

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: P392470

Luminaire Tested: **MWL-2-00-38-UNV-L935-EDD**

Issue Date: 12/2/2019

**Test Information**

Test Method: LM-79-08  
Report Number: P392470  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-1910-565-25)  
Test Lab: INNOVATION CENTER  
Issue Date: 12/2/2019  
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)  
Product Line: FAIL-SAFE  
Catalog Number: MWL-2-00-38-UNV-L935-EDD  
Description: MWL 2FT MEDICAL LED FIXTURE  
Light Source: -  
Ballast/Driver: ELECTRONIC DRIVER

**Summary**

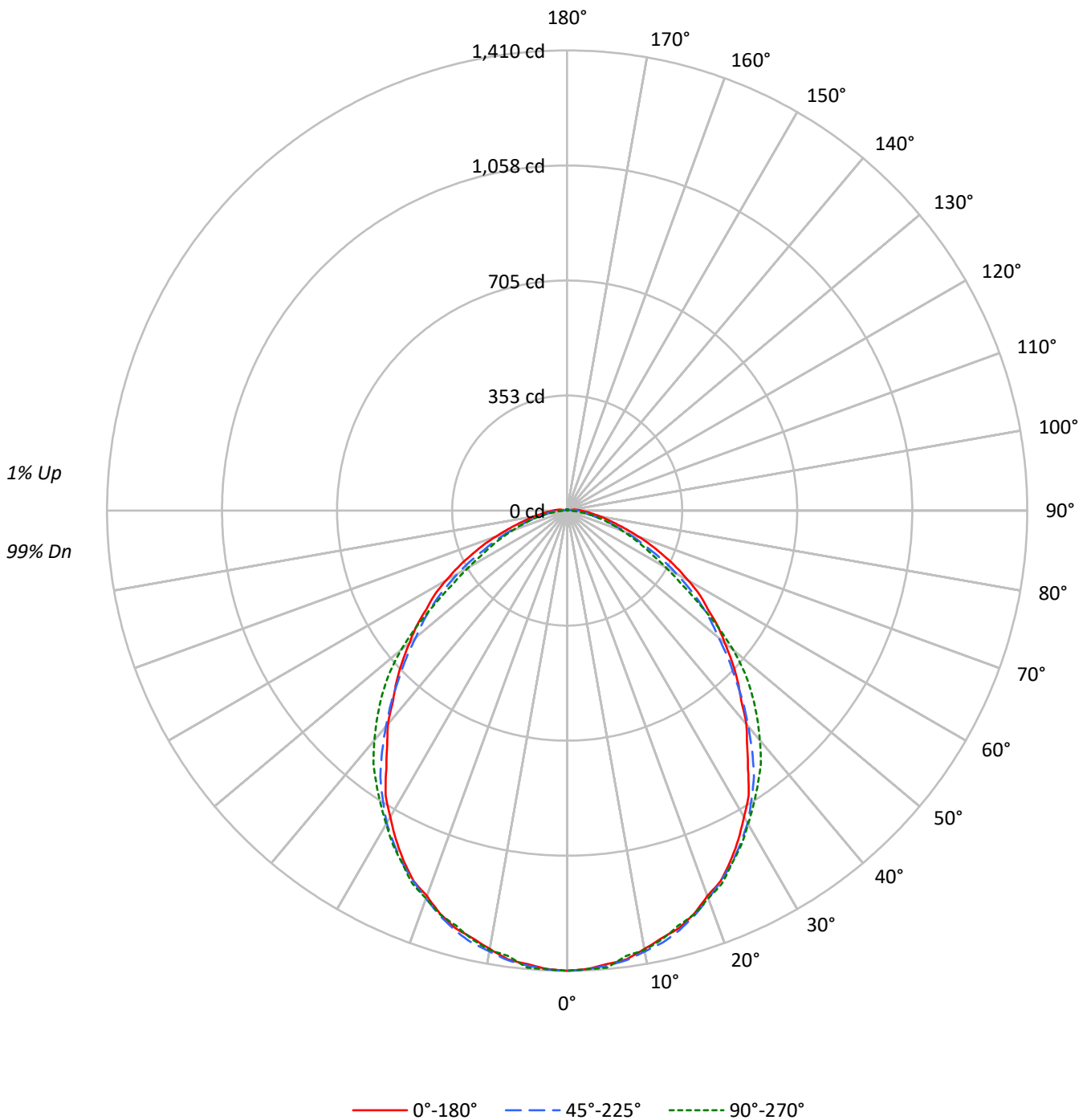
Lumens per Lamp: N/A  
Luminaire Lumens: 3210.9 lumens  
Efficiency: N/A  
Efficacy: 75.2 lumens/watt  
Spacing Criteria (0/90/45): 1.15 / 1.18 / 1.24  
Luminous Opening: Rectangular w/ Sides (W: 0.42' x L: 2' x H: 0.42')  
CIE Type: Direct

