

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: P392557

Luminaire Tested: **MWL-3-00-47-UNV-L835-EDD**

Issue Date: 12/2/2019

**Test Information**

Test Method: LM-79-08  
Report Number: P392557  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-1910-565-14)  
Test Lab: INNOVATION CENTER  
Issue Date: 12/2/2019  
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)  
Product Line: FAIL-SAFE  
Catalog Number: MWL-3-00-47-UNV-L835-EDD  
Description: MWL 3FT MEDICAL LED FIXTURE  
Light Source: -  
Ballast/Driver: ELECTRONIC DRIVER

**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 4690.9 lumens  
Efficiency: N/A  
Efficacy: 85.9 lumens/watt  
Spacing Criteria (0/90/45): 1.16 / 1.17 / 1.25  
Luminous Opening: Rectangular w/ Sides (W: 0.42' x L: 3' x H: 0.42')  
CIE Type: Direct

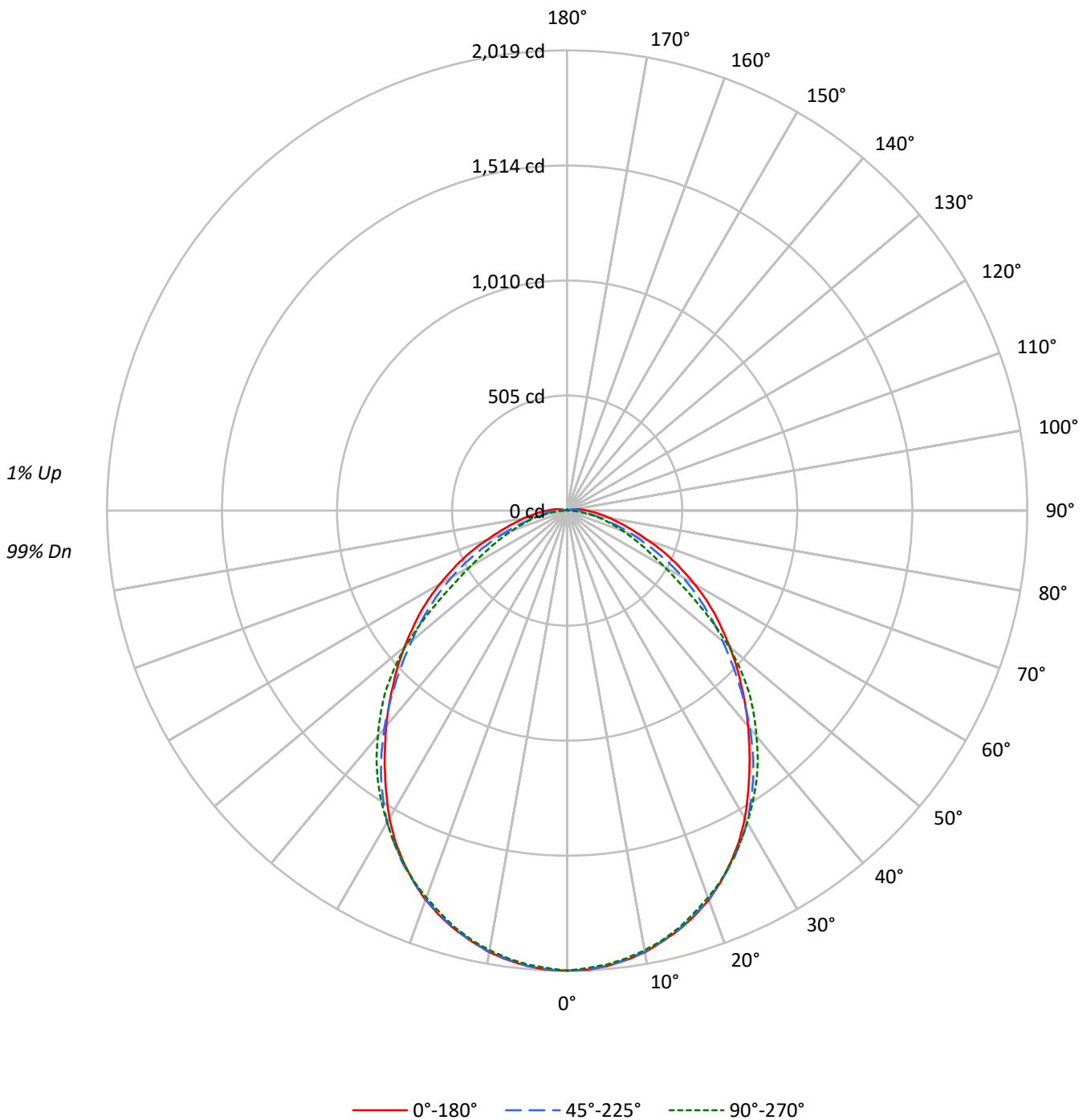
Input Watts (W): 54.6  
Input Voltage (V): NR  
Input Current (A<sub>in</sub>): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 25 FT



