

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: P392639

Luminaire Tested: **MWL-4-00-73-UNV-L940-EDD**

Issue Date: 12/2/2019

Test Information

Test Method: LM-79-08
Report Number: P392639
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-1910-565-1)
Test Lab: INNOVATION CENTER
Issue Date: 12/2/2019
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: FAIL-SAFE
Catalog Number: MWL-4-00-73-UNV-L940-EDD
Description: MWL 4FT MEDICAL LED FIXTURE
Light Source: -
Ballast/Driver: ELECTRONIC DRIVER

Summary

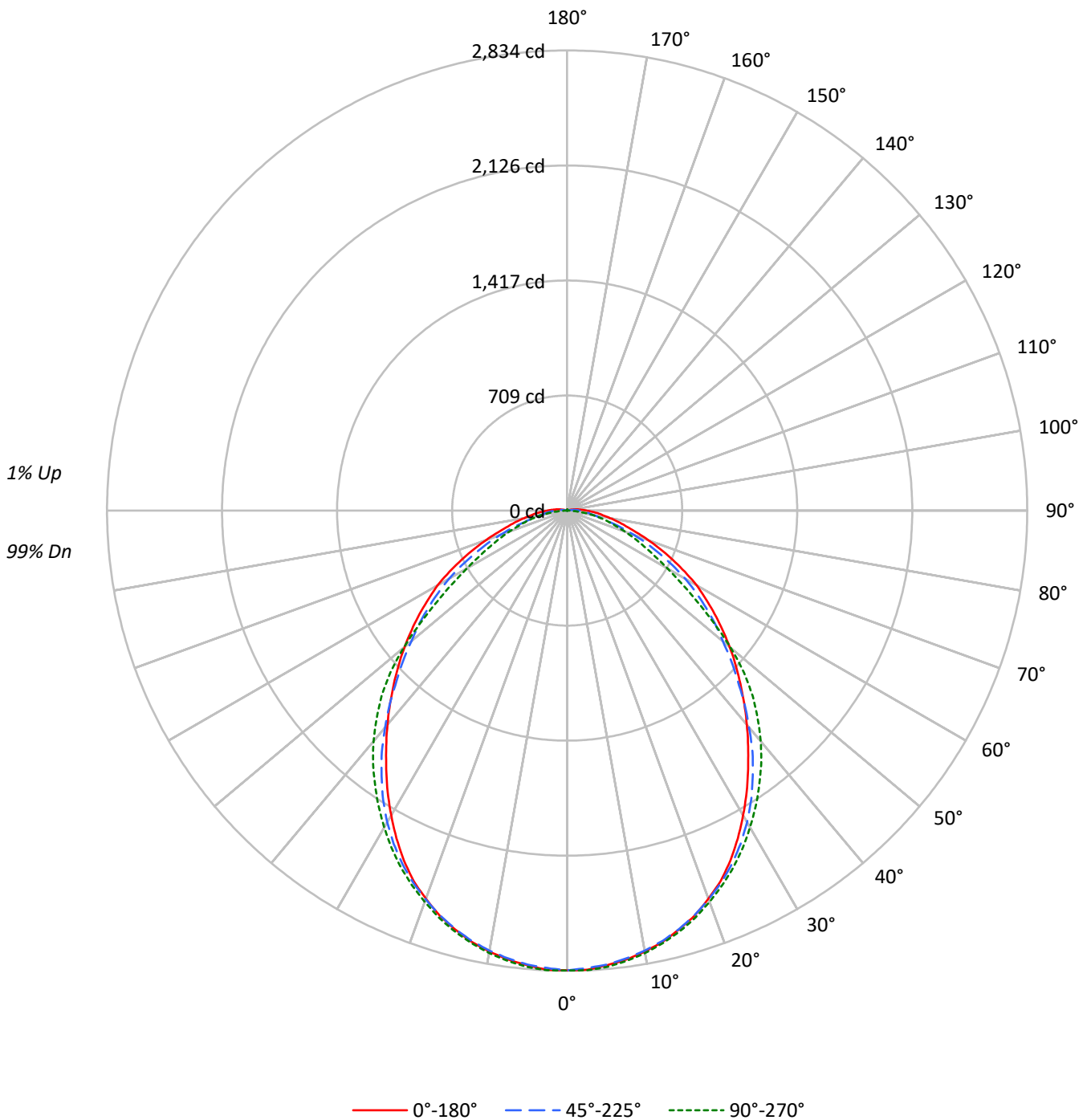
Lumens per Lamp: N/A
Luminaire Lumens: 6633.7 lumens
Efficiency: N/A
Efficacy: 77.5 lumens/watt
Spacing Criteria (0/90/45): 1.15 / 1.19 / 1.25
Luminous Opening: Rectangular w/ Sides (W: 0.42' x L: 4' x H: 0.42')
CIE Type: Direct

