

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: P546359

Luminaire Tested: **FMR-12-4-LD4-2STD-50-UNV-80-84-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: P546359
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-12-4-LD4-2STD-50-UNV-80-84-EDD
Description: 1X4 FMR TROFFER WITH .125 PRISMATIC ACRYLIC FIXTURE SIDE AND .125 CLEAR PC ENVIRONMENTAL SIDE LENSES WITH, 90 CRI AND 5000K CCT LEDS
Light Source: -
Ballast/Driver: -

Luminaire Equipment: Sample No. Condition Description

Summary

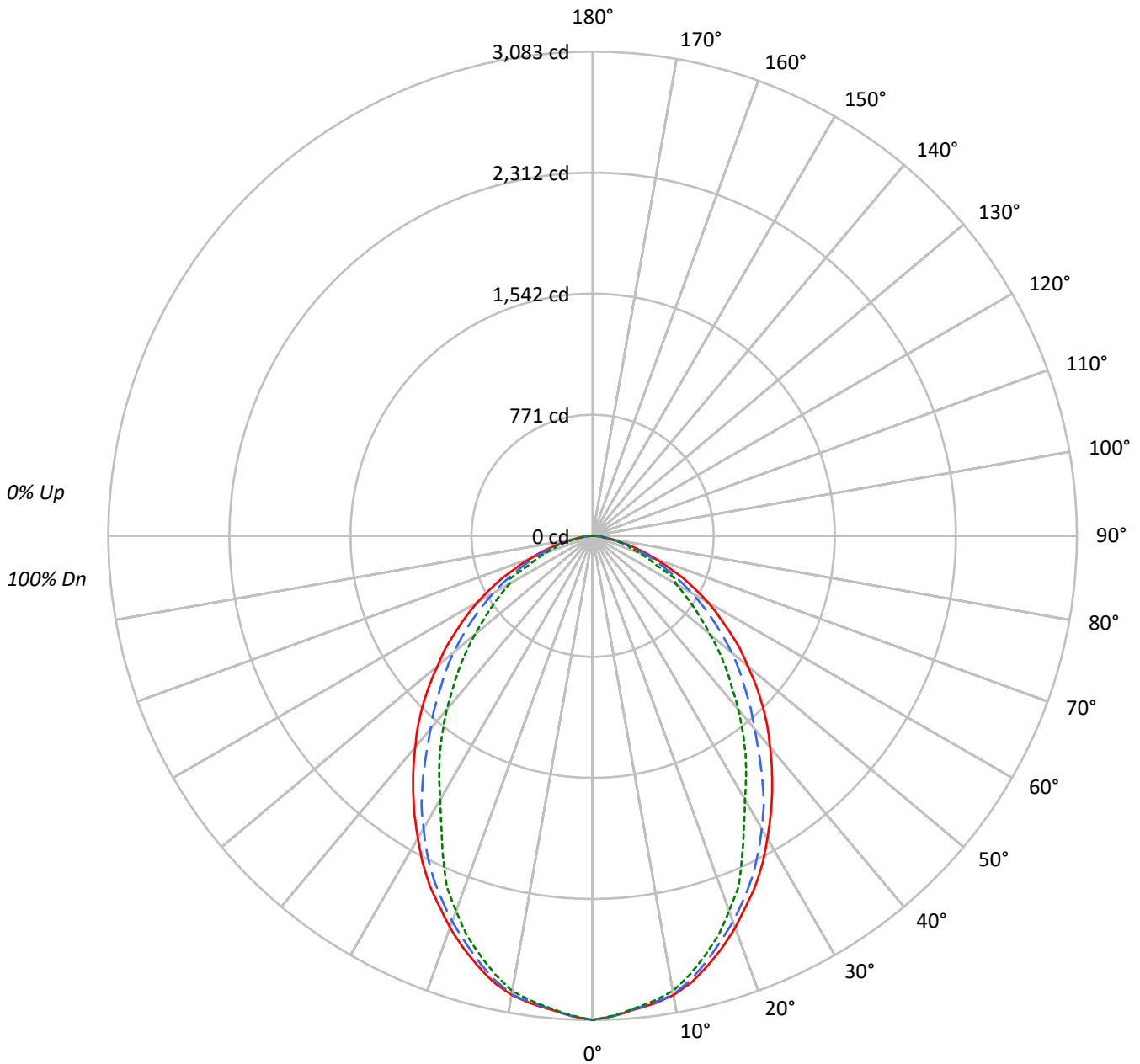
Lumens per Lamp: N/A
Luminaire Lumens: 6052.0 lumens
Efficiency: N/A
Efficacy: 90.9 lumens/watt
Spacing Criteria (0/90/45): 1.1 / 1 / 1.15
Luminous Opening: Rectangular (W 1' x L: 4' x H: 0')
CIE Type: Direct

