

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: P546329

Luminaire Tested: **FMR-12-4-LD4-2STD-40-UNV-80-86-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: P546329
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-40-UNV-80-86-EDD
Description: 1X4 FMR TROFFER WITH .125 PRISMATIC ACRYLIC FIXTURE SIDE AND .250 CLEAR PC ENVIRONMENTAL SIDE LENSES WITH, 90 CRI AND 4000K CCT LEDS
Light Source: -
Ballast/Driver: -

Luminaire Equipment: Sample No. Condition Description

Summary

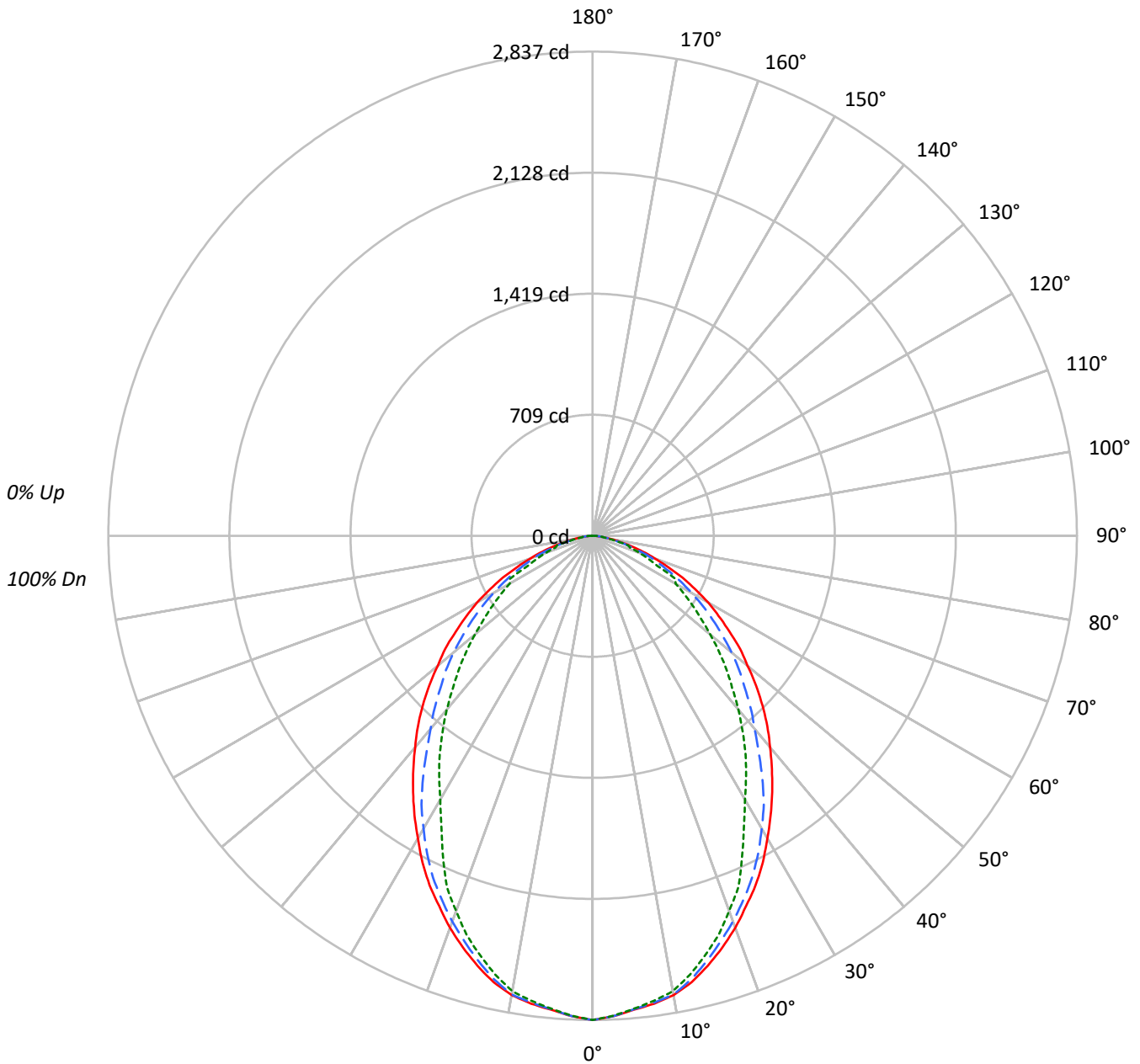
Lumens per Lamp: N/A
Luminaire Lumens: 5570.0 lumens
Efficiency: N/A
Efficacy: 83.6 lumens/watt
Spacing Criteria (0/90/45): 1.1 / 1 / 1.15
Luminous Opening: Rectangular (W 1' x L: 4' x H: 0')
CIE Type: Direct