Input Watts (W): 42.723  
Input Voltage (V): NR  
Input Current (A<sub>in</sub>): 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	77	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	52	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°	18214	18214	18214
5°	17765	16880	16762
10°	17259	15636	15239
15°	16770	14481	13885
20°	16055	13261	12739
25°	15391	12159	11605
30°	14429	11042	10484
35°	13296	9845	9456
40°	12263	8481	8422
45°	11175	7183	7331
50°	10140	6032	6090
55°	9138	5078	4519
60°	8142	4024	3313
65°	6893	2972	2465
70°	5570	2147	1799
75°	4310	1412	1267
80°	3444	870	801
85°	2888	654	328



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	132.6	4.1
10°-20°	373.1	11.6
20°-30°	547.2	17.0
30°-40°	620.2	19.3
40°-50°	578.7	18.0
50°-60°	454.3	14.1
60°-70°	282.5	8.8
70°-80°	135.8	4.2
80°-90°	54.5	1.7
90°-100°	18.1	0.6
100°-110°	2.1	0.1
110°-120°	1.9	0.1
120°-130°	2.3	0.1
130°-140°	2.5	0.1
140°-150°	2.2	0.1
150°-160°	1.7	0.1
160°-170°	0.9	0.0
170°-180°	0.3	0.0
0°-30°	1052.9	32.8
0°-40°	1673.1	52.1
0°-60°	2706.1	84.3
0°-90°	3178.9	99.0
90°-120°	22.1	0.7
90°-150°	29.0	0.9
90°-180°	32.0	1.0
0°-180°	3210.9	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	1410	1410	1410	1410	1410	
5°	1395	1398	1399	1397	1406	132
15°	1324	1322	1331	1322	1317	372
25°	1185	1182	1193	1192	1194	544
35°	966	970	998	1015	1020	606
45°	739	728	729	773	803	570
55°	526	522	501	502	487	474
65°	326	314	275	247	254	325
75°	154	133	118	109	120	168
85°	66	64	48	33	28	61
90°	42	48	33	18	1	24
95°	29	30	18	1	1	21
105°	2	2	2	1	1	4
115°	2	2	2	2	2	2
125°	2	2	2	2	2	2
135°	3	3	3	3	3	3
145°	3	3	3	3	3	2
155°	4	4	3	3	3	2
165°	4	3	3	3	2	1
175°	2	2	3	3	3	0
180°	3	3	3	3	3	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	1410.1	1410.1	1410.1	1410.1	1410.1
2.5°	1405.9	1401.7	1407.6	1402.6	1406.7
5°	1395.1	1397.6	1399.2	1396.7	1405.9
7.5°	1387.5	1389.2	1390.0	1385.8	1376.7
10°	1364.2	1374.2	1371.7	1368.3	1366.7
12.5°	1341.6	1345.0	1355.8	1348.3	1345.8
15°	1324.1	1322.5	1330.8	1322.5	1316.6
17.5°	1295.0	1291.6	1300.0	1300.0	1296.6
20°	1256.6	1264.8	1264.8	1267.3	1264.1
22.5°	1229.0	1227.3	1229.8	1233.2	1238.2
25°	1184.8	1182.3	1193.1	1192.3	1194.0
27.5°	1136.4	1134.7	1150.6	1153.9	1155.6
30°	1083.8	1088.0	1105.5	1108.0	1108.8
32.5°	1035.4	1032.1	1051.3	1065.5	1064.6
35°	966.2	970.3	997.9	1014.6	1019.6
37.5°	905.3	908.6	931.2	964.5	975.3
40°	854.4	844.3	863.6	903.6	918.6
42.5°	789.3	785.2	797.7	841.1	861.9
45°	739.2	727.5	729.2	773.4	802.7
47.5°	685.0	670.0	668.3	705.0	740.9
50°	629.9	622.4	605.8	632.4	664.2
52.5°	582.4	572.4	554.0	569.9	579.0
55°	526.5	522.3	500.6	502.3	487.3
57.5°	482.3	476.4	443.9	429.7	410.5
60°	428.9	422.2	386.3	360.4	350.4
62.5°	378.0	370.4	332.0	298.7	295.4
65°	326.3	313.8	275.4	247.0	253.6
67.5°	279.5	260.3	231.1	205.3	214.4
70°	231.9	211.1	190.3	168.5	178.5
72.5°	189.4	170.3	152.6	137.6	146.9
75°	153.5	132.6	118.5	109.3	120.1
77.5°	126.0	108.5	88.4	85.1	95.1
80°	101.0	90.1	68.4	63.4	71.8
82.5°	80.9	75.9	56.8	44.2	47.5
85°	65.9	64.3	47.5	33.4	27.5
87.5°	52.6	55.9	40.0	25.9	8.4
90°	42.5	47.5	33.4	17.5	0.9
92.5°	36.7	39.2	26.7	7.5	0.9
95°	29.2	30.0	17.5	0.9	0.9
97.5°	22.5	20.0	7.5	0.9	0.9
100°	13.4	9.1	1.6	0.9	0.9
102.5°	5.0	3.4	0.9	0.9	0.9
105°	1.6	1.6	1.6	0.9	0.9
107.5°	1.6	1.6	1.6	1.6	0.9
110°	1.6	1.6	1.6	1.6	1.6



