

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: P392468

Luminaire Tested: **MWL-2-00-31-UNV-L940-EDD**

Issue Date: 12/2/2019

**Test Information**

Test Method: LM-79-08  
Report Number: P392468  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-1910-565-26)  
Test Lab: INNOVATION CENTER  
Issue Date: 12/2/2019  
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)  
Product Line: FAIL-SAFE  
Catalog Number: MWL-2-00-31-UNV-L940-EDD  
Description: MWL 2FT MEDICAL LED FIXTURE  
Light Source: -  
Ballast/Driver: ELECTRONIC DRIVER

**Summary**

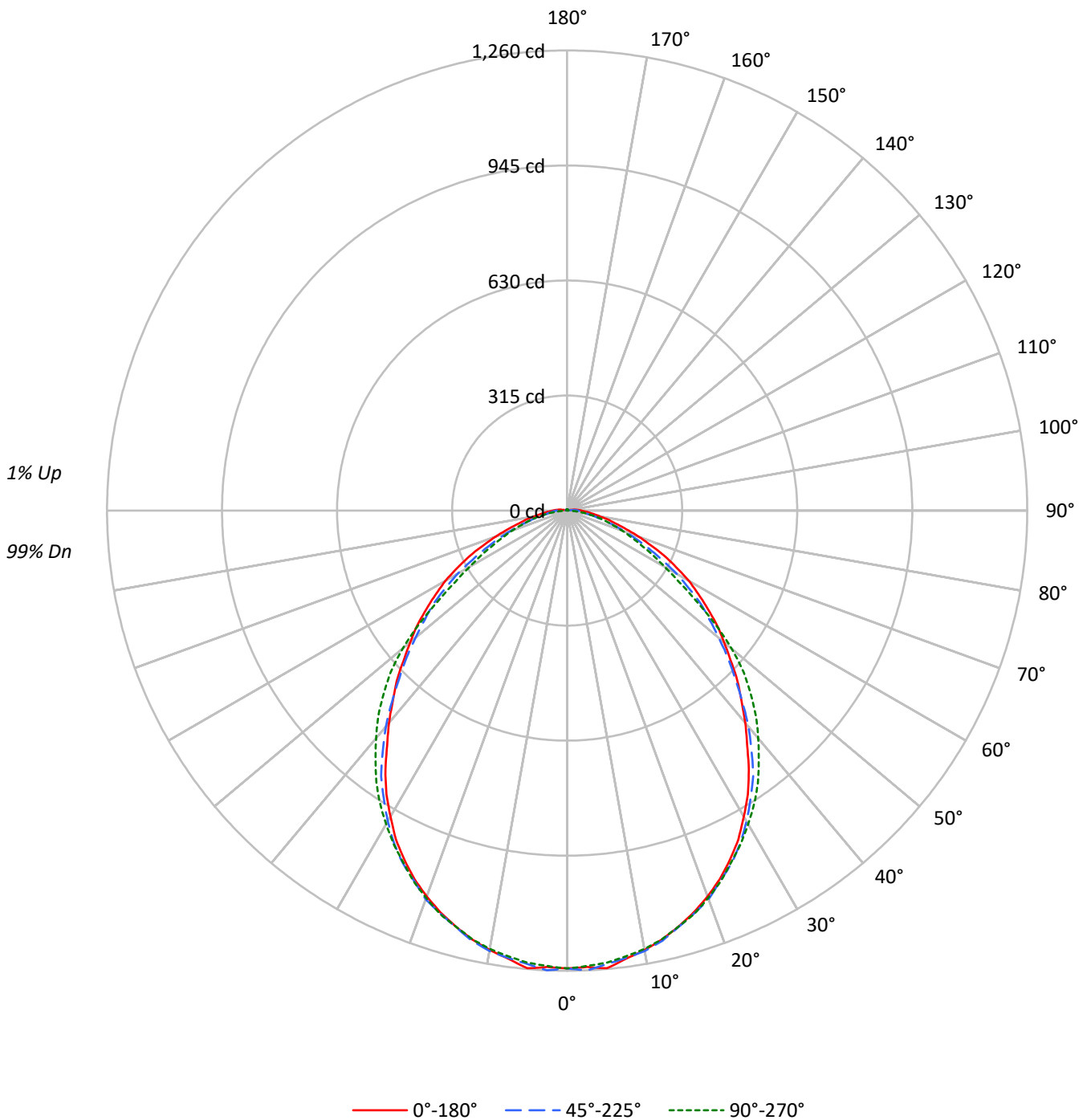
Lumens per Lamp: N/A  
Luminaire Lumens: 2862.6 lumens  
Efficiency: N/A  
Efficacy: 86.4 lumens/watt  
Spacing Criteria (0/90/45): 1.16 / 1.18 / 1.25  
Luminous Opening: Rectangular w/ Sides (W: 0.42' x L: 2' x H: 0.42')  
CIE Type: Direct

