

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-L935-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-L935-EDD
Description: MWL 2FT MEDICAL LED FIXTURE
Light Source: -
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 1938.8 lumens
Efficiency: N/A
Efficacy: 84.6 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

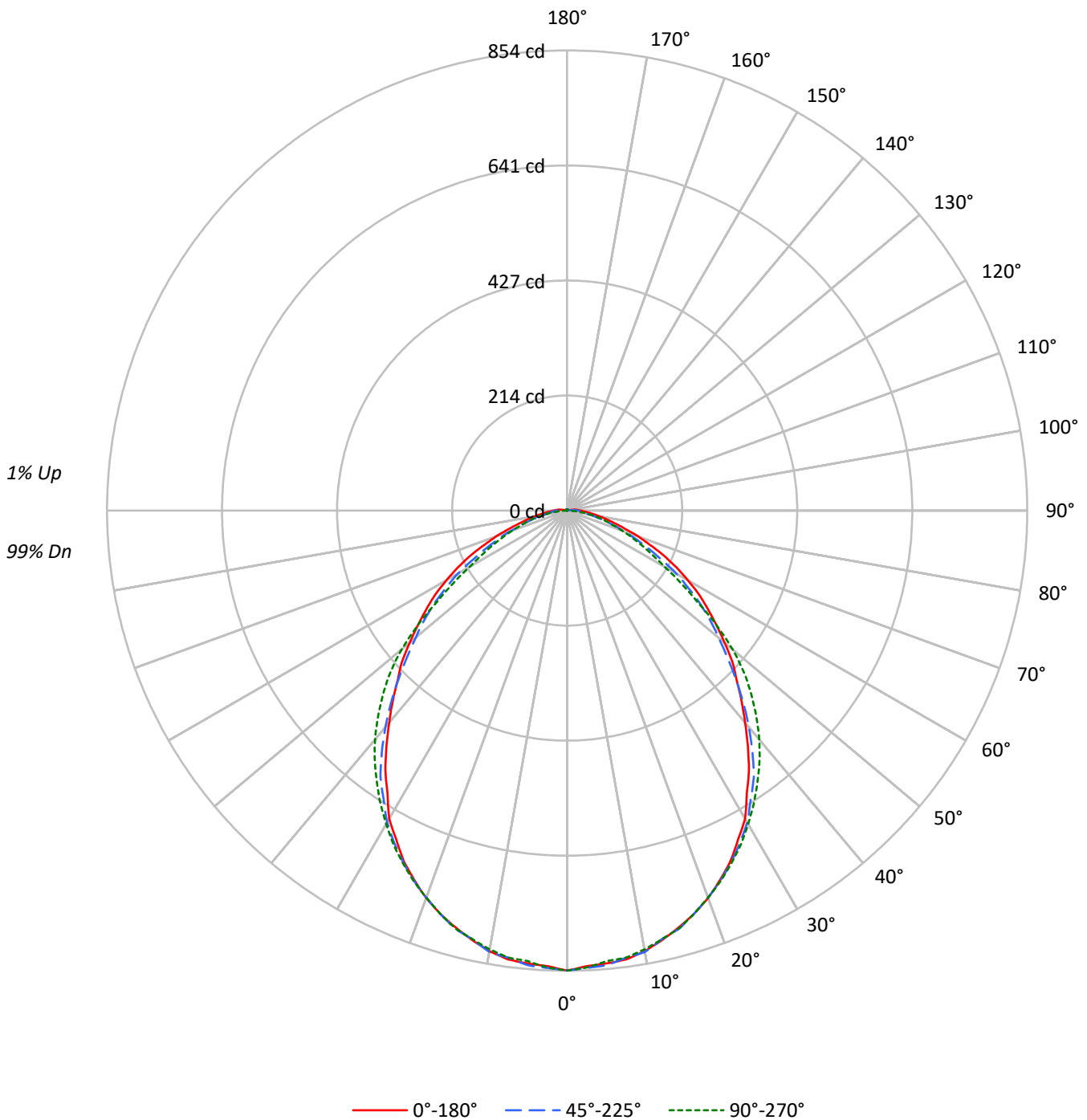
Input Watts (W): 22.927
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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	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°	11026	11026	11026
5°	10742	10217	10007
10°	10503	9481	9219
15°	10144	8742	8466
20°	9776	8014	7702
25°	9322	7339	7015
30°	8798	6675	6351
35°	8094	5960	5711
40°	7376	5154	5087
45°	6723	4364	4420
50°	6138	3655	3679
55°	5533	3055	2731
60°	4909	2442	1980
65°	4195	1791	1483
70°	3365	1270	1093
75°	2552	845	774
80°	2049	520	474
85°	1683	391	199



