

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: P392463

Luminaire Tested: **MWL-2-00-23-UNV-L930-EDD**

Issue Date: 12/2/2019

Test Information

Test Method: LM-79-08
Report Number: P392463
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-L930-EDD
Description: MWL 2FT MEDICAL LED FIXTURE
Light Source: -
Ballast/Driver: ELECTRONIC DRIVER

Summary

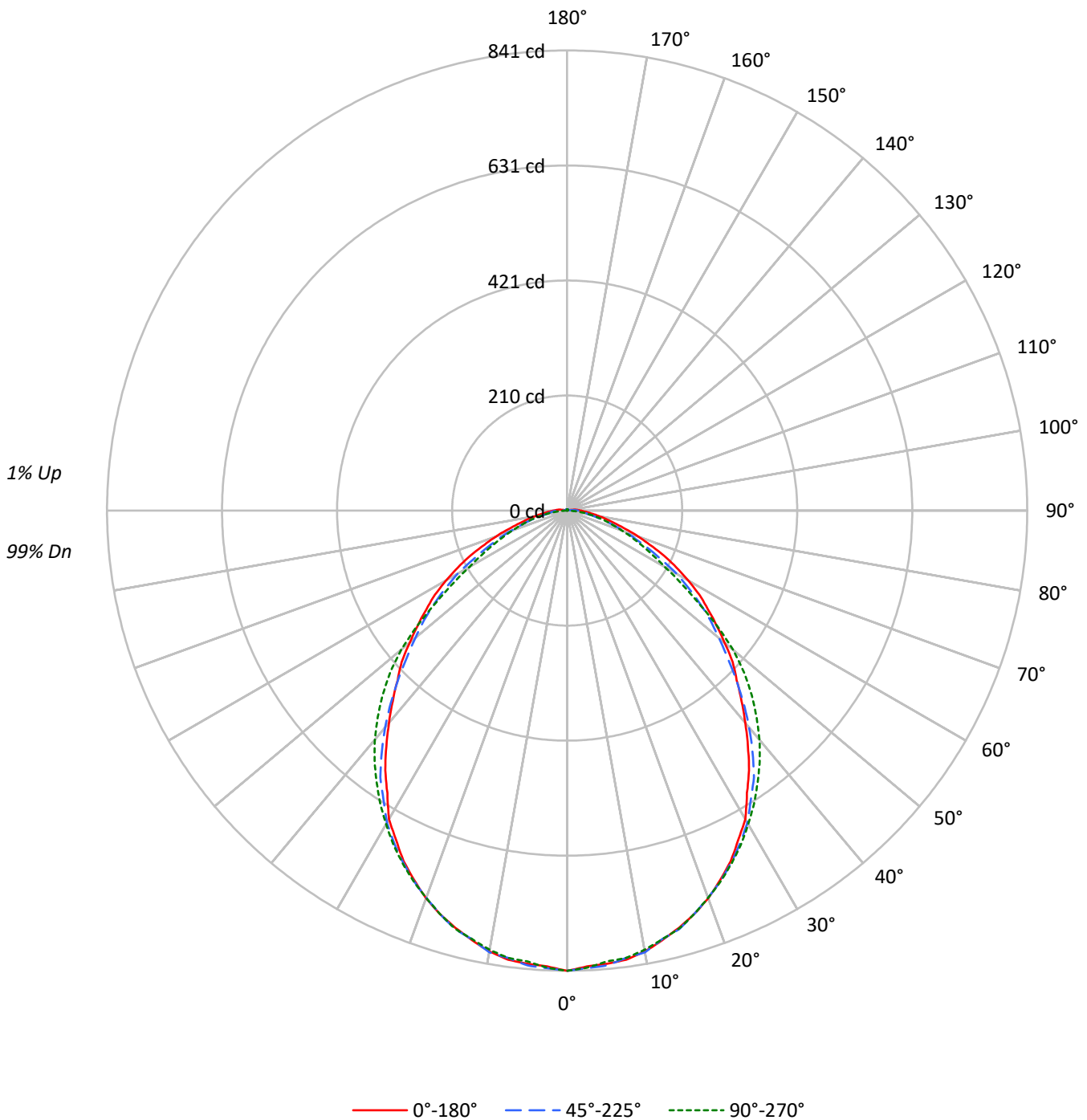
Lumens per Lamp: N/A
Luminaire Lumens: 1910.8 lumens
Efficiency: N/A
Efficacy: 83.3 lumens/watt
Spacing Criteria (0/90/45): 1.16 / 1.18 / 1.25
Luminous Opening: Rectangular w/ Sides (W: 0.42' x L: 2' x H: 0.42')
CIE Type: Direct

Input Watts (W): 22.927
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	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	43	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°	10864	10864	10864
5°	10586	10068	9861
10°	10350	9343	9085
15°	9997	8615	8342
20°	9634	7897	7591
25°	9185	7232	6913
30°	8670	6578	6259
35°	7976	5873	5628
40°	7270	5079	5013
45°	6624	4301	4356
50°	6048	3602	3626
55°	5451	3010	2691
60°	4839	2406	1952
65°	4132	1765	1463
70°	3319	1252	1077
75°	2516	833	764
80°	2019	513	467
85°	1661	384	197



