

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: P392467

Luminaire Tested: **MWL-2-00-31-UNV-L835-EDD**

Issue Date: 12/2/2019

**Test Information**

Test Method: LM-79-08  
Report Number: P392467  
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-L835-EDD  
Description: MWL 2FT MEDICAL LED FIXTURE  
Light Source: -  
Ballast/Driver: ELECTRONIC DRIVER

**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 3038.0 lumens  
Efficiency: N/A  
Efficacy: 92.6 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

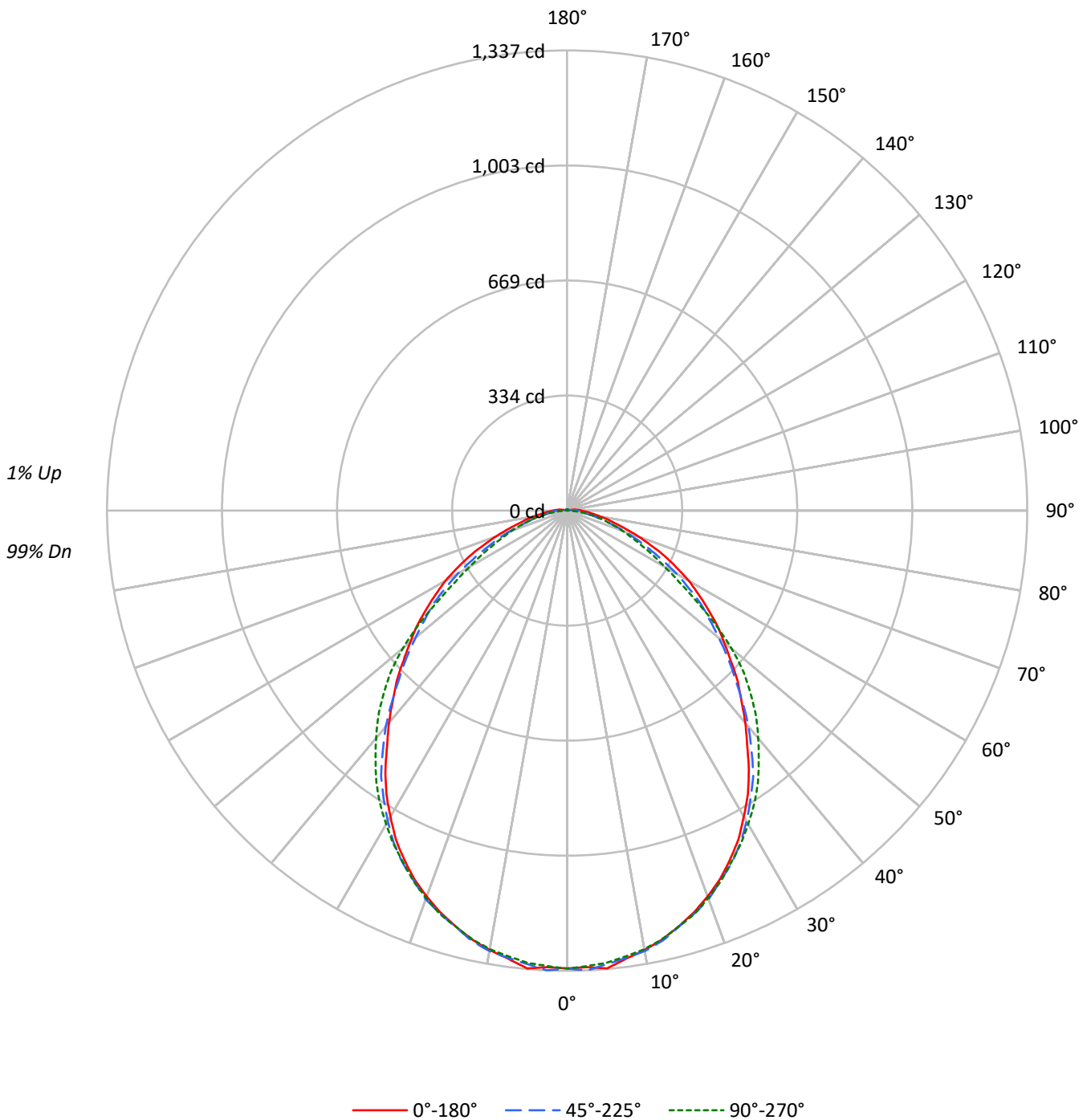
Input Watts (W): 32.8  
Input Voltage (V): NR  
Input Current (Ain): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 25 FT



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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°	17184	17184	17184
5°	17002	15957	15724
10°	16404	14813	14425
15°	15846	13624	13195
20°	15244	12601	12072
25°	14544	11519	10958
30°	13670	10410	9946
35°	12666	9301	8958
40°	11560	8052	7916
45°	10582	6800	6888
50°	9572	5728	5727
55°	8659	4825	4250
60°	7745	3817	3100
65°	6597	2827	2303
70°	5294	2007	1705
75°	4071	1325	1193
80°	3263	825	755
85°	2753	613	311



