

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: P392466

Luminaire Tested: **MWL-2-00-31-UNV-L930-EDD**

Issue Date: 12/2/2019

Test Information

Test Method: LM-79-08
Report Number: P392466
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-1910-565-26)
Test Lab: INNOVATION CENTER
Issue Date: 12/2/2019
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: FAIL-SAFE
Catalog Number: MWL-2-00-31-UNV-L930-EDD
Description: MWL 2FT MEDICAL LED FIXTURE
Light Source: -
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 2583.6 lumens
Efficiency: N/A
Efficacy: 78.0 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

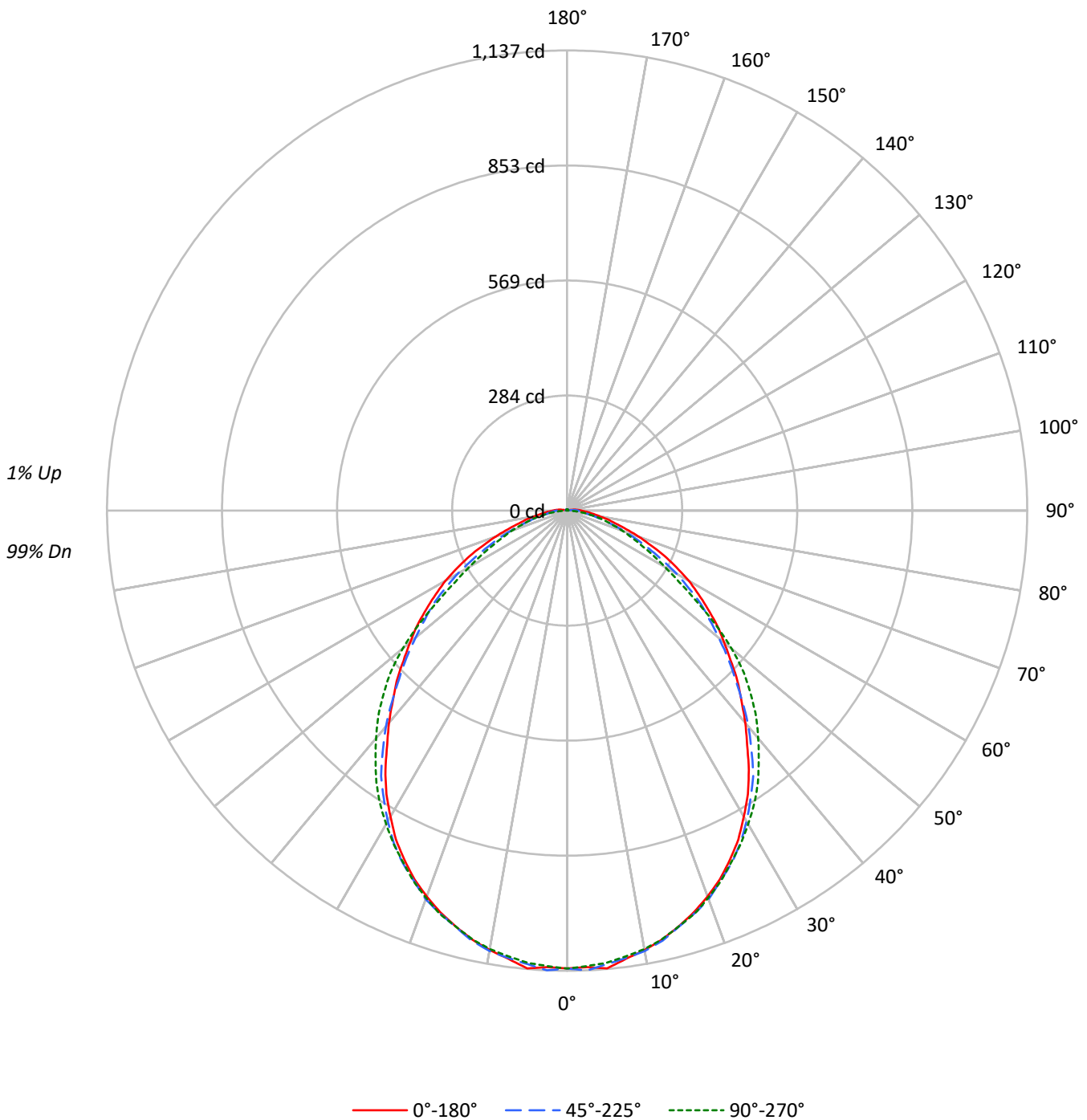
Input Watts (W): 33.128
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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	81	98	91	85	80	87	83	78	84	80	76	81	78	75	73
3	92	83	75	69	90	81	74	68	78	72	67	75	70	66	72	68	65	62
4	85	74	66	59	83	73	65	59	70	63	58	68	62	57	65	60	56	54
5	79	67	58	52	77	65	57	52	63	56	51	61	55	50	59	54	50	48
6	73	60	52	46	71	59	51	46	57	50	45	56	49	45	54	48	44	42
7	68	55	47	41	66	54	46	41	52	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	32	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°	14614	14614	14614
5°	14458	13570	13370
10°	13949	12596	12266
15°	13475	11585	11220
20°	12963	10716	10266
25°	12368	9796	9318
30°	11625	8852	8458
35°	10771	7908	7617
40°	9830	6847	6731
45°	8998	5782	5857
50°	8141	4871	4869
55°	7362	4103	3614
60°	6585	3246	2635
65°	5611	2404	1959
70°	4503	1707	1450
75°	3465	1127	1015
80°	2776	701	642
85°	2341	522	265



