

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: P392462

Luminaire Tested: **MWL-2-00-17-UNV-L840-EDD**

Issue Date: 12/2/2019

**Test Information**

Test Method: LM-79-08  
Report Number: P392462  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-1910-565-29)  
Test Lab: INNOVATION CENTER  
Issue Date: 12/2/2019  
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)  
Product Line: FAIL-SAFE  
Catalog Number: MWL-2-00-17-UNV-L840-EDD  
Description: MWL 2FT MEDICAL LED FIXTURE  
Light Source: -  
Ballast/Driver: ELECTRONIC DRIVER

**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 1755.1 lumens  
Efficiency: N/A  
Efficacy: 105.7 lumens/watt  
Spacing Criteria (0/90/45): 1.15 / 1.17 / 1.24  
Luminous Opening: Rectangular w/ Sides (W: 0.42' x L: 2' x H: 0.42')  
CIE Type: Direct

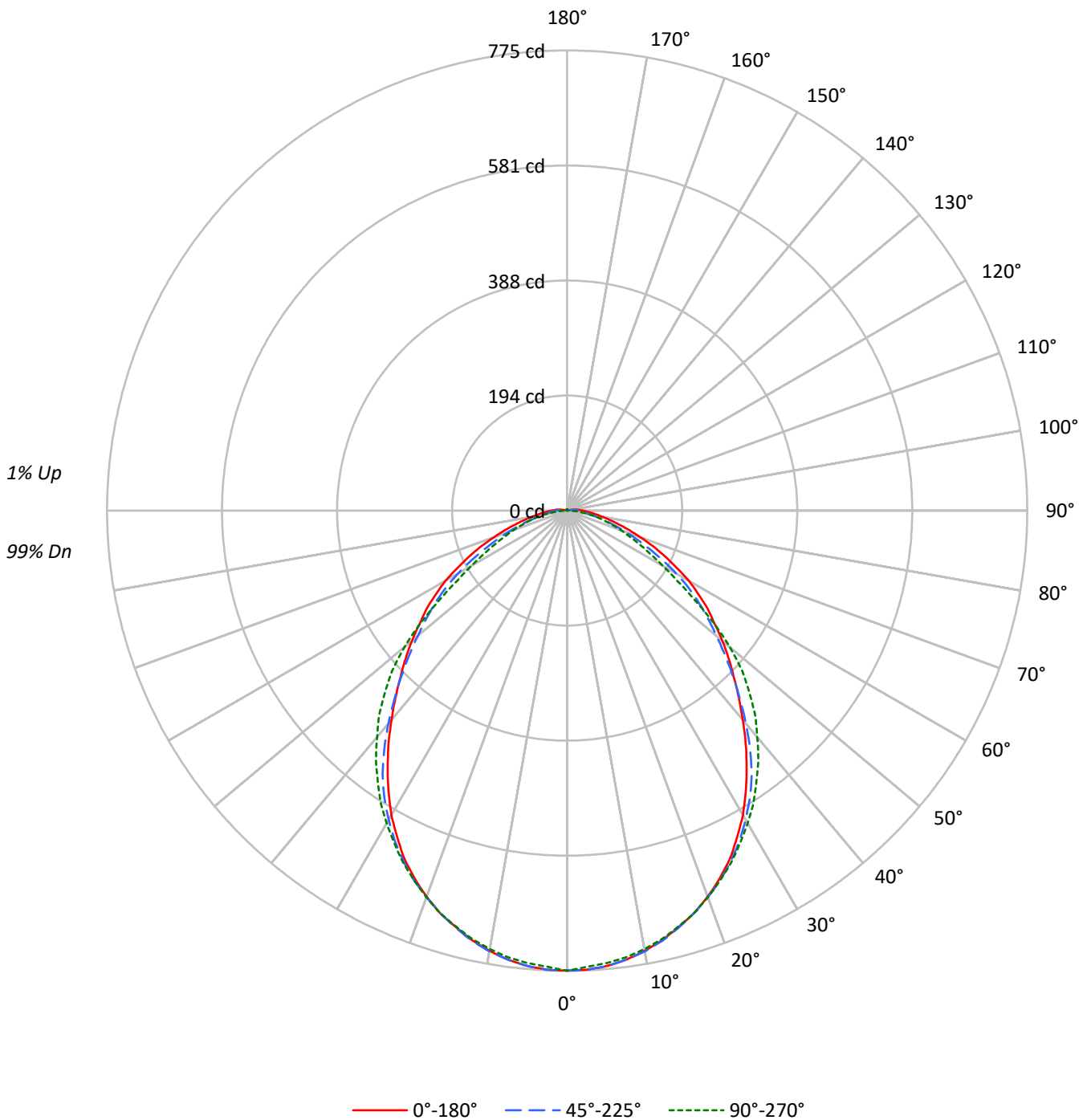
Input Watts (W): 16.6  
Input Voltage (V): NR  
Input Current (Ain): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 25 FT



