

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: P392637

Luminaire Tested: **MWL-4-00-73-UNV-L830-EDD**

Issue Date: 12/2/2019

Test Information

Test Method: LM-79-08
Report Number: P392637
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-L830-EDD
Description: MWL 4FT MEDICAL LED FIXTURE
Light Source: -
Ballast/Driver: ELECTRONIC DRIVER

Summary

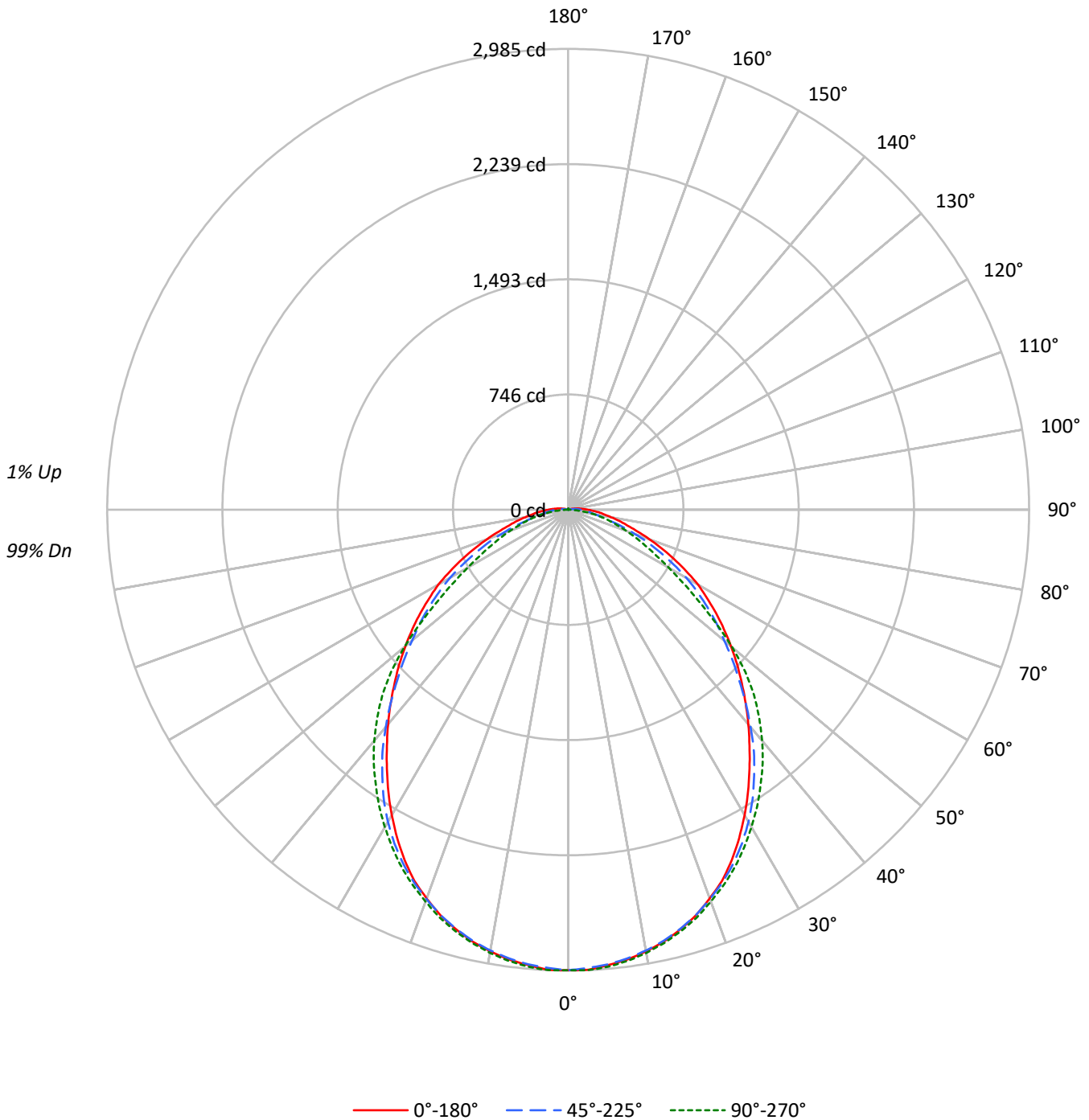
Lumens per Lamp: N/A
Luminaire Lumens: 6989.0 lumens
Efficiency: N/A
Efficacy: 82.4 lumens/watt
Spacing Criteria (0/90/45): 1.15 / 1.19 / 1.25
Luminous Opening: Rectangular w/ Sides (W: 0.42' x L: 4' x H: 0.42')
CIE Type: Direct

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°	19268	19268	19268
5°	19025	17941	17717
10°	18712	16710	16253
15°	18295	15536	14902
20°	17747	14364	13611
25°	17026	13214	12409
30°	16064	12000	11223
35°	15038	10701	10078
40°	14066	9354	8959
45°	13149	8030	7777
50°	12303	6864	6354
55°	11450	5851	4781
60°	10620	4855	3553
65°	9448	3785	2678
70°	8216	2767	2012
75°	7158	1836	1443
80°	6642	1217	926
85°	6755	910	412