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	79.1	4.1
10°-20°	222.6	11.7
20°-30°	326.5	17.1
30°-40°	370.2	19.4
40°-50°	345.1	18.1
50°-60°	269.6	14.1
60°-70°	167.0	8.7
70°-80°	80.2	4.2
80°-90°	32.1	1.7
90°-100°	10.5	0.5
100°-110°	1.2	0.1
110°-120°	1.0	0.1
120°-130°	1.5	0.1
130°-140°	1.3	0.1
140°-150°	1.3	0.1
150°-160°	1.0	0.1
160°-170°	0.5	0.0
170°-180°	0.2	0.0
0°-30°	628.3	32.9
0°-40°	998.4	52.2
0°-60°	1613.1	84.4
0°-90°	1892.3	99.0
90°-120°	12.7	0.7
90°-150°	16.8	0.9
90°-180°	19.0	1.0
0°-180°	1910.8	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	841	841	841	841	841	
5°	831	837	834	834	827	79
15°	789	794	792	789	791	222
25°	707	710	710	714	711	325
35°	580	583	595	606	607	361
45°	438	434	437	461	477	340
55°	314	310	297	295	290	281
65°	196	183	164	147	150	193
75°	90	79	70	64	72	99
85°	38	38	28	20	16	36
90°	25	28	20	10	0	14
95°	17	17	10	1	0	12
105°	1	1	1	1	1	2
115°	2	1	1	1	1	1
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	1
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°	841.1	841.1	841.1	841.1	841.1
2.5°	833.7	841.9	837.0	836.2	836.2
5°	831.3	837.0	834.5	833.7	827.1
7.5°	827.9	830.4	824.7	826.3	824.7
10°	818.1	819.0	819.7	815.6	814.8
12.5°	804.1	805.7	802.5	805.0	802.5
15°	789.3	794.2	791.7	789.3	791.0
17.5°	772.9	775.4	772.9	772.9	772.9
20°	754.0	754.8	753.2	752.3	753.2
22.5°	730.9	735.0	732.6	735.0	733.4
25°	707.1	709.6	709.6	713.6	711.2
27.5°	677.5	680.8	684.9	688.2	688.2
30°	651.2	649.5	658.6	661.1	661.9
32.5°	611.7	616.6	624.9	634.8	635.5
35°	579.6	583.0	595.3	606.0	606.8
37.5°	542.7	543.4	556.7	574.7	578.0
40°	506.5	505.7	517.2	538.5	546.8
42.5°	471.9	468.7	476.9	504.0	512.3
45°	438.2	434.1	436.6	461.3	476.9
47.5°	410.3	399.6	397.1	418.5	439.0
50°	375.7	370.0	361.8	377.4	395.5
52.5°	343.7	341.2	329.7	336.3	344.5
55°	314.1	309.9	296.8	295.1	290.2
57.5°	286.2	280.4	262.3	255.7	246.6
60°	254.9	250.0	231.0	213.8	206.4
62.5°	225.3	217.0	194.1	177.6	175.9
65°	195.6	183.3	163.6	147.1	150.5
67.5°	163.6	152.9	135.7	120.9	127.4
70°	138.2	124.9	111.0	99.5	106.9
72.5°	111.8	100.3	88.8	81.4	87.2
75°	89.6	78.9	69.9	64.1	72.4
77.5°	74.0	63.3	52.7	51.0	57.6
80°	59.2	52.7	40.3	37.9	41.9
82.5°	47.7	44.4	33.7	27.1	29.6
85°	37.9	37.9	27.9	19.7	16.5
87.5°	30.5	32.9	23.9	14.8	4.1
90°	24.7	27.9	19.7	9.9	0.0
92.5°	20.5	23.0	15.6	4.1	0.0
95°	17.3	17.3	9.9	0.8	0.0
97.5°	13.1	11.5	4.1	0.8	0.8
100°	7.4	4.9	0.8	0.8	0.8
102.5°	2.5	1.7	0.8	0.8	0.8
105°	0.8	0.8	0.8	0.8	0.8
107.5°	0.8	0.8	0.8	0.8	0.8
110°	0.8	0.8	0.8	0.8	0.8



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CANDELA DISTRIBUTION (continued):

	0°	22.5°	45°	67.5°	90°
112.5°	0.8	0.8	0.8	0.8	0.8
115°	1.7	0.8	0.8	0.8	0.8
117.5°	1.7	1.7	0.8	0.8	0.8
120°	1.7	1.7	1.7	1.7	1.7
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°	2.5	2.5	2.5	1.7	1.7
147.5°	2.5	2.5	2.5	2.5	1.7
150°	2.5	2.5	2.5	1.7	1.7
152.5°	2.5	2.5	2.5	1.7	1.7
155°	2.5	2.5	2.5	1.7	1.7
157.5°	2.5	2.5	1.7	1.7	1.7
160°	2.5	2.5	1.7	1.7	1.7
162.5°	2.5	2.5	1.7	1.7	1.7
165°	2.5	1.7	1.7	1.7	1.7
167.5°	2.5	1.7	1.7	1.7	1.7
170°	1.7	1.7	1.7	1.7	1.7
172.5°	1.7	1.7	1.7	1.7	1.7
175°	0.8	1.7	1.7	2.5	2.5
177.5°	0.8	1.7	1.7	2.5	2.5
180°	1.7	1.7	1.7	1.7	1.7

(END OF REPORT)