

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: P392464

Luminaire Tested: **MWL-2-00-23-UNV-L835-EDD**

Issue Date: 12/2/2019

Test Information

Test Method: LM-79-08
Report Number: P392464
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-1910-565-27)
Test Lab: INNOVATION CENTER
Issue Date: 12/2/2019
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: FAIL-SAFE
Catalog Number: MWL-2-00-23-UNV-L835-EDD
Description: MWL 2FT MEDICAL LED FIXTURE
Light Source: -
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 2246.9 lumens
Efficiency: N/A
Efficacy: 99.0 lumens/watt
Spacing Criteria (0/90/45): 1.16 / 1.18 / 1.25
Luminous Opening: Rectangular w/ Sides (W: 0.42' x L: 2' x H: 0.42')
CIE Type: Direct

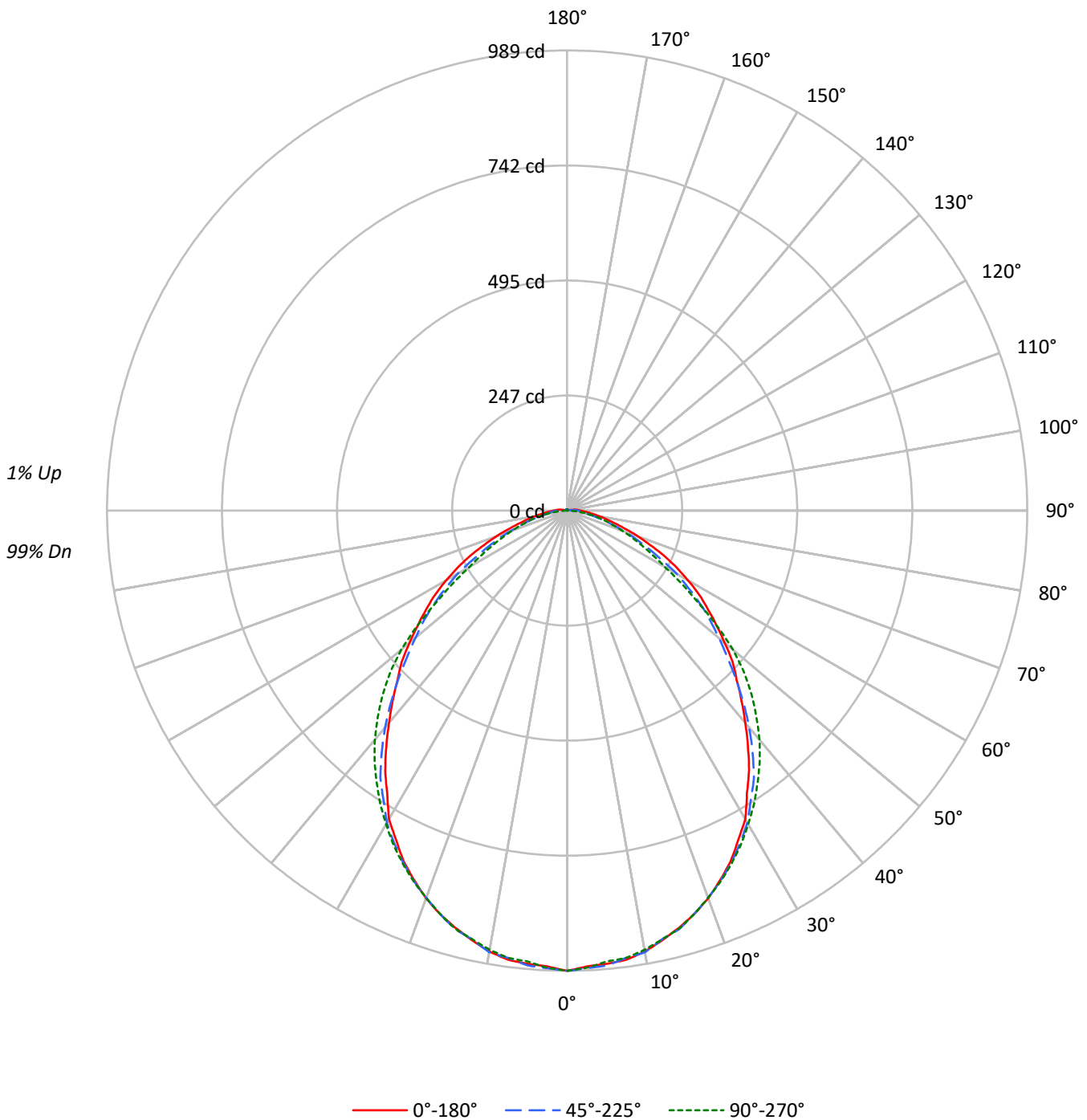
Input Watts (W): 22.7
Input Voltage (V): NR
Input Current (A_{in}): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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	110	105	101	98	107	103	99	96	98	96	93	94	92	90	91	89	87	85
2	101	93	87	82	98	91	85	80	87	83	78	84	80	77	81	78	75	73
3	92	83	75	69	90	81	74	68	78	72	67	75	70	66	73	68	65	63
4	85	74	66	60	83	73	65	59	70	63	58	68	62	57	65	61	56	54
5	79	67	58	52	77	65	58	52	63	56	51	61	55	50	59	54	50	48
6	73	60	52	46	71	59	51	46	58	50	45	56	49	45	54	49	44	42
7	68	55	47	41	66	54	46	41	53	45	40	51	45	40	50	44	40	38
8	63	50	42	37	62	50	42	37	48	41	36	47	41	36	46	40	36	34
9	59	46	39	33	58	46	38	33	45	38	33	44	37	33	42	37	33	31
10	56	43	35	30	54	42	35	30	41	35	30	40	34	30	39	34	30	28

