

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: P546301

Luminaire Tested: **FMR-12-4-LD4-2STD-35-UNV-80-96-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: P546301
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-35-UNV-80-96-EDD
Description: 1X4 FMR TROFFER WITH .125 PRISMATIC ACRYLIC FIXTURE SIDE AND .250 CLEAR TEMPERED GLASS ENVIRONMENTAL SIDE LENSES WITH, 90 CRI AND 3500K CCT LEDS
Light Source: -
Ballast/Driver: -

Luminaire Equipment: Sample No. Condition Description

Summary

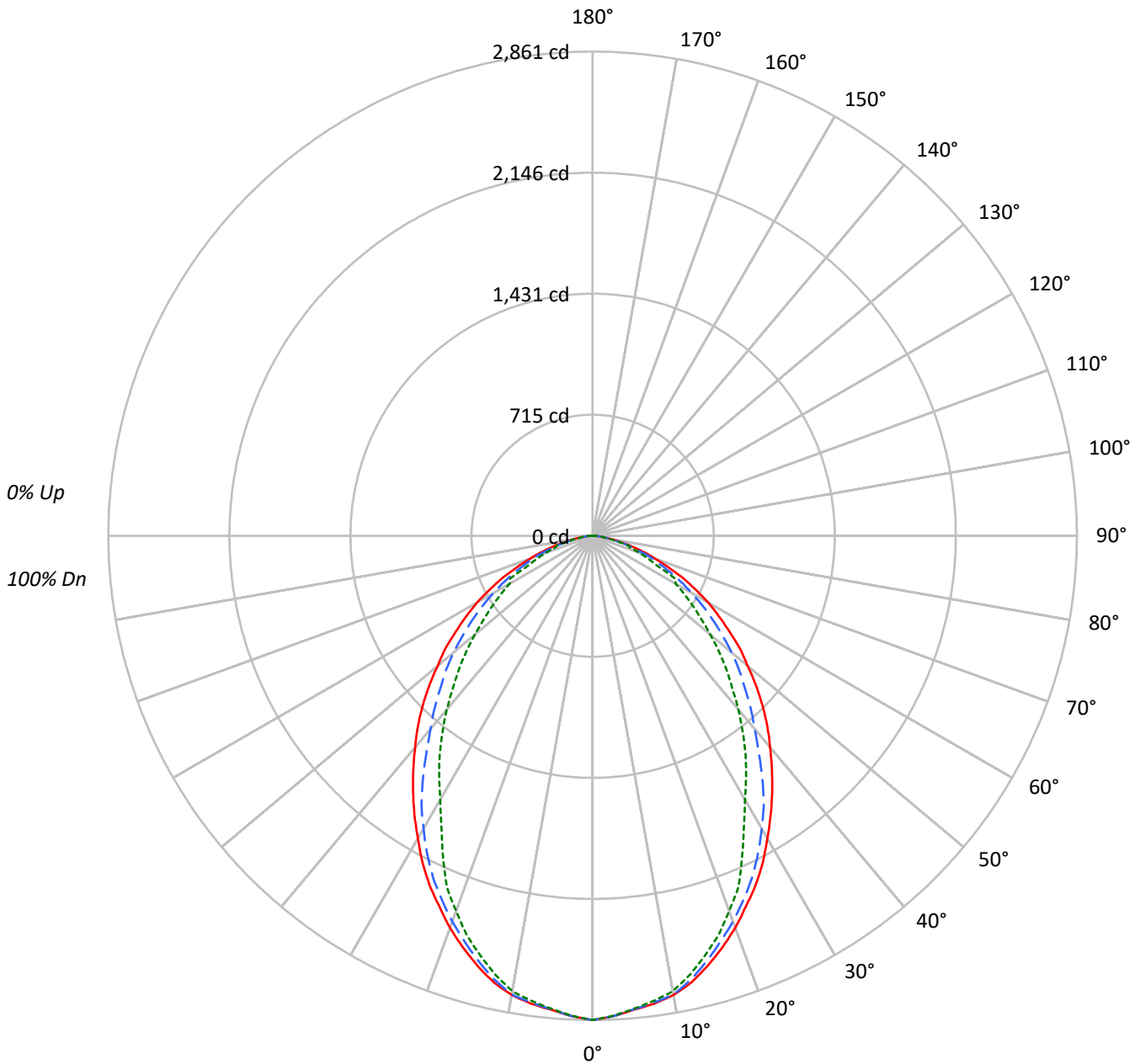
Lumens per Lamp: N/A
Luminaire Lumens: 5617.0 lumens
Efficiency: N/A
Efficacy: 84.3 lumens/watt
Spacing Criteria (0/90/45): 1.1 / 1 / 1.15
Luminous Opening: Rectangular (W 1' x L: 4' x H: 0')
CIE Type: Direct