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									
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°	8296	8296	8296
5°	8183	8173	8164
10°	8112	8102	8044
15°	7893	7814	7705
20°	7603	7481	7277
25°	7291	7132	6688
30°	6910	6689	6024
35°	6545	6182	5573
40°	6172	5634	5070
45°	5818	5208	4584
50°	5386	4834	4088
55°	4983	4381	3662
60°	4565	3913	3280
65°	4017	3427	2905
70°	3308	3000	2467
75°	2630	2298	2409
80°	1767	1657	1547
85°	1099	1321	1541



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	287.0	4.7
10°-20°	787.6	13.0
20°-30°	1090.3	18.0
30°-40°	1162.6	19.2
40°-50°	1060.6	17.5
50°-60°	830.9	13.7
60°-70°	541.6	8.9
70°-80°	239.9	4.0
80°-90°	51.5	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°	2164.8	35.8
0°-40°	3327.4	55.0
0°-60°	5219.0	86.2
0°-90°	6052.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	6052.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	3083	3083	3083	3083	3083	
5°	3029	3026	3026	3022	3022	288
15°	2833	2833	2805	2776	2766	797
25°	2456	2441	2402	2317	2252	1127
35°	1992	1978	1882	1739	1696	1246
45°	1529	1497	1369	1254	1205	1178
55°	1062	1030	934	823	780	953
65°	631	595	538	549	456	622
75°	253	235	221	210	232	271
85°	36	39	43	46	50	49
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	3082.8	3082.8	3082.8	3082.8	3082.8
2.5°	3061.4	3061.4	3061.4	3057.9	3057.9
5°	3029.3	3025.8	3025.8	3022.2	3022.2
7.5°	3004.4	3000.8	2997.3	2993.7	2986.6
10°	2968.8	2968.8	2965.2	2947.4	2943.8
12.5°	2911.7	2908.2	2893.9	2869.0	2861.8
15°	2833.3	2833.3	2804.8	2776.3	2765.6
17.5°	2747.8	2744.2	2708.6	2680.1	2665.8
20°	2655.1	2648.0	2612.4	2566.0	2541.1
22.5°	2551.8	2551.8	2509.0	2448.4	2423.5
25°	2455.6	2441.3	2402.1	2316.6	2252.4
27.5°	2345.1	2323.7	2280.9	2159.7	2084.9
30°	2223.9	2213.2	2152.6	1995.8	1938.8
32.5°	2109.9	2092.0	2027.9	1863.9	1817.6
35°	1992.2	1978.0	1881.8	1739.2	1696.4
37.5°	1874.6	1856.8	1735.6	1621.6	1568.1
40°	1757.0	1735.6	1603.8	1500.4	1443.4
42.5°	1646.5	1618.0	1489.7	1379.2	1315.1
45°	1528.9	1496.9	1368.6	1254.5	1204.6
47.5°	1411.3	1382.8	1265.2	1147.6	1090.6
50°	1286.6	1261.6	1154.7	1037.1	976.5
52.5°	1183.2	1144.0	1040.7	923.1	873.2
55°	1062.1	1030.0	933.8	823.3	780.5
57.5°	951.6	919.5	830.4	727.0	691.4
60°	848.2	801.9	727.0	637.9	609.4
62.5°	734.2	698.5	634.4	559.5	595.2
65°	630.8	595.2	538.2	548.8	456.2
67.5°	516.8	499.0	449.1	399.2	384.9
70°	420.5	399.2	381.3	327.9	313.6
72.5°	335.0	313.6	288.7	260.2	249.5
75°	253.0	235.2	221.0	210.3	231.7
77.5°	174.6	167.5	156.8	146.1	142.6
80°	114.0	110.5	106.9	103.4	99.8
82.5°	67.7	67.7	67.7	67.7	67.7
85°	35.6	39.2	42.8	46.3	49.9
87.5°	21.4	21.4	24.9	28.5	32.1
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)