

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: P546870

Luminaire Tested: **FMR-24-4-LD4-2LO-50-UNV-93-97-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: P546870
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-LD4-2LO-50-UNV-93-97-EDD
Description: 2X4 FMR TROFFER WITH .156 CLEAR TEMPERED GLASS FIXTURE SIDE AND .375 CLEAR TEMPERED GLASS ENVIRONMENTAL SIDE LENSES WITH, 90 CRI AND 5000K CCT LEDS
Light Source: -
Ballast/Driver: -

Luminaire Equipment: Sample No. Condition Description

Summary

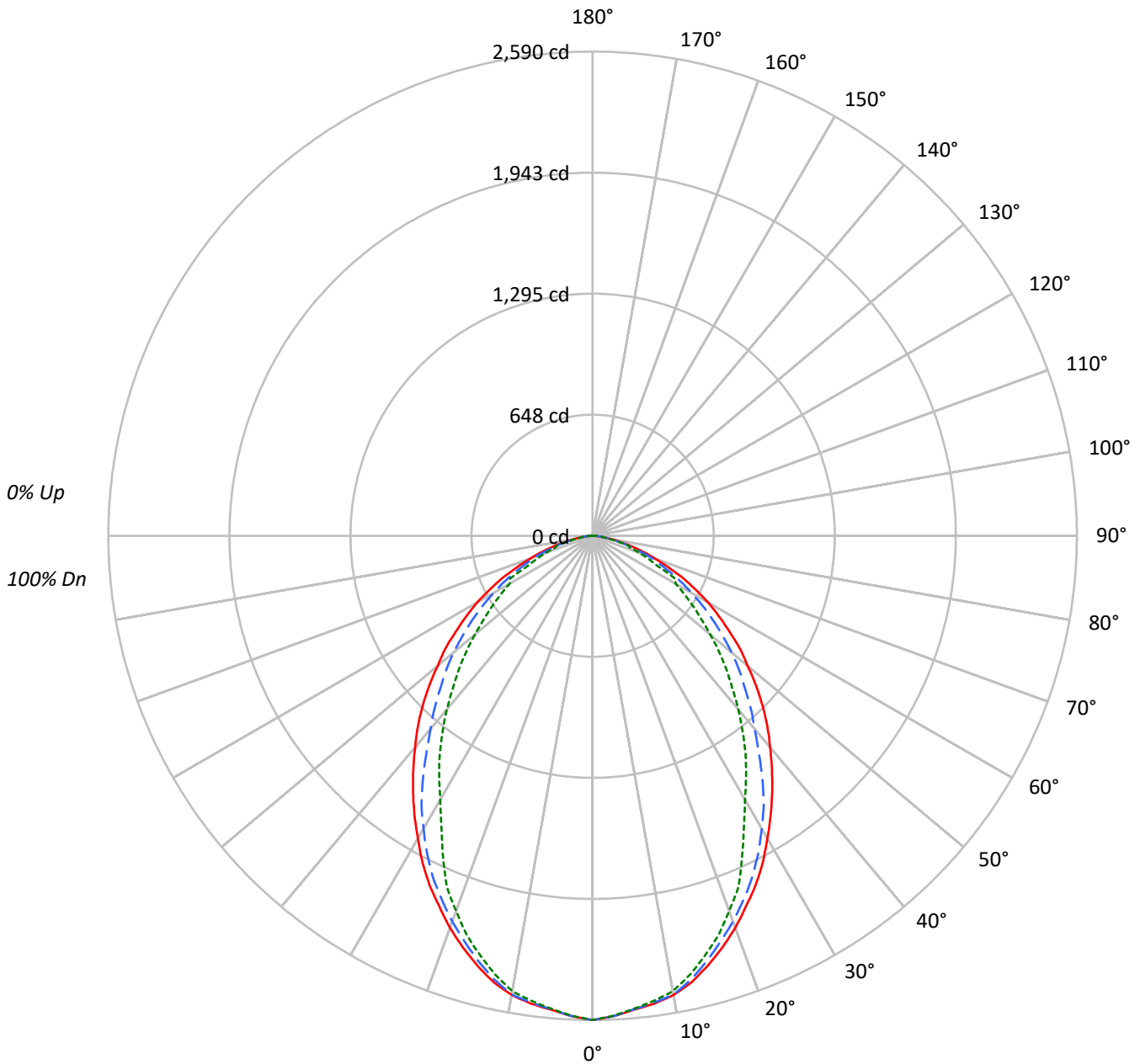
Lumens per Lamp: N/A
Luminaire Lumens: 5085.0 lumens
Efficiency: N/A
Efficacy: 108.7 lumens/watt
Spacing Criteria (0/90/45): 1.1 / 1 / 1.15
Luminous Opening: Rectangular (W 2' x L: 4' x H: 0')
CIE Type: Direct

