

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: P392638

Luminaire Tested: **MWL-4-00-73-UNV-L935-EDD**

Issue Date: 12/2/2019

**Test Information**

Test Method: LM-79-08  
Report Number: P392638  
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-L935-EDD  
Description: MWL 4FT MEDICAL LED FIXTURE  
Light Source: -  
Ballast/Driver: ELECTRONIC DRIVER

**Summary**

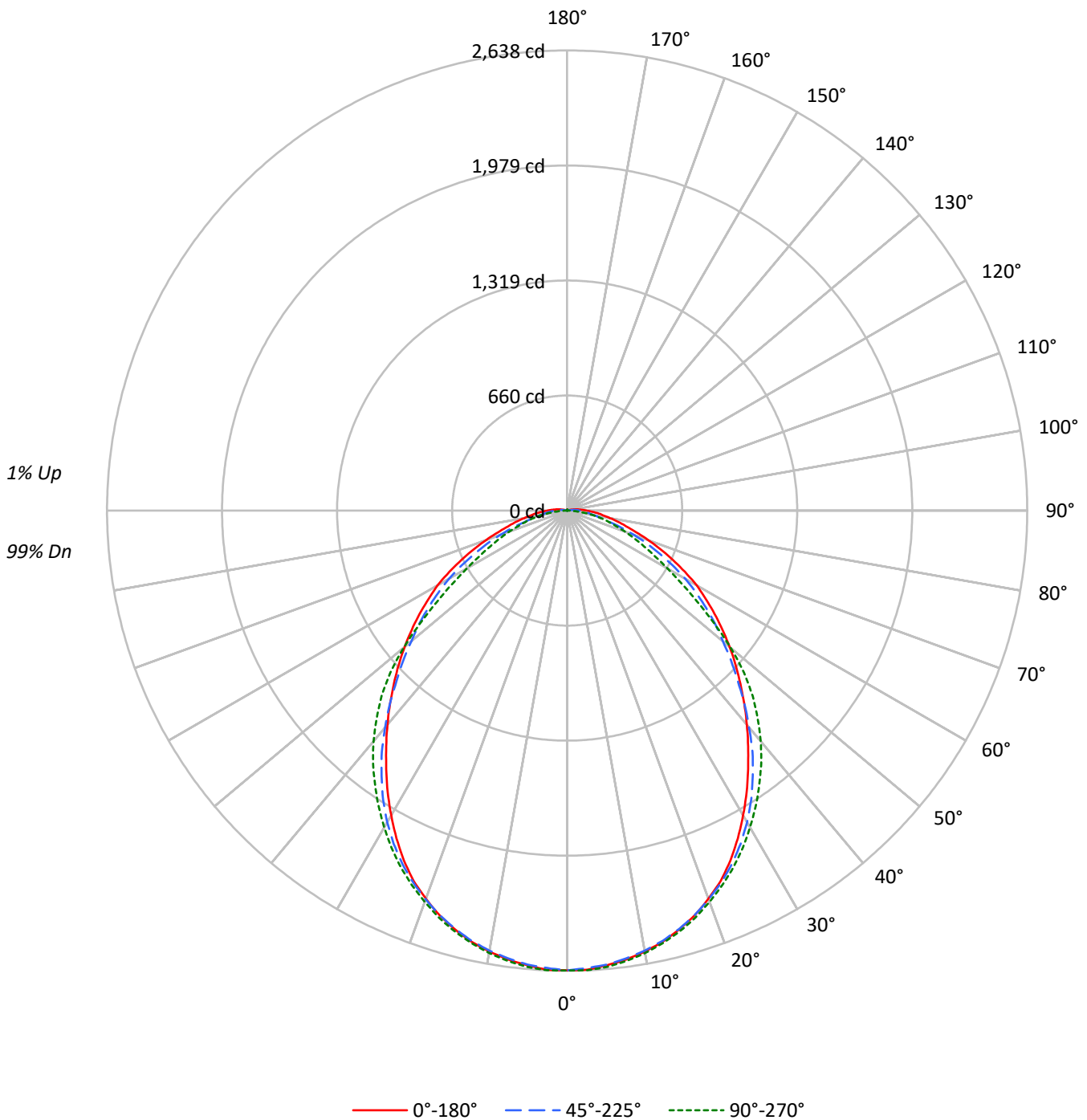
Lumens per Lamp: N/A  
Luminaire Lumens: 6174.7 lumens  
Efficiency: N/A  
Efficacy: 72.1 lumens/watt  
Spacing Criteria (0/90/45): 1.15 / 1.19 / 1.25  
Luminous Opening: Rectangular w/ Sides (W: 0.42' x L: 4' x H: 0.42')  
CIE Type: Direct

