

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: P392471

Luminaire Tested: **MWL-2-00-38-UNV-L940-EDD**

Issue Date: 12/2/2019

Test Information

Test Method: LM-79-08
Report Number: P392471
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-L940-EDD
Description: MWL 2FT MEDICAL LED FIXTURE
Light Source: -
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 3505.8 lumens
Efficiency: N/A
Efficacy: 82.1 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

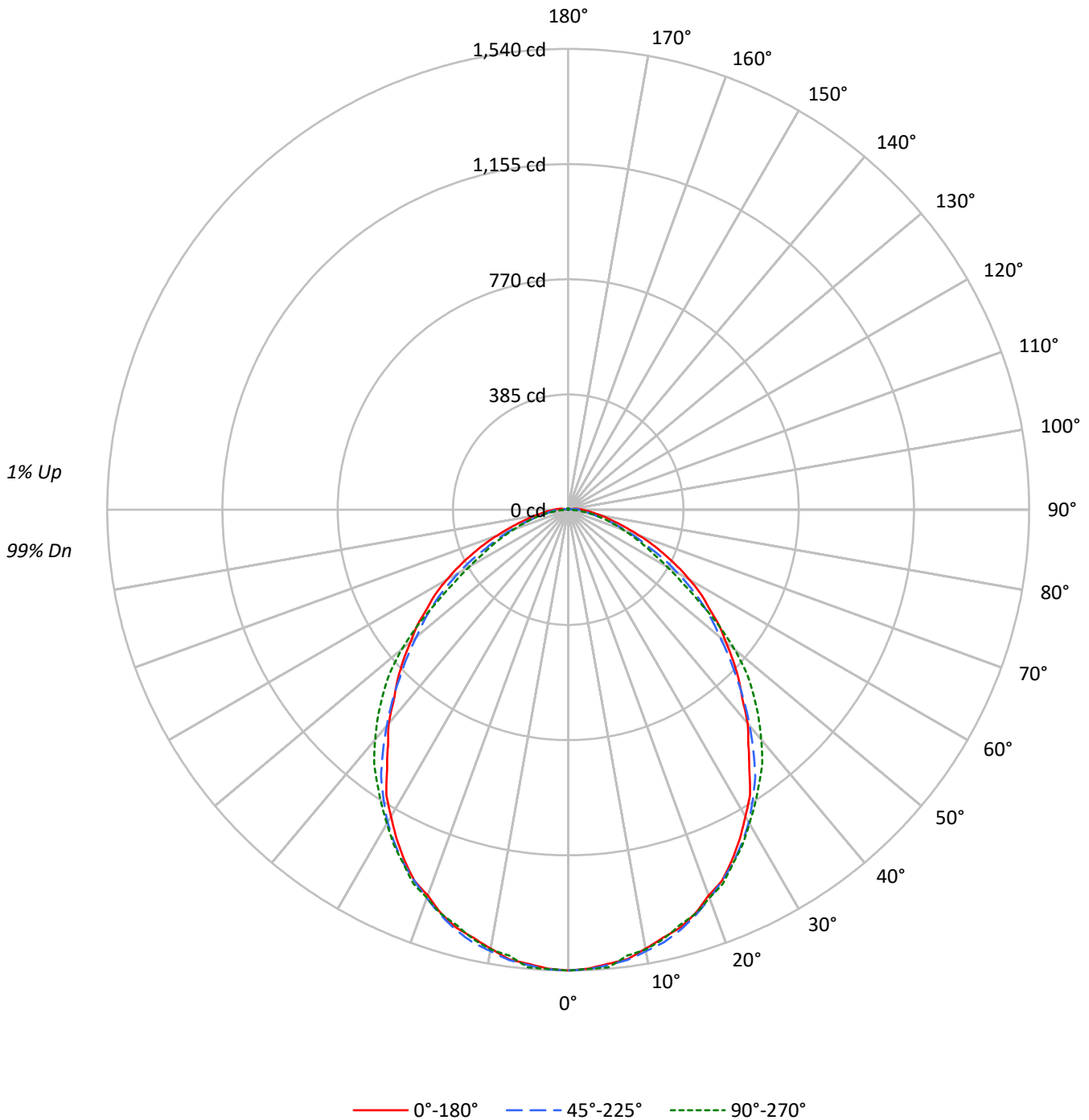
Input Watts (W): 42.723
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



