

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: P392632

Luminaire Tested: **MWL-4-00-45-UNV-L935-EDD**

Issue Date: 12/2/2019

**Test Information**

Test Method: LM-79-08  
Report Number: P392632  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-1910-565-3)  
Test Lab: INNOVATION CENTER  
Issue Date: 12/2/2019  
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)  
Product Line: FAIL-SAFE  
Catalog Number: MWL-4-00-45-UNV-L935-EDD  
Description: MWL 4FT MEDICAL LED FIXTURE  
Light Source: -  
Ballast/Driver: ELECTRONIC DRIVER

**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 3826.8 lumens  
Efficiency: N/A  
Efficacy: 83.3 lumens/watt  
Spacing Criteria (0/90/45): 1.15 / 1.19 / 1.25  
Luminous Opening: Rectangular w/ Sides (W: 0.42' x L: 4' x H: 0.42')  
CIE Type: Direct

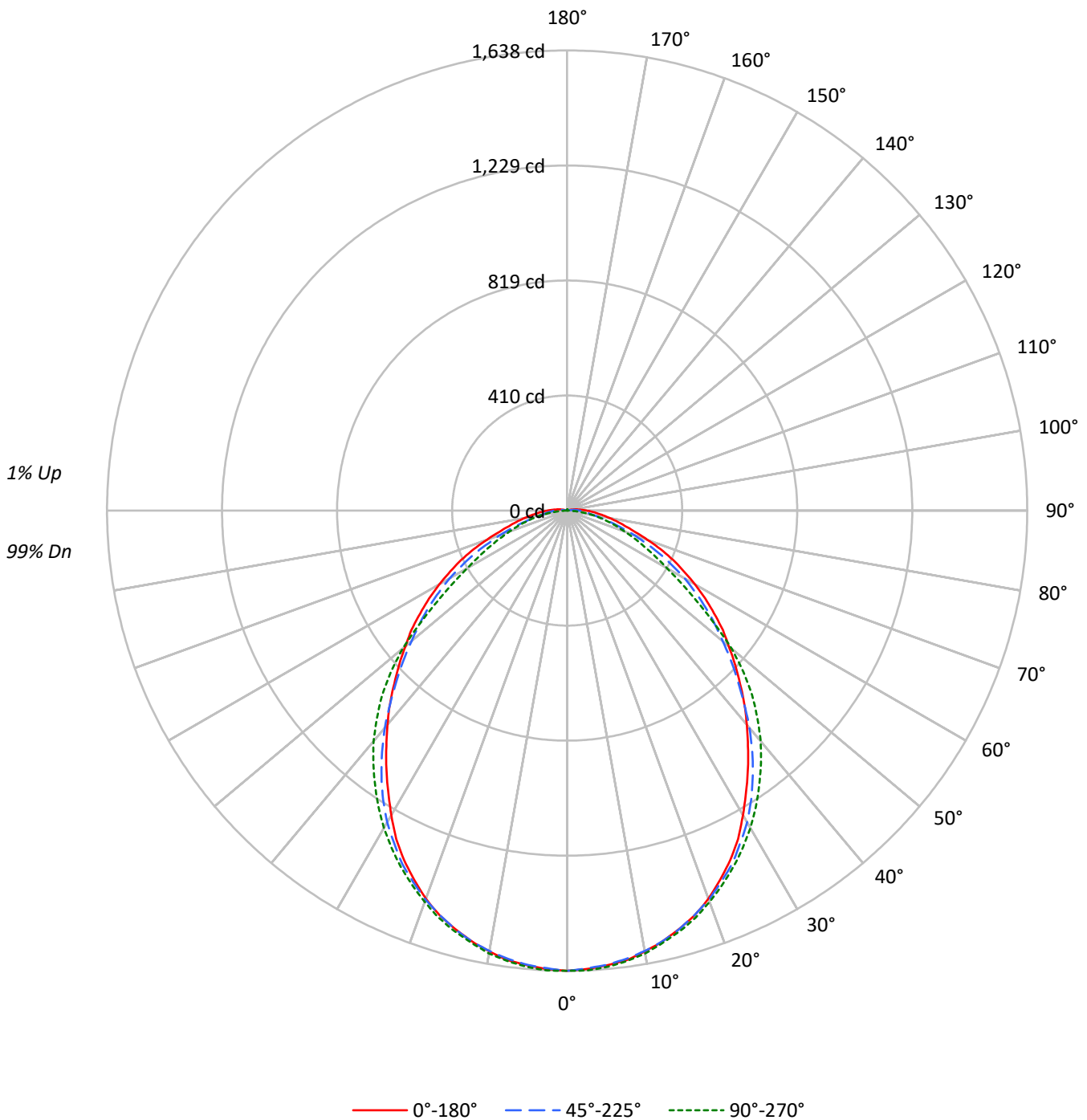
Input Watts (W): 45.955  
Input Voltage (V): NR  
Input Current (A<sub>in</sub>): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 25 FT