Input Watts (W): 85.648  
Input Voltage (V): NR  
Input Current (A<sub>in</sub>): 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°	17024	17024	17024
5°	16809	15852	15653
10°	16532	14764	14359
15°	16164	13726	13166
20°	15680	12691	12026
25°	15043	11674	10964
30°	14193	10602	9916
35°	13286	9455	8904
40°	12427	8264	7916
45°	11618	7094	6871
50°	10870	6065	5614
55°	10116	5170	4224
60°	9383	4289	3140
65°	8348	3344	2366
70°	7258	2444	1778
75°	6325	1623	1275
80°	5868	1075	818
85°	5967	804	364



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	248.5	4.0
10°-20°	701.2	11.4
20°-30°	1028.1	16.6
30°-40°	1163.2	18.8
40°-50°	1095.8	17.7
50°-60°	876.6	14.2
60°-70°	576.8	9.3
70°-80°	293.5	4.8
80°-90°	123.3	2.0
90°-100°	44.2	0.7
100°-110°	7.9	0.1
110°-120°	3.1	0.1
120°-130°	3.3	0.1
130°-140°	3.1	0.0
140°-150°	2.7	0.0
150°-160°	1.9	0.0
160°-170°	1.2	0.0
170°-180°	0.4	0.0
0°-30°	1977.7	32.0
0°-40°	3141.0	50.9
0°-60°	5113.4	82.8
0°-90°	6107.0	98.9
90°-120°	55.2	0.9
90°-150°	64.2	1.0
90°-180°	68.0	1.1
0°-180°	6174.7	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	2636	2636	2636	2636	2636	
5°	2616	2620	2612	2627	2626	248
15°	2485	2486	2482	2496	2497	700
25°	2214	2219	2235	2256	2256	1016
35°	1808	1815	1855	1918	1920	1131
45°	1404	1386	1383	1456	1505	1085
55°	1032	1018	971	954	911	924
65°	668	656	585	495	487	664
75°	352	307	254	222	242	380
85°	176	145	108	70	61	158
90°	112	100	71	39	1	62
95°	70	69	43	8	2	52
105°	14	9	2	2	2	18
115°	4	3	3	2	2	4
125°	4	4	3	3	2	4
135°	4	4	4	3	3	3
145°	4	5	4	4	3	3
155°	4	4	4	4	4	2
165°	4	4	4	4	5	1
175°	2	4	4	5	5	0
180°	4	4	4	4	4	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	2635.9	2635.9	2635.9	2635.9	2635.9
2.5°	2635.0	2633.4	2624.9	2638.5	2637.6
5°	2616.4	2619.8	2612.2	2626.6	2625.7
7.5°	2596.0	2601.1	2590.1	2606.2	2604.5
10°	2567.2	2568.9	2561.3	2576.5	2575.7
12.5°	2531.6	2531.6	2526.5	2540.0	2539.3
15°	2485.0	2485.8	2482.4	2495.9	2496.8
17.5°	2433.2	2433.2	2431.5	2446.8	2446.8
20°	2367.9	2371.3	2371.3	2386.6	2386.6
22.5°	2299.2	2301.8	2307.7	2327.2	2324.7
25°	2213.5	2218.6	2234.7	2256.0	2256.0
27.5°	2118.6	2132.1	2153.4	2178.8	2180.5
30°	2017.6	2032.0	2062.6	2098.2	2097.4
32.5°	1915.0	1929.4	1964.2	2006.6	2011.7
35°	1808.1	1814.9	1854.8	1917.5	1920.1
37.5°	1703.9	1705.5	1745.4	1811.6	1827.6
40°	1602.9	1594.5	1622.4	1697.1	1726.7
42.5°	1502.8	1492.6	1505.4	1578.3	1617.3
45°	1404.5	1385.8	1383.2	1456.2	1504.6
47.5°	1310.3	1288.3	1275.5	1332.4	1374.8
50°	1216.2	1194.9	1165.3	1205.1	1224.6
52.5°	1122.9	1106.8	1069.5	1083.0	1062.7
55°	1032.1	1017.7	971.1	954.1	910.9
57.5°	942.3	933.7	876.1	824.3	777.7
60°	857.5	848.1	781.1	700.5	664.1
62.5°	760.7	756.5	681.0	590.3	567.4
65°	668.3	655.5	585.2	495.3	486.8
67.5°	578.4	559.8	494.4	413.8	416.4
70°	494.4	465.6	407.1	341.8	352.8
72.5°	415.6	379.9	326.5	278.2	292.6
75°	352.0	307.0	254.5	222.2	241.7
77.5°	300.2	251.9	198.5	171.3	195.1
80°	251.0	206.9	156.9	126.3	146.7
82.5°	209.5	172.1	129.8	90.8	102.6
85°	176.4	145.1	107.7	70.4	61.1
87.5°	139.1	118.7	87.3	55.1	22.9
90°	111.9	100.1	71.3	39.0	0.9
92.5°	89.9	84.8	57.6	22.9	1.7
95°	70.4	68.7	43.2	7.6	1.7
97.5°	54.3	54.3	26.3	1.7	1.7
100°	39.9	37.3	12.7	1.7	1.7
102.5°	25.5	22.1	4.2	1.7	1.7
105°	13.5	9.3	2.5	1.7	1.7
107.5°	6.0	4.2	2.5	2.5	1.7
110°	4.2	4.2	2.5	2.5	2.5



