

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: P392638

Luminaire Tested: **MWL-4-00-73-UNV-L835-EDD**

Issue Date: 12/2/2019

Test Information

Test Method: LM-79-08
Report Number: P392638
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-1910-565-1)
Test Lab: INNOVATION CENTER
Issue Date: 12/2/2019
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: FAIL-SAFE
Catalog Number: MWL-4-00-73-UNV-L835-EDD
Description: MWL 4FT MEDICAL LED FIXTURE
Light Source: -
Ballast/Driver: ELECTRONIC DRIVER

Summary

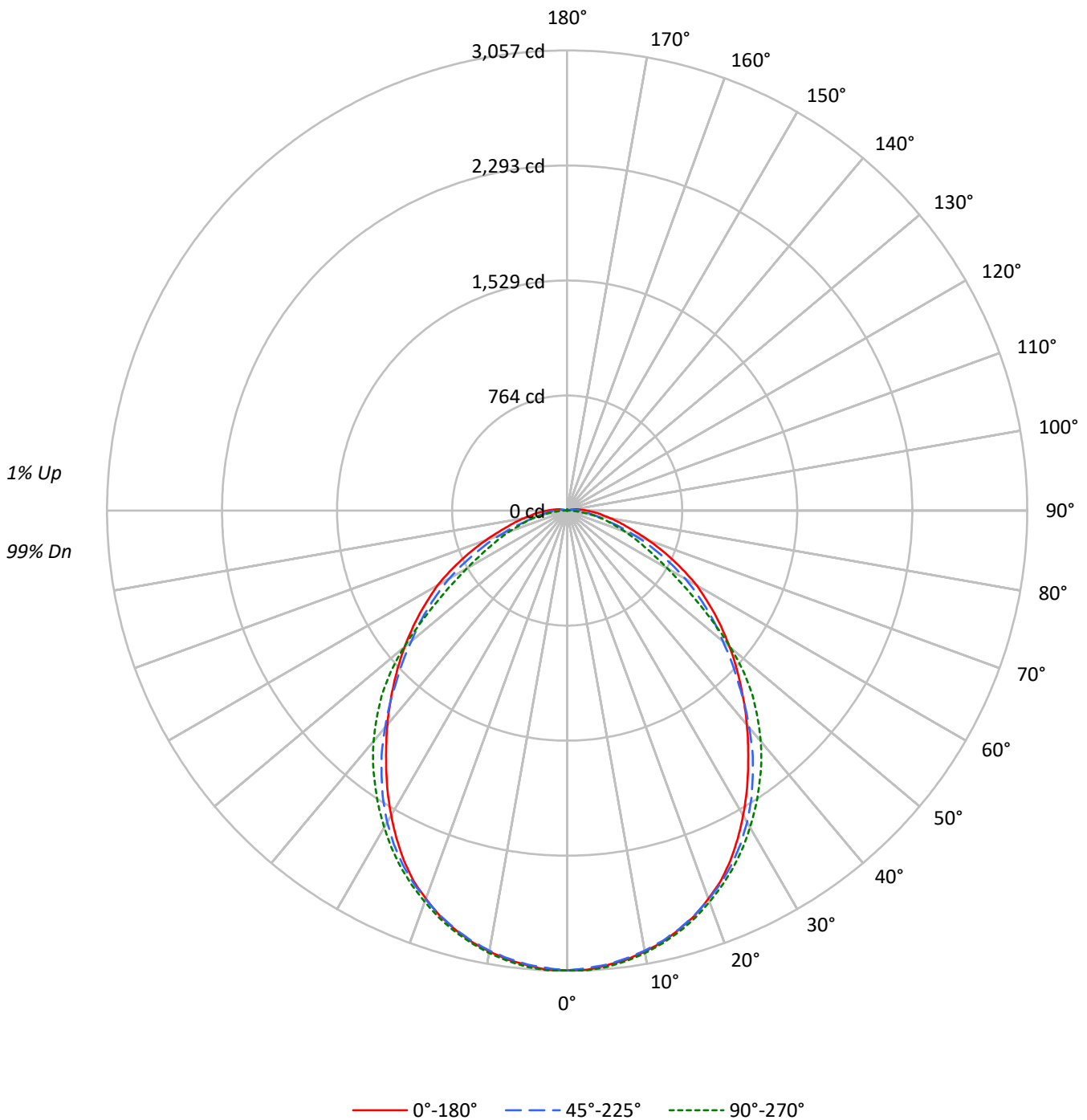
Lumens per Lamp: N/A
Luminaire Lumens: 7155.9 lumens
Efficiency: N/A
Efficacy: 84.4 lumens/watt
Spacing Criteria (0/90/45): 1.15 / 1.19 / 1.25
Luminous Opening: Rectangular w/ Sides (W: 0.42' x L: 4' x H: 0.42')
CIE Type: Direct

