

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: P392547

Luminaire Tested: **MWL-3-00-25-UNV-L830-EDD**

Issue Date: 12/2/2019

**Test Information**

Test Method: LM-79-08  
Report Number: P392547  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-1910-565-18)  
Test Lab: INNOVATION CENTER  
Issue Date: 12/2/2019  
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)  
Product Line: FAIL-SAFE  
Catalog Number: MWL-3-00-25-UNV-L830-EDD  
Description: MWL 3FT MEDICAL LED FIXTURE  
Light Source: -  
Ballast/Driver: ELECTRONIC DRIVER

**Summary**

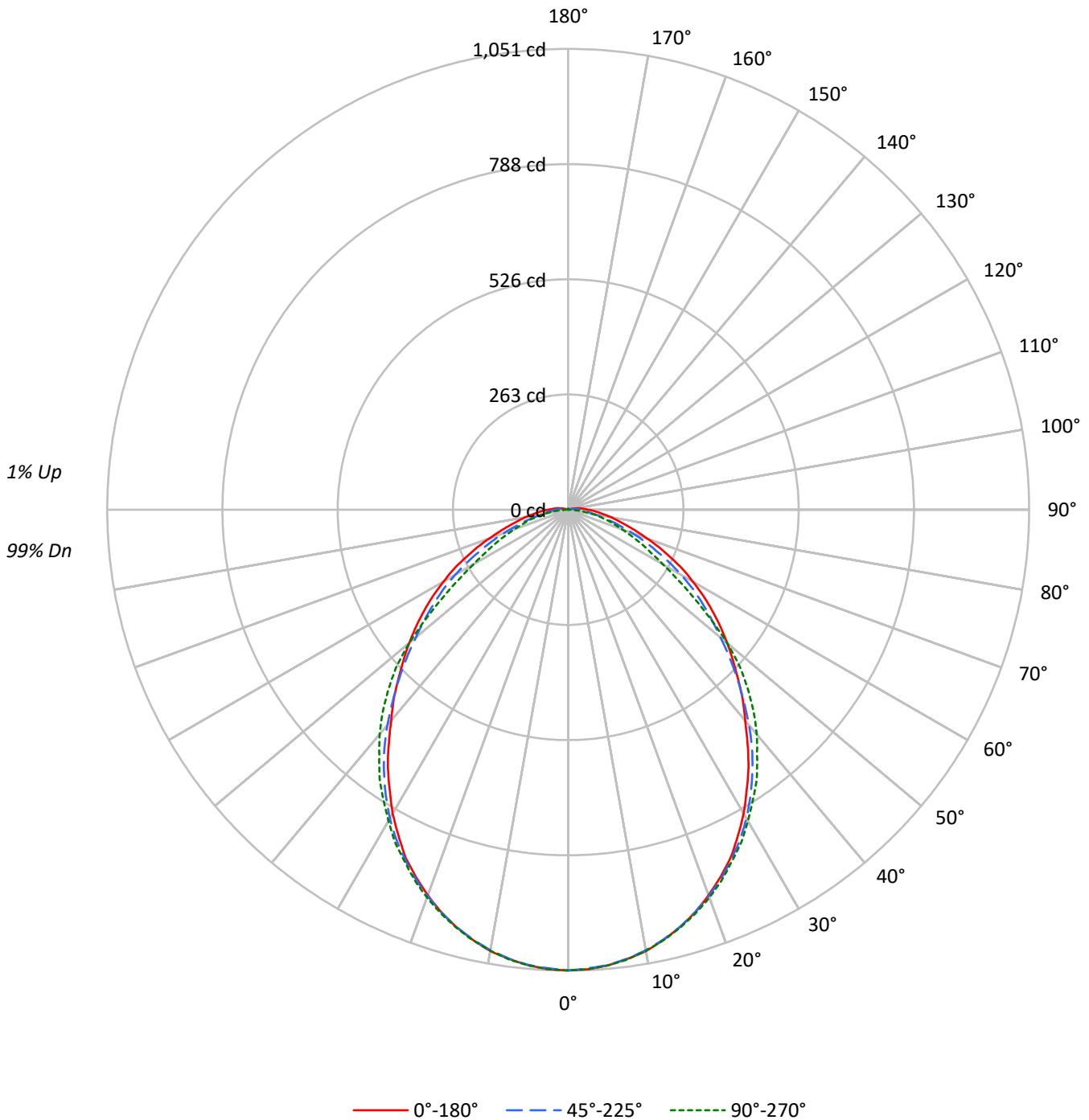
Lumens per Lamp: N/A  
Luminaire Lumens: 2412.1 lumens  
Efficiency: N/A  
Efficacy: 98.1 lumens/watt  
Spacing Criteria (0/90/45): 1.14 / 1.17 / 1.24  
Luminous Opening: Rectangular w/ Sides (W: 0.42' x L: 3' x H: 0.42')  
CIE Type: Direct