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**CANDELA DISTRIBUTION (continued):**

	0°	22.5°	45°	67.5°	90°
112.5°	4.2	4.2	2.5	2.5	2.5
115°	4.2	3.4	3.4	2.5	2.5
117.5°	4.2	3.4	3.4	2.5	2.5
120°	4.2	3.4	3.4	2.5	2.5
122.5°	4.2	4.2	3.4	3.4	2.5
125°	4.2	4.2	3.4	3.4	2.5
127.5°	4.2	4.2	4.2	3.4	3.4
130°	4.2	4.2	4.2	3.4	3.4
132.5°	4.2	4.2	4.2	3.4	3.4
135°	4.2	4.2	4.2	3.4	3.4
137.5°	4.2	4.2	4.2	4.2	3.4
140°	4.2	4.2	4.2	4.2	3.4
142.5°	5.1	5.1	4.2	4.2	3.4
145°	4.2	5.1	4.2	4.2	3.4
147.5°	5.1	4.2	4.2	4.2	3.4
150°	4.2	4.2	4.2	4.2	3.4
152.5°	4.2	4.2	4.2	4.2	3.4
155°	4.2	4.2	4.2	4.2	4.2
157.5°	4.2	4.2	4.2	4.2	4.2
160°	4.2	4.2	4.2	4.2	4.2
162.5°	4.2	4.2	4.2	4.2	4.2
165°	4.2	4.2	4.2	4.2	5.1
167.5°	3.4	3.4	4.2	5.1	5.1
170°	2.5	4.2	4.2	5.1	5.1
172.5°	2.5	4.2	4.2	5.1	5.1
175°	2.5	4.2	4.2	5.1	5.1
177.5°	2.5	4.2	4.2	5.1	5.1
180°	4.2	4.2	4.2	4.2	4.2

(END OF REPORT)