

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: P392558

Luminaire Tested: **MWL-3-00-47-UNV-L940-EDD**

Issue Date: 12/2/2019

**Test Information**

Test Method: LM-79-08  
Report Number: P392558  
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-L940-EDD  
Description: MWL 3FT MEDICAL LED FIXTURE  
Light Source: -  
Ballast/Driver: ELECTRONIC DRIVER

**Summary**

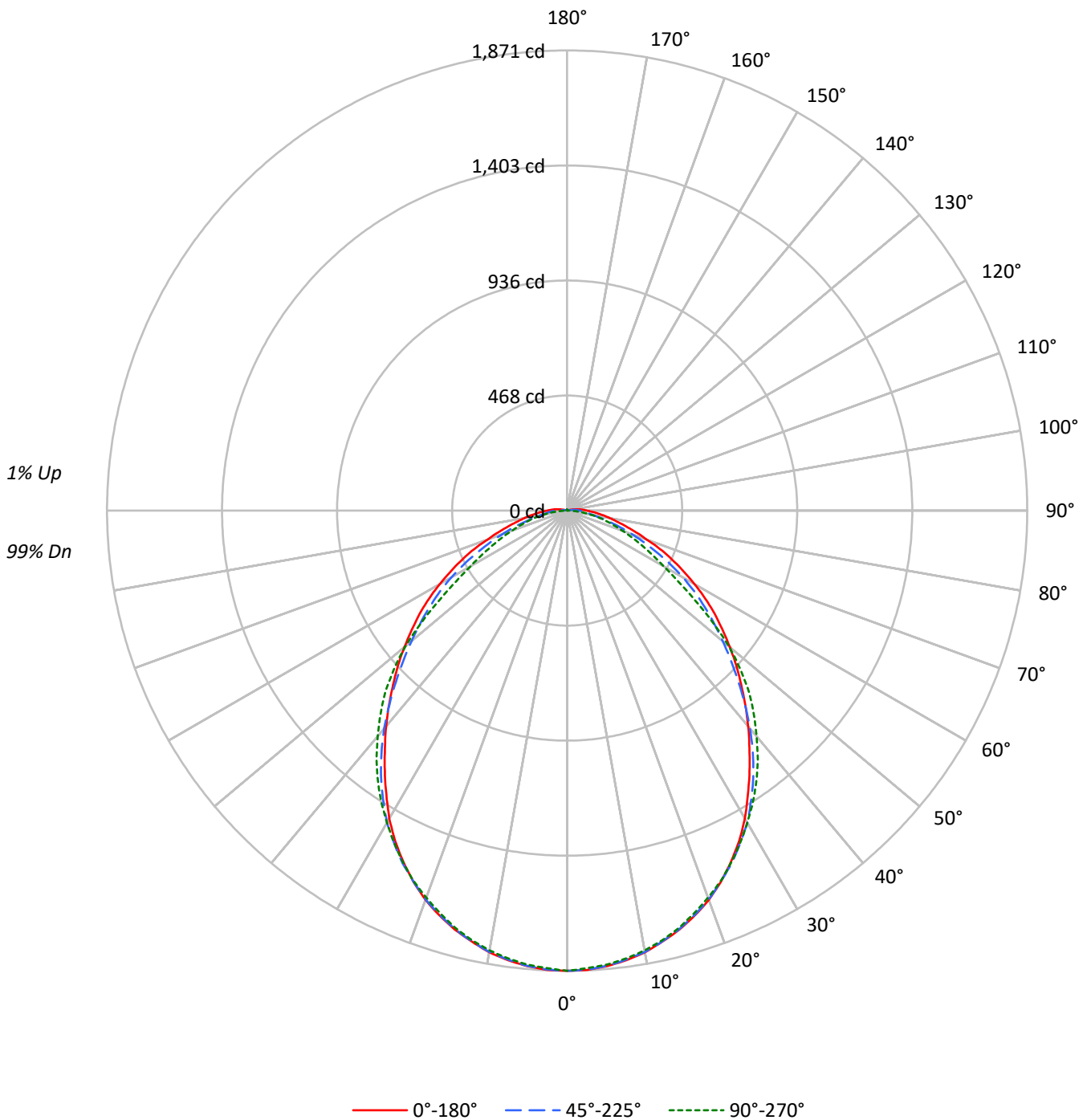
Lumens per Lamp: N/A  
Luminaire Lumens: 4348.6 lumens  
Efficiency: N/A  
Efficacy: 78.9 lumens/watt  
Spacing Criteria (0/90/45): 1.16 / 1.17 / 1.25  
Luminous Opening: Rectangular w/ Sides (W: 0.42' x L: 3' x H: 0.42')  
CIE Type: Direct