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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	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	109	105	101	97	106	102	99	95	98	95	92	94	92	89	90	88	86	84				
2	100	92	86	81	97	90	85	80	87	82	78	83	79	76	80	77	74	72				
3	92	82	74	68	89	80	73	68	77	71	66	74	69	65	72	67	64	62				
4	85	73	65	59	82	72	64	58	69	63	57	67	61	56	65	60	56	53				
5	78	66	57	51	76	65	57	51	63	55	50	60	54	49	59	53	49	47				
6	72	60	51	45	70	59	51	45	57	50	44	55	49	44	53	48	43	41				
7	67	54	46	40	66	53	46	40	52	45	40	50	44	39	49	43	39	37				
8	63	50	42	36	61	49	41	36	48	41	36	46	40	35	45	39	35	33				
9	59	46	38	33	57	45	38	32	44	37	32	43	37	32	42	36	32	30				
10	55	42	35	30	54	42	35	30	41	34	29	40	34	29	39	33	29	27				

**AVERAGE LUMINANCE (cd/sqm):**

	0°	45°	90°
0°	10581	10581	10581
5°	10438	9850	9721
10°	10261	9175	8926
15°	10028	8529	8175
20°	9737	7888	7469
25°	9331	7256	6804
30°	8804	6586	6167
35°	8244	5874	5529
40°	7713	5144	4914
45°	7197	4406	4256
50°	6708	3760	3499
55°	6258	3201	2615
60°	5744	2654	1933
65°	5200	2069	1471
70°	4469	1512	1098
75°	3854	1017	796
80°	3610	662	506
85°	3586	494	232



