

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: P392639

Luminaire Tested: **MWL-4-00-73-UNV-L840-EDD**

Issue Date: 12/2/2019

Test Information

Test Method: LM-79-08
Report Number: P392639
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-1910-565-1)
Test Lab: INNOVATION CENTER
Issue Date: 12/2/2019
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: FAIL-SAFE
Catalog Number: MWL-4-00-73-UNV-L840-EDD
Description: MWL 4FT MEDICAL LED FIXTURE
Light Source: -
Ballast/Driver: ELECTRONIC DRIVER

Summary

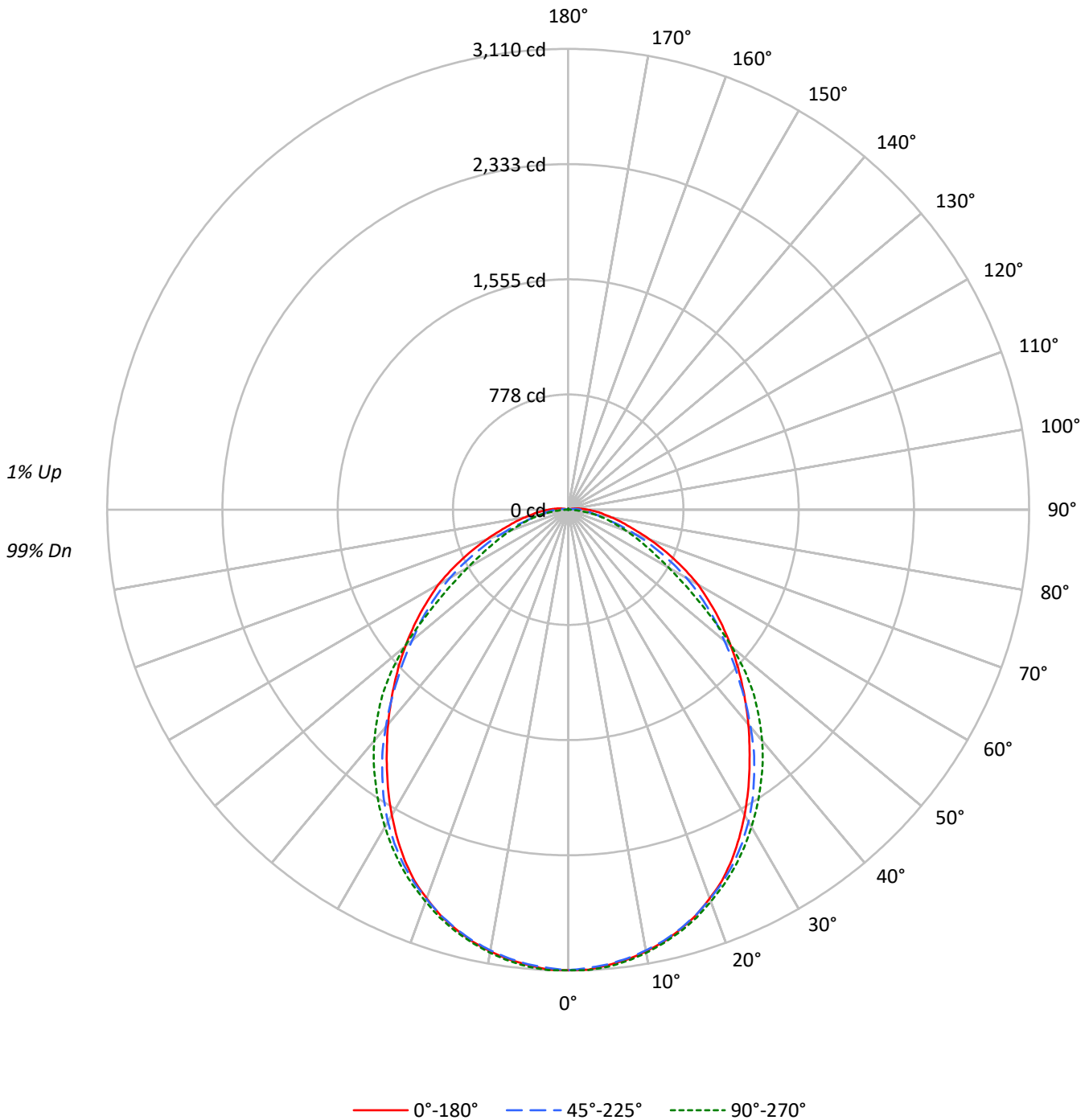
Lumens per Lamp: N/A
Luminaire Lumens: 7280.9 lumens
Efficiency: N/A
Efficacy: 85.9 lumens/watt
Spacing Criteria (0/90/45): 1.15 / 1.19 / 1.25
Luminous Opening: Rectangular w/ Sides (W: 0.42' x L: 4' x H: 0.42')
CIE Type: Direct