Input Watts (W): 24.6  
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				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	110	110	110	106	106	106	101	101	101	99
1	109	105	101	97	106	102	99	96	98	95	92	94	92	89	90	88	86	84
2	100	92	86	81	98	91	85	80	87	82	78	83	79	76	80	77	74	72
3	92	82	74	68	89	80	73	68	77	71	66	75	69	65	72	68	64	62
4	85	73	65	59	82	72	64	58	69	63	57	67	61	57	65	60	56	54
5	78	66	58	51	76	65	57	51	63	56	50	61	54	50	59	53	49	47
6	73	60	51	45	71	59	51	45	57	50	45	55	49	44	54	48	44	42
7	67	55	46	40	66	54	46	40	52	45	40	51	44	39	49	43	39	37
8	63	50	42	36	61	49	41	36	48	41	36	47	40	36	45	40	35	33
9	59	46	38	33	58	45	38	33	44	37	32	43	37	32	42	36	32	30
10	55	43	35	30	54	42	35	30	41	34	30	40	34	29	39	33	29	28

**AVERAGE LUMINANCE (cd/sqm):**

	0°	45°	90°
0°	9049	9049	9049
5°	8908	8416	8291
10°	8723	7811	7590
15°	8471	7220	6936
20°	8162	6644	6325
25°	7819	6079	5727
30°	7368	5517	5166
35°	6868	4922	4634
40°	6318	4301	4088
45°	5860	3677	3529
50°	5438	3097	2892
55°	5014	2614	2154
60°	4556	2139	1573
65°	4052	1649	1194
70°	3462	1219	877
75°	3006	837	641
80°	2768	547	414
85°	2639	400	176



