

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: P392469

Luminaire Tested: **MWL-2-00-38-UNV-L930-EDD**

Issue Date: 12/2/2019

**Test Information**

Test Method: LM-79-08  
Report Number: P392469  
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-L930-EDD  
Description: MWL 2FT MEDICAL LED FIXTURE  
Light Source: -  
Ballast/Driver: ELECTRONIC DRIVER

**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 3164.6 lumens  
Efficiency: N/A  
Efficacy: 74.1 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

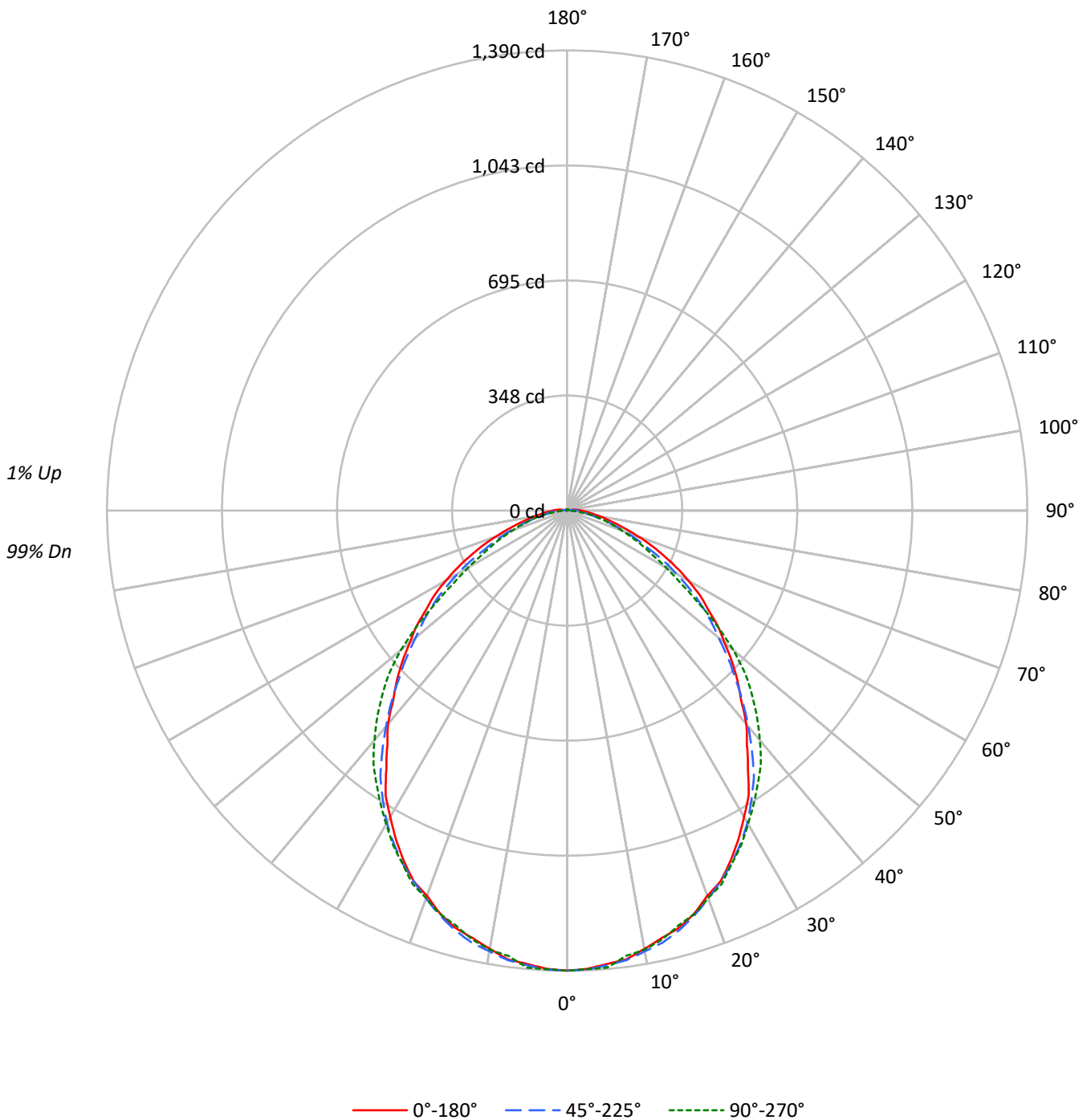
Input Watts (W): 42.723  
Input Voltage (V): NR  
Input Current (Ain): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 25 FT



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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	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	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	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°	17950	17950	17950
5°	17508	16637	16520
10°	17008	15410	15019
15°	16528	14272	13685
20°	15823	13071	12555
25°	15168	11984	11437
30°	14222	10882	10334
35°	13105	9703	9319
40°	12085	8358	8300
45°	11013	7080	7225
50°	9994	5944	6002
55°	9006	5003	4454
60°	8022	3966	3265
65°	6794	2929	2430
70°	5491	2115	1774
75°	4248	1392	1249
80°	3393	858	788
85°	2849	644	323