Input Watts (W): 84.8
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: P392639
CATALOG NUMBER: MWL-4-00-73-UNV-L840-EDD

Luminous Intensity Polar Plot





TEST NUMBER: P392639

CATALOG NUMBER: MWL-4-00-73-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	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	97	106	102	99	95	98	95	92	94	91	89	90	88	86	84				
2	100	92	86	81	97	90	85	80	87	82	78	83	79	76	80	77	74	72				
3	92	82	74	68	89	80	73	67	77	71	66	74	69	65	72	67	64	62				
4	85	73	65	59	82	72	64	58	69	62	57	67	61	56	65	60	55	53				
5	78	66	57	51	76	65	57	51	62	55	50	60	54	49	59	53	49	47				
6	72	60	51	45	70	59	51	45	57	50	44	55	49	44	53	48	43	41				
7	67	54	46	40	66	53	45	40	52	45	39	50	44	39	49	43	39	37				
8	63	50	42	36	61	49	41	36	48	41	36	46	40	35	45	39	35	33				
9	59	46	38	33	57	45	38	32	44	37	32	43	37	32	42	36	32	30				
10	55	42	35	30	54	42	35	30	41	34	29	40	34	29	39	33	29	27				

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	20073	20073	20073
5°	19820	18692	18457
10°	19494	17409	16932
15°	19059	16185	15525
20°	18489	14965	14180
25°	17738	13766	12928
30°	16736	12502	11692
35°	15666	11148	10499
40°	14653	9744	9333
45°	13698	8365	8101
50°	12817	7151	6620
55°	11929	6096	4980
60°	11063	5057	3702
65°	9843	3943	2790
70°	8559	2882	2096
75°	7457	1913	1503
80°	6921	1268	964
85°	7036	948	429



TEST NUMBER: P392639

CATALOG NUMBER: MWL-4-00-73-UNV-L840-EDD

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	293.0	4.0
10°-20°	826.8	11.4
20°-30°	1212.2	16.6
30°-40°	1371.6	18.8
40°-50°	1292.1	17.7
50°-60°	1033.6	14.2
60°-70°	680.2	9.3
70°-80°	346.0	4.8
80°-90°	145.4	2.0
90°-100°	52.1	0.7
100°-110°	9.3	0.1
110°-120°	3.7	0.1
120°-130°	3.9	0.1
130°-140°	3.7	0.1
140°-150°	3.2	0.0
150°-160°	2.3	0.0
160°-170°	1.4	0.0
170°-180°	0.5	0.0
0°-30°	2332.0	32.0
0°-40°	3703.6	50.9
0°-60°	6029.3	82.8
0°-90°	7200.9	98.9
90°-120°	65.1	0.9
90°-150°	75.8	1.0
90°-180°	80.0	1.1
0°-180°	7280.9	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	3108	3108	3108	3108	3108	
5°	3085	3089	3080	3097	3096	293
15°	2930	2931	2927	2943	2944	825
25°	2610	2616	2635	2660	2660	1198
35°	2132	2140	2187	2261	2264	1334
45°	1656	1634	1631	1717	1774	1280
55°	1217	1200	1145	1125	1074	1090
65°	788	773	690	584	574	782
75°	415	362	300	262	285	448
85°	208	171	127	83	72	186
90°	132	118	84	46	1	73
95°	83	81	51	9	2	61
105°	16	11	3	2	2	21
115°	5	4	4	3	3	5
125°	5	5	4	4	3	4
135°	5	5	5	4	4	4
145°	5	6	5	5	4	3
155°	5	5	5	5	5	2
165°	5	5	5	5	6	1
175°	3	5	5	6	6	0
180°	5	5	5	5	5	



