

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: P392559

Luminaire Tested: **MWL-3-00-57-UNV-L830-EDD**

Issue Date: 12/2/2019

**Test Information**

Test Method: LM-79-08  
Report Number: P392559  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-1910-565-13)  
Test Lab: INNOVATION CENTER  
Issue Date: 12/2/2019  
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)  
Product Line: FAIL-SAFE  
Catalog Number: MWL-3-00-57-UNV-L830-EDD  
Description: MWL 3FT MEDICAL LED FIXTURE  
Light Source: -  
Ballast/Driver: ELECTRONIC DRIVER

**Summary**

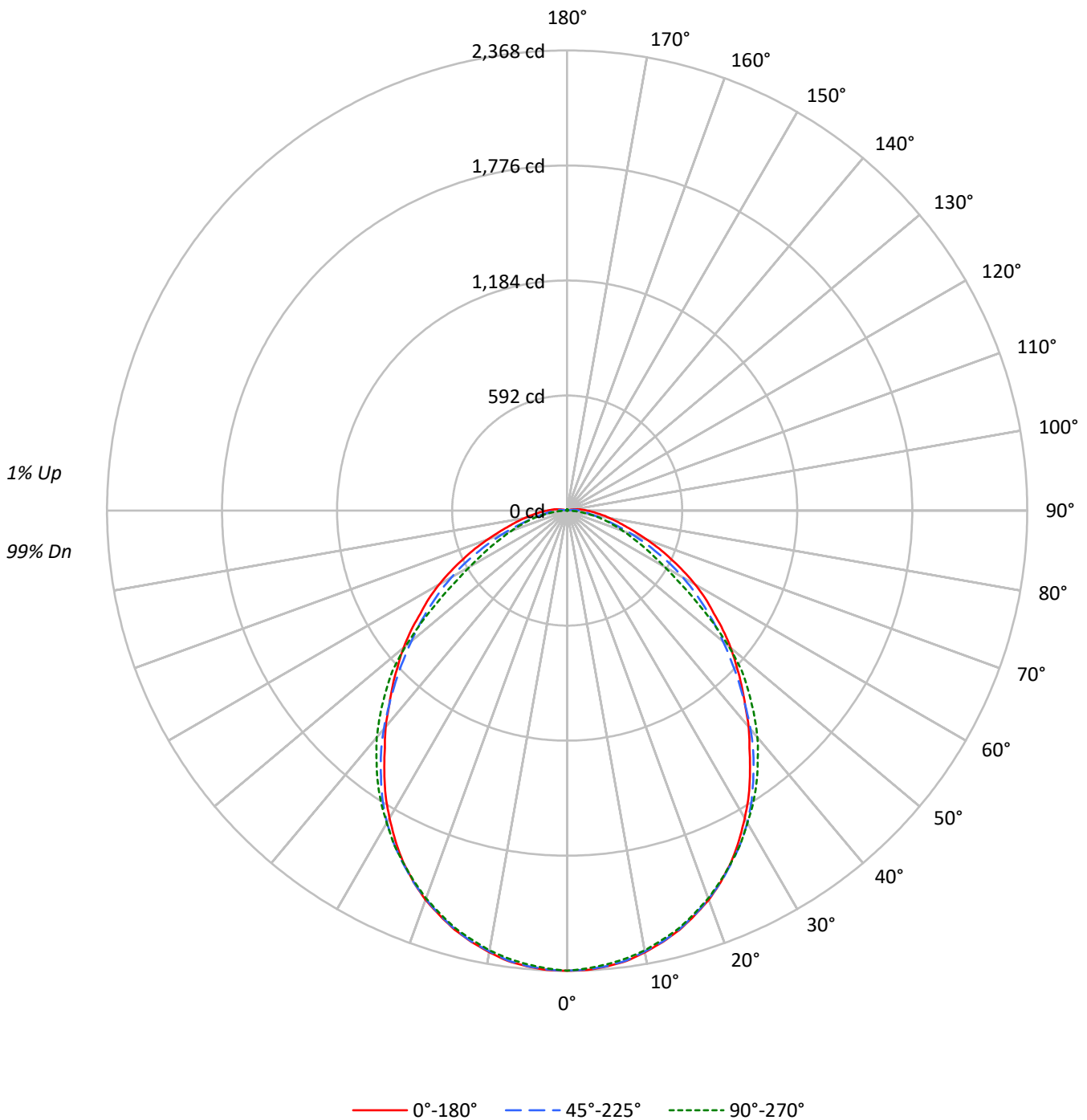
Lumens per Lamp: N/A  
Luminaire Lumens: 5504.9 lumens  
Efficiency: N/A  
Efficacy: 79.3 lumens/watt  
Spacing Criteria (0/90/45): 1.16 / 1.17 / 1.25  
Luminous Opening: Rectangular w/ Sides (W: 0.42' x L: 3' x H: 0.42')  
CIE Type: Direct

