

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: P546899

Luminaire Tested: **FMR-24-4-LD4-2STD-35-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: P546899
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-LD4-2STD-35-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 3500K CCT LEDS
Light Source: -
Ballast/Driver: -

Luminaire Equipment: Sample No. Condition Description

Summary

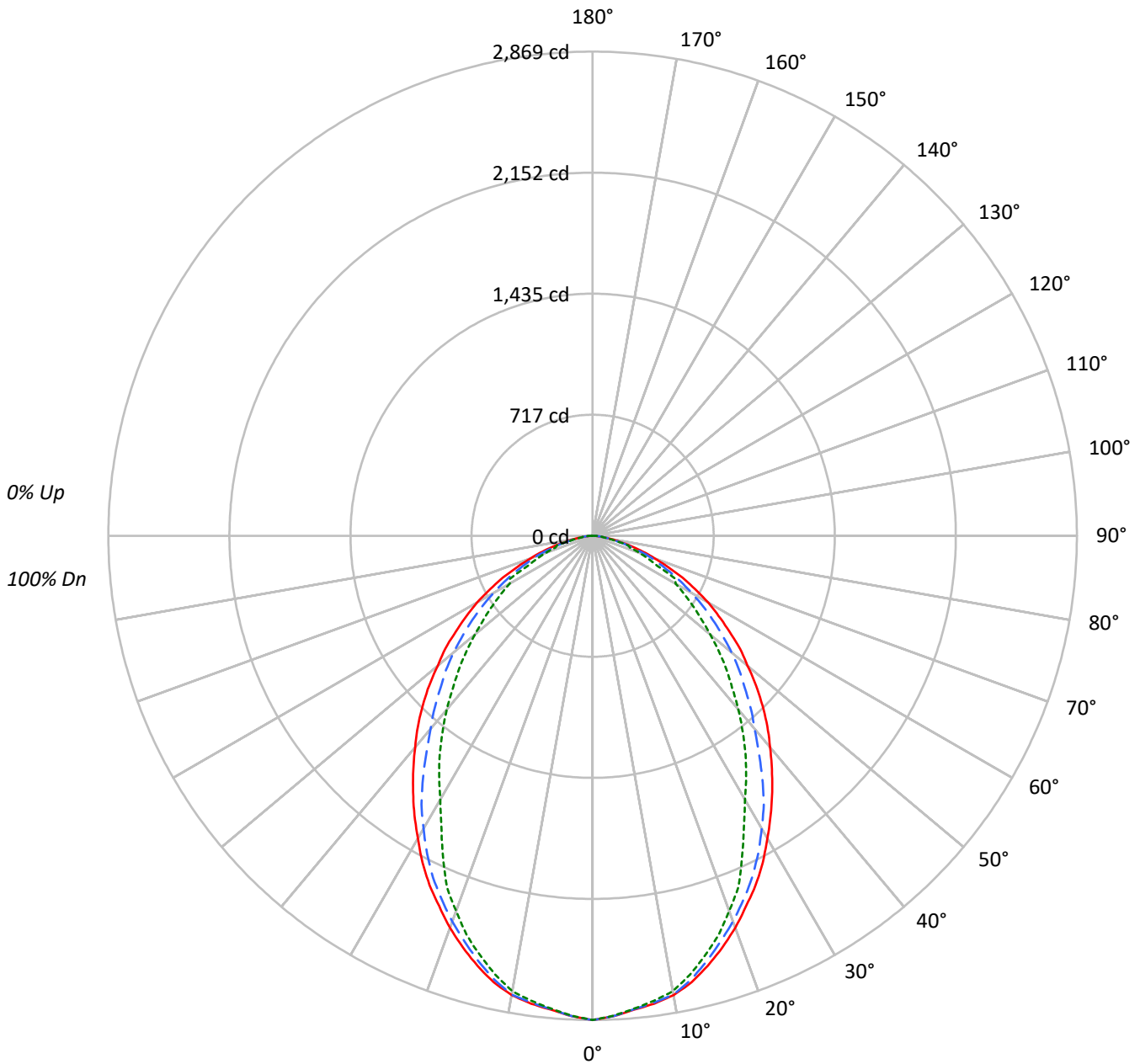
Lumens per Lamp: N/A
Luminaire Lumens: 5633.0 lumens
Efficiency: N/A
Efficacy: 84.6 lumens/watt
Spacing Criteria (0/90/45): 1.1 / 1 / 1.15
Luminous Opening: Rectangular (W 2' x L: 4' x H: 0')
CIE Type: Direct