Input Watts (W): 84.8
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	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	91	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	67	77	71	66	74	69	65	72	67	64	62
4	85	73	65	59	82	72	64	58	69	62	57	67	61	56	65	60	55	53
5	78	66	57	51	76	65	57	51	62	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	45	40	52	45	39	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°	19728	19728	19728
5°	19480	18371	18140
10°	19159	17110	16641
15°	18732	15907	15258
20°	18171	14708	13936
25°	17433	13529	12706
30°	16448	12287	11491
35°	15397	10957	10319
40°	14402	9577	9173
45°	13463	8222	7963
50°	12597	7028	6506
55°	11724	5991	4895
60°	10873	4970	3639
65°	9675	3875	2742
70°	8412	2833	2060
75°	7329	1880	1477
80°	6801	1246	948
85°	6914	932	422



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	288.0	4.0
10°-20°	812.6	11.4
20°-30°	1191.4	16.6
30°-40°	1348.1	18.8
40°-50°	1269.9	17.7
50°-60°	1015.9	14.2
60°-70°	668.5	9.3
70°-80°	340.1	4.8
80°-90°	142.9	2.0
90°-100°	51.2	0.7
100°-110°	9.1	0.1
110°-120°	3.6	0.1
120°-130°	3.8	0.1
130°-140°	3.6	0.0
140°-150°	3.1	0.0
150°-160°	2.2	0.0
160°-170°	1.4	0.0
170°-180°	0.5	0.0
0°-30°	2291.9	32.0
0°-40°	3640.0	50.9
0°-60°	5925.8	82.8
0°-90°	7077.4	98.9
90°-120°	63.9	0.9
90°-150°	74.4	1.0
90°-180°	79.0	1.1
0°-180°	7155.9	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	3055	3055	3055	3055	3055	
5°	3032	3036	3027	3044	3043	288
15°	2880	2881	2877	2892	2894	811
25°	2565	2571	2590	2614	2614	1178
35°	2095	2103	2150	2222	2225	1311
45°	1628	1606	1603	1688	1744	1258
55°	1196	1179	1125	1106	1056	1071
65°	774	760	678	574	564	769
75°	408	356	295	258	280	440
85°	204	168	125	82	71	183
90°	130	116	83	45	1	72
95°	82	80	50	9	2	60
105°	16	11	3	2	2	21
115°	5	4	4	3	3	5
125°	5	5	4	4	3	4
135°	5	5	5	4	4	4
145°	5	6	5	5	4	3
155°	5	5	5	5	5	2
165°	5	5	5	5	6	1
175°	3	5	5	6	6	0
180°	5	5	5	5	5	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	3054.7	3054.7	3054.7	3054.7	3054.7
2.5°	3053.7	3051.8	3041.9	3057.7	3056.7
5°	3032.1	3036.0	3027.2	3043.9	3042.9
7.5°	3008.5	3014.4	3001.6	3020.3	3018.3
10°	2975.1	2977.1	2968.2	2985.9	2984.9
12.5°	2933.8	2933.8	2927.9	2943.6	2942.7
15°	2879.8	2880.7	2876.8	2892.5	2893.5
17.5°	2819.8	2819.8	2817.8	2835.5	2835.5
20°	2744.1	2748.1	2748.1	2765.8	2765.8
22.5°	2664.5	2667.5	2674.3	2697.0	2694.0
25°	2565.2	2571.1	2589.8	2614.4	2614.4
27.5°	2455.2	2470.9	2495.5	2525.0	2526.9
30°	2338.2	2354.9	2390.3	2431.6	2430.6
32.5°	2219.3	2236.0	2276.3	2325.4	2331.3
35°	2095.4	2103.3	2149.5	2222.2	2225.2
37.5°	1974.6	1976.5	2022.7	2099.4	2118.0
40°	1857.6	1847.8	1880.2	1966.7	2001.1
42.5°	1741.6	1729.8	1744.6	1829.1	1874.3
45°	1627.6	1606.0	1603.0	1687.6	1743.6
47.5°	1518.5	1493.0	1478.2	1544.1	1593.2
50°	1409.4	1384.8	1350.4	1396.6	1419.2
52.5°	1301.3	1282.6	1239.4	1255.1	1231.5
55°	1196.1	1179.4	1125.4	1105.7	1055.6
57.5°	1092.0	1082.1	1015.3	955.3	901.3
60°	993.7	982.9	905.2	811.8	769.6
62.5°	881.6	876.7	789.2	684.1	657.5
65°	774.5	759.7	678.2	574.0	564.2
67.5°	670.3	648.7	573.0	479.6	482.6
70°	573.0	539.6	471.8	396.1	408.9
72.5°	481.6	440.3	378.4	322.4	339.1
75°	407.9	355.8	294.9	257.5	280.1
77.5°	347.9	291.9	230.0	198.5	226.1
80°	290.9	239.8	181.8	146.4	170.0
82.5°	242.8	199.5	150.4	105.2	118.9
85°	204.4	168.1	124.8	81.6	70.8
87.5°	161.2	137.6	101.2	63.9	26.5
90°	129.7	116.0	82.6	45.2	1.0
92.5°	104.2	98.3	66.8	26.5	2.0
95°	81.6	79.6	50.1	8.8	2.0
97.5°	62.9	62.9	30.5	2.0	2.0
100°	46.2	43.2	14.7	2.0	2.0
102.5°	29.5	25.6	4.9	2.0	2.0
105°	15.7	10.8	2.9	2.0	2.0
107.5°	6.9	4.9	2.9	2.9	2.0
110°	4.9	4.9	2.9	2.9	2.9