Input Watts (W): 69.4  
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	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°	20390	20390	20390
5°	20107	18997	18631
10°	19694	17638	17080
15°	19197	16356	15642
20°	18594	15073	14264
25°	17815	13823	12949
30°	16822	12587	11702
35°	15715	11232	10516
40°	14630	9851	9316
45°	13568	8430	8042
50°	12632	7159	6618
55°	11543	6025	4967
60°	10566	4949	3642
65°	9267	3808	2743
70°	7958	2761	2050
75°	6773	1866	1478
80°	6150	1223	942
85°	5827	901	382



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	223.0	4.1
10°-20°	627.9	11.4
20°-30°	920.0	16.7
30°-40°	1043.0	18.9
40°-50°	980.3	17.8
50°-60°	777.8	14.1
60°-70°	505.4	9.2
70°-80°	256.4	4.7
80°-90°	107.7	2.0
90°-100°	40.2	0.7
100°-110°	7.1	0.1
110°-120°	3.3	0.1
120°-130°	3.3	0.1
130°-140°	3.2	0.1
140°-150°	2.7	0.0
150°-160°	1.9	0.0
160°-170°	1.2	0.0
170°-180°	0.4	0.0
0°-30°	1770.9	32.2
0°-40°	2813.8	51.1
0°-60°	4571.9	83.1
0°-90°	5441.5	98.8
90°-120°	50.6	0.9
90°-150°	59.8	1.1
90°-180°	63.0	1.1
0°-180°	5504.9	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	2368	2368	2368	2368	2368	
5°	2354	2355	2352	2348	2344	223
15°	2234	2229	2231	2228	2225	629
25°	1996	1997	2001	2004	1998	917
35°	1640	1642	1671	1698	1701	1026
45°	1269	1246	1250	1291	1321	980
55°	921	907	863	841	803	828
65°	590	578	510	430	423	588
75°	309	266	225	195	210	335
85°	153	126	93	60	48	140
90°	102	91	64	34	1	56
95°	68	64	39	5	1	50
105°	12	8	3	2	2	17
115°	5	4	4	3	2	5
125°	5	4	4	3	3	4
135°	5	5	4	4	4	4
145°	5	5	5	4	4	3
155°	5	5	4	4	4	2
165°	5	4	5	5	5	1
175°	3	4	5	5	5	0
180°	4	4	4	4	4	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	2367.9	2367.9	2367.9	2367.9	2367.9
2.5°	2366.9	2365.9	2364.0	2360.2	2358.3
5°	2354.4	2355.4	2352.5	2347.7	2343.9
7.5°	2338.1	2335.2	2335.2	2327.5	2324.7
10°	2307.4	2307.4	2303.6	2300.7	2297.8
12.5°	2273.8	2272.8	2271.9	2267.1	2262.3
15°	2233.5	2228.7	2230.6	2227.7	2224.8
17.5°	2183.6	2182.6	2181.7	2180.7	2174.9
20°	2131.7	2128.9	2126.9	2127.9	2123.1
22.5°	2067.4	2067.4	2068.4	2067.4	2062.6
25°	1996.4	1997.4	2001.2	2004.1	1998.3
27.5°	1914.8	1921.5	1932.1	1935.0	1933.1
30°	1827.5	1833.2	1854.4	1864.9	1856.3
32.5°	1739.2	1741.1	1767.0	1782.4	1782.4
35°	1640.3	1642.2	1671.0	1697.9	1700.8
37.5°	1541.5	1543.4	1574.1	1603.8	1611.5
40°	1453.2	1442.6	1468.5	1505.0	1524.2
42.5°	1355.3	1341.8	1355.3	1401.3	1424.4
45°	1268.9	1245.8	1249.7	1290.9	1320.7
47.5°	1180.6	1156.6	1145.1	1182.5	1219.0
50°	1099.0	1070.2	1047.2	1063.5	1082.7
52.5°	1011.6	987.6	954.1	956.0	943.5
55°	921.4	907.0	862.9	840.8	803.4
57.5°	843.7	827.4	774.6	725.6	677.6
60°	761.1	747.7	688.2	612.4	577.8
62.5°	674.7	665.2	599.9	513.5	495.3
65°	590.3	577.8	509.7	430.0	423.3
67.5°	512.5	493.3	430.0	359.0	358.0
70°	436.7	409.8	352.3	298.5	305.2
72.5°	366.6	335.0	284.1	242.8	252.4
75°	309.1	265.9	224.6	194.8	210.2
77.5°	263.0	217.9	173.7	149.7	168.0
80°	221.7	178.5	137.3	113.3	126.7
82.5°	188.1	147.8	111.3	81.6	87.3
85°	152.6	125.7	93.1	60.5	48.0
87.5°	125.7	106.5	77.7	47.0	14.4
90°	101.7	91.2	64.3	33.6	1.0
92.5°	82.5	77.7	52.8	19.2	1.0
95°	68.1	64.3	39.4	4.8	1.0
97.5°	54.7	50.9	22.1	1.9	1.0
100°	37.4	30.7	9.6	1.9	1.9
102.5°	23.0	18.2	2.9	1.9	1.9
105°	12.5	7.7	2.9	1.9	1.9
107.5°	6.7	4.8	2.9	1.9	1.9
110°	5.8	3.8	2.9	1.9	1.9