Input Watts (W): 46.8
Input Voltage (V): NR
Input Current (A_{in}): 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°	3485	3485	3485
5°	3438	3434	3430
10°	3408	3404	3379
15°	3316	3283	3237
20°	3194	3143	3057
25°	3063	2996	2810
30°	2903	2810	2531
35°	2749	2597	2341
40°	2593	2367	2130
45°	2444	2188	1926
50°	2263	2031	1717
55°	2093	1841	1538
60°	1918	1644	1378
65°	1687	1440	1220
70°	1390	1260	1037
75°	1105	965	1012
80°	742	696	649
85°	462	554	647



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	241.1	4.7
10°-20°	661.7	13.0
20°-30°	916.1	18.0
30°-40°	976.8	19.2
40°-50°	891.2	17.5
50°-60°	698.2	13.7
60°-70°	455.0	8.9
70°-80°	201.6	4.0
80°-90°	43.3	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°	1819.0	35.8
0°-40°	2795.8	55.0
0°-60°	4385.1	86.2
0°-90°	5085.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	5085.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	2590	2590	2590	2590	2590	
5°	2545	2542	2542	2539	2539	242
15°	2381	2381	2357	2333	2324	669
25°	2063	2051	2018	1946	1892	947
35°	1674	1662	1581	1461	1425	1046
45°	1285	1258	1150	1054	1012	990
55°	892	865	785	692	656	800
65°	530	500	452	461	383	522
75°	213	198	186	177	195	228
85°	30	33	36	39	42	42
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	2590.2	2590.2	2590.2	2590.2	2590.2
2.5°	2572.3	2572.3	2572.3	2569.3	2569.3
5°	2545.3	2542.3	2542.3	2539.3	2539.3
7.5°	2524.4	2521.4	2518.4	2515.4	2509.4
10°	2494.4	2494.4	2491.4	2476.4	2473.4
12.5°	2446.5	2443.5	2431.5	2410.6	2404.6
15°	2380.6	2380.6	2356.7	2332.7	2323.7
17.5°	2308.7	2305.8	2275.8	2251.9	2239.9
20°	2230.9	2224.9	2195.0	2156.0	2135.1
22.5°	2144.1	2144.1	2108.1	2057.2	2036.3
25°	2063.2	2051.2	2018.3	1946.4	1892.5
27.5°	1970.4	1952.4	1916.5	1814.7	1751.8
30°	1868.6	1859.6	1808.7	1676.9	1629.0
32.5°	1772.7	1757.8	1703.9	1566.1	1527.2
35°	1673.9	1661.9	1581.1	1461.3	1425.4
37.5°	1575.1	1560.1	1458.3	1362.5	1317.6
40°	1476.3	1458.3	1347.5	1260.7	1212.8
42.5°	1383.5	1359.5	1251.7	1158.9	1105.0
45°	1284.6	1257.7	1149.9	1054.1	1012.1
47.5°	1185.8	1161.9	1063.0	964.2	916.3
50°	1081.0	1060.0	970.2	871.4	820.5
52.5°	994.2	961.2	874.4	775.6	733.6
55°	892.4	865.4	784.6	691.7	655.8
57.5°	799.5	772.6	697.7	610.9	580.9
60°	712.7	673.8	610.9	536.0	512.1
62.5°	616.9	586.9	533.0	470.1	500.1
65°	530.0	500.1	452.2	461.2	383.3
67.5°	434.2	419.2	377.3	335.4	323.4
70°	353.3	335.4	320.4	275.5	263.5
72.5°	281.5	263.5	242.6	218.6	209.6
75°	212.6	197.6	185.7	176.7	194.6
77.5°	146.7	140.7	131.8	122.8	119.8
80°	95.8	92.8	89.8	86.8	83.8
82.5°	56.9	56.9	56.9	56.9	56.9
85°	29.9	32.9	35.9	38.9	41.9
87.5°	18.0	18.0	21.0	24.0	27.0
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)