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CANDELA DISTRIBUTION (continued):

	0°	22.5°	45°	67.5°	90°
112.5°	4.9	4.9	2.9	2.9	2.9
115°	4.9	3.9	3.9	2.9	2.9
117.5°	4.9	3.9	3.9	2.9	2.9
120°	4.9	3.9	3.9	2.9	2.9
122.5°	4.9	4.9	3.9	3.9	2.9
125°	4.9	4.9	3.9	3.9	2.9
127.5°	4.9	4.9	4.9	3.9	3.9
130°	4.9	4.9	4.9	3.9	3.9
132.5°	4.9	4.9	4.9	3.9	3.9
135°	4.9	4.9	4.9	3.9	3.9
137.5°	4.9	4.9	4.9	4.9	3.9
140°	4.9	4.9	4.9	4.9	3.9
142.5°	5.9	5.9	4.9	4.9	3.9
145°	4.9	5.9	4.9	4.9	3.9
147.5°	5.9	4.9	4.9	4.9	3.9
150°	4.9	4.9	4.9	4.9	3.9
152.5°	4.9	4.9	4.9	4.9	3.9
155°	4.9	4.9	4.9	4.9	4.9
157.5°	4.9	4.9	4.9	4.9	4.9
160°	4.9	4.9	4.9	4.9	4.9
162.5°	4.9	4.9	4.9	4.9	4.9
165°	4.9	4.9	4.9	4.9	5.9
167.5°	3.9	3.9	4.9	5.9	5.9
170°	2.9	4.9	4.9	5.9	5.9
172.5°	2.9	4.9	4.9	5.9	5.9
175°	2.9	4.9	4.9	5.9	5.9
177.5°	2.9	4.9	4.9	5.9	5.9
180°	4.9	4.9	4.9	4.9	4.9

(END OF REPORT)