

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: P392554

Luminaire Tested: **MWL-3-00-33-UNV-L935-EDD**

Issue Date: 12/2/2019

**Test Information**

Test Method: LM-79-08  
Report Number: P392554  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-1910-565-16)  
Test Lab: INNOVATION CENTER  
Issue Date: 12/2/2019  
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)  
Product Line: FAIL-SAFE  
Catalog Number: MWL-3-00-33-UNV-L935-EDD  
Description: MWL 3FT MEDICAL LED FIXTURE  
Light Source: -  
Ballast/Driver: ELECTRONIC DRIVER

**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 2876.1 lumens  
Efficiency: N/A  
Efficacy: 79.5 lumens/watt  
Spacing Criteria (0/90/45): 1.14 / 1.17 / 1.24  
Luminous Opening: Rectangular w/ Sides (W: 0.42' x L: 3' x H: 0.42')  
CIE Type: Direct

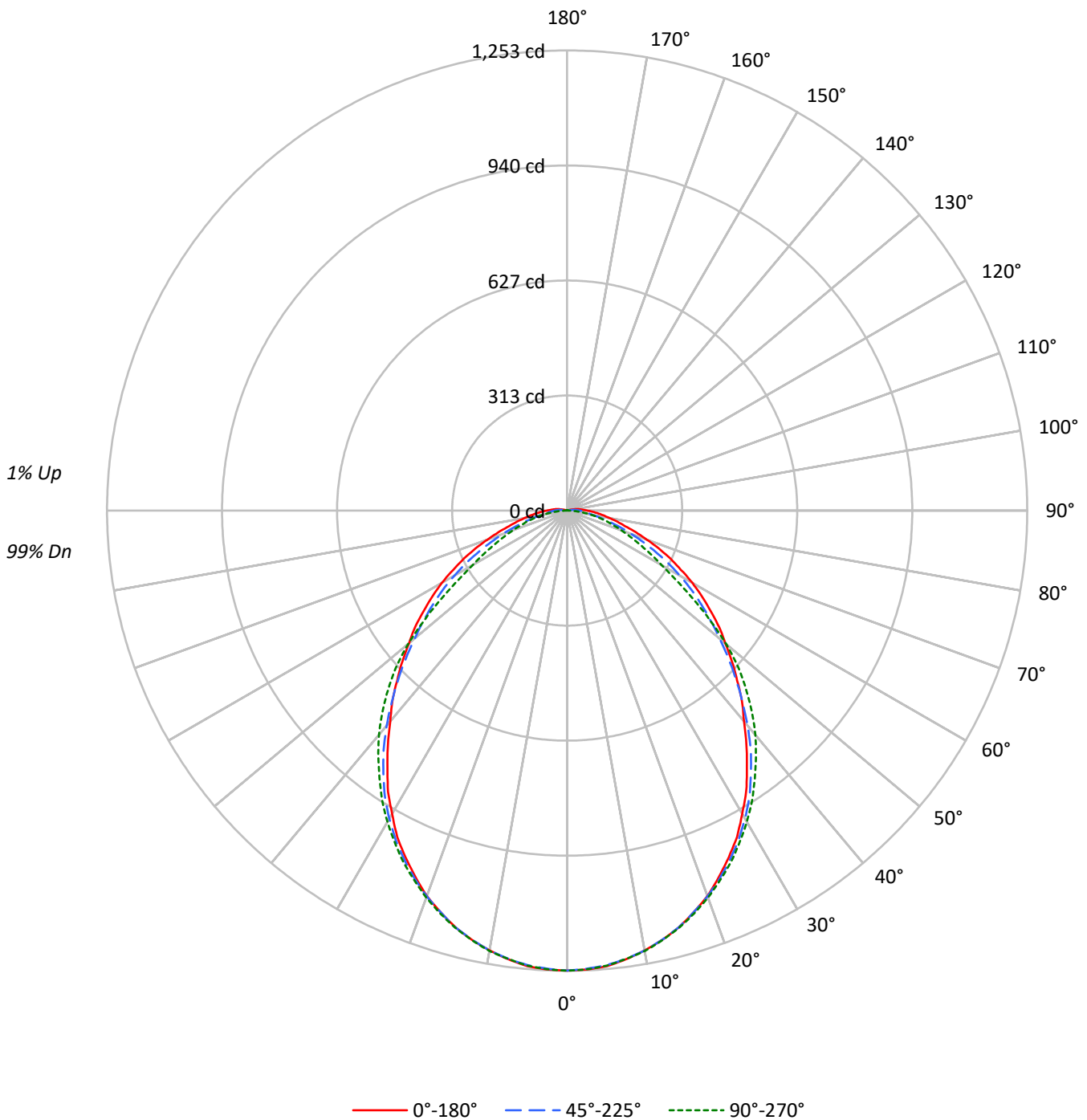
Input Watts (W): 36.158  
Input Voltage (V): NR  
Input Current (Ain): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 25 FT



