

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: P392627

Luminaire Tested: **MWL-4-00-25-UNV-L840-EDD**

Issue Date: 12/2/2019

**Test Information**

Test Method: LM-79-08  
Report Number: P392627  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-1910-565-6)  
Test Lab: INNOVATION CENTER  
Issue Date: 12/2/2019  
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)  
Product Line: FAIL-SAFE  
Catalog Number: MWL-4-00-25-UNV-L840-EDD  
Description: MWL 4FT MEDICAL LED FIXTURE  
Light Source: -  
Ballast/Driver: ELECTRONIC DRIVER

**Summary**

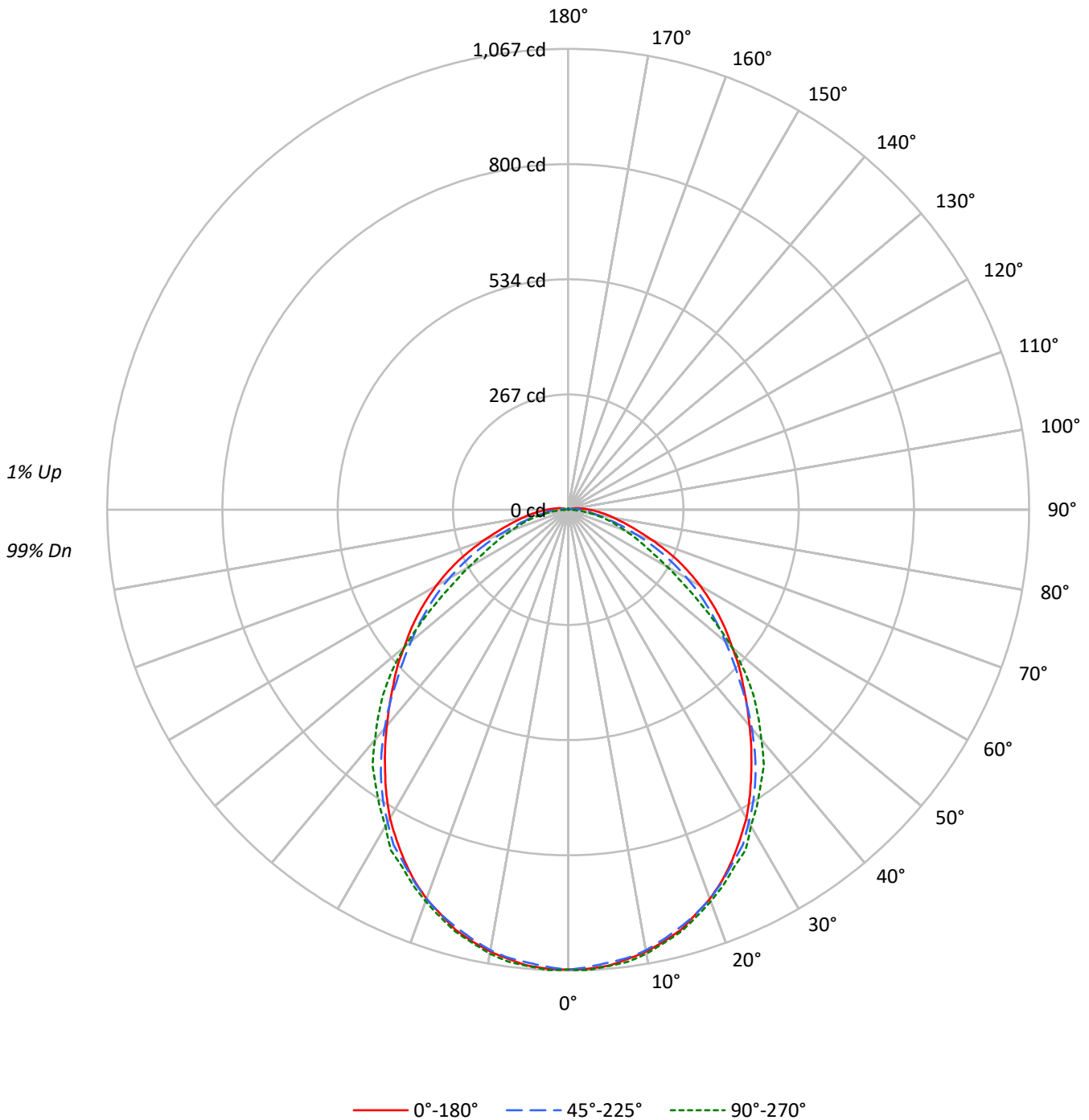
Lumens per Lamp: N/A  
Luminaire Lumens: 2516.1 lumens  
Efficiency: N/A  
Efficacy: 108.5 lumens/watt  
Spacing Criteria (0/90/45): 1.16 / 1.19 / 1.25  
Luminous Opening: Rectangular w/ Sides (W: 0.42' x L: 4' x H: 0.42')  
CIE Type: Direct