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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	110	110	110	106	106	106	101	101	101	99				
1	109	105	101	97	106	102	99	96	98	95	92	94	92	89	90	88	86	84				
2	100	92	86	81	97	91	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	56	50	61	54	50	59	53	49	47				
6	72	60	51	45	71	59	51	45	57	50	44	55	49	44	53	48	43	41				
7	67	54	46	40	66	54	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	33	44	37	32	43	37	32	42	36	32	30				
10	55	43	35	30	54	42	35	30	41	34	30	40	34	29	39	33	29	27				

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

	0°	45°	90°
0°	17382	17382	17382
5°	17131	16190	15889
10°	16793	15050	14560
15°	16354	13937	13322
20°	15851	12864	12136
25°	15172	11792	11036
30°	14357	10726	9962
35°	13361	9573	8950
40°	12438	8372	7899
45°	11539	7167	6876
50°	10709	6087	5659
55°	9900	5133	4223
60°	8950	4219	3091
65°	7946	3246	2337
70°	6770	2372	1730
75°	5835	1591	1251
80°	5315	1042	789
85°	5029	771	328



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	190.0	4.1
10°-20°	535.1	11.4
20°-30°	783.9	16.7
30°-40°	888.1	18.9
40°-50°	835.0	17.8
50°-60°	662.6	14.1
60°-70°	430.9	9.2
70°-80°	218.5	4.7
80°-90°	92.0	2.0
90°-100°	34.5	0.7
100°-110°	6.3	0.1
110°-120°	2.7	0.1
120°-130°	2.9	0.1
130°-140°	2.8	0.1
140°-150°	2.4	0.1
150°-160°	1.7	0.0
160°-170°	1.1	0.0
170°-180°	0.3	0.0
0°-30°	1509.0	32.2
0°-40°	2397.2	51.1
0°-60°	3894.7	83.0
0°-90°	4636.1	98.8
90°-120°	43.5	0.9
90°-150°	51.6	1.1
90°-180°	55.0	1.2
0°-180°	4690.9	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	2019	2019	2019	2019	2019	
5°	2006	2007	2005	2001	1999	190
15°	1903	1902	1901	1898	1895	536
25°	1700	1702	1707	1707	1703	782
35°	1395	1401	1424	1446	1448	873
45°	1079	1064	1062	1100	1129	834
55°	790	773	735	718	683	705
65°	506	492	434	366	361	502
75°	266	229	192	163	178	287
85°	132	106	80	52	41	120
90°	86	79	55	28	1	48
95°	58	55	33	4	1	43
105°	11	7	3	2	2	15
115°	4	3	3	2	2	4
125°	4	4	3	3	3	3
135°	4	4	4	3	3	3
145°	4	4	4	4	3	2
155°	4	4	4	4	3	2
165°	4	4	4	4	4	1
175°	2	3	4	4	4	0
180°	4	4	4	4	4	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	2018.6	2018.6	2018.6	2018.6	2018.6
2.5°	2016.7	2017.7	2014.7	2010.8	2008.8
5°	2005.9	2006.8	2004.9	2000.9	1999.0
7.5°	1989.2	1991.1	1986.2	1984.2	1981.3
10°	1967.5	1968.5	1965.6	1960.6	1958.7
