

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: P392460

Luminaire Tested: **MWL-2-00-17-UNV-L930-EDD**

Issue Date: 12/2/2019

**Test Information**

Test Method: LM-79-08  
Report Number: P392460  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-1910-565-29)  
Test Lab: INNOVATION CENTER  
Issue Date: 12/2/2019  
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)  
Product Line: FAIL-SAFE  
Catalog Number: MWL-2-00-17-UNV-L930-EDD  
Description: MWL 2FT MEDICAL LED FIXTURE  
Light Source: -  
Ballast/Driver: ELECTRONIC DRIVER

**Summary**

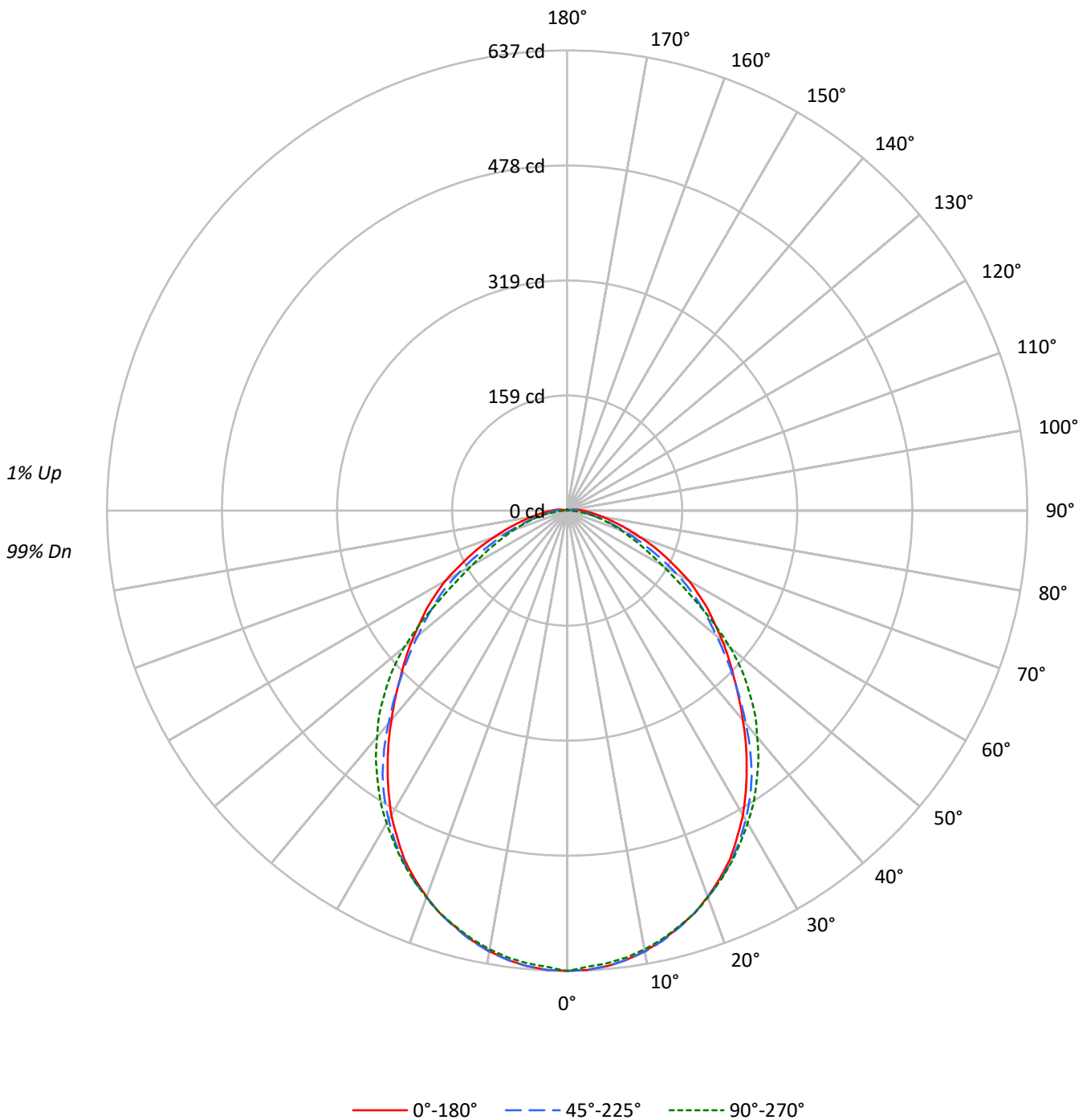
Lumens per Lamp: N/A  
Luminaire Lumens: 1443.1 lumens  
Efficiency: N/A  
Efficacy: 86.1 lumens/watt  
Spacing Criteria (0/90/45): 1.15 / 1.17 / 1.24  
Luminous Opening: Rectangular w/ Sides (W: 0.42' x L: 2' x H: 0.42')  
CIE Type: Direct

