

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: P382148

Luminaire Tested: **MWL-2-00-38-UNV-L830-EDD**

Issue Date: 12/2/2019

Test Information

Test Method: LM-79-08
Report Number: P382148
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-1910-565-25)
Test Lab: INNOVATION CENTER
Issue Date: 12/2/2019
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: FAIL-SAFE
Catalog Number: MWL-2-00-38-UNV-L830-EDD
Description: MWL 2FT MEDICAL LED FIXTURE
Light Source: -
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 3594.0 lumens
Efficiency: N/A
Efficacy: 85.0 lumens/watt
Spacing Criteria (0/90/45): 1.15 / 1.18 / 1.24
Luminous Opening: Rectangular w/ Sides (W: 0.42' x L: 2' x H: 0.42')
CIE Type: Direct

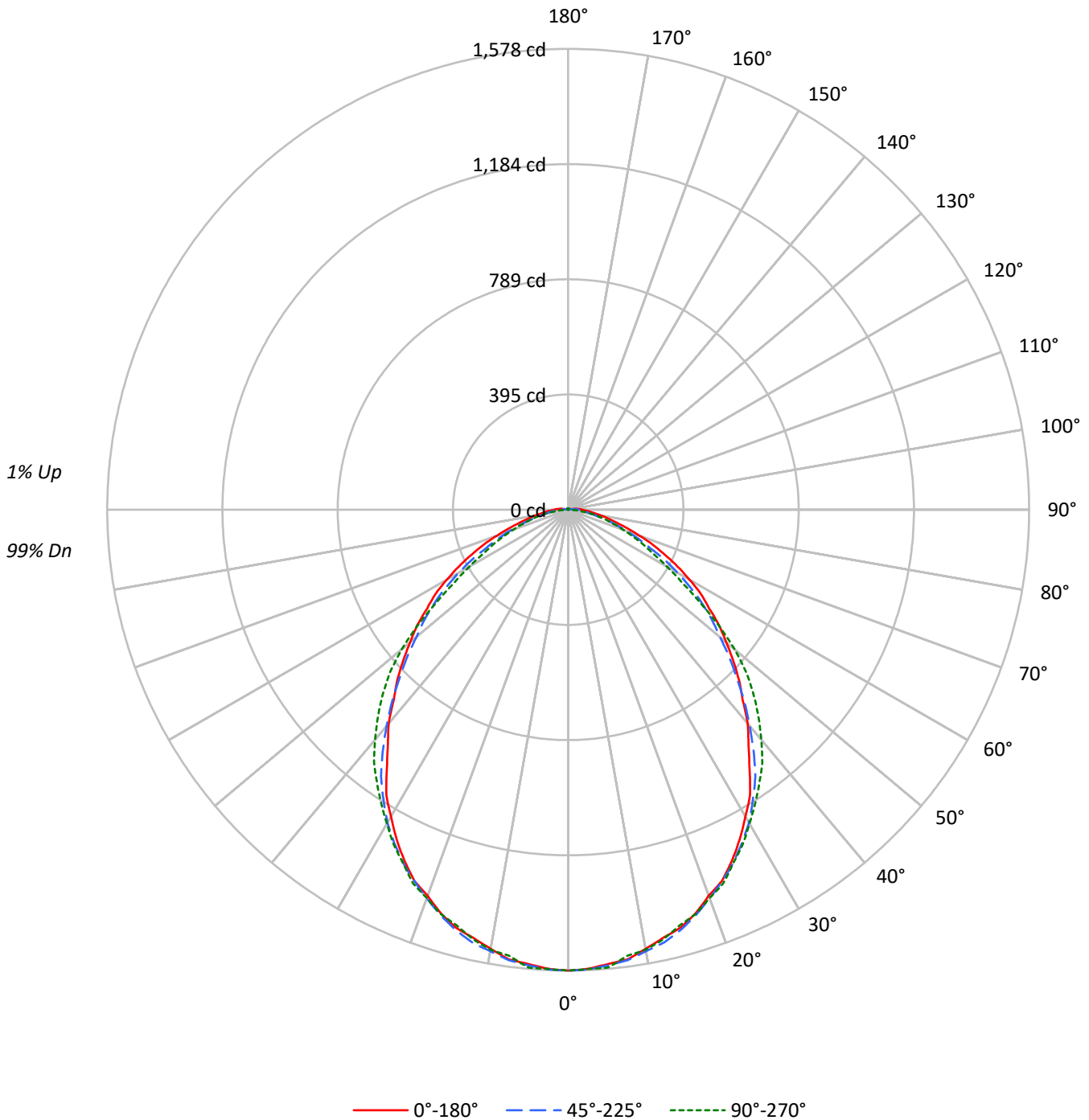
Input Watts (W): 42.3
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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	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	77	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	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°	20386	20386	20386
5°	19884	18895	18762
10°	19317	17501	17057
15°	18771	16209	15542
20°	17971	14845	14259
25°	17227	13611	12989
30°	16152	12359	11736
35°	14882	11020	10584
40°	13725	9493	9427
45°	12508	8040	8206
50°	11351	6751	6816
55°	10228	5683	5058
60°	9112	4504	3709
65°	7715	3326	2759
70°	6235	2402	2015
75°	4824	1580	1418
80°	3853	975	895
85°	3235	732	367