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	12777	12777	12777
5°	12449	11840	11597
10°	12172	10988	10684
15°	11756	10131	9810
20°	11329	9287	8926
25°	10803	8505	8130
30°	10196	7736	7360
35°	9381	6907	6618
40°	8548	5973	5895
45°	7792	5057	5122
50°	7114	4235	4264
55°	6411	3541	3165
60°	5689	2830	2295
65°	4861	2076	1719
70°	3901	1472	1267
75°	2959	979	898
80°	2373	603	550
85°	1950	453	230



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	93.0	4.1
10°-20°	261.8	11.7
20°-30°	384.0	17.1
30°-40°	435.3	19.4
40°-50°	405.8	18.1
50°-60°	317.1	14.1
60°-70°	196.3	8.7
70°-80°	94.3	4.2
80°-90°	37.7	1.7
90°-100°	12.3	0.5
100°-110°	1.5	0.1
110°-120°	1.2	0.1
120°-130°	1.7	0.1
130°-140°	1.5	0.1
140°-150°	1.5	0.1
150°-160°	1.1	0.1
160°-170°	0.6	0.0
170°-180°	0.2	0.0
0°-30°	738.8	32.9
0°-40°	1174.1	52.3
0°-60°	1897.0	84.4
0°-90°	2225.4	99.0
90°-120°	15.0	0.7
90°-150°	19.7	0.9
90°-180°	22.0	1.0
0°-180°	2246.9	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	989	989	989	989	989	
5°	978	984	981	980	973	93
15°	928	934	931	928	930	262
25°	832	834	834	839	836	382
35°	682	686	700	713	714	425
45°	515	510	513	542	561	400
55°	369	364	349	347	341	331
65°	230	216	192	173	177	227
75°	105	93	82	75	85	116
85°	44	44	33	23	19	42
90°	29	33	23	12	0	16
95°	20	20	12	1	0	14
105°	1	1	1	1	1	3
115°	2	1	1	1	1	2
125°	2	2	2	2	2	2
135°	2	2	2	2	2	1
145°	3	3	3	2	2	2
155°	3	3	3	2	2	1
165°	3	2	2	2	2	1
175°	1	2	2	3	3	0
180°	2	2	2	2	2	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	989.2	989.2	989.2	989.2	989.2
2.5°	980.5	990.1	984.3	983.4	983.4
5°	977.6	984.3	981.4	980.5	972.7
7.5°	973.7	976.6	969.8	971.8	969.8
10°	962.1	963.1	964.0	959.2	958.2
12.5°	945.7	947.6	943.7	946.6	943.7
15°	928.2	934.0	931.1	928.2	930.2
17.5°	908.9	911.8	908.9	908.9	908.9
20°	886.7	887.6	885.7	884.7	885.7
22.5°	859.6	864.4	861.5	864.4	862.5
25°	831.6	834.5	834.5	839.3	836.4
27.5°	796.7	800.6	805.4	809.3	809.3