12.5°	1936.1	1937.1	1935.1	1931.2	1930.2
15°	1902.7	1901.7	1900.7	1897.8	1894.8
17.5°	1862.4	1862.4	1859.4	1857.5	1851.6
20°	1817.2	1815.2	1815.2	1811.3	1806.4
22.5°	1762.1	1762.1	1761.1	1761.1	1759.2
25°	1700.2	1702.2	1707.1	1707.1	1703.2
27.5°	1633.4	1636.3	1644.2	1649.1	1643.2
30°	1559.7	1564.6	1580.3	1587.2	1580.3
32.5°	1476.1	1484.0	1502.7	1517.4	1516.4
35°	1394.6	1401.4	1424.1	1445.7	1447.6
37.5°	1313.0	1314.0	1337.6	1367.0	1373.9
40°	1235.4	1232.4	1248.1	1283.5	1292.4
42.5°	1156.7	1145.9	1153.8	1196.0	1211.8
45°	1079.1	1064.4	1062.4	1099.7	1129.2
47.5°	1006.4	987.7	973.9	1002.4	1030.9
50°	931.7	911.0	890.4	908.1	925.8
52.5°	858.0	841.3	811.8	810.8	804.9
55°	790.2	773.4	735.1	718.4	683.0
57.5°	718.4	705.6	661.4	619.2	574.9
60°	644.7	637.8	586.7	519.9	490.4
62.5°	573.9	568.0	510.1	438.3	420.6
65°	506.1	492.4	434.4	365.6	360.7
67.5°	441.3	423.6	363.6	306.6	306.6
70°	371.5	349.9	302.7	253.6	257.5
72.5°	317.4	282.1	245.7	205.4	214.2
75°	266.3	229.0	191.6	163.1	177.9
77.5°	223.1	184.8	147.4	127.8	142.5
80°	191.6	153.3	117.0	95.3	106.1
82.5°	159.2	127.8	95.3	68.8	75.7
85°	131.7	106.1	79.6	52.1	41.3
87.5°	105.2	91.4	65.8	40.3	12.8
90°	86.5	78.6	55.0	28.5	1.0
92.5°	71.7	66.8	45.2	16.7	1.0
95°	58.0	55.0	33.4	3.9	1.0
97.5°	47.2	44.2	18.7	2.0	1.0
100°	32.4	27.5	7.9	2.0	1.0
102.5°	19.7	14.7	2.9	2.0	1.0
105°	10.8	6.9	2.9	2.0	2.0
107.5°	5.9	3.9	2.9	2.0	2.0
110°	4.9	3.9	2.9	2.0	2.0



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**CANDELA DISTRIBUTION (continued):**

	0°	22.5°	45°	67.5°	90°
112.5°	3.9	2.9	2.9	2.0	2.0
115°	3.9	2.9	2.9	2.0	2.0
117.5°	3.9	2.9	2.9	2.0	2.0
120°	3.9	3.9	2.9	2.0	2.0
122.5°	3.9	3.9	2.9	2.9	2.9
125°	3.9	3.9	2.9	2.9	2.9
127.5°	3.9	3.9	2.9	2.9	2.9
130°	3.9	3.9	3.9	2.9	2.9
132.5°	3.9	3.9	3.9	2.9	2.9
135°	3.9	3.9	3.9	2.9	2.9
137.5°	3.9	3.9	3.9	3.9	2.9
140°	3.9	3.9	3.9	3.9	2.9
142.5°	3.9	3.9	3.9	3.9	2.9
145°	3.9	3.9	3.9	3.9	2.9
147.5°	3.9	3.9	3.9	3.9	2.9
150°	3.9	3.9	3.9	3.9	2.9
152.5°	3.9	3.9	3.9	3.9	2.9
155°	3.9	3.9	3.9	3.9	2.9
157.5°	3.9	3.9	3.9	2.9	2.9
160°	3.9	3.9	3.9	3.9	2.9
162.5°	3.9	3.9	3.9	3.9	3.9
165°	3.9	3.9	3.9	3.9	3.9
167.5°	3.9	3.9	3.9	3.9	3.9
170°	2.9	2.9	3.9	3.9	3.9
172.5°	2.0	2.9	3.9	3.9	3.9
175°	2.0	2.9	3.9	3.9	3.9
177.5°	2.0	2.9	3.9	3.9	3.9
180°	3.9	3.9	3.9	3.9	3.9

(END OF REPORT)