

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: P546332

Luminaire Tested: **FMR-12-4-LD4-2STD-40-UNV-80-94-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: P546332
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-80-94-EDD
Description: 1X4 FMR TROFFER WITH .125 PRISMATIC ACRYLIC FIXTURE SIDE AND .187 CLEAR TEMPERED GLASS ENVIRONMENTAL SIDE LENSES WITH, 90 CRI AND 4000K CCT LEDS
Light Source: -
Ballast/Driver: -

Luminaire Equipment: Sample No. Condition Description

Summary

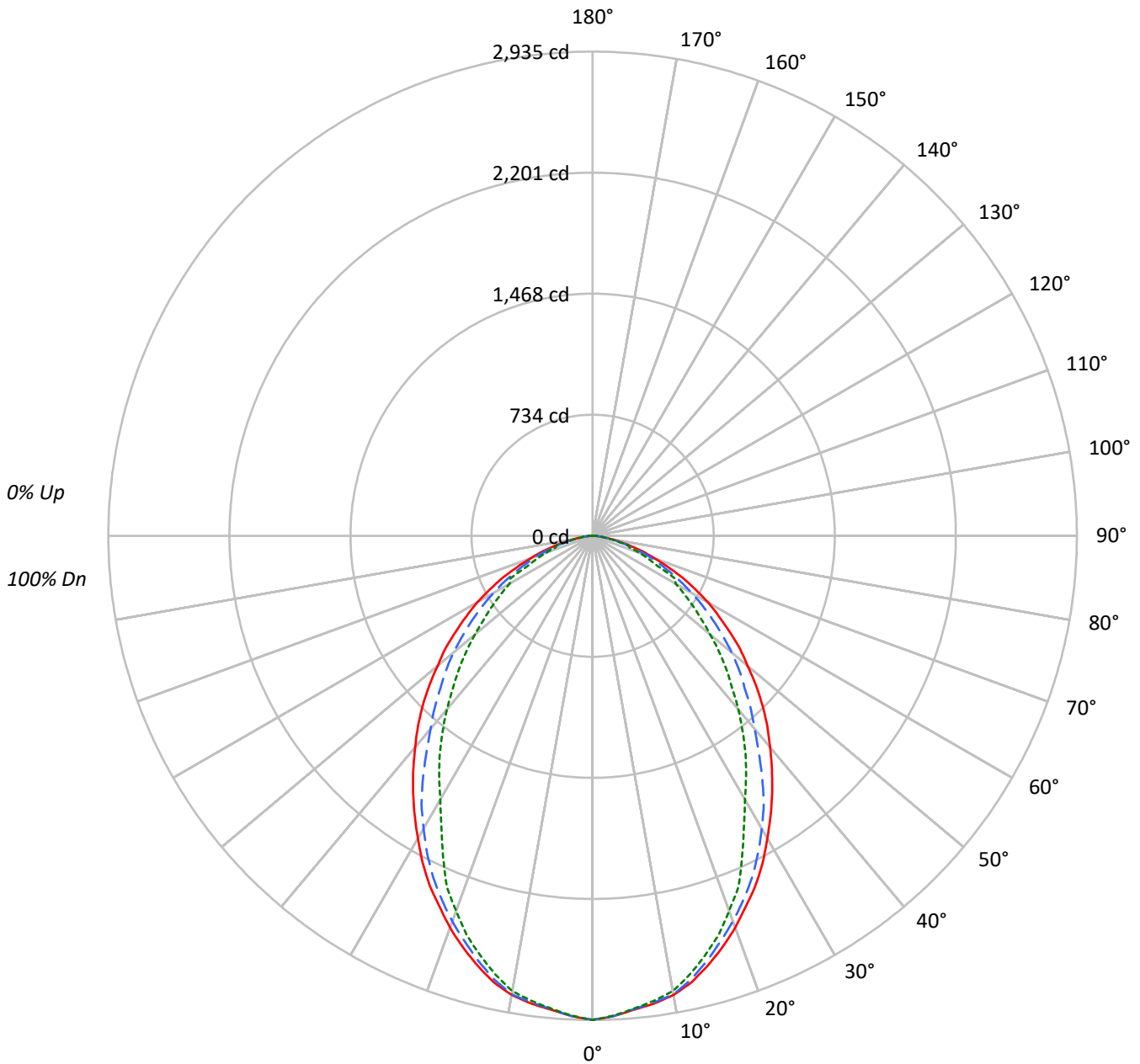
Lumens per Lamp: N/A
Luminaire Lumens: 5761.0 lumens
Efficiency: N/A
Efficacy: 86.5 lumens/watt
Spacing Criteria (0/90/45): 1.1 / 1 / 1.15
Luminous Opening: Rectangular (W 1' x L: 4' x H: 0')
CIE Type: Direct