30°	765.8	763.9	774.5	777.4	778.4
32.5°	719.4	725.2	734.9	746.5	747.4
35°	681.7	685.5	700.1	712.6	713.6
37.5°	638.2	639.1	654.6	675.9	679.7
40°	595.6	594.7	608.2	633.3	643.0
42.5°	555.0	551.1	560.8	592.7	602.4
45°	515.4	510.5	513.4	542.4	560.8
47.5°	482.5	469.9	467.0	492.2	516.3
50°	441.9	435.1	425.4	443.8	465.1
52.5°	404.2	401.3	387.7	395.5	405.1
55°	369.4	364.5	349.1	347.1	341.3
57.5°	336.5	329.7	308.4	300.7	290.1
60°	299.7	293.9	271.7	251.4	242.7
62.5°	264.9	255.3	228.2	208.9	206.9
65°	230.1	215.6	192.4	173.1	176.9
67.5°	192.4	179.8	159.5	142.1	149.9
70°	162.4	147.0	130.5	117.0	125.7
72.5°	131.5	118.0	104.4	95.7	102.5
75°	105.4	92.8	82.2	75.4	85.1
77.5°	87.0	74.5	61.9	59.9	67.7
80°	69.6	61.9	47.4	44.5	49.3
82.5°	56.1	52.2	39.6	31.9	34.8
85°	44.5	44.5	32.9	23.2	19.3
87.5°	35.8	38.7	28.0	17.4	4.8
90°	29.0	32.9	23.2	11.6	0.0
92.5°	24.2	27.1	18.4	4.8	0.0
95°	20.3	20.3	11.6	1.0	0.0
97.5°	15.5	13.5	4.8	1.0	1.0
100°	8.7	5.8	1.0	1.0	1.0
102.5°	2.9	1.9	1.0	1.0	1.0
105°	1.0	1.0	1.0	1.0	1.0
107.5°	1.0	1.0	1.0	1.0	1.0
110°	1.0	1.0	1.0	1.0	1.0



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CANDELA DISTRIBUTION (continued):

	0°	22.5°	45°	67.5°	90°
112.5°	1.0	1.0	1.0	1.0	1.0
115°	1.9	1.0	1.0	1.0	1.0
117.5°	1.9	1.9	1.0	1.0	1.0
120°	1.9	1.9	1.9	1.9	1.9
122.5°	1.9	1.9	1.9	1.9	1.9
125°	1.9	1.9	1.9	1.9	1.9
127.5°	1.9	1.9	1.9	1.9	1.9
130°	1.9	1.9	1.9	1.9	1.9
132.5°	1.9	1.9	1.9	1.9	1.9
135°	1.9	1.9	1.9	1.9	1.9
137.5°	1.9	1.9	1.9	1.9	1.9
140°	1.9	1.9	1.9	1.9	1.9
142.5°	1.9	1.9	1.9	1.9	1.9
145°	2.9	2.9	2.9	1.9	1.9
147.5°	2.9	2.9	2.9	2.9	1.9
150°	2.9	2.9	2.9	1.9	1.9
152.5°	2.9	2.9	2.9	1.9	1.9
155°	2.9	2.9	2.9	1.9	1.9
157.5°	2.9	2.9	1.9	1.9	1.9
160°	2.9	2.9	1.9	1.9	1.9
162.5°	2.9	2.9	1.9	1.9	1.9
165°	2.9	1.9	1.9	1.9	1.9
167.5°	2.9	1.9	1.9	1.9	1.9
170°	1.9	1.9	1.9	1.9	1.9
172.5°	1.9	1.9	1.9	1.9	1.9
175°	1.0	1.9	1.9	2.9	2.9
177.5°	1.0	1.9	1.9	2.9	2.9
180°	1.9	1.9	1.9	1.9	1.9

(END OF REPORT)