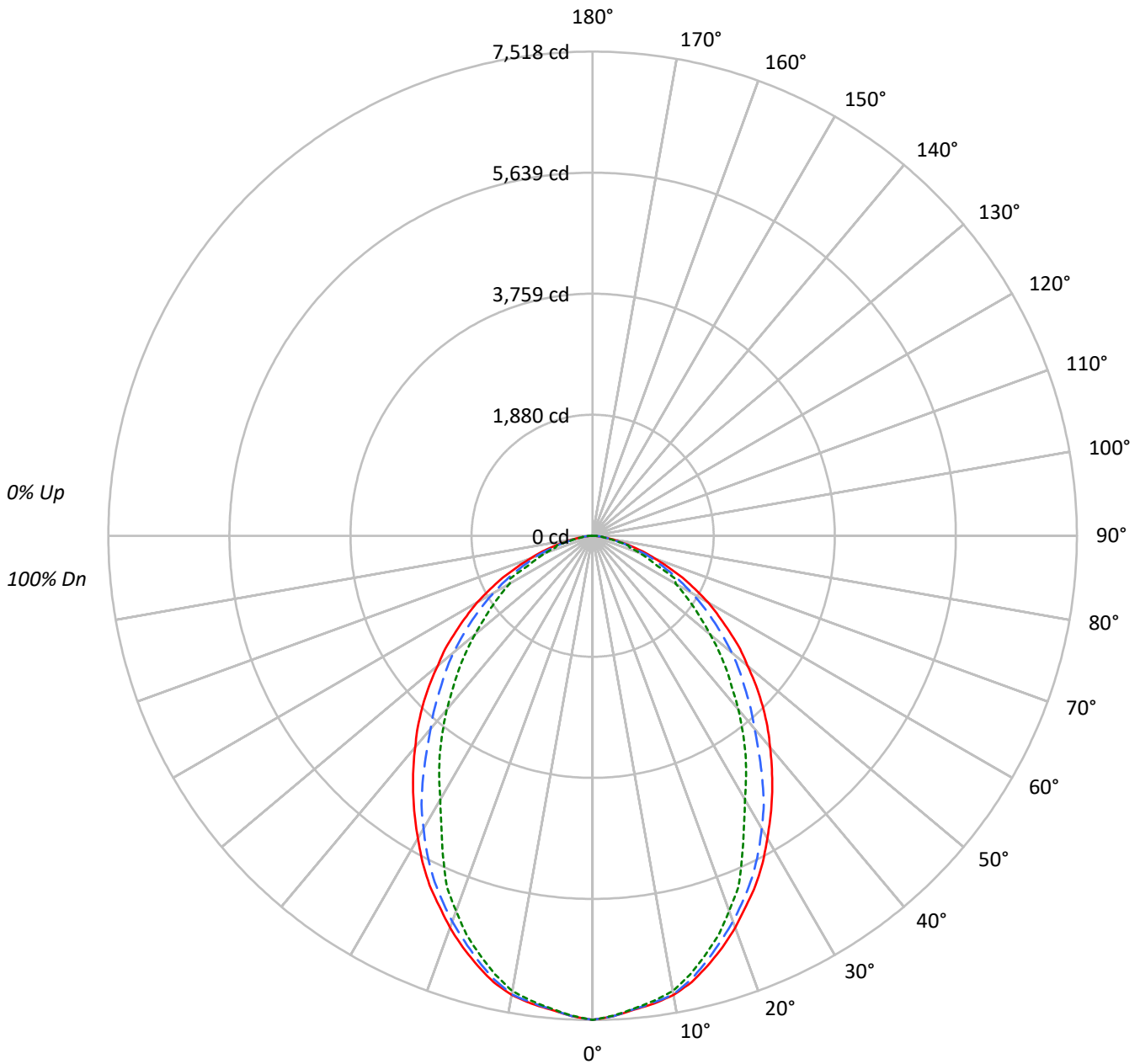
Lumens per Lamp: N/A
Luminaire Lumens: 14758.0 lumens
Efficiency: N/A
Efficacy: 85.4 lumens/watt
Spacing Criteria (0/90/45): 1.1 / 1 / 1.15
Luminous Opening: Rectangular (W 2' x L: 4' x H: 0')
CIE Type: Direct