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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					99			
1	109	105	101	97	106	102	99	96	98	95	92	94	92	89	90	88	86	84					84			
2	100	92	86	81	97	91	85	80	87	82	78	83	79	76	80	77	74	72					72			
3	92	82	74	68	89	80	73	68	77	71	66	75	69	65	72	68	64	62					62			
4	85	73	65	59	82	72	64	58	69	63	57	67	61	57	65	60	56	54					54			
5	78	66	58	51	76	65	57	51	63	56	50	61	54	50	59	53	49	47					47			
6	73	60	51	45	71	59	51	45	57	50	45	55	49	44	54	48	44	42					42			
7	67	55	46	40	66	54	46	40	52	45	40	51	44	39	49	43	39	37					37			
8	63	50	42	36	61	49	41	36	48	41	36	47	40	36	45	40	35	33					33			
9	59	46	38	33	58	45	38	33	44	37	32	43	37	32	42	36	32	30					30			
10	55	43	35	30	54	42	35	30	41	34	30	40	34	29	39	33	29	28					28			

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

	0°	45°	90°
0°	10787	10787	10787
5°	10633	10033	9883
10°	10380	9312	9053
15°	10097	8614	8271
20°	9743	7921	7533
25°	9294	7247	6842
30°	8775	6574	6170
35°	8174	5866	5506
40°	7540	5126	4873
45°	7002	4388	4198
50°	6463	3705	3458
55°	5972	3115	2586
60°	5464	2549	1871
65°	4873	1983	1407
70°	4204	1456	1059
75°	3587	1008	769
80°	3270	649	492
85°	3173	476	209