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	106.7	4.1
10°-20°	300.3	11.6
20°-30°	440.2	17.0
30°-40°	499.1	19.3
40°-50°	465.5	18.0
50°-60°	364.9	14.1
60°-70°	227.5	8.8
70°-80°	109.2	4.2
80°-90°	44.1	1.7
90°-100°	14.7	0.6
100°-110°	1.8	0.1
110°-120°	1.6	0.1
120°-130°	1.9	0.1
130°-140°	1.9	0.1
140°-150°	1.7	0.1
150°-160°	1.4	0.1
160°-170°	0.8	0.0
170°-180°	0.2	0.0
0°-30°	847.3	32.8
0°-40°	1346.4	52.1
0°-60°	2176.8	84.3
0°-90°	2557.5	99.0
90°-120°	18.2	0.7
90°-150°	23.7	0.9
90°-180°	26.0	1.0
0°-180°	2583.6	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1131	1131	1131	1131	1131	
5°	1135	1126	1125	1124	1121	107
15°	1064	1065	1065	1062	1064	300
25°	952	953	961	959	959	438
35°	783	783	802	817	821	488
45°	595	585	587	622	641	458
55°	424	423	404	400	390	381
65°	266	253	223	200	202	262
75°	123	108	95	88	96	136
85°	53	53	38	27	22	49
90°	34	39	26	14	1	19
95°	24	24	15	1	1	17
105°	2	2	1	1	1	4
115°	2	2	2	2	2	2
125°	2	2	2	2	2	2
135°	2	2	2	2	2	2
145°	2	3	2	2	2	2
155°	3	3	3	2	2	2
165°	3	2	2	2	2	1
175°	2	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°	1131.4	1131.4	1131.4	1131.4	1131.4
2.5°	1128.9	1134.6	1137.1	1125.5	1126.4
5°	1135.4	1126.4	1124.8	1123.9	1121.4
7.5°	1116.5	1120.6	1114.9	1113.2	1110.8
10°	1102.6	1105.8	1105.0	1099.2	1100.1
12.5°	1085.3	1088.6	1088.6	1082.0	1084.4
15°	1063.9	1064.7	1064.7	1062.2	1063.9
17.5°	1040.8	1044.2	1044.2	1045.0	1045.0
20°	1014.6	1019.5	1022.0	1017.9	1018.7
22.5°	985.8	986.6	989.9	984.1	991.5
25°	952.1	952.9	961.2	958.7	958.7
27.5°	915.9	915.9	926.6	924.1	929.0
30°	873.2	880.6	886.3	898.6	894.5
32.5°	831.2	835.3	843.5	852.6	860.0
35°	782.7	782.7	801.6	817.3	821.3
37.5°	730.1	731.7	748.2	772.0	777.7
40°	684.9	681.6	697.2	728.4	734.2
42.5°	637.2	632.3	640.5	678.3	691.5
45°	595.2	585.4	587.0	622.4	641.3
47.5°	548.4	545.1	538.5	562.4	592.0
50°	505.7	499.1	489.2	508.9	531.1
52.5°	467.8	462.1	443.9	455.5	460.4
55°	424.2	423.4	404.5	399.6	389.7
57.5°	384.8	383.1	356.0	346.9	328.1
60°	346.9	341.2	311.6	288.5	278.7
62.5°	304.2	301.0	264.8	240.1	238.4
65°	265.6	253.2	222.8	199.8	201.5
67.5°	223.6	211.3	185.0	164.5	171.0
70°	187.5	171.0	151.3	134.0	143.9
72.5°	153.7	136.5	121.7	109.4	118.4
75°	123.4	107.7	94.6	88.0	96.2
77.5°	103.6	87.2	71.5	68.2	78.1
80°	81.4	72.4	55.1	51.0	57.6
82.5°	65.8	61.6	46.1	36.2	39.4
85°	53.4	52.7	37.9	27.1	22.2
87.5°	42.8	45.3	32.1	20.5	6.6
90°	34.5	38.7	26.3	14.0	0.8
92.5°	29.6	32.1	21.4	6.6	0.8
95°	23.9	23.9	14.8	0.8	0.8
97.5°	18.1	16.5	5.7	0.8	0.8
100°	10.7	8.2	0.8	0.8	0.8
102.5°	4.9	2.5	0.8	0.8	0.8
105°	1.7	1.7	0.8	0.8	0.8
107.5°	1.7	1.7	1.7	0.8	0.8
110°	1.7	1.7	1.7	0.8	0.8