Input Watts (W): 33.128  
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	110	105	101	98	107	103	99	96	98	96	93	94	92	90	91	89	87	85
2	101	93	87	81	98	91	85	80	87	83	78	84	80	76	81	78	75	73
3	92	83	75	69	90	81	74	68	78	72	67	75	70	66	72	68	65	62
4	85	74	66	59	83	73	65	59	70	63	58	68	62	57	65	60	56	54
5	79	67	58	52	77	65	57	52	63	56	51	61	55	50	59	54	50	48
6	73	60	52	46	71	59	51	46	57	50	45	56	49	45	54	49	44	42
7	68	55	47	41	66	54	46	41	53	45	40	51	45	40	50	44	40	38
8	63	50	42	37	62	50	42	37	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°	16192	16192	16192
5°	16021	15036	14815
10°	15456	13957	13592
15°	14931	12838	12433
20°	14364	11873	11376
25°	13704	10854	10325
30°	12882	9810	9373
35°	11936	8764	8442
40°	10892	7587	7459
45°	9971	6408	6491
50°	9020	5397	5397
55°	8159	4547	4006
60°	7299	3597	2921
65°	6217	2664	2169
70°	4989	1891	1606
75°	3838	1249	1124
80°	3076	776	711
85°	2595	577	293



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	118.2	4.1
10°-20°	332.8	11.6
20°-30°	487.8	17.0
30°-40°	553.1	19.3
40°-50°	515.8	18.0
50°-60°	404.4	14.1
60°-70°	252.1	8.8
70°-80°	121.0	4.2
80°-90°	48.8	1.7
90°-100°	16.3	0.6
100°-110°	2.0	0.1
110°-120°	1.7	0.1
120°-130°	2.1	0.1
130°-140°	2.1	0.1
140°-150°	1.9	0.1
150°-160°	1.5	0.1
160°-170°	0.8	0.0
170°-180°	0.3	0.0
0°-30°	938.8	32.8
0°-40°	1491.9	52.1
0°-60°	2412.2	84.3
0°-90°	2834.0	99.0
90°-120°	20.0	0.7
90°-150°	26.0	0.9
90°-180°	29.0	1.0
0°-180°	2862.6	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	1254	1254	1254	1254	1254	
5°	1258	1248	1246	1245	1243	118
15°	1179	1180	1180	1177	1179	332
25°	1055	1056	1065	1062	1062	485
35°	867	867	888	906	910	541
45°	660	649	650	690	711	508
55°	470	469	448	443	432	422
65°	294	281	247	221	223	291
75°	137	119	105	98	107	151
85°	59	58	42	30	25	55
90°	38	43	29	16	1	21
95°	26	26	16	1	1	19
105°	2	2	1	1	1	4
115°	2	2	2	2	2	2
125°	3	3	3	2	2	2
135°	3	3	3	3	3	2
145°	3	4	3	3	3	2
155°	4	4	4	3	3	2
165°	4	3	3	3	3	1
175°	2	3	3	4	4	0
180°	3	3	3	3	3	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	1253.6	1253.6	1253.6	1253.6	1253.6
2.5°	1250.8	1257.2	1260.0	1247.2	1248.1
5°	1258.1	1248.1	1246.3	1245.4	1242.6
7.5°	1237.2	1241.7	1235.4	1233.5	1230.8
10°	1221.7	1225.3	1224.4	1218.0	1219.0
