

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: P382154

Luminaire Tested: **MWL-2-00-31-UNV-L830-EDD**

Issue Date: 12/2/2019

Test Information

Test Method: LM-79-08
Report Number: P382154
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-L830-EDD
Description: MWL 2FT MEDICAL LED FIXTURE
Light Source: -
Ballast/Driver: ELECTRONIC DRIVER

Summary

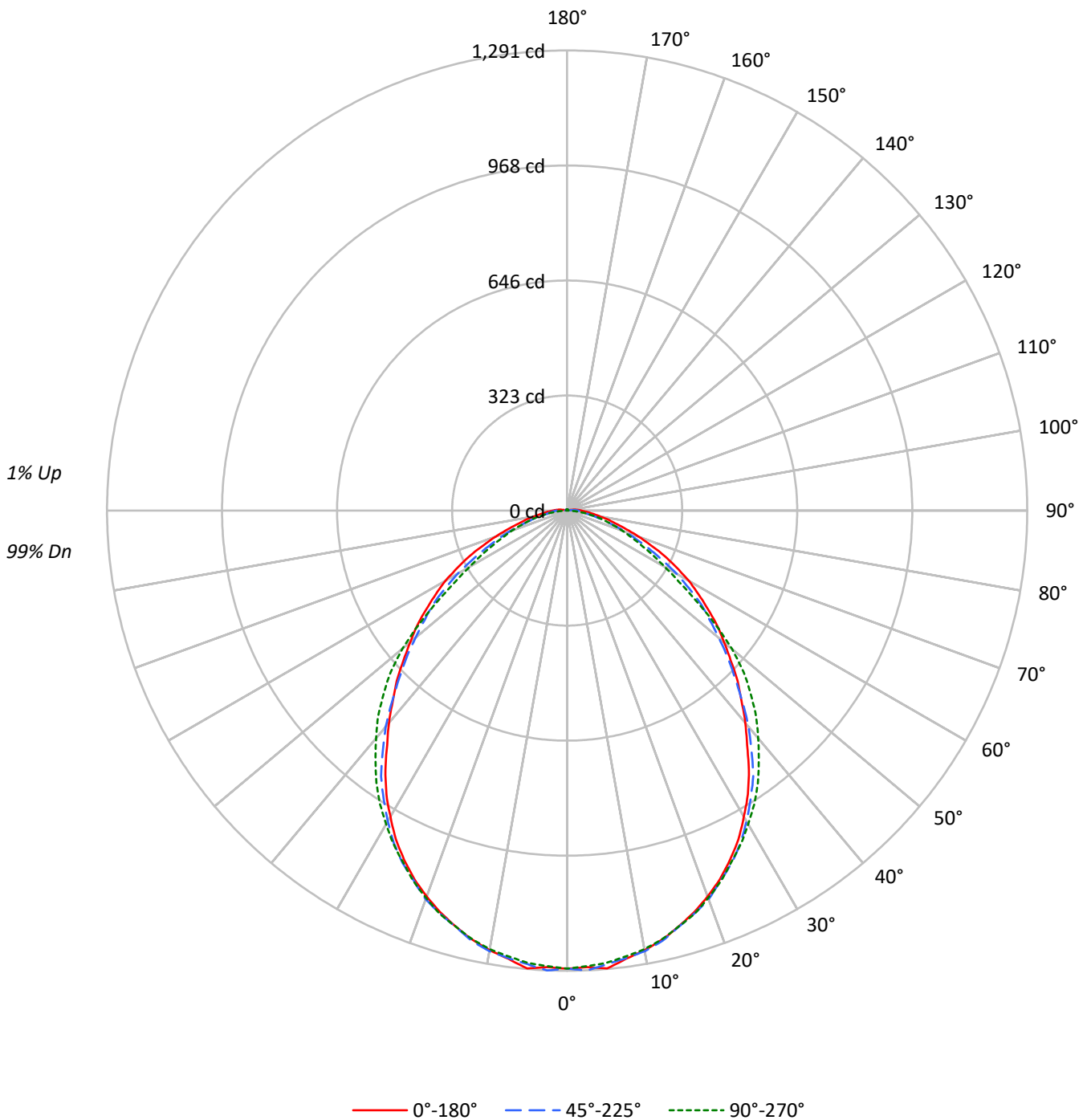
Lumens per Lamp: N/A
Luminaire Lumens: 2934.0 lumens
Efficiency: N/A
Efficacy: 89.5 lumens/watt
Spacing Criteria (0/90/45): 1.16 / 1.18 / 1.25
Luminous Opening: Rectangular w/ Sides (W: 0.42' x L: 2' x H: 0.42')
CIE Type: Direct