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CANDELA DISTRIBUTION (continued):

	0°	22.5°	45°	67.5°	90°
112.5°	1.7	1.7	1.7	1.7	0.8
115°	1.7	1.7	1.7	1.7	1.7
117.5°	1.7	1.7	1.7	1.7	1.7
120°	1.7	1.7	1.7	1.7	1.7
122.5°	2.5	1.7	1.7	1.7	1.7
125°	2.5	2.5	2.5	1.7	1.7
127.5°	2.5	2.5	2.5	2.5	2.5
130°	2.5	2.5	2.5	2.5	2.5
132.5°	2.5	2.5	2.5	2.5	2.5
135°	2.5	2.5	2.5	2.5	2.5
137.5°	2.5	2.5	2.5	2.5	2.5
140°	2.5	2.5	2.5	2.5	2.5
142.5°	2.5	2.5	2.5	2.5	2.5
145°	2.5	3.3	2.5	2.5	2.5
147.5°	3.3	3.3	3.3	2.5	2.5
150°	3.3	3.3	3.3	2.5	2.5
152.5°	3.3	3.3	3.3	2.5	2.5
155°	3.3	3.3	3.3	2.5	2.5
157.5°	3.3	3.3	2.5	2.5	2.5
160°	3.3	3.3	2.5	2.5	2.5
162.5°	3.3	3.3	2.5	2.5	2.5
165°	3.3	2.5	2.5	2.5	2.5
167.5°	3.3	2.5	2.5	2.5	2.5
170°	2.5	2.5	2.5	2.5	2.5
172.5°	1.7	2.5	2.5	2.5	2.5
175°	1.7	2.5	2.5	3.3	3.3
177.5°	1.7	1.7	2.5	3.3	3.3
180°	2.5	2.5	2.5	2.5	2.5

(END OF REPORT)