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	130.7	4.1
10°-20°	367.7	11.6
20°-30°	539.3	17.0
30°-40°	611.3	19.3
40°-50°	570.3	18.0
50°-60°	447.7	14.1
60°-70°	278.5	8.8
70°-80°	133.8	4.2
80°-90°	53.7	1.7
90°-100°	17.8	0.6
100°-110°	2.1	0.1
110°-120°	1.9	0.1
120°-130°	2.3	0.1
130°-140°	2.4	0.1
140°-150°	2.1	0.1
150°-160°	1.7	0.1
160°-170°	0.9	0.0
170°-180°	0.3	0.0
0°-30°	1037.7	32.8
0°-40°	1649.0	52.1
0°-60°	2667.0	84.3
0°-90°	3133.0	99.0
90°-120°	21.9	0.7
90°-150°	28.7	0.9
90°-180°	32.0	1.0
0°-180°	3164.6	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	1390	1390	1390	1390	1390	
5°	1375	1377	1379	1377	1386	131
15°	1305	1303	1312	1303	1298	367
25°	1168	1165	1176	1175	1177	536
35°	952	956	984	1000	1005	597
45°	728	717	719	762	791	562
55°	519	515	493	495	480	467
65°	322	309	271	243	250	320
75°	151	131	117	108	118	165
85°	65	63	47	33	27	60
90°	42	47	33	17	1	24
95°	29	30	17	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°	1389.7	1389.7	1389.7	1389.7	1389.7
2.5°	1385.6	1381.5	1387.2	1382.3	1386.4
5°	1374.9	1377.4	1379.0	1376.6	1385.6
7.5°	1367.5	1369.2	1370.0	1365.8	1356.9
10°	1344.4	1354.4	1351.9	1348.6	1347.0
12.5°	1322.2	1325.6	1336.2	1328.9	1326.4
15°	1305.0	1303.4	1311.6	1303.4	1297.6
17.5°	1276.2	1272.9	1281.1	1281.1	1277.9
20°	1238.4	1246.6	1246.6	1249.1	1245.8
22.5°	1211.3	1209.6	1212.1	1215.4	1220.3
25°	1167.7	1165.3	1175.9	1175.1	1176.7
27.5°	1120.0	1118.3	1134.0	1137.3	1138.9
30°	1068.2	1072.3	1089.5	1092.0	1092.9
32.5°	1020.5	1017.2	1036.1	1050.1	1049.3
35°	952.3	956.3	983.5	999.9	1004.8
37.5°	892.2	895.5	917.7	950.6	961.2
40°	842.0	832.2	851.1	890.5	905.3
42.5°	777.9	773.8	786.1	828.9	849.4
45°	728.5	717.1	718.7	762.2	791.0
47.5°	675.1	660.3	658.7	694.9	730.2
50°	620.8	613.4	597.0	623.3	654.6
52.5°	574.0	564.1	546.0	561.7	570.7
55°	518.9	514.7	493.3	495.0	480.2
57.5°	475.3	469.6	437.4	423.5	404.6
60°	422.6	416.1	380.7	355.3	345.3
62.5°	372.5	365.1	327.3	294.4	291.1
65°	321.6	309.2	271.4	243.4	250.0
67.5°	275.5	256.6	227.8	202.3	211.3
70°	228.6	208.1	187.5	166.2	176.0
72.5°	186.7	167.7	150.5	135.7	144.8
75°	151.3	130.8	116.8	107.7	118.4
77.5°	124.2	106.9	87.2	83.9	93.8
80°	99.5	88.8	67.4	62.5	70.7
82.5°	79.8	74.8	55.9	43.6	46.8
85°	65.0	63.3	46.8	32.9	27.1
87.5°	51.8	55.1	39.4	25.5	8.2
90°	41.9	46.8	32.9	17.3	0.8
92.5°	36.2	38.7	26.3	7.4	0.8
95°	28.8	29.6	17.3	0.8	0.8
97.5°	22.2	19.7	7.4	0.8	0.8
100°	13.1	9.1	1.7	0.8	0.8
102.5°	4.9	3.3	0.8	0.8	0.8
105°	1.7	1.7	1.7	0.8	0.8
107.5°	1.7	1.7	1.7	1.7	0.8
110°	1.7	1.7	1.7	1.7	1.7



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**CANDELA DISTRIBUTION (continued):**

	0°	22.5°	45°	67.5°	90°
112.5°	1.7	1.7	1.7	1.7	1.7
115°	2.5	1.7	1.7	1.7	1.7
117.5°	2.5	2.5	2.5	1.7	1.7
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°	3.3	2.5	2.5	2.5	2.5
132.5°	3.3	3.3	2.5	3.3	3.3
135°	3.3	3.3	3.3	3.3	3.3
137.5°	3.3	3.3	3.3	3.3	3.3
140°	3.3	3.3	3.3	3.3	3.3
142.5°	3.3	3.3	3.3	3.3	3.3
145°	3.3	3.3	3.3	3.3	3.3
147.5°	3.3	3.3	3.3	3.3	3.3
150°	4.1	4.1	4.1	3.3	3.3
152.5°	4.1	4.1	4.1	3.3	3.3
155°	4.1	4.1	3.3	3.3	3.3
157.5°	4.1	4.1	3.3	3.3	3.3
160°	4.1	4.1	3.3	3.3	2.5
162.5°	4.1	3.3	3.3	3.3	2.5
165°	4.1	3.3	3.3	3.3	2.5
167.5°	3.3	3.3	3.3	2.5	2.5
170°	3.3	3.3	2.5	3.3	3.3
172.5°	2.5	3.3	2.5	3.3	3.3
175°	1.7	2.5	3.3	3.3	3.3
177.5°	2.5	2.5	3.3	4.1	4.1
180°	3.3	3.3	3.3	3.3	3.3

(END OF REPORT)