Input Watts (W): 66.6
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°	3861	3861	3861
5°	3808	3804	3799
10°	3775	3771	3744
15°	3673	3636	3586
20°	3539	3482	3387
25°	3393	3319	3112
30°	3216	3113	2804
35°	3046	2877	2594
40°	2872	2622	2360
45°	2708	2424	2133
50°	2507	2250	1903
55°	2319	2039	1704
60°	2125	1821	1526
65°	1869	1595	1352
70°	1540	1396	1148
75°	1224	1069	1121
80°	823	771	720
85°	513	614	716



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	267.1	4.7
10°-20°	733.0	13.0
20°-30°	1014.8	18.0
30°-40°	1082.1	19.2
40°-50°	987.2	17.5
50°-60°	773.4	13.7
60°-70°	504.1	8.9
70°-80°	223.3	4.0
80°-90°	47.9	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°	2015.0	35.8
0°-40°	3097.1	55.0
0°-60°	4857.7	86.2
0°-90°	5633.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	5633.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	2869	2869	2869	2869	2869	
5°	2820	2816	2816	2813	2813	268
15°	2637	2637	2611	2584	2574	741
25°	2286	2272	2236	2156	2096	1049
35°	1854	1841	1752	1619	1579	1159
45°	1423	1393	1274	1168	1121	1096
55°	988	959	869	766	726	887
65°	587	554	501	511	425	579
75°	236	219	206	196	216	252
85°	33	36	40	43	46	46
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	2869.4	2869.4	2869.4	2869.4	2869.4
2.5°	2849.5	2849.5	2849.5	2846.2	2846.2
5°	2819.6	2816.3	2816.3	2813.0	2813.0
7.5°	2796.4	2793.1	2789.8	2786.4	2779.8
10°	2763.2	2763.2	2759.9	2743.3	2740.0
12.5°	2710.1	2706.8	2693.6	2670.3	2663.7
15°	2637.2	2637.2	2610.6	2584.1	2574.1
17.5°	2557.6	2554.2	2521.1	2494.5	2481.3
20°	2471.3	2464.7	2431.5	2388.4	2365.2
22.5°	2375.1	2375.1	2335.3	2278.9	2255.7
25°	2285.5	2272.3	2235.8	2156.2	2096.5
27.5°	2182.7	2162.8	2123.0	2010.2	1940.6
30°	2069.9	2060.0	2003.6	1857.6	1804.6
32.5°	1963.8	1947.2	1887.5	1734.9	1691.8
35°	1854.3	1841.0	1751.5	1618.8	1579.0
37.5°	1744.8	1728.3	1615.5	1509.3	1459.6
40°	1635.4	1615.5	1492.7	1396.5	1343.5
42.5°	1532.5	1506.0	1386.6	1283.8	1224.0
45°	1423.1	1393.2	1273.8	1167.7	1121.2
47.5°	1313.6	1287.1	1177.6	1068.1	1015.1
50°	1197.5	1174.3	1074.8	965.3	908.9
52.5°	1101.3	1064.8	968.6	859.2	812.7
55°	988.5	958.7	869.1	766.3	726.5
57.5°	885.7	855.8	772.9	676.7	643.5
60°	789.5	746.4	676.7	593.8	567.2
62.5°	683.3	650.2	590.5	520.8	554.0
65°	587.1	554.0	500.9	510.8	424.6
67.5°	481.0	464.4	418.0	371.5	358.3
70°	391.4	371.5	354.9	305.2	291.9
72.5°	311.8	291.9	268.7	242.2	232.2
75°	235.5	218.9	205.7	195.7	215.6
77.5°	162.5	155.9	146.0	136.0	132.7
80°	106.2	102.8	99.5	96.2	92.9
82.5°	63.0	63.0	63.0	63.0	63.0
85°	33.2	36.5	39.8	43.1	46.4
87.5°	19.9	19.9	23.2	26.5	29.9
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)