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	125.5	4.1
10°-20°	353.2	11.6
20°-30°	517.7	17.0
30°-40°	586.9	19.3
40°-50°	547.4	18.0
50°-60°	429.2	14.1
60°-70°	267.5	8.8
70°-80°	128.4	4.2
80°-90°	51.8	1.7
90°-100°	17.3	0.6
100°-110°	2.1	0.1
110°-120°	1.8	0.1
120°-130°	2.2	0.1
130°-140°	2.2	0.1
140°-150°	2.0	0.1
150°-160°	1.6	0.1
160°-170°	0.9	0.0
170°-180°	0.3	0.0
0°-30°	996.4	32.8
0°-40°	1583.3	52.1
0°-60°	2559.9	84.3
0°-90°	3007.5	99.0
90°-120°	21.3	0.7
90°-150°	27.7	0.9
90°-180°	30.0	1.0
0°-180°	3038.0	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	1330	1330	1330	1330	1330	
5°	1335	1325	1323	1322	1319	126
15°	1251	1252	1252	1249	1251	353
25°	1120	1121	1130	1127	1127	515
35°	920	920	943	961	966	574
45°	700	688	690	732	754	539
55°	499	498	476	470	458	448
65°	312	298	262	235	237	308
75°	145	127	111	104	113	160
85°	63	62	44	32	26	58
90°	41	45	31	16	1	23
95°	28	28	17	1	1	20
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°	1330.4	1330.4	1330.4	1330.4	1330.4
2.5°	1327.5	1334.3	1337.2	1323.6	1324.6
5°	1335.2	1324.6	1322.7	1321.7	1318.8
7.5°	1313.0	1317.8	1311.1	1309.1	1306.2
10°	1296.6	1300.4	1299.5	1292.7	1293.7
12.5°	1276.3	1280.1	1280.1	1272.4	1275.3
15°	1251.1	1252.1	1252.1	1249.2	1251.1
17.5°	1224.0	1227.9	1227.9	1228.9	1228.9
20°	1193.1	1198.9	1201.8	1197.0	1197.9
22.5°	1159.3	1160.2	1164.1	1157.3	1166.0
25°	1119.6	1120.6	1130.3	1127.4	1127.4
27.5°	1077.1	1077.1	1089.6	1086.7	1092.5
30°	1026.8	1035.5	1042.3	1056.8	1051.9
32.5°	977.5	982.3	992.0	1002.6	1011.3
35°	920.4	920.4	942.7	961.1	965.9
37.5°	858.6	860.5	879.8	907.9	914.6
40°	805.4	801.5	819.9	856.6	863.4
42.5°	749.3	743.5	753.2	797.7	813.1
45°	700.0	688.4	690.3	731.9	754.1
47.5°	644.9	641.0	633.3	661.3	696.1
50°	594.6	586.9	575.3	598.5	624.6
52.5°	550.1	543.4	522.1	535.6	541.4
55°	498.9	497.9	475.7	469.9	458.3
57.5°	452.5	450.6	418.6	408.0	385.8
60°	408.0	401.2	366.4	339.4	327.8
62.5°	357.7	353.9	311.3	282.3	280.4
65°	312.3	297.8	262.0	234.9	236.9
67.5°	263.0	248.5	217.5	193.4	201.1
70°	220.4	201.1	177.9	157.6	169.2
72.5°	180.8	160.5	143.1	128.6	139.2
75°	145.0	126.7	111.2	103.5	113.1
77.5°	121.8	102.5	84.1	80.2	91.9
80°	95.7	85.1	64.8	59.9	67.7
82.5°	77.3	72.5	54.1	42.5	46.4
85°	62.8	61.9	44.5	31.9	26.1
87.5°	50.3	53.2	37.7	24.2	7.7
90°	40.6	45.4	30.9	16.4	1.0
92.5°	34.8	37.7	25.1	7.7	1.0
95°	28.0	28.0	17.4	1.0	1.0
97.5°	21.3	19.3	6.8	1.0	1.0
100°	12.6	9.7	1.0	1.0	1.0
102.5°	5.8	2.9	1.0	1.0	1.0
105°	1.9	1.9	1.0	1.0	1.0
107.5°	1.9	1.9	1.9	1.0	1.0
110°	1.9	1.9	1.9	1.0	1.0



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**CANDELA DISTRIBUTION (continued):**

	0°	22.5°	45°	67.5°	90°
112.5°	1.9	1.9	1.9	1.9	1.0
115°	1.9	1.9	1.9	1.9	1.9
117.5°	1.9	1.9	1.9	1.9	1.9
120°	1.9	1.9	1.9	1.9	1.9
122.5°	2.9	1.9	1.9	1.9	1.9
125°	2.9	2.9	2.9	1.9	1.9
127.5°	2.9	2.9	2.9	2.9	2.9
130°	2.9	2.9	2.9	2.9	2.9
132.5°	2.9	2.9	2.9	2.9	2.9
135°	2.9	2.9	2.9	2.9	2.9
137.5°	2.9	2.9	2.9	2.9	2.9
140°	2.9	2.9	2.9	2.9	2.9
142.5°	2.9	2.9	2.9	2.9	2.9
145°	2.9	3.9	2.9	2.9	2.9
147.5°	3.9	3.9	3.9	2.9	2.9
150°	3.9	3.9	3.9	2.9	2.9
152.5°	3.9	3.9	3.9	2.9	2.9
155°	3.9	3.9	3.9	2.9	2.9
157.5°	3.9	3.9	2.9	2.9	2.9
160°	3.9	3.9	2.9	2.9	2.9
162.5°	3.9	3.9	2.9	2.9	2.9
165°	3.9	2.9	2.9	2.9	2.9
167.5°	3.9	2.9	2.9	2.9	2.9
170°	2.9	2.9	2.9	2.9	2.9
172.5°	1.9	2.9	2.9	2.9	2.9
175°	1.9	2.9	2.9	3.9	3.9
177.5°	1.9	1.9	2.9	3.9	3.9
180°	2.9	2.9	2.9	2.9	2.9

(END OF REPORT)