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	148.4	4.1
10°-20°	417.6	11.6
20°-30°	612.5	17.0
30°-40°	694.2	19.3
40°-50°	647.7	18.0
50°-60°	508.5	14.1
60°-70°	316.3	8.8
70°-80°	152.0	4.2
80°-90°	61.0	1.7
90°-100°	20.3	0.6
100°-110°	2.4	0.1
110°-120°	2.2	0.1
120°-130°	2.5	0.1
130°-140°	2.7	0.1
140°-150°	2.4	0.1
150°-160°	1.9	0.1
160°-170°	1.0	0.0
170°-180°	0.3	0.0
0°-30°	1178.6	32.8
0°-40°	1872.8	52.1
0°-60°	3029.0	84.3
0°-90°	3558.2	99.0
90°-120°	24.8	0.7
90°-150°	32.5	0.9
90°-180°	36.0	1.0
0°-180°	3594.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1578	1578	1578	1578	1578	
5°	1562	1564	1566	1563	1574	148
15°	1482	1480	1490	1480	1474	416
25°	1326	1323	1336	1335	1336	609
35°	1082	1086	1117	1136	1141	678
45°	827	814	816	866	898	638
55°	589	585	560	562	545	530
65°	365	351	308	276	284	364
75°	172	148	133	122	134	188
85°	74	72	53	37	31	68
90°	48	53	37	20	1	27
95°	33	34	20	1	1	23
105°	2	2	2	1	1	5
115°	3	2	2	2	2	2
125°	3	3	3	3	3	3
135°	4	4	4	4	4	3
145°	4	4	4	4	4	2
155°	5	5	4	4	4	2
165°	5	4	4	4	3	1
175°	2	3	4	4	4	0
180°	4	4	4	4	4	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1578.3	1578.3	1578.3	1578.3	1578.3
2.5°	1573.6	1569.0	1575.5	1569.9	1574.6
5°	1561.5	1564.3	1566.2	1563.4	1573.6
7.5°	1553.1	1555.0	1555.9	1551.2	1541.0
10°	1526.9	1538.2	1535.4	1531.6	1529.8
12.5°	1501.7	1505.5	1517.6	1509.2	1506.4
15°	1482.1	1480.3	1489.6	1480.3	1473.7
17.5°	1449.4	1445.7	1455.0	1455.0	1451.3
20°	1406.5	1415.8	1415.8	1418.6	1414.9
22.5°	1375.7	1373.8	1376.6	1380.3	1385.9
25°	1326.2	1323.4	1335.5	1334.6	1336.4
27.5°	1272.0	1270.1	1287.9	1291.6	1293.5
30°	1213.2	1217.8	1237.4	1240.2	1241.2
32.5°	1159.0	1155.3	1176.7	1192.6	1191.7
35°	1081.5	1086.1	1117.0	1135.6	1141.2
37.5°	1013.3	1017.0	1042.2	1079.6	1091.7
40°	956.3	945.1	966.6	1011.4	1028.2
42.5°	883.5	878.8	892.8	941.4	964.7
45°	827.4	814.4	816.2	865.7	898.4
47.5°	766.7	749.9	748.1	789.2	829.3
50°	705.1	696.7	678.0	707.9	743.4
52.5°	651.9	640.7	620.1	637.9	648.1
55°	589.3	584.6	560.3	562.2	545.4
57.5°	539.8	533.3	496.8	481.0	459.5
60°	480.0	472.6	432.4	403.5	392.2
62.5°	423.1	414.7	371.7	334.3	330.6
65°	365.2	351.2	308.2	276.4	283.9
67.5°	312.9	291.4	258.7	229.7	240.0
70°	259.6	236.3	212.9	188.7	199.9
72.5°	212.0	190.5	170.9	154.1	164.4
75°	171.8	148.5	132.6	122.3	134.5
77.5°	141.0	121.4	99.0	95.3	106.5
80°	113.0	100.9	76.6	71.0	80.3
82.5°	90.6	85.0	63.5	49.5	53.2
85°	73.8	71.9	53.2	37.4	30.8
87.5°	58.8	62.6	44.8	29.0	9.3
90°	47.6	53.2	37.4	19.6	0.9
92.5°	41.1	43.9	29.9	8.4	0.9
95°	32.7	33.6	19.6	0.9	0.9
97.5°	25.2	22.4	8.4	0.9	0.9
100°	14.9	10.3	1.9	0.9	0.9
102.5°	5.6	3.7	0.9	0.9	0.9
105°	1.9	1.9	1.9	0.9	0.9
107.5°	1.9	1.9	1.9	1.9	0.9
110°	1.9	1.9	1.9	1.9	1.9