TEST NUMBER: P392471

CATALOG NUMBER: MWL-2-00-38-UNV-L940-EDD

Luminous Intensity Polar Plot





TEST NUMBER: P392471

CATALOG NUMBER: MWL-2-00-38-UNV-L940-EDD

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	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°	19888	19888	19888
5°	19398	18432	18303
10°	18845	17073	16639
15°	18312	15811	15162
20°	17530	14481	13909
25°	16805	13277	12671
30°	15755	12056	11449
35°	14518	10750	10325
40°	13389	9260	9196
45°	12201	7843	8005
50°	11072	6585	6648
55°	9976	5544	4935
60°	8890	4394	3619
65°	7525	3245	2692
70°	6084	2343	1965
75°	4706	1542	1384
80°	3758	951	874
85°	3156	714	359



TEST NUMBER: P392471

CATALOG NUMBER: MWL-2-00-38-UNV-L940-EDD

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	144.8	4.1
10°-20°	407.4	11.6
20°-30°	597.5	17.0
30°-40°	677.2	19.3
40°-50°	631.8	18.0
50°-60°	496.0	14.1
60°-70°	308.5	8.8
70°-80°	148.3	4.2
80°-90°	59.5	1.7
90°-100°	19.8	0.6
100°-110°	2.3	0.1
110°-120°	2.1	0.1
120°-130°	2.4	0.1
130°-140°	2.7	0.1
140°-150°	2.3	0.1
150°-160°	1.9	0.1
160°-170°	1.0	0.0
170°-180°	0.3	0.0
0°-30°	1149.7	32.8
0°-40°	1826.9	52.1
0°-60°	2954.8	84.3
0°-90°	3471.0	99.0
90°-120°	24.2	0.7
90°-150°	31.6	0.9
90°-180°	35.0	1.0
0°-180°	3505.8	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1540	1540	1540	1540	1540	
5°	1523	1526	1528	1525	1535	145
15°	1446	1444	1453	1444	1438	406
25°	1294	1291	1303	1302	1304	594
35°	1055	1060	1090	1108	1113	661
45°	807	794	796	844	876	622
55°	575	570	547	548	532	517
65°	356	343	301	270	277	355
75°	168	145	129	119	131	183
85°	72	70	52	36	30	66
90°	46	52	36	19	1	26
95°	32	33	19	1	1	23
105°	2	2	2	1	1	5
115°	3	2	2	2	2	2
125°	3	3	3	3	3	3
135°	4	4	4	4	4	3
145°	4	4	4	4	4	2
155°	5	5	4	4	4	2
165°	5	4	4	4	3	1
175°	2	3	4	4	4	0
180°	4	4	4	4	4	