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°	7635	7635	7635
5°	7531	7522	7514
10°	7466	7457	7403
15°	7265	7192	7091
20°	6998	6885	6697
25°	6710	6564	6155
30°	6360	6156	5545
35°	6024	5689	5129
40°	5681	5185	4666
45°	5355	4794	4219
50°	4957	4449	3762
55°	4586	4032	3370
60°	4202	3601	3019
65°	3697	3154	2674
70°	3046	2762	2271
75°	2421	2115	2217
80°	1627	1525	1423
85°	1013	1216	1417



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	264.1	4.7
10°-20°	724.8	13.0
20°-30°	1003.5	18.0
30°-40°	1070.0	19.2
40°-50°	976.2	17.5
50°-60°	764.7	13.7
60°-70°	498.4	8.9
70°-80°	220.8	4.0
80°-90°	47.4	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°	1992.4	35.8
0°-40°	3062.4	55.0
0°-60°	4803.3	86.2
0°-90°	5570.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	5570.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	2837	2837	2837	2837	2837	
5°	2788	2785	2785	2782	2782	265
15°	2608	2608	2581	2555	2545	733
25°	2260	2247	2211	2132	2073	1038
35°	1834	1820	1732	1601	1561	1146
45°	1407	1378	1260	1155	1109	1084
55°	978	948	859	758	718	877
65°	581	548	495	505	420	572
75°	233	216	203	194	213	250
85°	33	36	39	43	46	46
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	2837.3	2837.3	2837.3	2837.3	2837.3
2.5°	2817.6	2817.6	2817.6	2814.3	2814.3
5°	2788.1	2784.8	2784.8	2781.5	2781.5
7.5°	2765.1	2761.8	2758.6	2755.3	2748.7
10°	2732.3	2732.3	2729.0	2712.6	2709.4
12.5°	2679.8	2676.6	2663.4	2640.5	2633.9
15°	2607.7	2607.7	2581.4	2555.2	2545.4
17.5°	2529.0	2525.7	2492.9	2466.6	2453.5
20°	2443.7	2437.1	2404.3	2361.7	2338.7
22.5°	2348.5	2348.5	2309.2	2253.4	2230.5
25°	2260.0	2246.9	2210.8	2132.1	2073.0
27.5°	2158.3	2138.6	2099.3	1987.7	1918.9
30°	2046.8	2036.9	1981.2	1836.9	1784.4
32.5°	1941.8	1925.4	1866.4	1715.5	1672.8
35°	1833.6	1820.5	1731.9	1600.7	1561.3
37.5°	1725.3	1708.9	1597.4	1492.4	1443.2
40°	1617.1	1597.4	1476.0	1380.9	1328.4
42.5°	1515.4	1489.2	1371.1	1269.4	1210.4
45°	1407.2	1377.6	1259.6	1154.6	1108.7
47.5°	1298.9	1272.7	1164.4	1056.2	1003.7
50°	1184.1	1161.2	1062.8	954.5	898.7
52.5°	1089.0	1052.9	957.8	849.5	803.6
55°	977.5	947.9	859.4	757.7	718.3
57.5°	875.8	846.3	764.3	669.1	636.3
60°	780.7	738.0	669.1	587.1	560.9
62.5°	675.7	642.9	583.9	515.0	547.8
65°	580.6	547.8	495.3	505.1	419.9
67.5°	475.6	459.2	413.3	367.4	354.3
70°	387.1	367.4	351.0	301.8	288.6
72.5°	308.3	288.6	265.7	239.4	229.6
75°	232.9	216.5	203.4	193.5	213.2
77.5°	160.7	154.2	144.3	134.5	131.2
80°	105.0	101.7	98.4	95.1	91.8
82.5°	62.3	62.3	62.3	62.3	62.3
85°	32.8	36.1	39.4	42.6	45.9
87.5°	19.7	19.7	23.0	26.2	29.5
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)