Input Watts (W): 55.146  
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	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°	16114	16114	16114
5°	15881	15008	14730
10°	15567	13951	13497
15°	15160	12920	12350
20°	14694	11925	11250
25°	14064	10931	10230
30°	13309	9944	9235
35°	12386	8874	8297
40°	11531	7762	7322
45°	10697	6644	6375
50°	9927	5643	5246
55°	9177	4759	3915
60°	8298	3911	2866
65°	7366	3009	2167
70°	6276	2199	1604
75°	5410	1476	1159
80°	4929	966	731
85°	4662	715	304



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	176.1	4.1
10°-20°	496.1	11.4
20°-30°	726.7	16.7
30°-40°	823.3	18.9
40°-50°	774.1	17.8
50°-60°	614.2	14.1
60°-70°	399.5	9.2
70°-80°	202.6	4.7
80°-90°	85.3	2.0
90°-100°	32.0	0.7
100°-110°	5.8	0.1
110°-120°	2.5	0.1
120°-130°	2.7	0.1
130°-140°	2.6	0.1
140°-150°	2.2	0.1
150°-160°	1.6	0.0
160°-170°	1.0	0.0
170°-180°	0.3	0.0
0°-30°	1398.9	32.2
0°-40°	2222.2	51.1
0°-60°	3610.5	83.0
0°-90°	4297.8	98.8
90°-120°	40.3	0.9
90°-150°	47.8	1.1
90°-180°	51.0	1.2
0°-180°	4348.6	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	1871	1871	1871	1871	1871	
5°	1860	1860	1859	1855	1853	176
15°	1764	1763	1762	1759	1756	497
25°	1576	1578	1582	1582	1579	725
35°	1293	1299	1320	1340	1342	809
45°	1000	987	985	1020	1047	773
55°	732	717	682	666	633	654
65°	469	456	403	339	334	465
75°	247	212	178	151	165	266
85°	122	98	74	48	38	111
90°	80	73	51	26	1	44
95°	54	51	31	4	1	40
105°	10	6	3	2	2	14
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°	1871.3	1871.3	1871.3	1871.3	1871.3
2.5°	1869.5	1870.4	1867.7	1864.0	1862.2
5°	1859.5	1860.4	1858.6	1854.9	1853.1
7.5°	1844.0	1845.8	1841.2	1839.4	1836.7
10°	1823.9	1824.8	1822.1	1817.6	1815.7
12.5°	1794.8	1795.7	1793.9	1790.2	1789.3
15°	1763.8	1762.9	1762.0	1759.2	1756.5
17.5°	1726.4	1726.4	1723.7	1721.9	1716.4
20°	1684.5	1682.7	1682.7	1679.1	1674.5
22.5°	1633.5	1633.5	1632.6	1632.6	1630.8
25°	1576.1	1577.9	1582.5	1582.5	1578.8
27.5°	1514.2	1516.9	1524.2	1528.7	1523.3
30°	1445.8	1450.4	1465.0	1471.3	1465.0
32.5°	1368.4	1375.7	1393.0	1406.6	1405.7
35°	1292.8	1299.1	1320.1	1340.1	1342.0
37.5°	1217.1	1218.0	1239.9	1267.2	1273.6
40°	1145.3	1142.5	1157.1	1189.8	1198.0
42.5°	1072.4	1062.3	1069.6	1108.8	1123.4
45°	1000.4	986.7	984.9	1019.5	1046.9
47.5°	933.0	915.7	902.9	929.3	955.7
50°	863.7	844.6	825.5	841.9	858.3
52.5°	795.4	779.9	752.6	751.7	746.2
55°	732.5	717.0	681.5	666.0	633.2
57.5°	666.0	654.2	613.2	574.0	533.0
60°	597.7	591.3	543.9	482.0	454.6
62.5°	532.1	526.6	472.9	406.4	390.0
65°	469.2	456.5	402.7	338.9	334.4
67.5°	409.1	392.7	337.1	284.3	284.3
70°	344.4	324.4	280.6	235.1	238.7
72.5°	294.3	261.5	227.8	190.4	198.6
75°	246.9	212.3	177.7	151.2	164.9
77.5°	206.8	171.3	136.7	118.4	132.1
80°	177.7	142.1	108.4	88.4	98.4
82.5°	147.6	118.4	88.4	63.8	70.2
85°	122.1	98.4	73.8	48.3	38.3
87.5°	97.5	84.7	61.0	37.4	11.8
90°	80.2	72.9	51.0	26.4	0.9
92.5°	66.5	62.0	41.9	15.5	0.9
95°	53.8	51.0	31.0	3.6	0.9
97.5°	43.7	41.0	17.3	1.8	0.9
100°	30.1	25.5	7.3	1.8	0.9
102.5°	18.2	13.7	2.7	1.8	0.9
105°	10.0	6.4	2.7	1.8	1.8
107.5°	5.5	3.6	2.7	1.8	1.8
110°	4.6	3.6	2.7	1.8	1.8



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**CANDELA DISTRIBUTION (continued):**

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

(END OF REPORT)