

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: P392629

Luminaire Tested: **MWL-4-00-33-UNV-L835-EDD**

Issue Date: 12/2/2019

Test Information

Test Method: LM-79-08
Report Number: P392629
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-1910-565-5)
Test Lab: INNOVATION CENTER
Issue Date: 12/2/2019
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: FAIL-SAFE
Catalog Number: MWL-4-00-33-UNV-L835-EDD
Description: MWL 4FT MEDICAL LED FIXTURE
Light Source: -
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 3278.9 lumens
Efficiency: N/A
Efficacy: 97.3 lumens/watt
Spacing Criteria (0/90/45): 1.16 / 1.18 / 1.25
Luminous Opening: Rectangular w/ Sides (W: 0.42' x L: 4' x H: 0.42')
CIE Type: Direct

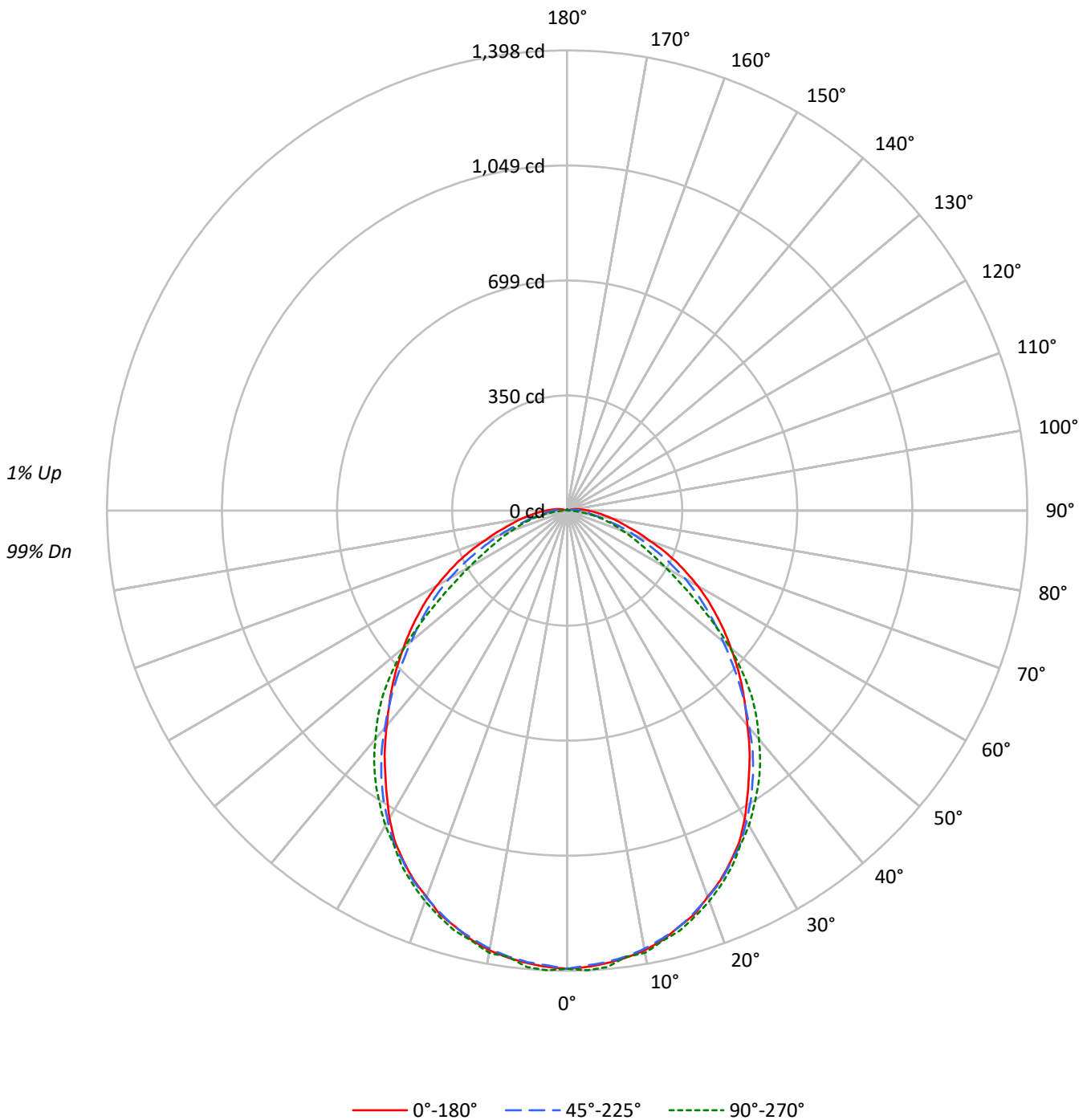
Input Watts (W): 33.7
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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	110	110	110	105	105	105	101	101	101	99				
1	109	105	101	97	106	102	99	95	98	95	92	94	91	89	90	88	86	84				
2	100	92	86	80	97	90	84	79	87	82	77	83	79	75	80	77	74	71				
3	92	82	74	68	89	80	73	67	77	71	66	74	69	65	71	67	63	61				
4	84	73	65	58	82	72	64	58	69	62	57	67	61	56	64	59	55	53				
5	78	66	57	51	76	65	57	51	62	55	50	60	54	49	58	53	49	47				
6	72	60	51	45	70	59	50	45	57	49	44	55	48	44	53	48	43	41				
7	67	54	46	40	65	53	45	40	52	45	39	50	44	39	49	43	39	37				
8	63	50	41	36	61	49	41	36	48	40	35	46	40	35	45	39	35	33				
9	59	46	38	32	57	45	38	32	44	37	32	43	36	32	42	36	32	30				
10	55	42	35	30	54	42	34	29	41	34	29	40	33	29	39	33	29	27				