Input Watts (W): 32.8
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	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	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	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°	16597	16597	16597
5°	16420	15411	15185
10°	15842	14305	13931
15°	15304	13158	12743
20°	14723	12170	11659
25°	14046	11125	10583
30°	13203	10054	9606
35°	12232	8982	8651
40°	11163	7776	7645
45°	10219	6567	6652
50°	9245	5532	5530
55°	8362	4660	4105
60°	7479	3687	2993
65°	6371	2730	2224
70°	5113	1938	1647
75°	3934	1280	1152
80°	3151	797	729
85°	2661	592	300



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	121.2	4.1
10°-20°	341.1	11.6
20°-30°	500.0	17.0
30°-40°	566.8	19.3
40°-50°	528.7	18.0
50°-60°	414.5	14.1
60°-70°	258.3	8.8
70°-80°	124.0	4.2
80°-90°	50.0	1.7
90°-100°	16.7	0.6
100°-110°	2.1	0.1
110°-120°	1.8	0.1
120°-130°	2.1	0.1
130°-140°	2.2	0.1
140°-150°	1.9	0.1
150°-160°	1.5	0.1
160°-170°	0.9	0.0
170°-180°	0.3	0.0
0°-30°	962.2	32.8
0°-40°	1529.1	52.1
0°-60°	2472.2	84.3
0°-90°	2904.5	99.0
90°-120°	20.6	0.7
90°-150°	26.8	0.9
90°-180°	29.0	1.0
0°-180°	2934.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1285	1285	1285	1285	1285	
5°	1290	1279	1277	1276	1274	121
15°	1208	1209	1209	1206	1208	341
25°	1081	1082	1092	1089	1089	497
35°	889	889	910	928	933	554
45°	676	665	667	707	728	520
55°	482	481	459	454	443	432
65°	302	288	253	227	229	298
75°	140	122	107	100	109	154
85°	61	60	43	31	25	56
90°	39	44	30	16	1	22
95°	27	27	17	1	1	19
105°	2	2	1	1	1	4
115°	2	2	2	2	2	2
125°	3	3	3	2	2	2
135°	3	3	3	3	3	2
145°	3	4	3	3	3	2
155°	4	4	4	3	3	2
165°	4	3	3	3	3	1
175°	2	3	3	4	4	0
180°	3	3	3	3	3	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1284.9	1284.9	1284.9	1284.9	1284.9
2.5°	1282.1	1288.6	1291.4	1278.3	1279.3
5°	1289.5	1279.3	1277.4	1276.4	1273.6
7.5°	1268.0	1272.7	1266.2	1264.3	1261.5
10°	1252.2	1255.9	1255.0	1248.4	1249.4
12.5°	1232.6	1236.3	1236.3	1228.8	1231.6
15°	1208.3	1209.2	1209.2	1206.4	1208.3
17.5°	1182.1	1185.9	1185.9	1186.8	1186.8
20°	1152.3	1157.9	1160.7	1156.0	1156.9
22.5°	1119.6	1120.5	1124.2	1117.7	1126.1
25°	1081.3	1082.2	1091.6	1088.8	1088.8
27.5°	1040.2	1040.2	1052.3	1049.5	1055.1
30°	991.7	1000.1	1006.6	1020.6	1015.9
32.5°	944.0	948.7	958.0	968.3	976.7
35°	888.9	888.9	910.4	928.2	932.8
37.5°	829.2	831.0	849.7	876.8	883.3
40°	777.8	774.1	791.8	827.3	833.8
42.5°	723.7	718.1	727.4	770.4	785.3
45°	676.0	664.8	666.7	706.9	728.3
47.5°	622.8	619.1	611.6	638.7	672.3
50°	574.3	566.8	555.6	578.0	603.2
52.5°	531.3	524.8	504.2	517.3	522.9
55°	481.8	480.9	459.4	453.8	442.6
57.5°	437.0	435.1	404.3	394.0	372.6
60°	394.0	387.5	353.9	327.7	316.5
62.5°	345.5	341.8	300.7	272.7	270.8
65°	301.6	287.6	253.0	226.9	228.8
67.5°	254.0	240.0	210.1	186.8	194.2
70°	212.9	194.2	171.8	152.2	163.4
72.5°	174.6	155.0	138.2	124.2	134.5
75°	140.1	122.3	107.4	99.9	109.2
77.5°	117.7	99.0	81.2	77.5	88.7
80°	92.4	82.2	62.6	57.9	65.4
82.5°	74.7	70.0	52.3	41.1	44.8
85°	60.7	59.8	43.0	30.8	25.2
87.5°	48.6	51.4	36.4	23.3	7.5
90°	39.2	43.9	29.9	15.9	0.9
92.5°	33.6	36.4	24.3	7.5	0.9
95°	27.1	27.1	16.8	0.9	0.9
97.5°	20.5	18.7	6.5	0.9	0.9
100°	12.1	9.3	0.9	0.9	0.9
102.5°	5.6	2.8	0.9	0.9	0.9
105°	1.9	1.9	0.9	0.9	0.9
107.5°	1.9	1.9	1.9	0.9	0.9
110°	1.9	1.9	1.9	0.9	0.9