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	98.9	4.1
10°-20°	277.6	11.5
20°-30°	405.0	16.8
30°-40°	457.0	18.9
40°-50°	427.4	17.7
50°-60°	337.1	14.0
60°-70°	220.0	9.1
70°-80°	113.4	4.7
80°-90°	48.0	2.0
90°-100°	18.2	0.8
100°-110°	3.4	0.1
110°-120°	1.3	0.1
120°-130°	1.2	0.0
130°-140°	1.2	0.0
140°-150°	1.1	0.0
150°-160°	0.7	0.0
160°-170°	0.5	0.0
170°-180°	0.2	0.0
0°-30°	781.4	32.4
0°-40°	1238.4	51.3
0°-60°	2002.9	83.0
0°-90°	2384.4	98.9
90°-120°	22.9	1.0
90°-150°	26.4	1.1
90°-180°	28.0	1.2
0°-180°	2412.1	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	1051	1051	1051	1051	1051	
5°	1043	1045	1042	1042	1043	99
15°	986	986	985	986	986	277
25°	876	875	880	886	884	402
35°	717	719	732	746	750	447
45°	548	540	545	568	580	424
55°	400	391	374	366	348	358
65°	258	253	221	189	184	256
75°	137	120	101	86	91	148
85°	69	56	41	27	22	62
90°	45	41	29	14	0	25
95°	32	30	17	2	1	23
105°	6	3	1	1	1	8
115°	2	2	1	1	1	2
125°	2	2	1	1	1	2
135°	2	2	2	1	1	1
145°	2	2	2	2	1	1
155°	2	2	2	1	1	1
165°	2	1	2	2	2	1
175°	1	1	2	2	2	0
180°	2	2	2	2	2	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	1050.8	1050.8	1050.8	1050.8	1050.8
2.5°	1048.9	1050.8	1047.0	1047.9	1048.9
5°	1043.1	1045.1	1042.2	1042.2	1043.1
7.5°	1033.6	1034.5	1032.6	1033.6	1034.5
10°	1022.0	1021.1	1020.1	1021.1	1021.1
12.5°	1004.8	1003.8	1003.8	1005.7	1005.7
15°	985.6	985.6	984.6	986.5	986.5
17.5°	962.5	962.5	962.5	965.4	965.4
20°	935.7	937.6	937.6	941.4	941.4
22.5°	906.9	908.8	910.7	913.6	914.6
25°	876.2	875.2	880.0	885.8	883.8
27.5°	837.8	843.5	848.3	854.1	855.1
30°	800.4	803.2	812.8	819.5	819.5
32.5°	757.2	762.9	773.5	784.0	784.0
35°	716.9	718.8	732.2	745.7	749.5
37.5°	671.8	673.7	689.0	705.3	707.3
40°	627.6	628.6	641.1	663.1	668.9
42.5°	589.2	582.5	592.1	617.1	625.7
45°	548.0	540.3	545.1	568.1	579.6
47.5°	509.6	500.0	499.0	516.3	531.7
50°	473.1	461.6	453.0	465.4	473.1
52.5°	436.6	425.1	412.7	415.5	408.8
55°	400.2	390.6	374.3	365.6	348.4
57.5°	364.7	357.0	336.8	316.7	295.6
60°	328.2	324.4	297.5	267.7	249.5
62.5°	294.6	287.9	259.1	224.6	213.0
65°	258.1	253.3	220.7	189.1	184.3
67.5°	224.6	215.0	188.1	155.5	155.5
70°	190.0	180.4	155.5	129.6	130.5
72.5°	162.2	147.8	126.7	105.6	109.4
75°	137.2	120.0	100.8	86.4	91.2
77.5°	116.1	96.0	78.7	67.2	72.9
80°	99.8	78.7	61.4	50.9	55.7
82.5°	81.6	66.2	49.9	36.5	38.4
85°	69.1	55.7	41.3	26.9	22.1
87.5°	56.6	48.0	34.5	21.1	6.7
90°	45.1	41.3	28.8	14.4	0.0
92.5°	36.5	34.5	23.0	8.6	1.0
95°	31.7	29.7	17.3	1.9	1.0
97.5°	25.0	23.0	10.6	1.0	1.0
100°	18.2	16.3	4.8	1.0	1.0
102.5°	12.5	9.6	1.0	1.0	1.0
105°	5.8	2.9	1.0	1.0	1.0
107.5°	1.9	1.9	1.0	1.0	1.0
110°	1.9	1.9	1.0	1.0	1.0



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**CANDELA DISTRIBUTION (continued):**

	0°	22.5°	45°	67.5°	90°
112.5°	1.9	1.9	1.0	1.0	1.0
115°	1.9	1.9	1.0	1.0	1.0
117.5°	1.9	1.9	1.0	1.0	1.0
120°	1.9	1.9	1.0	1.0	1.0
122.5°	1.9	1.9	1.0	1.0	1.0
125°	1.9	1.9	1.0	1.0	1.0
127.5°	1.9	1.9	1.0	1.0	1.0
130°	1.9	1.9	1.0	1.0	1.0
132.5°	1.9	1.9	1.9	1.0	1.0
135°	1.9	1.9	1.9	1.0	1.0
137.5°	1.9	1.9	1.0	1.0	1.0
140°	1.9	1.9	1.9	1.9	1.0
142.5°	1.9	1.9	1.9	1.0	1.0
145°	1.9	1.9	1.9	1.9	1.0
147.5°	1.9	1.9	1.9	1.9	1.0
150°	1.9	1.9	1.9	1.9	1.0
152.5°	1.9	1.9	1.0	1.0	1.0
155°	1.9	1.9	1.9	1.0	1.0
157.5°	1.9	1.9	1.9	1.0	1.0
160°	1.9	1.9	1.9	1.9	1.0
162.5°	1.9	1.0	1.9	1.9	1.9
165°	1.9	1.0	1.9	1.9	1.9
167.5°	1.9	1.0	1.9	1.9	1.9
170°	1.0	1.0	1.9	1.9	1.9
172.5°	1.0	1.0	1.9	1.9	1.9
175°	1.0	1.0	1.9	1.9	1.9
177.5°	1.0	1.0	1.9	1.9	1.9
180°	1.9	1.9	1.9	1.9	1.9

(END OF REPORT)