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°	7897	7897	7897
5°	7790	7780	7771
10°	7722	7713	7657
15°	7514	7438	7334
20°	7238	7121	6927
25°	6940	6789	6366
30°	6578	6367	5735
35°	6230	5885	5305
40°	5875	5363	4827
45°	5539	4958	4364
50°	5127	4602	3892
55°	4743	4170	3486
60°	4345	3725	3122
65°	3824	3262	2765
70°	3150	2856	2349
75°	2505	2187	2293
80°	1683	1578	1472
85°	1047	1257	1467



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	273.2	4.7
10°-20°	749.7	13.0
20°-30°	1037.9	18.0
30°-40°	1106.7	19.2
40°-50°	1009.6	17.5
50°-60°	791.0	13.7
60°-70°	515.5	8.9
70°-80°	228.4	4.0
80°-90°	49.0	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°	2060.8	35.8
0°-40°	3167.5	55.0
0°-60°	4968.1	86.2
0°-90°	5761.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	5761.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	2935	2935	2935	2935	2935	
5°	2884	2880	2880	2877	2877	274
15°	2697	2697	2670	2643	2633	758
25°	2338	2324	2287	2205	2144	1073
35°	1896	1883	1791	1656	1615	1186
45°	1455	1425	1303	1194	1147	1121
55°	1011	980	889	784	743	907
65°	600	567	512	522	434	592
75°	241	224	210	200	220	258
85°	34	37	41	44	48	47
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	2934.6	2934.6	2934.6	2934.6	2934.6
2.5°	2914.2	2914.2	2914.2	2910.8	2910.8
5°	2883.7	2880.3	2880.3	2876.9	2876.9
7.5°	2859.9	2856.5	2853.2	2849.8	2843.0
10°	2826.0	2826.0	2822.6	2805.7	2802.3
12.5°	2771.7	2768.3	2754.8	2731.0	2724.2
15°	2697.1	2697.1	2670.0	2642.8	2632.6
17.5°	2615.7	2612.3	2578.4	2551.2	2537.6
20°	2527.5	2520.7	2486.8	2442.7	2418.9
22.5°	2429.1	2429.1	2388.4	2330.7	2307.0
25°	2337.5	2323.9	2286.6	2205.2	2144.1
27.5°	2232.3	2212.0	2171.2	2055.9	1984.7
30°	2117.0	2106.8	2049.1	1899.8	1845.6
32.5°	2008.4	1991.4	1930.4	1774.3	1730.2
35°	1896.4	1882.9	1791.3	1655.6	1614.9
37.5°	1784.5	1767.5	1652.2	1543.6	1492.7
40°	1672.5	1652.2	1526.7	1428.3	1374.0
42.5°	1567.4	1540.2	1418.1	1312.9	1251.9
45°	1455.4	1424.9	1302.7	1194.2	1146.7
47.5°	1343.5	1316.3	1204.4	1092.4	1038.1
50°	1224.7	1201.0	1099.2	987.2	929.6
52.5°	1126.3	1089.0	990.6	878.7	831.2
55°	1011.0	980.5	888.9	783.7	743.0
57.5°	905.8	875.3	790.5	692.1	658.2
60°	807.4	763.3	692.1	607.3	580.1
62.5°	698.9	664.9	603.9	532.6	566.6
65°	600.5	566.6	512.3	522.5	434.2
67.5°	491.9	475.0	427.5	380.0	366.4
70°	400.3	380.0	363.0	312.1	298.5
72.5°	318.9	298.5	274.8	247.7	237.5
75°	240.9	223.9	210.3	200.2	220.5
77.5°	166.2	159.5	149.3	139.1	135.7
80°	108.6	105.2	101.8	98.4	95.0
82.5°	64.5	64.5	64.5	64.5	64.5
85°	33.9	37.3	40.7	44.1	47.5
87.5°	20.4	20.4	23.7	27.1	30.5
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)