Input Watts (W): 23.2  
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	0	
RCR																						
0	119	119	119	119	116	116	116	116	110	110	110	105	105	105	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	80	97	90	84	79	87	82	77	83	79	75	80	77	74	71				
3	92	82	74	68	89	80	73	67	77	71	66	74	69	65	71	67	63	61				
4	84	73	65	58	82	72	64	58	69	62	57	67	61	56	64	59	55	53				
5	78	66	57	51	76	64	56	50	62	55	50	60	54	49	58	53	49	46				
6	72	59	51	45	70	58	50	45	57	49	44	55	48	44	53	47	43	41				
7	67	54	46	40	65	53	45	40	52	45	39	50	44	39	49	43	39	37				
8	63	50	41	36	61	49	41	36	47	40	35	46	40	35	45	39	35	33				
9	59	46	38	32	57	45	37	32	44	37	32	43	36	32	42	36	32	30				
10	55	42	35	30	54	42	34	29	41	34	29	40	33	29	39	33	29	27				

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

	0°	45°	90°
0°	6877	6877	6877
5°	6809	6390	6325
10°	6690	5971	5820
15°	6549	5534	5331
20°	6350	5132	4862
25°	6095	4712	4427
30°	5803	4297	3999
35°	5430	3853	3603
40°	5062	3366	3190
45°	4731	2882	2767
50°	4423	2472	2264
55°	4165	2108	1702
60°	3863	1746	1258
65°	3510	1383	933
70°	3054	1009	695
75°	2677	695	512
80°	2502	452	329
85°	2537	336	143