Input Watts (W): 16.766  
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	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	98	107	103	99	96	98	95	93	94	92	90	91	89	87	85								
2	100	93	87	81	98	91	85	80	87	82	78	84	80	76	81	77	75	72								
3	92	83	75	69	90	81	74	68	78	72	67	75	70	66	72	68	64	62								
4	85	74	66	59	83	72	65	59	70	63	58	67	62	57	65	60	56	54								
5	79	66	58	52	76	65	57	51	63	56	51	61	55	50	59	54	50	48								
6	73	60	52	46	71	59	51	45	57	50	45	56	49	45	54	48	44	42								
7	68	55	47	41	66	54	46	41	52	45	40	51	45	40	50	44	40	38								
8	63	50	42	37	62	50	42	36	48	41	36	47	41	36	46	40	36	34								
9	59	46	39	33	58	46	38	33	45	38	33	43	37	33	42	37	32	31								
10	56	43	35	30	54	42	35	30	41	35	30	40	34	30	39	34	30	28								

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

	0°	45°	90°
0°	8231	8231	8231
5°	8062	7638	7500
10°	7834	7067	6876
15°	7561	6505	6287
20°	7270	5974	5742
25°	6921	5464	5226
30°	6480	4935	4727
35°	5963	4396	4240
40°	5430	3779	3754
45°	4934	3199	3260
50°	4514	2685	2699
55°	4124	2261	1999
60°	3700	1816	1446
65°	3143	1358	1071
70°	2587	975	795
75°	2078	656	563
80°	1681	408	367
85°	1442	317	156



