

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: P392629

Luminaire Tested: **MWL-4-00-33-UNV-L935-EDD**

Issue Date: 12/2/2019

Test Information

Test Method: LM-79-08
Report Number: P392629
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-L935-EDD
Description: MWL 4FT MEDICAL LED FIXTURE
Light Source: -
Ballast/Driver: ELECTRONIC DRIVER

Summary

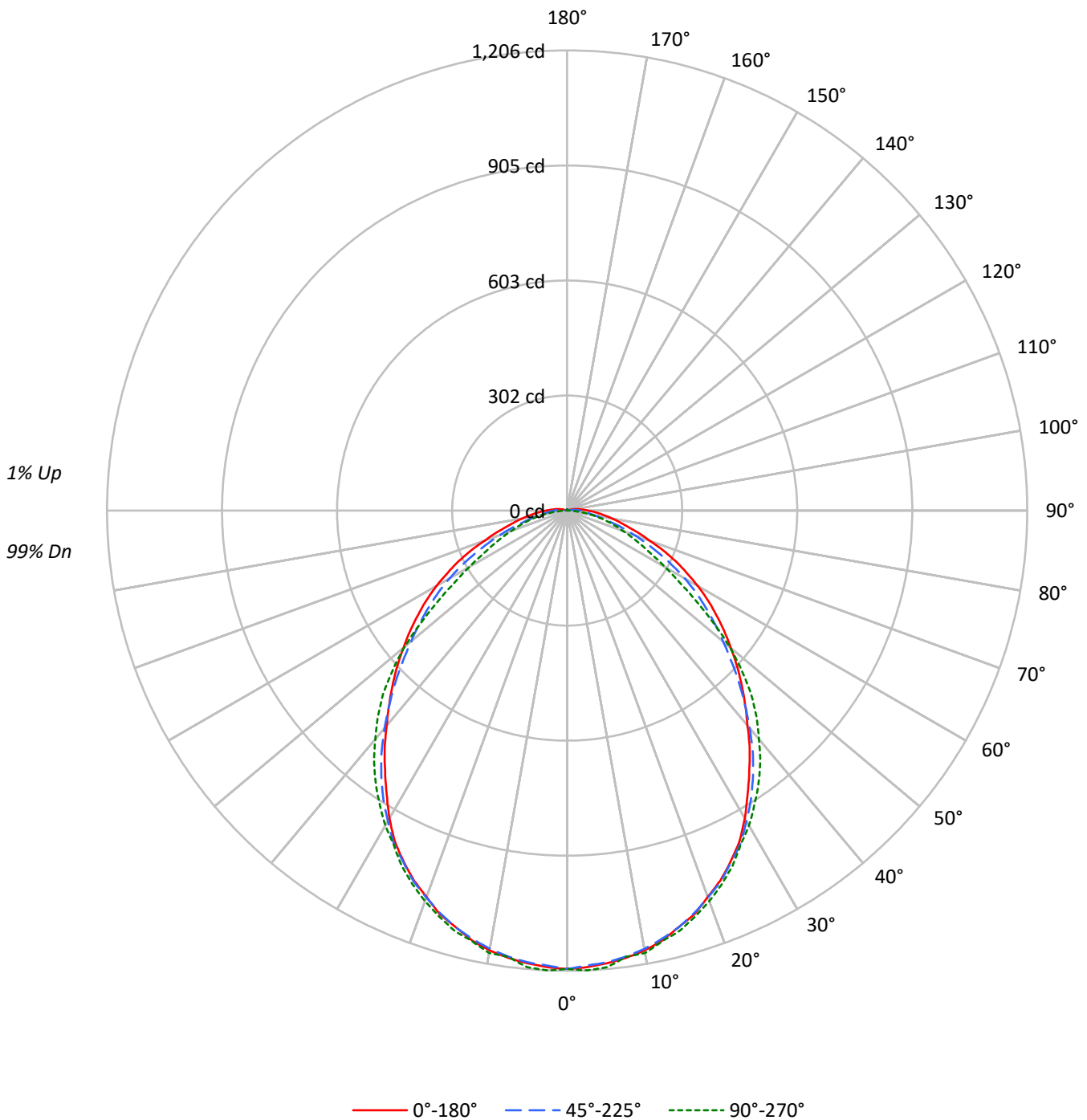
Lumens per Lamp: N/A
Luminaire Lumens: 2829.3 lumens
Efficiency: N/A
Efficacy: 83.1 lumens/watt
Spacing Criteria (0/90/45): 1.16 / 1.18 / 1.25
Luminous Opening: Rectangular w/ Sides (W: 0.42' x L: 4' x H: 0.42')
CIE Type: Direct

