

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: P392637

Luminaire Tested: **MWL-4-00-73-UNV-L930-EDD**

Issue Date: 12/2/2019

Test Information

Test Method: LM-79-08
Report Number: P392637
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-L930-EDD
Description: MWL 4FT MEDICAL LED FIXTURE
Light Source: -
Ballast/Driver: ELECTRONIC DRIVER

Summary

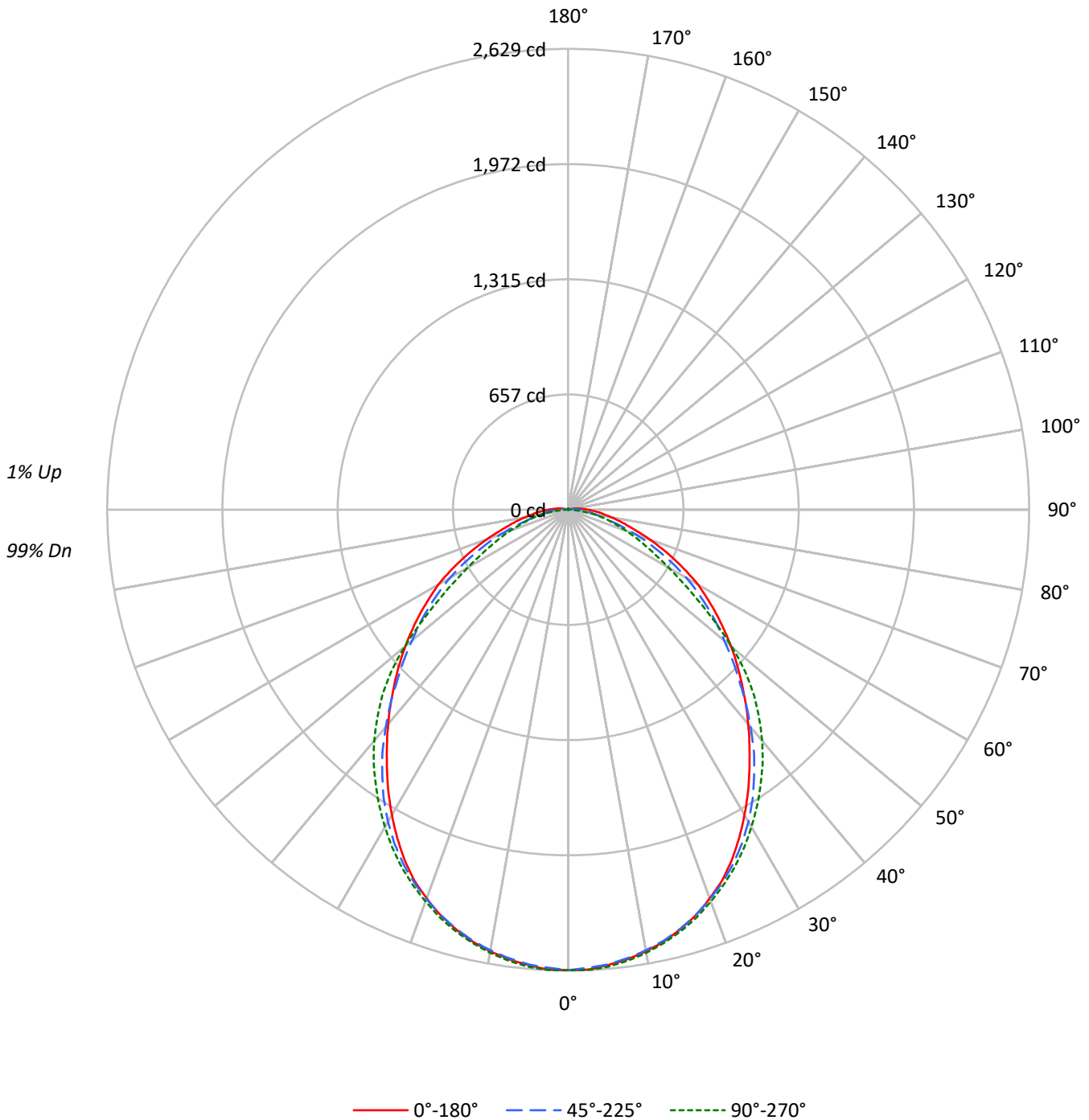
Lumens per Lamp: N/A
Luminaire Lumens: 6153.7 lumens
Efficiency: N/A
Efficacy: 71.8 lumens/watt
Spacing Criteria (0/90/45): 1.15 / 1.19 / 1.25
Luminous Opening: Rectangular w/ Sides (W: 0.42' x L: 4' x H: 0.42')
CIE Type: Direct