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	8990	8990	8990
5°	8867	8358	8298
10°	8736	7791	7606
15°	8517	7246	6967
20°	8267	6692	6360
25°	7990	6152	5781
30°	7593	5599	5224
35°	7086	5016	4700
40°	6608	4391	4155
45°	6204	3786	3614
50°	5799	3218	2956
55°	5424	2737	2211
60°	5013	2267	1631
65°	4531	1764	1213
70°	3911	1304	906
75°	3426	896	669
80°	3240	579	428
85°	3257	441	193



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	131.1	4.0
10°-20°	370.0	11.3
20°-30°	543.3	16.6
30°-40°	616.9	18.8
40°-50°	581.0	17.7
50°-60°	463.3	14.1
60°-70°	305.4	9.3
70°-80°	158.4	4.8
80°-90°	67.3	2.1
90°-100°	25.8	0.8
100°-110°	5.7	0.2
110°-120°	2.1	0.1
120°-130°	2.3	0.1
130°-140°	2.1	0.1
140°-150°	1.8	0.1
150°-160°	1.3	0.0
160°-170°	0.8	0.0
170°-180°	0.3	0.0
0°-30°	1044.4	31.9
0°-40°	1661.3	50.7
0°-60°	2705.6	82.5
0°-90°	3236.8	98.7
90°-120°	33.6	1.0
90°-150°	39.8	1.2
90°-180°	42.0	1.3
0°-180°	3278.9	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1392	1392	1392	1392	1392	
5°	1380	1380	1377	1386	1392	131
15°	1309	1314	1310	1316	1321	369
25°	1176	1176	1178	1190	1190	540
35°	964	967	984	1012	1014	604
45°	750	737	738	771	791	579
55°	553	539	514	499	477	495
65°	363	352	309	260	250	358
75°	191	167	141	118	127	207
85°	96	79	59	38	32	88
90°	64	56	40	22	1	35
95°	41	41	25	4	1	31
105°	12	9	2	1	1	14
115°	3	2	2	2	2	3
125°	3	3	3	2	2	3
135°	3	3	3	3	2	2
145°	3	3	3	3	2	2
155°	3	3	3	3	3	1
165°	3	3	3	3	3	1
175°	2	3	3	3	3	0
180°	3	3	3	3	3	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1392.0	1392.0	1392.0	1392.0	1392.0
2.5°	1388.0	1385.1	1383.1	1390.0	1397.8
5°	1380.2	1380.2	1377.2	1386.1	1392.0
7.5°	1370.3	1372.3	1366.4	1374.3	1367.4
10°	1356.6	1355.6	1351.6	1360.5	1364.4
12.5°	1336.9	1332.0	1332.0	1337.9	1338.9
15°	1309.4	1314.3	1310.4	1316.3	1321.2
17.5°	1285.8	1286.8	1281.9	1286.8	1292.7
20°	1248.4	1251.4	1250.4	1261.2	1262.2
22.5°	1216.0	1218.0	1218.9	1219.9	1227.8
25°	1175.7	1175.7	1177.7	1190.4	1189.5
27.5°	1133.4	1131.5	1140.3	1148.2	1142.3