Input Watts (W): 172.8
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				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				100
1	110	106	102	99	108	104	100	97	100	97	94	96	94	91	92	90	89	87				87
2	101	94	88	83	99	92	87	82	89	84	80	86	82	78	83	79	77	75				75
3	93	84	77	71	91	82	76	70	79	74	69	77	72	68	74	70	67	65				65
4	86	75	67	61	84	74	66	61	72	65	60	69	64	59	67	62	58	56				56
5	80	68	60	54	78	67	59	53	65	58	53	63	57	52	61	56	52	50				50
6	74	62	53	48	72	61	53	47	59	52	47	57	51	47	56	50	46	44				44
7	69	56	48	43	67	56	48	42	54	47	42	53	46	42	51	46	42	40				40
8	65	52	44	38	63	51	44	38	50	43	38	49	42	38	48	42	38	36				36
9	61	48	40	35	59	47	40	35	46	39	35	45	39	34	44	38	34	33				33
10	57	44	37	32	56	44	37	32	43	36	32	42	36	32	41	36	32	30				30

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	10115	10115	10115
5°	9977	9966	9954
10°	9891	9879	9808
15°	9624	9527	9394
20°	9271	9121	8872
25°	8890	8696	8154
30°	8425	8155	7345
35°	7980	7537	6795
40°	7526	6869	6182
45°	7094	6350	5590
50°	6567	5894	4985
55°	6075	5341	4465
60°	5566	4771	3999
65°	4897	4178	3542
70°	4034	3658	3009
75°	3208	2801	2937
80°	2155	2020	1885
85°	1342	1610	1879



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	699.8	4.7
10°-20°	1920.5	13.0
20°-30°	2658.8	18.0
30°-40°	2835.0	19.2
40°-50°	2586.4	17.5
50°-60°	2026.2	13.7
60°-70°	1320.6	8.9
70°-80°	585.1	4.0
80°-90°	125.6	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°	5279.1	35.8
0°-40°	8114.1	55.0
0°-60°	12726.7	86.2
0°-90°	14758.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	14758.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	7518	7518	7518	7518	7518	
5°	7387	7378	7378	7370	7370	701
15°	6909	6909	6840	6770	6744	1942
25°	5988	5953	5858	5649	5493	2749
35°	4858	4823	4589	4241	4137	3037
45°	3728	3650	3337	3059	2938	2872
55°	2590	2512	2277	2008	1903	2323
65°	1538	1451	1312	1338	1112	1516
75°	617	574	539	513	565	661
85°	87	96	104	113	122	121
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	7517.5	7517.5	7517.5	7517.5	7517.5
2.5°	7465.4	7465.4	7465.4	7456.7	7456.7
5°	7387.2	7378.5	7378.5	7369.8	7369.8
7.5°	7326.3	7317.6	7308.9	7300.3	7282.9
10°	7239.4	7239.4	7230.7	7187.3	7178.6
12.5°	7100.4	7091.7	7056.9	6996.1	6978.7
15°	6909.2	6909.2	6839.6	6770.1	6744.0
17.5°	6700.6	6691.9	6605.0	6535.5	6500.7
20°	6474.6	6457.3	6370.3	6257.4	6196.5
22.5°	6222.6	6222.6	6118.3	5970.6	5909.7
25°	5988.0	5953.2	5857.6	5649.0	5492.6
27.5°	5718.5	5666.4	5562.1	5266.6	5084.1
30°	5423.0	5397.0	5249.2	4866.8	4727.8
32.5°	5144.9	5101.5	4945.1	4545.3	4432.3
35°	4858.1	4823.4	4588.7	4241.1	4136.8
37.5°	4571.4	4527.9	4232.4	3954.3	3823.9
40°	4284.6	4232.4	3910.9	3658.8	3519.8
42.5°	4015.1	3945.6	3632.7	3363.3	3206.9
45°	3728.3	3650.1	3337.3	3059.2	2937.5
47.5°	3441.6	3372.0	3085.2	2798.4	2659.4
50°	3137.4	3076.5	2815.8	2529.0	2381.3
52.5°	2885.3	2789.7	2537.7	2250.9	2129.2
55°	2589.9	2511.6	2277.0	2007.6	1903.3
57.5°	2320.4	2242.2	2025.0	1772.9	1686.0
60°	2068.4	1955.4	1772.9	1555.7	1486.1
62.5°	1790.3	1703.4	1547.0	1364.5	1451.4
65°	1538.3	1451.4	1312.3	1338.4	1112.4
67.5°	1260.2	1216.7	1095.0	973.4	938.6
70°	1025.5	973.4	929.9	799.6	764.8
72.5°	816.9	764.8	704.0	634.4	608.4
75°	617.0	573.6	538.8	512.8	564.9
77.5°	425.8	408.5	382.4	356.3	347.6
80°	278.1	269.4	260.7	252.0	243.3
82.5°	165.1	165.1	165.1	165.1	165.1
85°	86.9	95.6	104.3	113.0	121.7
87.5°	52.1	52.1	60.8	69.5	78.2
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)