Input Watts (W): 85.648
Input Voltage (V): NR
Input Current (A_{in}): 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	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°	16965	16965	16965
5°	16751	15797	15600
10°	16476	14714	14310
15°	16109	13679	13121
20°	15626	12648	11984
25°	14992	11634	10926
30°	14144	10566	9882
35°	13241	9422	8874
40°	12385	8236	7888
45°	11577	7070	6847
50°	10833	6044	5595
55°	10082	5152	4210
60°	9350	4275	3129
65°	8319	3333	2358
70°	7233	2436	1772
75°	6303	1617	1270
80°	5850	1072	816
85°	5947	801	362



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	247.7	4.0
10°-20°	698.8	11.4
20°-30°	1024.5	16.6
30°-40°	1159.3	18.8
40°-50°	1092.1	17.7
50°-60°	873.6	14.2
60°-70°	574.9	9.3
70°-80°	292.5	4.8
80°-90°	122.9	2.0
90°-100°	44.0	0.7
100°-110°	7.9	0.1
110°-120°	3.1	0.1
120°-130°	3.2	0.1
130°-140°	3.1	0.0
140°-150°	2.7	0.0
150°-160°	1.9	0.0
160°-170°	1.2	0.0
170°-180°	0.4	0.0
0°-30°	1971.0	32.0
0°-40°	3130.2	50.9
0°-60°	5095.9	82.8
0°-90°	6086.2	98.9
90°-120°	55.1	0.9
90°-150°	64.0	1.0
90°-180°	68.0	1.1
0°-180°	6153.7	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	2627	2627	2627	2627	2627	
5°	2607	2611	2603	2618	2617	247
15°	2476	2477	2474	2487	2488	698
25°	2206	2211	2227	2248	2248	1013
35°	1802	1809	1848	1911	1914	1128
45°	1400	1381	1378	1451	1499	1082
55°	1029	1014	968	951	908	921
65°	666	653	583	494	485	661
75°	351	306	254	221	241	379
85°	176	144	107	70	61	158
90°	112	100	71	39	1	62
95°	70	68	43	8	2	51
105°	14	9	3	2	2	18
115°	4	3	3	3	3	4
125°	4	4	3	3	3	4
135°	4	4	4	3	3	3
145°	4	5	4	4	3	3
155°	4	4	4	4	4	2
165°	4	4	4	4	5	1
175°	3	4	4	5	5	0
180°	4	4	4	4	4	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	2626.9	2626.9	2626.9	2626.9	2626.9
2.5°	2626.1	2624.3	2615.9	2629.4	2628.6
5°	2607.4	2610.9	2603.2	2617.6	2616.8
7.5°	2587.2	2592.3	2581.3	2597.3	2595.6
10°	2558.5	2560.1	2552.5	2567.7	2566.9
12.5°	2523.0	2523.0	2517.9	2531.4	2530.6
15°	2476.5	2477.3	2473.9	2487.4	2488.3
17.5°	2424.9	2424.9	2423.2	2438.5	2438.5
20°	2359.8	2363.2	2363.2	2378.4	2378.4
22.5°	2291.3	2293.9	2299.8	2319.2	2316.7
25°	2206.0	2211.0	2227.1	2248.3	2248.3
27.5°	2111.4	2124.8	2146.0	2171.3	2173.0
30°	2010.7	2025.2	2055.5	2091.0	2090.2
32.5°	1908.5	1922.8	1957.5	1999.8	2004.8
35°	1801.9	1808.7	1848.4	1911.0	1913.6
37.5°	1698.0	1699.7	1739.4	1805.4	1821.4
40°	1597.4	1589.0	1616.9	1691.3	1720.8
42.5°	1497.7	1487.6	1500.3	1572.9	1611.8
45°	1399.6	1381.1	1378.5	1451.2	1499.4
47.5°	1305.9	1283.9	1271.2	1327.8	1370.1
50°	1212.0	1190.9	1161.3	1201.0	1220.5
52.5°	1119.0	1103.0	1065.8	1079.3	1059.1
55°	1028.6	1014.2	967.8	950.9	907.8
57.5°	939.1	930.6	873.1	821.5	775.0
60°	854.5	845.2	778.5	698.1	661.8
62.5°	758.1	753.9	678.7	588.3	565.5
65°	666.0	653.3	583.2	493.6	485.2
67.5°	576.5	557.8	492.7	412.4	415.0
70°	492.7	464.0	405.7	340.6	351.6
72.5°	414.2	378.6	325.4	277.3	291.6
75°	350.8	306.0	253.6	221.4	240.9
77.5°	299.2	251.0	197.8	170.7	194.4
80°	250.2	206.2	156.4	125.9	146.3
82.5°	208.8	171.6	129.3	90.4	102.2
85°	175.8	144.5	107.3	70.2	60.8
87.5°	138.6	118.3	87.1	54.9	22.8
90°	111.6	99.8	71.0	38.9	0.9
92.5°	89.6	84.5	57.5	22.8	1.7
95°	70.2	68.5	43.1	7.6	1.7
97.5°	54.1	54.1	26.2	1.7	1.7
100°	39.7	37.2	12.7	1.7	1.7
102.5°	25.4	22.0	4.2	1.7	1.7
105°	13.6	9.3	2.6	1.7	1.7
107.5°	5.9	4.2	2.6	2.6	1.7
110°	4.2	4.2	2.6	2.6	2.6