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CANDELA DISTRIBUTION (continued):

	0°	22.5°	45°	67.5°	90°
112.5°	1.9	1.9	1.9	1.9	1.9
115°	2.8	1.9	1.9	1.9	1.9
117.5°	2.8	2.8	2.8	1.9	1.9
120°	2.8	2.8	2.8	2.8	2.8
122.5°	2.8	2.8	2.8	2.8	2.8
125°	2.8	2.8	2.8	2.8	2.8
127.5°	2.8	2.8	2.8	2.8	2.8
130°	3.7	2.8	2.8	2.8	2.8
132.5°	3.7	3.7	2.8	3.7	3.7
135°	3.7	3.7	3.7	3.7	3.7
137.5°	3.7	3.7	3.7	3.7	3.7
140°	3.7	3.7	3.7	3.7	3.7
142.5°	3.7	3.7	3.7	3.7	3.7
145°	3.7	3.7	3.7	3.7	3.7
147.5°	3.7	3.7	3.7	3.7	3.7
150°	4.7	4.7	4.7	3.7	3.7
152.5°	4.7	4.7	4.7	3.7	3.7
155°	4.7	4.7	3.7	3.7	3.7
157.5°	4.7	4.7	3.7	3.7	3.7
160°	4.7	4.7	3.7	3.7	2.8
162.5°	4.7	3.7	3.7	3.7	2.8
165°	4.7	3.7	3.7	3.7	2.8
167.5°	3.7	3.7	3.7	2.8	2.8
170°	3.7	3.7	2.8	3.7	3.7
172.5°	2.8	3.7	2.8	3.7	3.7
175°	1.9	2.8	3.7	3.7	3.7
177.5°	2.8	2.8	3.7	4.7	4.7
180°	3.7	3.7	3.7	3.7	3.7

(END OF REPORT)