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	80.2	4.1
10°-20°	225.9	11.7
20°-30°	331.4	17.1
30°-40°	375.6	19.4
40°-50°	350.2	18.1
50°-60°	273.6	14.1
60°-70°	169.4	8.7
70°-80°	81.3	4.2
80°-90°	32.5	1.7
90°-100°	10.6	0.5
100°-110°	1.3	0.1
110°-120°	1.1	0.1
120°-130°	1.4	0.1
130°-140°	1.2	0.1
140°-150°	1.2	0.1
150°-160°	1.0	0.0
160°-170°	0.5	0.0
170°-180°	0.2	0.0
0°-30°	637.5	32.9
0°-40°	1013.2	52.3
0°-60°	1636.9	84.4
0°-90°	1920.2	99.0
90°-120°	13.0	0.7
90°-150°	16.9	0.9
90°-180°	19.0	1.0
0°-180°	1938.8	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	854	854	854	854	854	
5°	844	849	847	846	839	80
15°	801	806	803	801	803	226
25°	718	720	720	724	722	329
35°	588	592	604	615	616	367
45°	445	440	443	468	484	345
55°	319	314	301	300	294	286
65°	199	186	166	149	153	196
75°	91	80	71	65	73	100
85°	38	38	28	20	17	36
90°	25	28	20	10	0	14
95°	18	18	10	1	0	12
105°	1	1	1	1	1	2
115°	2	1	1	1	1	1
125°	2	2	2	2	2	1
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°	853.6	853.6	853.6	853.6	853.6
2.5°	846.1	854.4	849.4	848.6	848.6
5°	843.6	849.4	846.9	846.1	839.3
7.5°	840.2	842.7	836.8	838.6	836.8
10°	830.2	831.1	831.8	827.7	826.8
12.5°	816.0	817.7	814.3	816.8	814.3
15°	800.9	805.9	803.4	800.9	802.7
17.5°	784.3	786.8	784.3	784.3	784.3
20°	765.1	765.9	764.3	763.4	764.3
22.5°	741.7	745.9	743.4	745.9	744.3
25°	717.6	720.1	720.1	724.2	721.7
27.5°	687.5	690.8	695.0	698.3	698.3
30°	660.8	659.2	668.3	670.8	671.7
32.5°	620.8	625.8	634.1	644.2	644.9
35°	588.2	591.5	604.1	614.9	615.8
37.5°	550.7	551.5	564.9	583.2	586.5
40°	513.9	513.2	524.8	546.5	554.8
42.5°	478.9	475.5	483.9	511.4	519.8
45°	444.7	440.5	443.0	468.0	483.9
47.5°	416.3	405.5	403.0	424.7	445.5
50°	381.3	375.4	367.1	383.0	401.3
52.5°	348.8	346.3	334.5	341.3	349.6
55°	318.8	314.5	301.2	299.5	294.5
57.5°	290.4	284.5	266.1	259.5	250.3
60°	258.6	253.6	234.4	216.9	209.4
62.5°	228.6	220.3	196.9	180.3	178.5
65°	198.6	186.0	166.0	149.4	152.6
67.5°	166.0	155.1	137.6	122.6	129.3
70°	140.1	126.8	112.6	101.0	108.5
72.5°	113.5	101.8	90.1	82.6	88.4
75°	90.9	80.1	70.9	65.1	73.4
77.5°	75.1	64.3	53.4	51.7	58.4
80°	60.1	53.4	40.9	38.4	42.5
82.5°	48.4	45.0	34.2	27.5	30.0
85°	38.4	38.4	28.4	20.0	16.7
87.5°	30.9	33.4	24.2	15.0	4.1
90°	25.0	28.4	20.0	10.0	0.0
92.5°	20.9	23.4	15.9	4.1	0.0
95°	17.5	17.5	10.0	0.9	0.0
97.5°	13.4	11.6	4.1	0.9	0.9
100°	7.5	5.0	0.9	0.9	0.9
102.5°	2.5	1.6	0.9	0.9	0.9
105°	0.9	0.9	0.9	0.9	0.9
107.5°	0.9	0.9	0.9	0.9	0.9
110°	0.9	0.9	0.9	0.9	0.9



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CANDELA DISTRIBUTION (continued):

	0°	22.5°	45°	67.5°	90°
112.5°	0.9	0.9	0.9	0.9	0.9
115°	1.6	0.9	0.9	0.9	0.9
117.5°	1.6	1.6	0.9	0.9	0.9
120°	1.6	1.6	1.6	1.6	1.6
122.5°	1.6	1.6	1.6	1.6	1.6
125°	1.6	1.6	1.6	1.6	1.6
127.5°	1.6	1.6	1.6	1.6	1.6
130°	1.6	1.6	1.6	1.6	1.6
132.5°	1.6	1.6	1.6	1.6	1.6
135°	1.6	1.6	1.6	1.6	1.6
137.5°	1.6	1.6	1.6	1.6	1.6
140°	1.6	1.6	1.6	1.6	1.6
142.5°	1.6	1.6	1.6	1.6	1.6
145°	2.5	2.5	2.5	1.6	1.6
147.5°	2.5	2.5	2.5	2.5	1.6
150°	2.5	2.5	2.5	1.6	1.6
152.5°	2.5	2.5	2.5	1.6	1.6
155°	2.5	2.5	2.5	1.6	1.6
157.5°	2.5	2.5	1.6	1.6	1.6
160°	2.5	2.5	1.6	1.6	1.6
162.5°	2.5	2.5	1.6	1.6	1.6
165°	2.5	1.6	1.6	1.6	1.6
167.5°	2.5	1.6	1.6	1.6	1.6
170°	1.6	1.6	1.6	1.6	1.6
172.5°	1.6	1.6	1.6	1.6	1.6
175°	0.9	1.6	1.6	2.5	2.5
177.5°	0.9	1.6	1.6	2.5	2.5
180°	1.6	1.6	1.6	1.6	1.6

(END OF REPORT)