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CANDELA DISTRIBUTION (continued):

	0°	22.5°	45°	67.5°	90°
112.5°	4.2	4.2	2.6	2.6	2.6
115°	4.2	3.3	3.3	2.6	2.6
117.5°	4.2	3.3	3.3	2.6	2.6
120°	4.2	3.3	3.3	2.6	2.6
122.5°	4.2	4.2	3.3	3.3	2.6
125°	4.2	4.2	3.3	3.3	2.6
127.5°	4.2	4.2	4.2	3.3	3.3
130°	4.2	4.2	4.2	3.3	3.3
132.5°	4.2	4.2	4.2	3.3	3.3
135°	4.2	4.2	4.2	3.3	3.3
137.5°	4.2	4.2	4.2	4.2	3.3
140°	4.2	4.2	4.2	4.2	3.3
142.5°	5.1	5.1	4.2	4.2	3.3
145°	4.2	5.1	4.2	4.2	3.3
147.5°	5.1	4.2	4.2	4.2	3.3
150°	4.2	4.2	4.2	4.2	3.3
152.5°	4.2	4.2	4.2	4.2	3.3
155°	4.2	4.2	4.2	4.2	4.2
157.5°	4.2	4.2	4.2	4.2	4.2
160°	4.2	4.2	4.2	4.2	4.2
162.5°	4.2	4.2	4.2	4.2	4.2
165°	4.2	4.2	4.2	4.2	5.1
167.5°	3.3	3.3	4.2	5.1	5.1
170°	2.6	4.2	4.2	5.1	5.1
172.5°	2.6	4.2	4.2	5.1	5.1
175°	2.6	4.2	4.2	5.1	5.1
177.5°	2.6	4.2	4.2	5.1	5.1
180°	4.2	4.2	4.2	4.2	4.2

(END OF REPORT)