Input Watts (W): 34.037
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										
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	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°	7758	7758	7758
5°	7652	7212	7161
10°	7538	6723	6563
15°	7350	6252	6012
20°	7133	5775	5488
25°	6894	5309	4988
30°	6552	4831	4508
35°	6114	4328	4055
40°	5702	3789	3585
45°	5354	3267	3118
50°	5003	2777	2551
55°	4680	2362	1908
60°	4326	1956	1407
65°	3910	1522	1047
70°	3375	1125	782
75°	2958	773	577
80°	2796	500	369
85°	2811	380	167



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	113.1	4.0
10°-20°	319.2	11.3
20°-30°	468.9	16.6
30°-40°	532.3	18.8
40°-50°	501.3	17.7
50°-60°	399.8	14.1
60°-70°	263.6	9.3
70°-80°	136.7	4.8
80°-90°	58.1	2.1
90°-100°	22.3	0.8
100°-110°	4.9	0.2
110°-120°	1.8	0.1
120°-130°	2.0	0.1
130°-140°	1.8	0.1
140°-150°	1.5	0.1
150°-160°	1.1	0.0
160°-170°	0.7	0.0
170°-180°	0.2	0.0
0°-30°	901.2	31.9
0°-40°	1433.5	50.7
0°-60°	2334.7	82.5
0°-90°	2793.0	98.7
90°-120°	29.0	1.0
90°-150°	34.3	1.2
90°-180°	36.0	1.3
0°-180°	2829.3	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1201	1201	1201	1201	1201	
5°	1191	1191	1188	1196	1201	113
15°	1130	1134	1131	1136	1140	319
25°	1014	1014	1016	1027	1026	466
35°	832	835	849	874	874	521
45°	647	636	637	665	683	499
55°	478	465	444	431	411	427
65°	313	304	266	224	216	309
75°	165	144	121	102	109	179
85°	83	68	51	33	28	76
90°	55	48	35	19	1	31
95°	36	36	21	3	1	27
105°	10	8	2	1	1	12
115°	2	2	2	2	2	2
125°	2	2	2	2	2	2
135°	2	2	2	2	2	2
145°	2	2	2	2	2	2
155°	2	2	2	2	2	1
165°	2	2	2	2	2	1
175°	2	2	2	2	2	0
180°	2	2	2	2	2	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1201.2	1201.2	1201.2	1201.2	1201.2
2.5°	1197.7	1195.2	1193.5	1199.4	1206.2
5°	1191.0	1191.0	1188.4	1196.1	1201.2
7.5°	1182.4	1184.2	1179.1	1185.9	1179.9
10°	1170.6	1169.7	1166.3	1174.0	1177.3
12.5°	1153.6	1149.4	1149.4	1154.5	1155.3
15°	1129.9	1134.1	1130.7	1135.8	1140.1
17.5°	1109.5	1110.4	1106.2	1110.4	1115.5
20°	1077.2	1079.8	1079.0	1088.3	1089.2
22.5°	1049.3	1051.0	1051.8	1052.7	1059.5
25°	1014.5	1014.5	1016.2	1027.2	1026.4
27.5°	978.0	976.4	984.0	990.8	985.7
30°	931.4	933.1	939.9	956.0	953.4
32.5°	880.5	887.2	896.6	917.8	913.6
35°	832.1	834.7	849.1	873.7	874.5
37.5°	785.5	781.3	799.0	825.4	831.3
40°	735.4	736.3	743.9	776.2	782.0
42.5°	690.5	681.9	689.6	721.8	734.6
45°	647.2	636.2	637.0	665.0	682.8
47.5°	603.9	590.4	583.6	606.5	620.9
50°	559.8	547.1	533.5	547.9	556.5
52.5°	519.1	504.7	488.6	490.3	482.6
55°	477.5	464.8	443.6	430.9	411.4
57.5°	436.9	427.5	400.4	374.1	347.7
60°	395.3	387.6	356.3	318.1	297.7
62.5°	352.8	347.0	310.5	266.4	251.1
65°	313.0	303.7	266.4	223.9	215.5
67.5°	271.5	260.4	224.8	186.6	184.9
70°	229.9	218.8	187.4	154.4	155.2
72.5°	197.6	179.0	153.5	127.3	131.5
75°	164.6	144.2	121.3	101.8	109.4
77.5°	140.8	117.9	94.1	81.5	86.5
80°	119.6	95.9	72.9	61.1	66.2
82.5°	101.0	80.6	60.2	43.2	45.8
85°	83.1	67.8	50.9	33.0	28.0
87.5°	67.8	56.9	41.6	25.5	7.6
90°	55.1	48.3	34.8	18.6	0.9
92.5°	45.0	41.6	27.2	11.0	0.9
95°	35.6	35.6	21.2	3.4	0.9
97.5°	29.7	28.8	14.4	0.9	0.9
100°	22.9	21.2	7.6	0.9	0.9
102.5°	16.1	13.5	2.5	0.9	0.9
105°	10.2	7.6	1.7	0.9	0.9
107.5°	5.1	2.5	1.7	0.9	0.9
110°	2.5	1.7	1.7	1.7	0.9



