

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: P392626

Luminaire Tested: **MWL-4-00-25-UNV-L835-EDD**

Issue Date: 12/2/2019

Test Information

Test Method: LM-79-08
Report Number: P392626
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-1910-565-6)
Test Lab: INNOVATION CENTER
Issue Date: 12/2/2019
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: FAIL-SAFE
Catalog Number: MWL-4-00-25-UNV-L835-EDD
Description: MWL 4FT MEDICAL LED FIXTURE
Light Source: -
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 2473.2 lumens
Efficiency: N/A
Efficacy: 106.6 lumens/watt
Spacing Criteria (0/90/45): 1.16 / 1.19 / 1.25
Luminous Opening: Rectangular w/ Sides (W: 0.42' x L: 4' x H: 0.42')
CIE Type: Direct

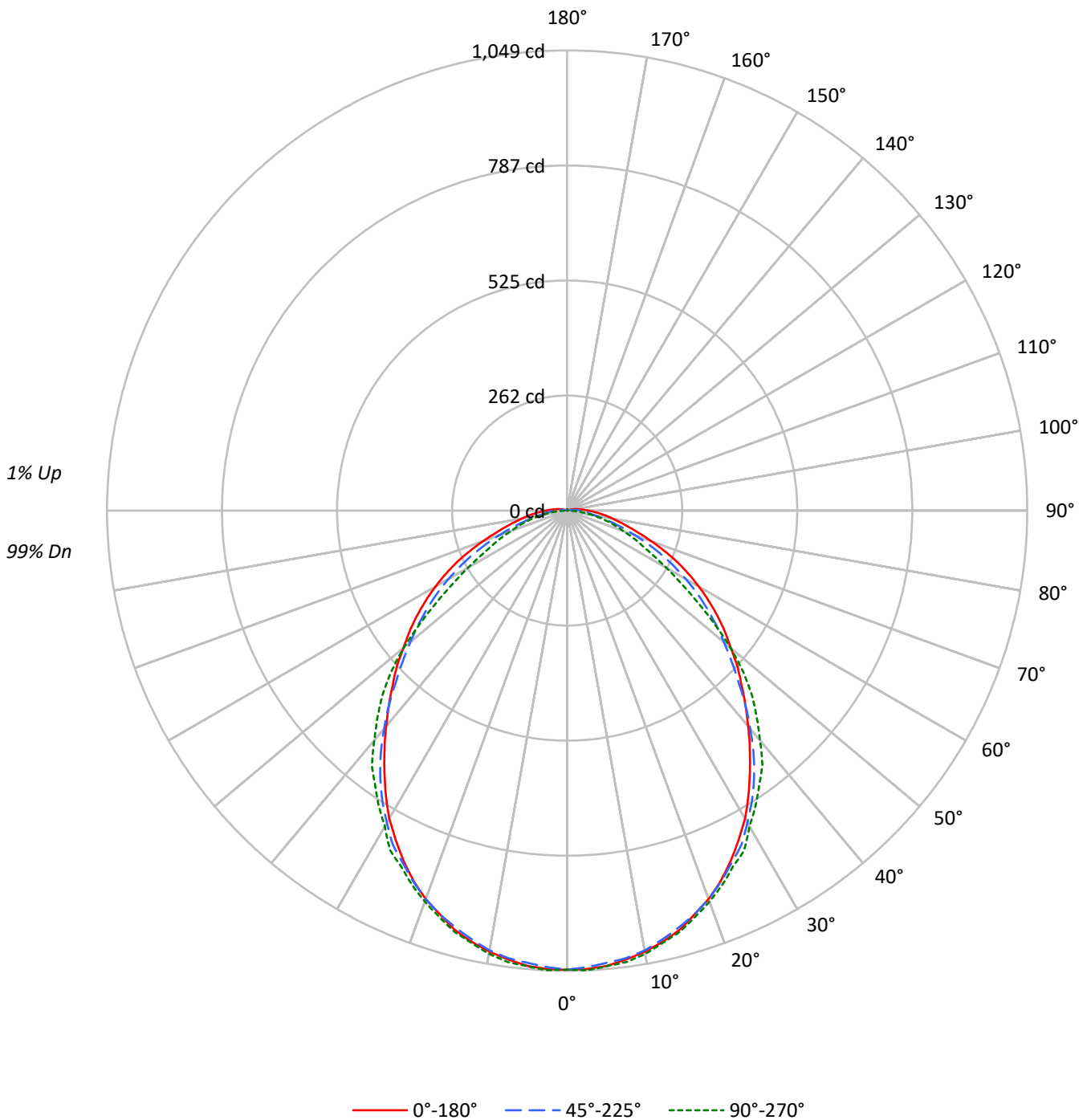
Input Watts (W): 23.2
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



TEST NUMBER: P392626

CATALOG NUMBER: MWL-4-00-25-UNV-L835-EDD

Luminous Intensity Polar Plot





TEST NUMBER: P392626

CATALOG NUMBER: MWL-4-00-25-UNV-L835-EDD

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	64	56	50	62	55	50	60	54	49	58	53	49	46
6	72	59	51	45	70	58	50	45	57	49	44	55	48	44	53	47	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	47	40	35	46	40	35	45	39	35	33
9	59	46	38	32	57	45	37	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°	6760	6760	6760
5°	6693	6280	6216
10°	6576	5869	5720
15°	6438	5440	5239
20°	6241	5044	4779
25°	5991	4631	4351
30°	5703	4223	3931
35°	5337	3787	3541
40°	4976	3309	3136
45°	4650	2833	2720
50°	4348	2430	2226
55°	4094	2072	1673
60°	3796	1716	1236
65°	3450	1359	917
70°	3001	991	683
75°	2631	683	503
80°	2460	445	323
85°	2493	330	141