12.5°	1202.6	1206.2	1206.2	1198.9	1201.6
15°	1178.9	1179.8	1179.8	1177.1	1178.9
17.5°	1153.4	1157.0	1157.0	1157.9	1157.9
20°	1124.2	1129.7	1132.4	1127.9	1128.8
22.5°	1092.3	1093.2	1096.9	1090.5	1098.7
25°	1055.0	1055.9	1065.0	1062.3	1062.3
27.5°	1015.0	1015.0	1026.8	1024.1	1029.5
30°	967.6	975.8	982.2	995.8	991.3
32.5°	921.1	925.7	934.8	944.8	953.0
35°	867.4	867.4	888.3	905.6	910.2
37.5°	809.1	810.9	829.1	855.5	861.9
40°	758.9	755.3	772.6	807.2	813.6
42.5°	706.1	700.6	709.7	751.7	766.2
45°	659.6	648.7	650.5	689.7	710.7
47.5°	607.7	604.1	596.8	623.2	656.0
50°	560.3	553.0	542.1	564.0	588.6
52.5°	518.4	512.0	492.0	504.7	510.2
55°	470.1	469.2	448.3	442.8	431.9
57.5°	426.4	424.6	394.5	384.5	363.5
60°	384.5	378.1	345.3	319.8	308.9
62.5°	337.1	333.5	293.4	266.0	264.2
65°	294.3	280.6	246.9	221.4	223.2
67.5°	247.8	234.2	205.0	182.2	189.5
70°	207.7	189.5	167.6	148.5	159.4
72.5°	170.4	151.2	134.8	121.2	131.2
75°	136.7	119.4	104.8	97.5	106.6
77.5°	114.8	96.6	79.3	75.6	86.6
80°	90.2	80.2	61.0	56.5	63.8
82.5°	72.9	68.3	51.0	40.1	43.7
85°	59.2	58.3	41.9	30.1	24.6
87.5°	47.4	50.1	35.5	22.8	7.3
90°	38.3	42.8	29.2	15.5	0.9
92.5°	32.8	35.5	23.7	7.3	0.9
95°	26.4	26.4	16.4	0.9	0.9
97.5°	20.0	18.2	6.4	0.9	0.9
100°	11.8	9.1	0.9	0.9	0.9
102.5°	5.5	2.7	0.9	0.9	0.9
105°	1.8	1.8	0.9	0.9	0.9
107.5°	1.8	1.8	1.8	0.9	0.9
110°	1.8	1.8	1.8	0.9	0.9



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**CANDELA DISTRIBUTION (continued):**

	0°	22.5°	45°	67.5°	90°
112.5°	1.8	1.8	1.8	1.8	0.9
115°	1.8	1.8	1.8	1.8	1.8
117.5°	1.8	1.8	1.8	1.8	1.8
120°	1.8	1.8	1.8	1.8	1.8
122.5°	2.7	1.8	1.8	1.8	1.8
125°	2.7	2.7	2.7	1.8	1.8
127.5°	2.7	2.7	2.7	2.7	2.7
130°	2.7	2.7	2.7	2.7	2.7
132.5°	2.7	2.7	2.7	2.7	2.7
135°	2.7	2.7	2.7	2.7	2.7
137.5°	2.7	2.7	2.7	2.7	2.7
140°	2.7	2.7	2.7	2.7	2.7
142.5°	2.7	2.7	2.7	2.7	2.7
145°	2.7	3.6	2.7	2.7	2.7
147.5°	3.6	3.6	3.6	2.7	2.7
150°	3.6	3.6	3.6	2.7	2.7
152.5°	3.6	3.6	3.6	2.7	2.7
155°	3.6	3.6	3.6	2.7	2.7
157.5°	3.6	3.6	2.7	2.7	2.7
160°	3.6	3.6	2.7	2.7	2.7
162.5°	3.6	3.6	2.7	2.7	2.7
165°	3.6	2.7	2.7	2.7	2.7
167.5°	3.6	2.7	2.7	2.7	2.7
170°	2.7	2.7	2.7	2.7	2.7
172.5°	1.8	2.7	2.7	2.7	2.7
175°	1.8	2.7	2.7	3.6	3.6
177.5°	1.8	1.8	2.7	3.6	3.6
180°	2.7	2.7	2.7	2.7	2.7

(END OF REPORT)