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CANDELA DISTRIBUTION (continued):

	0°	22.5°	45°	67.5°	90°
112.5°	1.9	1.9	1.9	1.9	0.9
115°	1.9	1.9	1.9	1.9	1.9
117.5°	1.9	1.9	1.9	1.9	1.9
120°	1.9	1.9	1.9	1.9	1.9
122.5°	2.8	1.9	1.9	1.9	1.9
125°	2.8	2.8	2.8	1.9	1.9
127.5°	2.8	2.8	2.8	2.8	2.8
130°	2.8	2.8	2.8	2.8	2.8
132.5°	2.8	2.8	2.8	2.8	2.8
135°	2.8	2.8	2.8	2.8	2.8
137.5°	2.8	2.8	2.8	2.8	2.8
140°	2.8	2.8	2.8	2.8	2.8
142.5°	2.8	2.8	2.8	2.8	2.8
145°	2.8	3.7	2.8	2.8	2.8
147.5°	3.7	3.7	3.7	2.8	2.8
150°	3.7	3.7	3.7	2.8	2.8
152.5°	3.7	3.7	3.7	2.8	2.8
155°	3.7	3.7	3.7	2.8	2.8
157.5°	3.7	3.7	2.8	2.8	2.8
160°	3.7	3.7	2.8	2.8	2.8
162.5°	3.7	3.7	2.8	2.8	2.8
165°	3.7	2.8	2.8	2.8	2.8
167.5°	3.7	2.8	2.8	2.8	2.8
170°	2.8	2.8	2.8	2.8	2.8
172.5°	1.9	2.8	2.8	2.8	2.8
175°	1.9	2.8	2.8	3.7	3.7
177.5°	1.9	1.9	2.8	3.7	3.7
180°	2.8	2.8	2.8	2.8	2.8

(END OF REPORT)