TEST NUMBER: P392626

CATALOG NUMBER: MWL-4-00-25-UNV-L835-EDD

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	98.7	4.0
10°-20°	278.5	11.3
20°-30°	409.0	16.5
30°-40°	464.4	18.8
40°-50°	436.8	17.7
50°-60°	350.0	14.2
60°-70°	232.2	9.4
70°-80°	120.5	4.9
80°-90°	51.1	2.1
90°-100°	19.7	0.8
100°-110°	4.2	0.2
110°-120°	1.6	0.1
120°-130°	1.8	0.1
130°-140°	1.5	0.1
140°-150°	1.3	0.1
150°-160°	0.9	0.0
160°-170°	0.6	0.0
170°-180°	0.2	0.0
0°-30°	786.2	31.8
0°-40°	1250.7	50.6
0°-60°	2037.5	82.4
0°-90°	2441.3	98.7
90°-120°	25.5	1.0
90°-150°	30.2	1.2
90°-180°	32.0	1.3
0°-180°	2473.2	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1047	1047	1047	1047	1047	
5°	1042	1040	1035	1044	1043	99
15°	990	986	984	993	994	278
25°	882	882	886	894	895	405
35°	726	729	743	763	764	454
45°	562	554	552	581	596	435
55°	418	408	389	378	361	373
65°	276	268	238	195	189	273
75°	146	128	107	90	95	158
85°	74	59	44	30	24	67
90°	49	42	30	17	0	27
95°	31	30	19	4	1	23
105°	9	7	1	1	1	10
115°	2	2	2	1	1	2
125°	2	2	2	2	2	2
135°	2	2	2	2	2	2
145°	2	2	2	2	2	1
155°	2	2	2	2	2	1
165°	2	2	2	2	2	1
175°	1	2	2	2	3	0
180°	2	2	2	2	2	



TEST NUMBER: P392626

CATALOG NUMBER: MWL-4-00-25-UNV-L835-EDD

CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1046.7	1046.7	1046.7	1046.7	1046.7
2.5°	1045.7	1043.7	1041.8	1052.6	1048.6
5°	1041.8	1039.8	1034.9	1043.7	1042.7
7.5°	1031.9	1030.0	1029.0	1034.9	1037.8
10°	1021.1	1020.1	1018.2	1024.1	1026.0
12.5°	1006.4	1009.3	1001.5	1007.4	1009.3
15°	989.7	985.7	983.8	992.6	993.6
17.5°	965.1	968.0	965.1	971.0	971.0
20°	942.5	942.5	942.5	948.4	948.4
22.5°	914.0	916.9	916.0	920.9	923.8
25°	881.6	882.5	886.5	894.3	895.3
27.5°	846.2	850.1	859.9	868.8	873.7
30°	810.8	810.8	821.6	830.5	831.4
32.5°	769.5	769.5	784.3	799.0	799.0
35°	726.3	729.2	743.0	762.6	763.6
37.5°	684.0	682.1	697.8	720.4	731.2
40°	641.8	637.8	649.6	676.2	684.0
42.5°	601.5	594.6	601.5	628.0	639.8
45°	562.2	554.3	552.3	580.8	595.6
47.5°	526.8	516.0	508.1	526.8	544.5
50°	486.5	477.6	466.8	475.7	485.5
52.5°	453.1	442.3	427.5	428.5	421.6
55°	417.7	407.9	389.2	378.4	360.7
57.5°	382.3	375.4	350.9	328.3	305.6
60°	346.9	340.0	312.5	276.2	261.4
62.5°	311.5	306.6	274.2	232.9	220.1
65°	276.2	268.3	237.8	194.6	188.7
67.5°	238.8	231.0	200.5	164.1	163.1
70°	204.4	192.6	165.1	135.6	135.6
72.5°	173.0	158.2	134.6	112.0	116.0
75°	146.4	127.8	107.1	90.4	95.3
77.5°	123.8	104.2	83.5	70.8	76.7
80°	105.2	85.5	64.9	53.1	58.0
82.5°	89.4	70.8	53.1	37.3	40.3
85°	73.7	59.0	44.2	29.5	23.6
87.5°	59.9	50.1	36.4	22.6	7.9
90°	49.1	42.3	30.5	16.7	0.0
92.5°	39.3	36.4	24.6	9.8	1.0
95°	31.4	30.5	18.7	3.9	1.0
97.5°	24.6	25.6	12.8	1.0	1.0
100°	19.7	18.7	6.9	1.0	1.0
102.5°	13.8	11.8	2.0	1.0	1.0
105°	8.8	6.9	1.0	1.0	1.0
107.5°	3.9	2.0	1.0	1.0	1.0
110°	2.0	2.0	1.0	1.0	1.0



TEST NUMBER: P392626

CATALOG NUMBER: MWL-4-00-25-UNV-L835-EDD

CANDELA DISTRIBUTION (continued):

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

(END OF REPORT)