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**CANDELA DISTRIBUTION (continued):**

	0°	22.5°	45°	67.5°	90°
112.5°	1.6	1.6	1.6	1.6	1.6
115°	2.5	1.6	1.6	1.6	1.6
117.5°	2.5	2.5	2.5	1.6	1.6
120°	2.5	2.5	2.5	2.5	2.5
122.5°	2.5	2.5	2.5	2.5	2.5
125°	2.5	2.5	2.5	2.5	2.5
127.5°	2.5	2.5	2.5	2.5	2.5
130°	3.4	2.5	2.5	2.5	2.5
132.5°	3.4	3.4	2.5	3.4	3.4
135°	3.4	3.4	3.4	3.4	3.4
137.5°	3.4	3.4	3.4	3.4	3.4
140°	3.4	3.4	3.4	3.4	3.4
142.5°	3.4	3.4	3.4	3.4	3.4
145°	3.4	3.4	3.4	3.4	3.4
147.5°	3.4	3.4	3.4	3.4	3.4
150°	4.1	4.1	4.1	3.4	3.4
152.5°	4.1	4.1	4.1	3.4	3.4
155°	4.1	4.1	3.4	3.4	3.4
157.5°	4.1	4.1	3.4	3.4	3.4
160°	4.1	4.1	3.4	3.4	2.5
162.5°	4.1	3.4	3.4	3.4	2.5
165°	4.1	3.4	3.4	3.4	2.5
167.5°	3.4	3.4	3.4	2.5	2.5
170°	3.4	3.4	2.5	3.4	3.4
172.5°	2.5	3.4	2.5	3.4	3.4
175°	1.6	2.5	3.4	3.4	3.4
177.5°	2.5	2.5	3.4	4.1	4.1
180°	3.4	3.4	3.4	3.4	3.4

(END OF REPORT)