

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: P392630

Luminaire Tested: **MWL-4-00-33-UNV-L840-EDD**

Issue Date: 12/2/2019

Test Information

Test Method: LM-79-08
Report Number: P392630
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-L840-EDD
Description: MWL 4FT MEDICAL LED FIXTURE
Light Source: -
Ballast/Driver: ELECTRONIC DRIVER

Summary

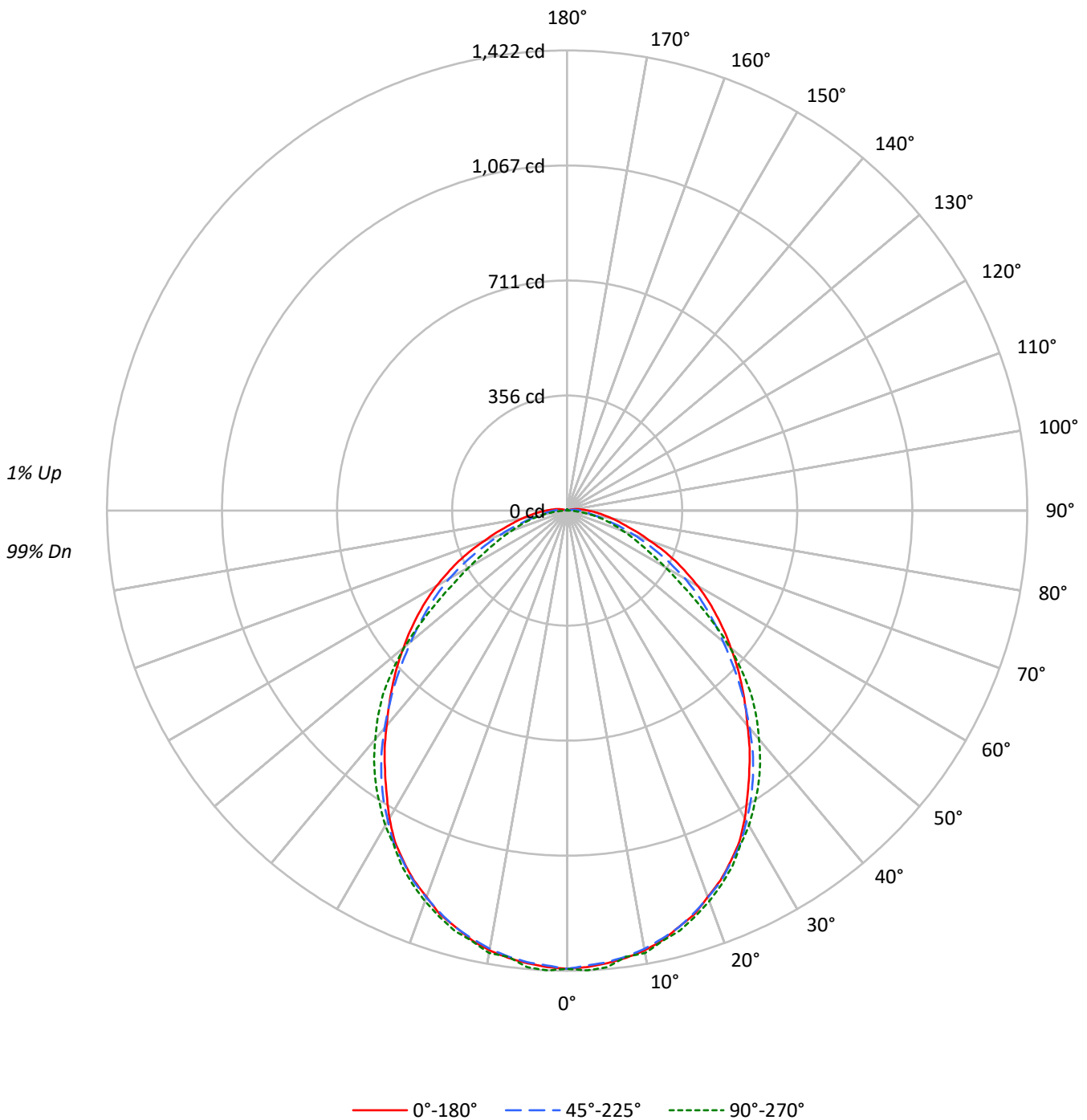
Lumens per Lamp: N/A
Luminaire Lumens: 3335.9 lumens
Efficiency: N/A
Efficacy: 99.0 lumens/watt
Spacing Criteria (0/90/45): 1.16 / 1.18 / 1.25
Luminous Opening: Rectangular w/ Sides (W: 0.42' x L: 4' x H: 0.42')
CIE Type: Direct

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	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°	9146	9146	9146
5°	9021	8503	8442
10°	8887	7927	7739
15°	8665	7371	7088
20°	8410	6808	6470
25°	8129	6259	5881
30°	7724	5696	5315
35°	7209	5103	4781
40°	6723	4468	4227
45°	6312	3852	3677
50°	5900	3274	3008
55°	5519	2785	2249
60°	5099	2306	1659
65°	4609	1794	1234
70°	3979	1327	922
75°	3486	912	680
80°	3297	589	435
85°	3315	448	197