TEST NUMBER: P392462

CATALOG NUMBER: MWL-2-00-17-UNV-L840-EDD

### Luminous Intensity Polar Plot





TEST NUMBER: P392462

CATALOG NUMBER: MWL-2-00-17-UNV-L840-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	111	111	111	106	106	106	101	101	101	99
1	109	105	101	98	107	103	99	96	98	95	93	94	92	90	91	89	87	85
2	100	93	87	81	98	91	85	80	87	82	78	84	80	76	81	77	75	72
3	92	83	75	69	90	81	74	68	78	72	67	75	70	66	72	68	64	62
4	85	74	66	59	83	72	65	59	70	63	58	67	62	57	65	60	56	54
5	79	66	58	52	76	65	57	51	63	56	51	61	55	50	59	54	50	48
6	73	60	52	46	71	59	51	45	57	50	45	56	49	45	54	48	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	36	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°	10009	10009	10009
5°	9804	9288	9120
10°	9525	8593	8361
15°	9194	7910	7645
20°	8840	7265	6983
25°	8416	6644	6356
30°	7882	6003	5749
35°	7252	5347	5157
40°	6602	4596	4566
45°	6002	3891	3964
50°	5489	3266	3282
55°	5016	2749	2430
60°	4499	2208	1759
65°	3824	1651	1302
70°	3146	1185	967
75°	2527	798	686
80°	2046	496	446
85°	1753	385	191



TEST NUMBER: P392462

CATALOG NUMBER: MWL-2-00-17-UNV-L840-EDD

**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	72.9	4.2
10°-20°	204.7	11.7
20°-30°	299.4	17.1
30°-40°	337.6	19.2
40°-50°	313.2	17.8
50°-60°	245.9	14.0
60°-70°	155.1	8.8
70°-80°	76.6	4.4
80°-90°	31.8	1.8
90°-100°	11.1	0.6
100°-110°	1.4	0.1
110°-120°	1.0	0.1
120°-130°	0.9	0.1
130°-140°	0.8	0.0
140°-150°	1.1	0.1
150°-160°	0.9	0.0
160°-170°	0.4	0.0
170°-180°	0.1	0.0
0°-30°	577.0	32.9
0°-40°	914.6	52.1
0°-60°	1473.8	84.0
0°-90°	1737.3	99.0
90°-120°	13.5	0.8
90°-150°	16.3	0.9
90°-180°	18.0	1.0
0°-180°	1755.1	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	775	775	775	775	775	
5°	770	770	770	767	765	73
15°	726	727	727	726	725	205
25°	648	649	652	653	654	297
35°	527	529	542	552	556	329
45°	397	394	395	419	434	307
55°	289	285	271	269	262	258
65°	181	175	153	135	134	180
75°	90	77	67	60	65	97
85°	40	38	28	19	16	37
90°	26	29	19	11	0	14
95°	18	19	11	1	0	12
105°	1	1	1	1	1	3
115°	1	1	1	1	1	1
125°	1	1	1	1	1	1
135°	1	1	1	1	1	1
145°	2	2	2	2	1	1
155°	2	2	2	2	1	1
165°	2	2	2	1	1	1
175°	1	1	2	2	2	0
180°	2	2	2	2	2	



TEST NUMBER: P392462

CATALOG NUMBER: MWL-2-00-17-UNV-L840-EDD

**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	774.9	774.9	774.9	774.9	774.9
2.5°	773.9	773.9	773.9	770.9	768.9
5°	769.9	769.9	769.9	766.9	764.9
7.5°	762.9	762.9	762.9	760.9	758.9
10°	752.9	753.9	753.9	751.9	749.9
12.5°	740.9	741.9	741.9	739.9	738.9
15°	725.9	726.9	726.9	725.9	724.9
17.5°	710.9	710.9	710.9	711.9	710.9
20°	691.9	692.9	692.9	693.9	692.9
22.5°	670.9	671.9	673.9	673.9	673.9
25°	647.9	648.9	651.9	652.9	653.9
27.5°	620.0	624.0	628.0	630.0	631.0
30°	592.0	595.0	601.0	607.0	608.0
32.5°	560.0	564.0	573.0	581.0	584.0
35°	527.0	529.0	542.0	552.0	556.0
37.5°	494.0	493.0	506.0	524.0	529.0
40°	460.0	458.0	468.0	492.0	498.0
42.5°	428.0	426.0	431.0	458.0	469.0
45°	397.0	394.0	395.0	419.0	434.0
47.5°	369.0	364.0	361.0	379.0	400.0
50°	341.0	336.0	328.0	341.0	358.0
52.5°	313.0	310.0	299.0	305.0	311.0
55°	289.0	285.0	271.0	269.0	262.0
57.5°	262.0	260.0	243.0	232.0	219.0
60°	237.0	232.0	212.0	196.0	186.0
62.5°	207.0	204.0	182.0	162.0	158.0
65°	181.0	175.0	153.0	135.0	134.0
67.5°	156.0	146.0	127.0	112.0	113.0
70°	131.0	120.0	105.0	92.0	96.0
72.5°	110.0	97.0	85.0	75.0	79.0
75°	90.0	77.0	67.0	60.0	65.0
77.5°	74.0	63.0	51.0	48.0	52.0
80°	60.0	52.0	39.0	36.0	40.0
82.5°	49.0	45.0	33.0	25.0	27.0
85°	40.0	38.0	28.0	19.0	16.0
87.5°	32.0	33.0	23.0	15.0	4.0
90°	26.0	29.0	19.0	11.0	0.0
92.5°	21.0	24.0	16.0	5.0	0.0
95°	18.0	19.0	11.0	1.0	0.0
97.5°	13.0	13.0	5.0	0.0	0.0
100°	8.0	7.0	1.0	0.0	0.0
102.5°	4.0	2.0	1.0	0.0	0.0
105°	1.0	1.0	1.0	1.0	1.0
107.5°	1.0	1.0	1.0	1.0	1.0
110°	1.0	1.0	1.0	1.0	1.0



TEST NUMBER: P392462

CATALOG NUMBER: MWL-2-00-17-UNV-L840-EDD

**CANDELA DISTRIBUTION (continued):**

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

(END OF REPORT)