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	117.8	4.1
10°-20°	330.9	11.5
20°-30°	482.7	16.8
30°-40°	545.1	19.0
40°-50°	509.5	17.7
50°-60°	402.0	14.0
60°-70°	262.5	9.1
70°-80°	135.6	4.7
80°-90°	57.4	2.0
90°-100°	21.9	0.8
100°-110°	4.1	0.1
110°-120°	1.5	0.1
120°-130°	1.5	0.1
130°-140°	1.3	0.0
140°-150°	1.1	0.0
150°-160°	0.8	0.0
160°-170°	0.5	0.0
170°-180°	0.2	0.0
0°-30°	931.4	32.4
0°-40°	1476.5	51.3
0°-60°	2388.0	83.0
0°-90°	2843.4	98.9
90°-120°	27.4	1.0
90°-150°	31.3	1.1
90°-180°	33.0	1.1
0°-180°	2876.1	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	1253	1253	1253	1253	1253	
5°	1245	1245	1242	1242	1243	118
15°	1175	1175	1175	1176	1176	331
25°	1042	1046	1049	1056	1056	479
35°	853	858	873	890	890	534
45°	655	645	650	676	690	506
55°	477	466	446	436	418	427
65°	310	300	265	224	217	307
75°	164	142	121	102	109	178
85°	83	67	49	32	26	75
90°	55	48	34	18	1	30
95°	37	36	21	2	1	28
105°	8	3	2	1	1	10
115°	2	2	2	1	1	2
125°	2	2	2	2	2	2
135°	2	2	2	2	2	1
145°	2	2	2	2	2	1
155°	2	2	2	2	2	1
165°	2	2	2	2	2	0
175°	1	2	2	2	2	0
180°	2	2	2	2	2	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	1252.7	1252.7	1252.7	1252.7	1252.7
2.5°	1250.9	1251.8	1248.4	1248.4	1250.2
5°	1245.1	1245.1	1242.5	1242.5	1243.4
7.5°	1232.3	1233.2	1230.7	1231.4	1231.4
10°	1216.2	1217.9	1216.2	1216.2	1217.9
12.5°	1197.5	1198.4	1196.7	1198.4	1198.4
15°	1174.7	1174.7	1174.7	1175.5	1176.4
17.5°	1146.7	1149.2	1146.7	1150.1	1150.1
20°	1117.0	1117.0	1117.8	1120.4	1121.3
22.5°	1079.7	1082.2	1084.8	1089.0	1089.0
25°	1041.5	1045.7	1049.1	1055.9	1055.9
27.5°	1001.7	1002.5	1011.0	1019.4	1017.8
30°	953.3	957.6	968.5	977.9	978.7
32.5°	907.5	909.2	923.6	934.6	937.2
35°	853.2	857.5	872.7	890.5	890.5
37.5°	801.5	804.1	821.0	843.1	844.7
40°	748.9	748.0	764.2	789.6	797.2
42.5°	704.8	694.6	706.5	733.6	745.5
45°	654.8	644.6	650.5	676.0	689.5
47.5°	608.9	596.3	595.4	614.9	632.7
50°	562.3	550.4	542.0	555.5	565.7
52.5°	522.5	506.3	492.8	496.2	490.2
55°	476.7	466.5	446.1	435.9	418.2
57.5°	435.1	425.8	401.2	375.7	350.3
60°	393.6	384.2	354.5	317.2	296.8
62.5°	349.4	343.5	309.6	267.2	256.1
65°	310.4	300.2	265.4	223.9	217.1
67.5°	269.7	257.0	223.9	186.6	185.8
70°	230.7	216.2	185.8	154.4	157.7
72.5°	195.9	176.4	151.8	126.3	130.6
75°	163.7	141.6	121.3	101.7	109.4
77.5°	140.0	115.4	93.3	79.7	87.3
80°	117.9	95.0	72.9	61.1	66.2
82.5°	99.2	78.9	59.4	43.2	46.7
85°	83.1	67.0	49.2	32.2	26.3
87.5°	67.8	56.9	41.6	24.6	7.6
90°	55.1	48.3	33.9	17.8	0.9
92.5°	44.1	40.7	28.0	10.2	0.9
95°	37.3	35.6	21.2	2.5	0.9
97.5°	30.5	28.0	12.7	0.9	0.9
100°	22.9	19.5	6.0	0.9	0.9
102.5°	15.3	11.9	1.7	0.9	0.9
105°	7.6	3.4	1.7	0.9	0.9
107.5°	2.5	1.7	1.7	0.9	0.9
110°	2.5	1.7	1.7	0.9	0.9



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**CANDELA DISTRIBUTION (continued):**

	0°	22.5°	45°	67.5°	90°
112.5°	2.5	1.7	1.7	0.9	0.9
115°	2.5	1.7	1.7	0.9	0.9
117.5°	1.7	1.7	1.7	0.9	0.9
120°	1.7	1.7	1.7	0.9	0.9
122.5°	1.7	1.7	1.7	1.7	1.7
125°	1.7	1.7	1.7	1.7	1.7
127.5°	1.7	1.7	1.7	1.7	1.7
130°	1.7	1.7	1.7	1.7	1.7
132.5°	1.7	1.7	1.7	1.7	1.7
135°	1.7	1.7	1.7	1.7	1.7
137.5°	1.7	1.7	1.7	1.7	1.7
140°	1.7	1.7	1.7	1.7	1.7
142.5°	1.7	1.7	1.7	1.7	1.7
145°	1.7	1.7	1.7	1.7	1.7
147.5°	1.7	1.7	1.7	1.7	1.7
150°	1.7	1.7	1.7	1.7	1.7
152.5°	1.7	1.7	1.7	1.7	1.7
155°	1.7	1.7	1.7	1.7	1.7
157.5°	1.7	1.7	1.7	1.7	1.7
160°	1.7	1.7	1.7	1.7	1.7
162.5°	1.7	1.7	1.7	1.7	1.7
165°	1.7	1.7	1.7	1.7	1.7
167.5°	1.7	1.7	1.7	1.7	1.7
170°	1.7	1.7	1.7	1.7	1.7
172.5°	0.9	1.7	1.7	1.7	1.7
175°	0.9	1.7	1.7	1.7	1.7
177.5°	0.9	1.7	1.7	1.7	1.7
180°	1.7	1.7	1.7	1.7	1.7

(END OF REPORT)