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	100.4	4.0
10°-20°	283.4	11.3
20°-30°	416.1	16.5
30°-40°	472.5	18.8
40°-50°	444.4	17.7
50°-60°	356.1	14.2
60°-70°	236.3	9.4
70°-80°	122.6	4.9
80°-90°	52.0	2.1
90°-100°	20.0	0.8
100°-110°	4.3	0.2
110°-120°	1.6	0.1
120°-130°	1.8	0.1
130°-140°	1.5	0.1
140°-150°	1.3	0.1
150°-160°	0.9	0.0
160°-170°	0.6	0.0
170°-180°	0.2	0.0
0°-30°	799.9	31.8
0°-40°	1272.4	50.6
0°-60°	2072.9	82.4
0°-90°	2483.8	98.7
90°-120°	25.9	1.0
90°-150°	30.5	1.2
90°-180°	32.0	1.3
0°-180°	2516.1	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	1065	1065	1065	1065	1065	
5°	1060	1058	1053	1062	1061	100
15°	1007	1003	1001	1010	1011	283
25°	897	898	902	910	911	412
35°	739	742	756	776	777	462
45°	572	564	562	591	606	442
55°	425	415	396	385	367	380
65°	281	273	242	198	192	277
75°	149	130	109	92	97	161
85°	75	60	45	30	24	68
90°	50	43	31	17	0	28
95°	32	31	19	4	1	24
105°	9	7	1	1	1	10
115°	2	2	2	1	1	2
125°	2	2	2	2	2	2
135°	2	2	2	2	2	2
145°	2	2	2	2	2	1
155°	2	2	2	2	2	1
165°	2	2	2	2	2	1
175°	1	2	2	2	3	0
180°	2	2	2	2	2	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	1064.9	1064.9	1064.9	1064.9	1064.9
2.5°	1063.9	1061.9	1059.9	1070.9	1066.9
5°	1059.9	1057.9	1052.9	1061.9	1060.9
7.5°	1049.9	1047.9	1046.9	1052.9	1055.9
10°	1038.9	1037.9	1035.9	1041.9	1043.9
12.5°	1023.9	1026.9	1018.9	1024.9	1026.9
15°	1006.9	1002.9	1000.9	1009.9	1010.9
17.5°	981.9	984.9	981.9	987.9	987.9
20°	958.9	958.9	958.9	964.9	964.9
22.5°	929.9	932.9	931.9	936.9	939.9
25°	896.9	897.9	901.9	909.9	910.9
27.5°	860.9	864.9	874.9	883.9	888.9
30°	824.9	824.9	835.9	844.9	845.9
32.5°	782.9	782.9	797.9	812.9	812.9
35°	738.9	741.9	755.9	775.9	776.9
37.5°	695.9	693.9	709.9	732.9	743.9
40°	652.9	648.9	660.9	687.9	695.9
42.5°	611.9	604.9	611.9	638.9	650.9
45°	571.9	563.9	561.9	590.9	605.9
47.5°	535.9	524.9	516.9	535.9	553.9
50°	494.9	485.9	474.9	483.9	493.9
52.5°	460.9	449.9	434.9	435.9	428.9
55°	424.9	414.9	396.0	385.0	367.0
57.5°	389.0	382.0	357.0	334.0	311.0
60°	353.0	346.0	318.0	281.0	266.0
62.5°	317.0	312.0	279.0	237.0	224.0
65°	281.0	273.0	242.0	198.0	192.0
67.5°	243.0	235.0	204.0	167.0	166.0
70°	208.0	196.0	168.0	138.0	138.0
72.5°	176.0	161.0	137.0	114.0	118.0
75°	149.0	130.0	109.0	92.0	97.0
77.5°	126.0	106.0	85.0	72.0	78.0
80°	107.0	87.0	66.0	54.0	59.0
82.5°	91.0	72.0	54.0	38.0	41.0
85°	75.0	60.0	45.0	30.0	24.0
87.5°	61.0	51.0	37.0	23.0	8.0
90°	50.0	43.0	31.0	17.0	0.0
92.5°	40.0	37.0	25.0	10.0	1.0
95°	32.0	31.0	19.0	4.0	1.0
97.5°	25.0	26.0	13.0	1.0	1.0
100°	20.0	19.0	7.0	1.0	1.0
102.5°	14.0	12.0	2.0	1.0	1.0
105°	9.0	7.0	1.0	1.0	1.0
107.5°	4.0	2.0	1.0	1.0	1.0
110°	2.0	2.0	1.0	1.0	1.0



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**CANDELA DISTRIBUTION (continued):**

	0°	22.5°	45°	67.5°	90°
112.5°	2.0	2.0	1.0	1.0	1.0
115°	2.0	2.0	2.0	1.0	1.0
117.5°	2.0	2.0	2.0	2.0	1.0
120°	2.0	2.0	2.0	2.0	2.0
122.5°	2.0	2.0	2.0	2.0	2.0
125°	2.0	2.0	2.0	2.0	2.0
127.5°	2.0	2.0	2.0	2.0	2.0
130°	2.0	2.0	2.0	2.0	2.0
132.5°	2.0	2.0	2.0	2.0	2.0
135°	2.0	2.0	2.0	2.0	2.0
137.5°	2.0	2.0	2.0	2.0	2.0
140°	2.0	2.0	2.0	2.0	2.0
142.5°	2.0	3.0	2.0	2.0	2.0
145°	2.0	2.0	2.0	2.0	2.0
147.5°	2.0	2.0	2.0	2.0	2.0
150°	2.0	2.0	2.0	2.0	2.0
152.5°	2.0	2.0	2.0	2.0	2.0
155°	2.0	2.0	2.0	2.0	2.0
157.5°	2.0	2.0	2.0	2.0	2.0
160°	2.0	2.0	2.0	2.0	2.0
162.5°	2.0	2.0	2.0	2.0	2.0
165°	2.0	2.0	2.0	2.0	2.0
167.5°	2.0	2.0	2.0	2.0	2.0
170°	2.0	2.0	2.0	2.0	2.0
172.5°	1.0	2.0	2.0	2.0	3.0
175°	1.0	2.0	2.0	2.0	3.0
177.5°	1.0	2.0	2.0	2.0	3.0
180°	2.0	2.0	2.0	2.0	2.0

(END OF REPORT)