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CANDELA DISTRIBUTION (continued):

	0°	22.5°	45°	67.5°	90°
112.5°	2.5	1.7	1.7	1.7	0.9
115°	2.5	1.7	1.7	1.7	1.7
117.5°	2.5	2.5	1.7	1.7	1.7
120°	2.5	2.5	1.7	1.7	1.7
122.5°	2.5	2.5	2.5	1.7	1.7
125°	2.5	2.5	2.5	1.7	1.7
127.5°	2.5	2.5	2.5	1.7	1.7
130°	2.5	2.5	2.5	1.7	1.7
132.5°	2.5	2.5	2.5	2.5	1.7
135°	2.5	2.5	2.5	2.5	1.7
137.5°	2.5	2.5	2.5	2.5	1.7
140°	2.5	2.5	2.5	2.5	1.7
142.5°	2.5	2.5	2.5	2.5	1.7
145°	2.5	2.5	2.5	2.5	1.7
147.5°	2.5	2.5	2.5	2.5	1.7
150°	2.5	2.5	2.5	2.5	1.7
152.5°	2.5	2.5	2.5	2.5	1.7
155°	2.5	2.5	2.5	2.5	2.5
157.5°	2.5	2.5	2.5	2.5	2.5
160°	2.5	2.5	2.5	2.5	2.5
162.5°	2.5	2.5	2.5	2.5	2.5
165°	2.5	2.5	2.5	2.5	2.5
167.5°	2.5	2.5	2.5	2.5	2.5
170°	1.7	1.7	2.5	2.5	2.5
172.5°	1.7	2.5	2.5	2.5	2.5
175°	1.7	2.5	2.5	2.5	2.5
177.5°	1.7	2.5	2.5	2.5	2.5
180°	2.5	2.5	2.5	2.5	2.5

(END OF REPORT)