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	133.4	4.0
10°-20°	376.4	11.3
20°-30°	552.8	16.6
30°-40°	627.6	18.8
40°-50°	591.1	17.7
50°-60°	471.4	14.1
60°-70°	310.7	9.3
70°-80°	161.2	4.8
80°-90°	68.5	2.1
90°-100°	26.3	0.8
100°-110°	5.8	0.2
110°-120°	2.2	0.1
120°-130°	2.3	0.1
130°-140°	2.2	0.1
140°-150°	1.8	0.1
150°-160°	1.4	0.0
160°-170°	0.8	0.0
170°-180°	0.3	0.0
0°-30°	1062.5	31.9
0°-40°	1690.1	50.7
0°-60°	2752.6	82.5
0°-90°	3293.0	98.7
90°-120°	34.2	1.0
90°-150°	40.5	1.2
90°-180°	43.0	1.3
0°-180°	3335.9	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1416	1416	1416	1416	1416	
5°	1404	1404	1401	1410	1416	133
15°	1332	1337	1333	1339	1344	376
25°	1196	1196	1198	1211	1210	550
35°	981	984	1001	1030	1031	614
45°	763	750	751	784	805	589
55°	563	548	523	508	485	504
65°	369	358	314	264	254	364
75°	194	170	143	120	129	211
85°	98	80	60	39	33	89
90°	65	57	41	22	1	36
95°	42	42	25	4	1	32
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	



TEST NUMBER: P392630

CATALOG NUMBER: MWL-4-00-33-UNV-L840-EDD

CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1416.1	1416.1	1416.1	1416.1	1416.1
2.5°	1412.1	1409.1	1407.1	1414.1	1422.1
5°	1404.1	1404.1	1401.1	1410.1	1416.1
7.5°	1394.1	1396.1	1390.1	1398.1	1391.1
10°	1380.1	1379.1	1375.1	1384.1	1388.1
12.5°	1360.1	1355.1	1355.1	1361.1	1362.1
15°	1332.1	1337.1	1333.1	1339.1	1344.1
17.5°	1308.1	1309.1	1304.1	1309.1	1315.1
20°	1270.1	1273.1	1272.1	1283.1	1284.1
22.5°	1237.1	1239.1	1240.1	1241.1	1249.1
25°	1196.1	1196.1	1198.1	1211.1	1210.1
27.5°	1153.1	1151.1	1160.1	1168.1	1162.1
30°	1098.1	1100.1	1108.1	1127.1	1124.1
32.5°	1038.1	1046.1	1057.1	1082.1	1077.1
35°	981.1	984.1	1001.1	1030.1	1031.1
37.5°	926.1	921.1	942.1	973.1	980.1
40°	867.1	868.1	877.1	915.1	922.1
42.5°	814.1	804.1	813.1	851.1	866.1
45°	763.1	750.1	751.1	784.1	805.1
47.5°	712.1	696.1	688.1	715.1	732.1
50°	660.1	645.1	629.1	646.1	656.1
52.5°	612.1	595.1	576.1	578.1	569.1
55°	563.1	548.1	523.1	508.1	485.1
57.5°	515.1	504.1	472.0	441.0	410.0
60°	466.0	457.0	420.0	375.0	351.0
62.5°	416.0	409.0	366.0	314.0	296.0
65°	369.0	358.0	314.0	264.0	254.0
67.5°	320.0	307.0	265.0	220.0	218.0
70°	271.0	258.0	221.0	182.0	183.0
72.5°	233.0	211.0	181.0	150.0	155.0
75°	194.0	170.0	143.0	120.0	129.0
77.5°	166.0	139.0	111.0	96.0	102.0
80°	141.0	113.0	86.0	72.0	78.0
82.5°	119.0	95.0	71.0	51.0	54.0
85°	98.0	80.0	60.0	39.0	33.0
87.5°	80.0	67.0	49.0	30.0	9.0
90°	65.0	57.0	41.0	22.0	1.0
92.5°	53.0	49.0	32.0	13.0	1.0
95°	42.0	42.0	25.0	4.0	1.0
97.5°	35.0	34.0	17.0	1.0	1.0
100°	27.0	25.0	9.0	1.0	1.0
102.5°	19.0	16.0	3.0	1.0	1.0
105°	12.0	9.0	2.0	1.0	1.0
107.5°	6.0	3.0	2.0	1.0	1.0
110°	3.0	2.0	2.0	2.0	1.0



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CANDELA DISTRIBUTION (continued):

	0°	22.5°	45°	67.5°	90°
112.5°	3.0	2.0	2.0	2.0	1.0
115°	3.0	2.0	2.0	2.0	2.0
117.5°	3.0	3.0	2.0	2.0	2.0
120°	3.0	3.0	2.0	2.0	2.0
122.5°	3.0	3.0	3.0	2.0	2.0
125°	3.0	3.0	3.0	2.0	2.0
127.5°	3.0	3.0	3.0	2.0	2.0
130°	3.0	3.0	3.0	2.0	2.0
132.5°	3.0	3.0	3.0	3.0	2.0
135°	3.0	3.0	3.0	3.0	2.0
137.5°	3.0	3.0	3.0	3.0	2.0
140°	3.0	3.0	3.0	3.0	2.0
142.5°	3.0	3.0	3.0	3.0	2.0
145°	3.0	3.0	3.0	3.0	2.0
147.5°	3.0	3.0	3.0	3.0	2.0
150°	3.0	3.0	3.0	3.0	2.0
152.5°	3.0	3.0	3.0	3.0	2.0
155°	3.0	3.0	3.0	3.0	3.0
157.5°	3.0	3.0	3.0	3.0	3.0
160°	3.0	3.0	3.0	3.0	3.0
162.5°	3.0	3.0	3.0	3.0	3.0
165°	3.0	3.0	3.0	3.0	3.0
167.5°	3.0	3.0	3.0	3.0	3.0
170°	2.0	2.0	3.0	3.0	3.0
172.5°	2.0	3.0	3.0	3.0	3.0
175°	2.0	3.0	3.0	3.0	3.0
177.5°	2.0	3.0	3.0	3.0	3.0
180°	3.0	3.0	3.0	3.0	3.0

(END OF REPORT)