30°	1079.4	1081.3	1089.2	1107.9	1104.9
32.5°	1020.4	1028.2	1039.0	1063.6	1058.7
35°	964.3	967.3	984.0	1012.5	1013.5
37.5°	910.3	905.4	926.0	956.5	963.4
40°	852.3	853.3	862.1	899.5	906.3
42.5°	800.2	790.3	799.2	836.5	851.3
45°	750.0	737.3	738.2	770.7	791.3
47.5°	699.9	684.2	676.3	702.9	719.6
50°	648.8	634.0	618.3	635.0	644.9
52.5°	601.6	584.9	566.2	568.2	559.3
55°	553.4	538.7	514.1	499.4	476.8
57.5°	506.3	495.4	464.0	433.5	403.0
60°	458.1	449.2	412.9	368.6	345.0
62.5°	408.9	402.1	359.8	308.7	291.0
65°	362.7	351.9	308.7	259.5	249.7
67.5°	314.6	301.8	260.5	216.3	214.3
70°	266.4	253.6	217.2	178.9	179.9
72.5°	229.0	207.4	177.9	147.5	152.4
75°	190.7	167.1	140.6	118.0	126.8
77.5°	163.2	136.6	109.1	94.4	100.3
80°	138.6	111.1	84.5	70.8	76.7
82.5°	117.0	93.4	69.8	50.1	53.1
85°	96.3	78.6	59.0	38.3	32.4
87.5°	78.6	65.9	48.2	29.5	8.8
90°	63.9	56.0	40.3	21.6	1.0
92.5°	52.1	48.2	31.5	12.8	1.0
95°	41.3	41.3	24.6	3.9	1.0
97.5°	34.4	33.4	16.7	1.0	1.0
100°	26.5	24.6	8.8	1.0	1.0
102.5°	18.7	15.7	2.9	1.0	1.0
105°	11.8	8.8	2.0	1.0	1.0
107.5°	5.9	2.9	2.0	1.0	1.0
110°	2.9	2.0	2.0	2.0	1.0



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CANDELA DISTRIBUTION (continued):

	0°	22.5°	45°	67.5°	90°
112.5°	2.9	2.0	2.0	2.0	1.0
115°	2.9	2.0	2.0	2.0	2.0
117.5°	2.9	2.9	2.0	2.0	2.0
120°	2.9	2.9	2.0	2.0	2.0
122.5°	2.9	2.9	2.9	2.0	2.0
125°	2.9	2.9	2.9	2.0	2.0
127.5°	2.9	2.9	2.9	2.0	2.0
130°	2.9	2.9	2.9	2.0	2.0
132.5°	2.9	2.9	2.9	2.9	2.0
135°	2.9	2.9	2.9	2.9	2.0
137.5°	2.9	2.9	2.9	2.9	2.0
140°	2.9	2.9	2.9	2.9	2.0
142.5°	2.9	2.9	2.9	2.9	2.0
145°	2.9	2.9	2.9	2.9	2.0
147.5°	2.9	2.9	2.9	2.9	2.0
150°	2.9	2.9	2.9	2.9	2.0
152.5°	2.9	2.9	2.9	2.9	2.0
155°	2.9	2.9	2.9	2.9	2.9
157.5°	2.9	2.9	2.9	2.9	2.9
160°	2.9	2.9	2.9	2.9	2.9
162.5°	2.9	2.9	2.9	2.9	2.9
165°	2.9	2.9	2.9	2.9	2.9
167.5°	2.9	2.9	2.9	2.9	2.9
170°	2.0	2.0	2.9	2.9	2.9
172.5°	2.0	2.9	2.9	2.9	2.9
175°	2.0	2.9	2.9	2.9	2.9
177.5°	2.0	2.9	2.9	2.9	2.9
180°	2.9	2.9	2.9	2.9	2.9

(END OF REPORT)