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	281.3	4.0
10°-20°	793.6	11.4
20°-30°	1163.6	16.6
30°-40°	1316.6	18.8
40°-50°	1240.3	17.7
50°-60°	992.2	14.2
60°-70°	652.9	9.3
70°-80°	332.1	4.8
80°-90°	139.6	2.0
90°-100°	50.0	0.7
100°-110°	8.9	0.1
110°-120°	3.6	0.1
120°-130°	3.7	0.1
130°-140°	3.5	0.1
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°	2238.5	32.0
0°-40°	3555.1	50.9
0°-60°	5787.5	82.8
0°-90°	6912.2	98.9
90°-120°	62.5	0.9
90°-150°	72.8	1.0
90°-180°	77.0	1.1
0°-180°	6989.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	2983	2983	2983	2983	2983	
5°	2961	2965	2956	2973	2972	281
15°	2813	2814	2810	2825	2826	792
25°	2505	2511	2529	2553	2553	1150
35°	2046	2054	2099	2170	2173	1281
45°	1590	1568	1566	1648	1703	1229
55°	1168	1152	1099	1080	1031	1046
65°	756	742	662	561	551	751
75°	398	348	288	252	274	430
85°	200	164	122	80	69	179
90°	127	113	81	44	1	70
95°	80	78	49	9	2	58
105°	15	11	3	2	2	20
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°	2983.4	2983.4	2983.4	2983.4	2983.4
2.5°	2982.5	2980.5	2970.9	2986.3	2985.3
5°	2961.3	2965.2	2956.5	2972.9	2971.9
7.5°	2938.3	2944.1	2931.6	2949.8	2947.9
10°	2905.7	2907.6	2898.9	2916.2	2915.3
12.5°	2865.4	2865.4	2859.6	2875.0	2874.0
15°	2812.6	2813.5	2809.7	2825.0	2826.0
17.5°	2754.0	2754.0	2752.1	2769.4	2769.4
20°	2680.1	2683.9	2683.9	2701.2	2701.2
22.5°	2602.3	2605.2	2611.9	2634.0	2631.1
25°	2505.4	2511.1	2529.4	2553.4	2553.4
27.5°	2397.9	2413.2	2437.2	2466.0	2467.9
30°	2283.6	2300.0	2334.5	2374.8	2373.9
32.5°	2167.5	2183.8	2223.2	2271.2	2276.9
35°	2046.5	2054.2	2099.3	2170.4	2173.3
37.5°	1928.5	1930.4	1975.5	2050.4	2068.6
40°	1814.2	1804.6	1836.3	1920.8	1954.4
42.5°	1701.0	1689.5	1703.9	1786.4	1830.6
45°	1589.6	1568.5	1565.6	1648.2	1702.9
47.5°	1483.1	1458.1	1443.7	1508.0	1556.0
50°	1376.5	1352.5	1318.9	1364.0	1386.1
52.5°	1270.9	1252.7	1210.5	1225.8	1202.8
55°	1168.2	1151.9	1099.1	1079.9	1031.0
57.5°	1066.5	1056.9	991.6	933.0	880.2
60°	970.5	959.9	884.1	792.9	751.6
62.5°	861.0	856.2	770.8	668.1	642.2
65°	756.4	742.0	662.3	560.6	551.0
67.5°	654.7	633.5	559.6	468.4	471.3
70°	559.6	527.0	460.8	386.8	399.3
72.5°	470.4	430.0	369.6	314.9	331.2
75°	398.4	347.5	288.0	251.5	273.6
77.5°	339.8	285.1	224.6	193.9	220.8
80°	284.1	234.2	177.6	143.0	166.1
82.5°	237.1	194.9	146.9	102.7	116.1
85°	199.7	164.1	121.9	79.7	69.1
87.5°	157.4	134.4	98.9	62.4	25.9
90°	126.7	113.3	80.6	44.2	1.0
92.5°	101.8	96.0	65.3	25.9	1.9
95°	79.7	77.8	49.0	8.6	1.9
97.5°	61.4	61.4	29.8	1.9	1.9
100°	45.1	42.2	14.4	1.9	1.9
102.5°	28.8	25.0	4.8	1.9	1.9
105°	15.4	10.6	2.9	1.9	1.9
107.5°	6.7	4.8	2.9	2.9	1.9
110°	4.8	4.8	2.9	2.9	2.9



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CANDELA DISTRIBUTION (continued):

	0°	22.5°	45°	67.5°	90°
112.5°	4.8	4.8	2.9	2.9	2.9
115°	4.8	3.8	3.8	2.9	2.9
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	4.8	3.8	3.8	2.9
125°	4.8	4.8	3.8	3.8	2.9
127.5°	4.8	4.8	4.8	3.8	3.8
130°	4.8	4.8	4.8	3.8	3.8
132.5°	4.8	4.8	4.8	3.8	3.8
135°	4.8	4.8	4.8	3.8	3.8
137.5°	4.8	4.8	4.8	4.8	3.8
140°	4.8	4.8	4.8	4.8	3.8
142.5°	5.8	5.8	4.8	4.8	3.8
145°	4.8	5.8	4.8	4.8	3.8
147.5°	5.8	4.8	4.8	4.8	3.8
150°	4.8	4.8	4.8	4.8	3.8
152.5°	4.8	4.8	4.8	4.8	3.8
155°	4.8	4.8	4.8	4.8	4.8
157.5°	4.8	4.8	4.8	4.8	4.8
160°	4.8	4.8	4.8	4.8	4.8
162.5°	4.8	4.8	4.8	4.8	4.8
165°	4.8	4.8	4.8	4.8	5.8
167.5°	3.8	3.8	4.8	5.8	5.8
170°	2.9	4.8	4.8	5.8	5.8
172.5°	2.9	4.8	4.8	5.8	5.8
175°	2.9	4.8	4.8	5.8	5.8
177.5°	2.9	4.8	4.8	5.8	5.8
180°	4.8	4.8	4.8	4.8	4.8

(END OF REPORT)