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	154.4	4.0
10°-20°	435.4	11.4
20°-30°	638.1	16.7
30°-40°	721.9	18.9
40°-50°	679.8	17.8
50°-60°	542.7	14.2
60°-70°	356.4	9.3
70°-80°	181.1	4.7
80°-90°	75.6	2.0
90°-100°	27.1	0.7
100°-110°	4.8	0.1
110°-120°	2.0	0.1
120°-130°	2.0	0.1
130°-140°	1.9	0.0
140°-150°	1.5	0.0
150°-160°	1.2	0.0
160°-170°	0.7	0.0
170°-180°	0.2	0.0
0°-30°	1227.9	32.1
0°-40°	1949.8	51.0
0°-60°	3172.3	82.9
0°-90°	3785.4	98.9
90°-120°	33.9	0.9
90°-150°	39.3	1.0
90°-180°	41.0	1.1
0°-180°	3826.8	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	1638	1638	1638	1638	1638	
5°	1625	1628	1623	1630	1631	154
15°	1542	1542	1542	1551	1550	434
25°	1373	1379	1389	1399	1400	631
35°	1122	1129	1152	1187	1192	702
45°	870	859	859	905	932	673
55°	638	630	601	594	564	572
65°	416	407	362	304	303	410
75°	214	190	160	137	151	233
85°	106	88	66	43	39	96
90°	70	62	44	24	1	38
95°	42	43	26	5	1	31
105°	8	6	2	1	1	11
115°	2	2	2	2	2	2
125°	2	2	2	2	2	2
135°	2	2	2	2	2	2
145°	2	2	2	2	2	2
155°	2	2	2	2	2	1
165°	2	2	2	2	2	1
175°	2	2	2	2	3	0
180°	2	2	2	2	2	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	1638.4	1638.4	1638.4	1638.4	1638.4
2.5°	1633.3	1636.7	1630.7	1639.2	1638.4
5°	1624.8	1628.2	1623.1	1629.8	1630.7
7.5°	1614.6	1613.8	1609.5	1618.0	1618.0
10°	1593.4	1595.9	1591.7	1601.0	1601.0
12.5°	1570.5	1572.2	1570.5	1578.2	1575.6
15°	1541.7	1542.5	1542.5	1551.0	1550.2
17.5°	1510.3	1511.1	1509.5	1518.8	1519.7
20°	1470.5	1470.5	1473.8	1481.4	1482.3
22.5°	1422.9	1428.0	1431.5	1442.4	1442.4
25°	1373.0	1378.8	1389.0	1399.2	1400.1
27.5°	1317.8	1324.6	1334.7	1353.5	1353.5
30°	1251.6	1261.8	1281.3	1300.8	1304.3
32.5°	1185.5	1195.7	1219.5	1244.9	1250.8
35°	1121.9	1128.7	1152.4	1187.2	1192.3
37.5°	1057.5	1059.1	1082.1	1123.6	1132.9
40°	994.8	990.4	1009.9	1053.3	1071.9
42.5°	933.7	924.3	931.9	982.8	1002.3
45°	870.1	859.0	859.0	904.8	931.9
47.5°	810.7	797.1	791.2	830.2	851.4
50°	750.5	739.5	722.5	746.2	763.2
52.5°	698.8	683.5	661.4	669.1	659.8
55°	638.5	630.1	601.3	593.6	563.9
57.5°	582.5	577.5	541.0	510.5	482.5
60°	524.9	522.4	483.4	436.7	408.8
62.5°	468.1	464.7	421.4	365.5	354.5
65°	416.3	407.0	362.1	304.4	302.7
67.5°	359.6	345.2	302.7	254.4	258.6
70°	304.4	285.8	251.9	211.2	218.0
72.5°	254.4	233.2	202.7	172.1	183.2
75°	214.5	189.9	159.5	137.4	150.9
77.5°	184.1	153.5	122.1	106.0	121.2
80°	154.4	127.2	96.6	78.9	90.8
82.5°	128.1	103.5	78.9	56.0	63.6
85°	106.0	88.2	66.2	43.2	39.0
87.5°	86.5	72.9	53.4	33.9	13.5
90°	69.5	61.9	44.1	23.7	0.9
92.5°	54.3	51.7	35.6	14.4	0.9
95°	42.4	43.2	26.3	5.1	0.9
97.5°	32.2	33.0	16.1	0.9	0.9
100°	23.7	22.9	7.6	0.9	0.9
102.5°	16.1	13.5	2.5	0.9	0.9
105°	8.5	6.0	1.7	0.9	0.9
107.5°	3.4	2.5	1.7	1.7	0.9
110°	2.5	2.5	1.7	1.7	1.7



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**CANDELA DISTRIBUTION (continued):**

	0°	22.5°	45°	67.5°	90°
112.5°	2.5	2.5	1.7	1.7	1.7
115°	2.5	2.5	1.7	1.7	1.7
117.5°	2.5	2.5	1.7	1.7	1.7
120°	2.5	2.5	2.5	1.7	1.7
122.5°	2.5	2.5	2.5	1.7	1.7
125°	2.5	2.5	2.5	1.7	1.7
127.5°	2.5	2.5	2.5	2.5	1.7
130°	2.5	2.5	2.5	2.5	1.7
132.5°	2.5	2.5	2.5	2.5	1.7
135°	2.5	2.5	2.5	2.5	1.7
137.5°	2.5	2.5	2.5	2.5	1.7
140°	2.5	2.5	2.5	2.5	1.7
142.5°	2.5	2.5	2.5	2.5	1.7
145°	2.5	2.5	2.5	2.5	2.5
147.5°	2.5	2.5	2.5	2.5	1.7
150°	2.5	2.5	2.5	2.5	2.5
152.5°	2.5	2.5	2.5	2.5	2.5
155°	2.5	2.5	2.5	2.5	2.5
157.5°	2.5	2.5	2.5	2.5	2.5
160°	2.5	2.5	2.5	2.5	2.5
162.5°	2.5	2.5	2.5	2.5	2.5
165°	2.5	2.5	2.5	2.5	2.5
167.5°	2.5	2.5	2.5	2.5	2.5
170°	1.7	2.5	2.5	2.5	2.5
172.5°	1.7	2.5	2.5	2.5	3.4
175°	1.7	2.5	2.5	2.5	3.4
177.5°	1.7	2.5	2.5	2.5	2.5
180°	2.5	2.5	2.5	2.5	2.5

(END OF REPORT)