Input Watts (W): 85.648
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				20	
RC	80				70				50				30				10	0
RW	70	50	30	10	70	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	101	101	101	99
1	109	105	101	97	106	102	99	95	98	95	92	94	91	89	90	88	86	84
2	100	92	86	81	97	90	85	80	87	82	78	83	79	76	80	77	74	72
3	92	82	74	68	89	80	73	67	77	71	66	74	69	65	72	67	64	62
4	85	73	65	59	82	72	64	58	69	62	57	67	61	56	65	60	55	53
5	78	66	57	51	76	65	57	51	62	55	50	60	54	49	59	53	49	47
6	72	60	51	45	70	59	51	45	57	50	44	55	49	44	53	48	43	41
7	67	54	46	40	66	53	45	40	52	45	39	50	44	39	49	43	39	37
8	63	50	42	36	61	49	41	36	48	41	36	46	40	35	45	39	35	33
9	59	46	38	33	57	45	38	32	44	37	32	43	37	32	42	36	32	30
10	55	42	35	30	54	42	35	30	41	34	29	40	34	29	39	33	29	27

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	18289	18289	18289
5°	18058	17030	16817
10°	17761	15861	15426
15°	17365	14746	14145
20°	16845	13634	12919
25°	16161	12542	11778
30°	15248	11390	10653
35°	14274	10157	9565
40°	13351	8878	8504
45°	12481	7622	7381
50°	11677	6516	6031
55°	10868	5554	4537
60°	10079	4608	3373
65°	8968	3593	2542
70°	7799	2625	1910
75°	6794	1742	1369
80°	6306	1155	879
85°	6410	864	391