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	59.9	4.2
10°-20°	168.4	11.7
20°-30°	246.2	17.1
30°-40°	277.6	19.2
40°-50°	257.6	17.8
50°-60°	202.2	14.0
60°-70°	127.6	8.8
70°-80°	62.9	4.4
80°-90°	26.2	1.8
90°-100°	9.1	0.6
100°-110°	1.1	0.1
110°-120°	0.8	0.1
120°-130°	0.7	0.0
130°-140°	0.7	0.0
140°-150°	0.9	0.1
150°-160°	0.7	0.1
160°-170°	0.4	0.0
170°-180°	0.1	0.0
0°-30°	474.5	32.9
0°-40°	752.1	52.1
0°-60°	1211.9	84.0
0°-90°	1428.5	99.0
90°-120°	11.0	0.8
90°-150°	13.4	0.9
90°-180°	15.0	1.0
0°-180°	1443.1	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	637	637	637	637	637	
5°	633	633	633	631	629	60
15°	597	598	598	597	596	168
25°	533	534	536	537	538	244
35°	433	435	446	454	457	271
45°	326	324	325	344	357	253
55°	238	234	223	221	216	212
65°	149	144	126	111	110	148
75°	74	63	55	49	53	80
85°	33	31	23	16	13	30
90°	21	24	16	9	0	12
95°	15	16	9	1	0	10
105°	1	1	1	1	1	2
115°	1	1	1	1	1	1
125°	1	1	1	1	1	1
135°	1	1	1	1	1	1
145°	2	2	2	2	1	1
155°	2	2	2	2	1	1
165°	2	2	2	1	1	0
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°	637.2	637.2	637.2	637.2	637.2
2.5°	636.4	636.4	636.4	634.0	632.3
5°	633.1	633.1	633.1	630.6	629.0
7.5°	627.4	627.4	627.4	625.7	624.1
10°	619.2	620.0	620.0	618.3	616.7
12.5°	609.3	610.1	610.1	608.4	607.6
15°	597.0	597.8	597.8	597.0	596.1
17.5°	584.7	584.7	584.7	585.4	584.7
20°	569.0	569.8	569.8	570.7	569.8
22.5°	551.7	552.5	554.2	554.2	554.2
25°	532.8	533.7	536.1	536.9	537.7
27.5°	509.8	513.1	516.3	518.0	518.8
30°	486.7	489.2	494.1	499.1	499.9
32.5°	460.4	463.8	471.2	477.8	480.2
35°	433.3	435.0	445.6	453.9	457.2
37.5°	406.2	405.4	416.0	430.8	435.0
40°	378.3	376.6	384.8	404.5	409.4
42.5°	351.9	350.3	354.4	376.6	385.7
45°	326.4	323.9	324.8	344.5	356.9
47.5°	303.4	299.3	296.8	311.6	328.9
50°	280.4	276.3	269.7	280.4	294.4
52.5°	257.4	254.9	245.8	250.8	255.7
55°	237.6	234.3	222.9	221.2	215.5
57.5°	215.5	213.8	199.8	190.7	180.1
60°	194.9	190.7	174.3	161.1	152.9
62.5°	170.2	167.7	149.7	133.2	129.9
65°	148.8	143.9	125.8	111.0	110.2
67.5°	128.3	120.0	104.4	92.1	92.9
70°	107.7	98.7	86.4	75.6	78.9
72.5°	90.4	79.8	69.9	61.6	65.0
75°	74.0	63.3	55.1	49.3	53.4
77.5°	60.8	51.8	41.9	39.4	42.8
80°	49.3	42.8	32.1	29.6	32.9
82.5°	40.3	37.0	27.1	20.5	22.2
85°	32.9	31.3	23.0	15.6	13.1
87.5°	26.3	27.1	18.9	12.3	3.3
90°	21.4	23.9	15.6	9.1	0.0
92.5°	17.3	19.7	13.1	4.1	0.0
95°	14.8	15.6	9.1	0.8	0.0
97.5°	10.7	10.7	4.1	0.0	0.0
100°	6.6	5.7	0.8	0.0	0.0
102.5°	3.3	1.7	0.8	0.0	0.0
105°	0.8	0.8	0.8	0.8	0.8
107.5°	0.8	0.8	0.8	0.8	0.8
110°	0.8	0.8	0.8	0.8	0.8



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**CANDELA DISTRIBUTION (continued):**

	0°	22.5°	45°	67.5°	90°
112.5°	0.8	0.8	0.8	0.8	0.8
115°	0.8	0.8	0.8	0.8	0.8
117.5°	0.8	0.8	0.8	0.8	0.8
120°	0.8	0.8	0.8	0.8	0.8
122.5°	0.8	0.8	0.8	0.8	0.8
125°	0.8	0.8	0.8	0.8	0.8
127.5°	0.8	0.8	0.8	0.8	0.8
130°	0.8	0.8	0.8	0.8	0.8
132.5°	0.8	0.8	0.8	0.8	0.8
135°	0.8	0.8	0.8	0.8	0.8
137.5°	0.8	0.8	0.8	0.8	0.8
140°	1.7	1.7	1.7	0.8	0.8
142.5°	1.7	1.7	1.7	0.8	0.8
145°	1.7	1.7	1.7	1.7	0.8
147.5°	1.7	1.7	1.7	1.7	0.8
150°	1.7	1.7	1.7	1.7	0.8
152.5°	1.7	1.7	1.7	1.7	0.8
155°	1.7	1.7	1.7	1.7	0.8
157.5°	1.7	1.7	1.7	1.7	0.8
160°	1.7	1.7	1.7	0.8	0.8
162.5°	1.7	1.7	1.7	0.8	0.8
165°	1.7	1.7	1.7	0.8	0.8
167.5°	1.7	1.7	0.8	0.8	0.8
170°	0.8	1.7	0.8	1.7	1.7
172.5°	0.8	0.8	0.8	1.7	1.7
175°	0.8	0.8	1.7	1.7	1.7
177.5°	0.8	0.8	1.7	1.7	1.7
180°	1.7	1.7	1.7	1.7	1.7

(END OF REPORT)