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**CANDELA DISTRIBUTION (continued):**

	0°	22.5°	45°	67.5°	90°
112.5°	4.8	3.8	2.9	1.9	1.9
115°	4.8	3.8	3.8	2.9	1.9
117.5°	4.8	3.8	3.8	2.9	2.9
120°	4.8	3.8	3.8	2.9	2.9
122.5°	4.8	3.8	3.8	2.9	2.9
125°	4.8	3.8	3.8	2.9	2.9
127.5°	4.8	4.8	3.8	2.9	2.9
130°	4.8	4.8	3.8	3.8	2.9
132.5°	4.8	4.8	3.8	3.8	3.8
135°	4.8	4.8	3.8	3.8	3.8
137.5°	4.8	4.8	3.8	3.8	3.8
140°	4.8	4.8	3.8	3.8	3.8
142.5°	4.8	4.8	4.8	3.8	3.8
145°	4.8	4.8	4.8	3.8	3.8
147.5°	4.8	4.8	3.8	3.8	3.8
150°	4.8	4.8	3.8	4.8	3.8
152.5°	4.8	4.8	3.8	3.8	3.8
155°	4.8	4.8	3.8	3.8	3.8
157.5°	4.8	4.8	3.8	3.8	3.8
160°	4.8	3.8	3.8	3.8	3.8
162.5°	4.8	3.8	3.8	4.8	4.8
165°	4.8	3.8	4.8	4.8	4.8
167.5°	3.8	3.8	4.8	4.8	4.8
170°	2.9	3.8	4.8	4.8	4.8
172.5°	2.9	3.8	4.8	4.8	4.8
175°	2.9	3.8	4.8	4.8	4.8
177.5°	2.9	3.8	4.8	4.8	4.8
180°	3.8	3.8	3.8	3.8	3.8

(END OF REPORT)