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	267.0	4.0
10°-20°	753.3	11.4
20°-30°	1104.5	16.6
30°-40°	1249.7	18.8
40°-50°	1177.2	17.7
50°-60°	941.7	14.2
60°-70°	619.7	9.3
70°-80°	315.2	4.8
80°-90°	132.5	2.0
90°-100°	47.4	0.7
100°-110°	8.5	0.1
110°-120°	3.4	0.1
120°-130°	3.5	0.1
130°-140°	3.3	0.1
140°-150°	2.9	0.0
150°-160°	2.1	0.0
160°-170°	1.3	0.0
170°-180°	0.4	0.0
0°-30°	2124.7	32.0
0°-40°	3374.4	50.9
0°-60°	5493.3	82.8
0°-90°	6560.8	98.9
90°-120°	59.3	0.9
90°-150°	69.1	1.0
90°-180°	73.0	1.1
0°-180°	6633.7	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	2832	2832	2832	2832	2832	
5°	2811	2814	2806	2822	2821	267
15°	2670	2670	2667	2682	2682	752
25°	2378	2384	2401	2424	2424	1092
35°	1942	1950	1993	2060	2063	1216
45°	1509	1489	1486	1564	1616	1166
55°	1109	1093	1043	1025	978	993
65°	718	704	629	532	523	713
75°	378	330	273	239	260	408
85°	190	156	116	76	66	170
90°	120	108	76	42	1	67
95°	76	74	46	8	2	55
105°	15	10	3	2	2	19
115°	5	4	4	3	3	5
125°	5	5	4	4	3	4
135°	5	5	5	4	4	4
145°	5	6	5	5	4	3
155°	5	5	5	5	5	2
165°	5	5	5	5	6	1
175°	3	5	5	6	6	0
180°	5	5	5	5	5	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	2831.8	2831.8	2831.8	2831.8	2831.8
2.5°	2830.9	2829.1	2819.9	2834.5	2833.6
5°	2810.8	2814.5	2806.3	2821.8	2820.9
7.5°	2789.0	2794.4	2782.6	2799.9	2798.1
10°	2758.0	2759.8	2751.6	2768.0	2767.1
12.5°	2719.7	2719.7	2714.3	2728.8	2727.9
15°	2669.6	2670.5	2666.9	2681.5	2682.4
17.5°	2614.0	2614.0	2612.2	2628.6	2628.6
20°	2543.9	2547.5	2547.5	2563.9	2563.9
22.5°	2470.1	2472.8	2479.2	2500.1	2497.4
25°	2378.1	2383.5	2400.8	2423.6	2423.6
27.5°	2276.0	2290.6	2313.4	2340.7	2342.5
30°	2167.6	2183.1	2215.9	2254.2	2253.2
32.5°	2057.3	2072.8	2110.2	2155.8	2161.2
35°	1942.5	1949.8	1992.6	2060.0	2062.7
37.5°	1830.4	1832.2	1875.0	1946.1	1963.4
40°	1722.0	1712.9	1742.9	1823.1	1855.0
42.5°	1614.5	1603.5	1617.2	1695.6	1737.5
45°	1508.8	1488.7	1486.0	1564.4	1616.3
47.5°	1407.6	1384.0	1370.3	1431.3	1476.9
50°	1306.5	1283.7	1251.9	1294.7	1315.6
52.5°	1206.3	1189.0	1148.9	1163.5	1141.6
55°	1108.8	1093.3	1043.2	1025.0	978.5
57.5°	1012.2	1003.1	941.2	885.6	835.5
60°	921.1	911.1	839.1	752.6	713.4
62.5°	817.3	812.7	731.6	634.1	609.5
65°	717.9	704.3	628.7	532.1	523.0
67.5°	621.4	601.3	531.2	444.6	447.4
70°	531.2	500.2	437.3	367.2	379.0
72.5°	446.4	408.2	350.8	298.8	314.3
75°	378.1	329.8	273.3	238.7	259.7
77.5°	322.5	270.6	213.2	184.0	209.6
80°	269.7	222.3	168.6	135.8	157.6
82.5°	225.0	185.0	139.4	97.5	110.2
85°	189.5	155.8	115.7	75.6	65.6
87.5°	149.4	127.6	93.8	59.2	24.6
90°	120.3	107.5	76.5	41.9	0.9
92.5°	96.6	91.1	62.0	24.6	1.8
95°	75.6	73.8	46.5	8.2	1.8
97.5°	58.3	58.3	28.2	1.8	1.8
100°	42.8	40.1	13.7	1.8	1.8
102.5°	27.3	23.7	4.6	1.8	1.8
105°	14.6	10.0	2.7	1.8	1.8
107.5°	6.4	4.6	2.7	2.7	1.8
110°	4.6	4.6	2.7	2.7	2.7



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CANDELA DISTRIBUTION (continued):

	0°	22.5°	45°	67.5°	90°
112.5°	4.6	4.6	2.7	2.7	2.7
115°	4.6	3.6	3.6	2.7	2.7
117.5°	4.6	3.6	3.6	2.7	2.7
120°	4.6	3.6	3.6	2.7	2.7
122.5°	4.6	4.6	3.6	3.6	2.7
125°	4.6	4.6	3.6	3.6	2.7
127.5°	4.6	4.6	4.6	3.6	3.6
130°	4.6	4.6	4.6	3.6	3.6
132.5°	4.6	4.6	4.6	3.6	3.6
135°	4.6	4.6	4.6	3.6	3.6
137.5°	4.6	4.6	4.6	4.6	3.6
140°	4.6	4.6	4.6	4.6	3.6
142.5°	5.5	5.5	4.6	4.6	3.6
145°	4.6	5.5	4.6	4.6	3.6
147.5°	5.5	4.6	4.6	4.6	3.6
150°	4.6	4.6	4.6	4.6	3.6
152.5°	4.6	4.6	4.6	4.6	3.6
155°	4.6	4.6	4.6	4.6	4.6
157.5°	4.6	4.6	4.6	4.6	4.6
160°	4.6	4.6	4.6	4.6	4.6
162.5°	4.6	4.6	4.6	4.6	4.6
165°	4.6	4.6	4.6	4.6	5.5
167.5°	3.6	3.6	4.6	5.5	5.5
170°	2.7	4.6	4.6	5.5	5.5
172.5°	2.7	4.6	4.6	5.5	5.5
175°	2.7	4.6	4.6	5.5	5.5
177.5°	2.7	4.6	4.6	5.5	5.5
180°	4.6	4.6	4.6	4.6	4.6

(END OF REPORT)