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°	7699	7699	7699
5°	7595	7586	7577
10°	7529	7520	7466
15°	7326	7252	7151
20°	7057	6943	6754
25°	6767	6619	6207
30°	6414	6208	5591
35°	6074	5737	5172
40°	5728	5229	4706
45°	5400	4834	4255
50°	4999	4487	3794
55°	4624	4066	3399
60°	4237	3632	3044
65°	3728	3181	2696
70°	3071	2784	2290
75°	2442	2132	2235
80°	1640	1537	1435
85°	1022	1226	1430



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	266.3	4.7
10°-20°	731.0	13.0
20°-30°	1012.0	18.0
30°-40°	1079.0	19.2
40°-50°	984.4	17.5
50°-60°	771.2	13.7
60°-70°	502.6	8.9
70°-80°	222.7	4.0
80°-90°	47.8	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°	2009.2	35.8
0°-40°	3088.3	55.0
0°-60°	4843.9	86.2
0°-90°	5617.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	5617.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	2861	2861	2861	2861	2861	
5°	2812	2808	2808	2805	2805	267
15°	2630	2630	2603	2577	2567	739
25°	2279	2266	2229	2150	2090	1046
35°	1849	1836	1746	1614	1574	1156
45°	1419	1389	1270	1164	1118	1093
55°	986	956	867	764	724	884
65°	586	552	500	509	423	577
75°	235	218	205	195	215	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°	2861.2	2861.2	2861.2	2861.2	2861.2
2.5°	2841.4	2841.4	2841.4	2838.1	2838.1
5°	2811.6	2808.3	2808.3	2805.0	2805.0
7.5°	2788.5	2785.1	2781.8	2778.5	2771.9
10°	2755.4	2755.4	2752.1	2735.5	2732.2
12.5°	2702.5	2699.1	2685.9	2662.8	2656.1
15°	2629.7	2629.7	2603.2	2576.8	2566.8
17.5°	2550.3	2547.0	2513.9	2487.4	2474.2
20°	2464.3	2457.7	2424.6	2381.6	2358.4
22.5°	2368.4	2368.4	2328.7	2272.4	2249.3
25°	2279.1	2265.8	2229.4	2150.1	2090.5
27.5°	2176.5	2156.7	2117.0	2004.5	1935.0
30°	2064.1	2054.1	1997.9	1852.4	1799.4
32.5°	1958.2	1941.7	1882.1	1730.0	1687.0
35°	1849.0	1835.8	1746.5	1614.2	1574.5
37.5°	1739.9	1723.4	1610.9	1505.0	1455.4
40°	1630.7	1610.9	1488.5	1392.6	1339.6
42.5°	1528.2	1501.7	1382.6	1280.1	1220.6
45°	1419.0	1389.3	1270.2	1164.3	1118.0
47.5°	1309.9	1283.4	1174.3	1065.1	1012.2
50°	1194.1	1171.0	1071.7	962.6	906.3
52.5°	1098.2	1061.8	965.9	856.7	810.4
55°	985.7	955.9	866.6	764.1	724.4
57.5°	883.2	853.4	770.7	674.8	641.7
60°	787.3	744.2	674.8	592.1	565.6
62.5°	681.4	648.3	588.8	519.3	552.4
65°	585.5	552.4	499.5	509.4	423.4
67.5°	479.6	463.1	416.8	370.5	357.2
70°	390.3	370.5	353.9	304.3	291.1
72.5°	310.9	291.1	267.9	241.5	231.5
75°	234.9	218.3	205.1	195.2	215.0
77.5°	162.1	155.5	145.5	135.6	132.3
80°	105.8	102.5	99.2	95.9	92.6
82.5°	62.8	62.8	62.8	62.8	62.8
85°	33.1	36.4	39.7	43.0	46.3
87.5°	19.8	19.8	23.2	26.5	29.8
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)