TEST NUMBER: P392639

CATALOG NUMBER: MWL-4-00-73-UNV-L840-EDD

CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	3108.1	3108.1	3108.1	<i>3108.1</i>	3108.1
2.5°	<i>3107.1</i>	<i>3105.1</i>	<i>3095.1</i>	<i>3111.1</i>	<i>3110.1</i>
5°	3085.1	3089.1	3080.1	<i>3097.1</i>	3096.1
7.5°	3061.1	3067.1	3054.1	<i>3073.1</i>	3071.1
10°	3027.1	3029.1	3020.1	<i>3038.1</i>	3037.1
12.5°	2985.1	2985.1	2979.1	<i>2995.1</i>	2994.1
15°	2930.1	2931.1	2927.1	<i>2943.1</i>	2944.1
17.5°	2869.1	2869.1	2867.1	<i>2885.1</i>	2885.1
20°	2792.1	2796.1	2796.1	<i>2814.1</i>	2814.1
22.5°	2711.1	2714.1	2721.1	<i>2744.1</i>	2741.1
25°	2610.1	2616.1	2635.1	<i>2660.1</i>	2660.1
27.5°	2498.1	2514.1	2539.1	<i>2569.1</i>	2571.1
30°	2379.1	2396.1	2432.1	<i>2474.1</i>	2473.1
32.5°	2258.0	2275.0	2316.1	<i>2366.1</i>	2372.1
35°	2132.0	2140.0	2187.0	<i>2261.0</i>	2264.0
37.5°	2009.0	2011.0	2058.0	<i>2136.0</i>	2155.0
40°	1890.0	1880.0	1913.0	<i>2001.0</i>	2036.0
42.5°	1772.0	1760.0	1775.0	<i>1861.0</i>	1907.0
45°	1656.0	1634.0	1631.0	<i>1717.0</i>	1774.0
47.5°	1545.0	1519.0	1504.0	<i>1571.0</i>	1621.0
50°	1434.0	1409.0	1374.0	<i>1421.0</i>	1444.0
52.5°	1324.0	1305.0	1261.0	<i>1277.0</i>	1253.0
55°	1217.0	1200.0	1145.0	<i>1125.0</i>	1074.0
57.5°	1111.0	1101.0	1033.0	<i>972.0</i>	917.0
60°	1011.0	1000.0	921.0	<i>826.0</i>	783.0
62.5°	897.0	892.0	803.0	<i>696.0</i>	669.0
65°	788.0	773.0	690.0	<i>584.0</i>	574.0
67.5°	682.0	660.0	583.0	<i>488.0</i>	491.0
70°	583.0	549.0	480.0	<i>403.0</i>	416.0
72.5°	490.0	448.0	385.0	<i>328.0</i>	345.0
75°	415.0	362.0	300.0	<i>262.0</i>	285.0
77.5°	354.0	297.0	234.0	<i>202.0</i>	230.0
80°	296.0	244.0	185.0	<i>149.0</i>	173.0
82.5°	247.0	203.0	153.0	<i>107.0</i>	121.0
85°	208.0	171.0	127.0	<i>83.0</i>	72.0
87.5°	164.0	140.0	103.0	<i>65.0</i>	27.0
90°	132.0	118.0	84.0	<i>46.0</i>	1.0
92.5°	106.0	100.0	68.0	<i>27.0</i>	2.0
95°	83.0	81.0	51.0	<i>9.0</i>	2.0
97.5°	64.0	64.0	31.0	<i>2.0</i>	2.0
100°	47.0	44.0	15.0	<i>2.0</i>	2.0
102.5°	30.0	26.0	5.0	<i>2.0</i>	2.0
105°	16.0	11.0	3.0	<i>2.0</i>	2.0
107.5°	7.0	5.0	3.0	<i>3.0</i>	2.0
110°	5.0	5.0	3.0	<i>3.0</i>	3.0



TEST NUMBER: P392639

CATALOG NUMBER: MWL-4-00-73-UNV-L840-EDD

CANDELA DISTRIBUTION (continued):

	0°	22.5°	45°	67.5°	90°
112.5°	5.0	5.0	3.0	3.0	3.0
115°	5.0	4.0	4.0	3.0	3.0
117.5°	5.0	4.0	4.0	3.0	3.0
120°	5.0	4.0	4.0	3.0	3.0
122.5°	5.0	5.0	4.0	4.0	3.0
125°	5.0	5.0	4.0	4.0	3.0
127.5°	5.0	5.0	5.0	4.0	4.0
130°	5.0	5.0	5.0	4.0	4.0
132.5°	5.0	5.0	5.0	4.0	4.0
135°	5.0	5.0	5.0	4.0	4.0
137.5°	5.0	5.0	5.0	5.0	4.0
140°	5.0	5.0	5.0	5.0	4.0
142.5°	6.0	6.0	5.0	5.0	4.0
145°	5.0	6.0	5.0	5.0	4.0
147.5°	6.0	5.0	5.0	5.0	4.0
150°	5.0	5.0	5.0	5.0	4.0
152.5°	5.0	5.0	5.0	5.0	4.0
155°	5.0	5.0	5.0	5.0	5.0
157.5°	5.0	5.0	5.0	5.0	5.0
160°	5.0	5.0	5.0	5.0	5.0
162.5°	5.0	5.0	5.0	5.0	5.0
165°	5.0	5.0	5.0	5.0	6.0
167.5°	4.0	4.0	5.0	6.0	6.0
170°	3.0	5.0	5.0	6.0	6.0
172.5°	3.0	5.0	5.0	6.0	6.0
175°	3.0	5.0	5.0	6.0	6.0
177.5°	3.0	5.0	5.0	6.0	6.0
180°	5.0	5.0	5.0	5.0	5.0

(END OF REPORT)