TEST NUMBER: P392471

CATALOG NUMBER: MWL-2-00-38-UNV-L940-EDD

CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1539.7	1539.7	1539.7	1539.7	1539.7
2.5°	1535.1	1530.6	1536.9	1531.5	1536.0
5°	1523.3	1526.0	1527.8	1525.1	1535.1
7.5°	1515.1	1516.9	1517.8	1513.2	1503.2
10°	1489.6	1500.5	1497.8	1494.1	1492.3
12.5°	1465.0	1468.6	1480.4	1472.2	1469.5
15°	1445.8	1444.0	1453.1	1444.0	1437.6
17.5°	1413.9	1410.3	1419.4	1419.4	1415.8
20°	1372.0	1381.1	1381.1	1383.9	1380.2
22.5°	1342.0	1340.1	1342.9	1346.5	1352.0
25°	1293.7	1290.9	1302.8	1301.9	1303.7
27.5°	1240.8	1239.0	1256.3	1260.0	1261.8
30°	1183.4	1188.0	1207.1	1209.8	1210.8
32.5°	1130.6	1126.9	1147.9	1163.4	1162.5
35°	1055.0	1059.5	1089.6	1107.8	1113.3
37.5°	988.5	992.1	1016.7	1053.1	1065.0
40°	932.9	921.9	942.9	986.6	1003.0
42.5°	861.8	857.3	870.9	918.3	941.1
45°	807.1	794.4	796.2	844.5	876.4
47.5°	747.9	731.5	729.7	769.8	809.0
50°	687.8	679.6	661.4	690.5	725.1
52.5°	635.9	624.9	604.9	622.2	632.2
55°	574.8	570.3	546.6	548.4	532.1
57.5°	526.6	520.2	484.7	469.2	448.3
60°	468.3	461.0	421.8	393.6	382.7
62.5°	412.7	404.5	362.6	326.2	322.5
65°	356.2	342.6	300.7	269.7	277.0
67.5°	305.2	284.3	252.4	224.1	234.2
70°	253.3	230.5	207.7	184.0	195.0
72.5°	206.8	185.9	166.7	150.3	160.4
75°	167.6	144.9	129.4	119.4	131.2
77.5°	137.6	118.4	96.6	92.9	103.9
80°	110.2	98.4	74.7	69.2	78.4
82.5°	88.4	82.9	62.0	48.3	51.9
85°	72.0	70.2	51.9	36.4	30.1
87.5°	57.4	61.0	43.7	28.2	9.1
90°	46.5	51.9	36.4	19.1	0.9
92.5°	40.1	42.8	29.2	8.2	0.9
95°	31.9	32.8	19.1	0.9	0.9
97.5°	24.6	21.9	8.2	0.9	0.9
100°	14.6	10.0	1.8	0.9	0.9
102.5°	5.5	3.6	0.9	0.9	0.9
105°	1.8	1.8	1.8	0.9	0.9
107.5°	1.8	1.8	1.8	1.8	0.9
110°	1.8	1.8	1.8	1.8	1.8



TEST NUMBER: P392471

CATALOG NUMBER: MWL-2-00-38-UNV-L940-EDD

CANDELA DISTRIBUTION (continued):

	0°	22.5°	45°	67.5°	90°
112.5°	1.8	1.8	1.8	1.8	1.8
115°	2.7	1.8	1.8	1.8	1.8
117.5°	2.7	2.7	2.7	1.8	1.8
120°	2.7	2.7	2.7	2.7	2.7
122.5°	2.7	2.7	2.7	2.7	2.7
125°	2.7	2.7	2.7	2.7	2.7
127.5°	2.7	2.7	2.7	2.7	2.7
130°	3.6	2.7	2.7	2.7	2.7
132.5°	3.6	3.6	2.7	3.6	3.6
135°	3.6	3.6	3.6	3.6	3.6
137.5°	3.6	3.6	3.6	3.6	3.6
140°	3.6	3.6	3.6	3.6	3.6
142.5°	3.6	3.6	3.6	3.6	3.6
145°	3.6	3.6	3.6	3.6	3.6
147.5°	3.6	3.6	3.6	3.6	3.6
150°	4.6	4.6	4.6	3.6	3.6
152.5°	4.6	4.6	4.6	3.6	3.6
155°	4.6	4.6	3.6	3.6	3.6
157.5°	4.6	4.6	3.6	3.6	3.6
160°	4.6	4.6	3.6	3.6	2.7
162.5°	4.6	3.6	3.6	3.6	2.7
165°	4.6	3.6	3.6	3.6	2.7
167.5°	3.6	3.6	3.6	2.7	2.7
170°	3.6	3.6	2.7	3.6	3.6
172.5°	2.7	3.6	2.7	3.6	3.6
175°	1.8	2.7	3.6	3.6	3.6
177.5°	2.7	2.7	3.6	4.6	4.6
180°	3.6	3.6	3.6	3.6	3.6

(END OF REPORT)