

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: P392628

Luminaire Tested: **MWL-4-00-33-UNV-L930-EDD**

Issue Date: 12/2/2019

Test Information

Test Method: LM-79-08
Report Number: P392628
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-L930-EDD
Description: MWL 4FT MEDICAL LED FIXTURE
Light Source: -
Ballast/Driver: ELECTRONIC DRIVER

Summary

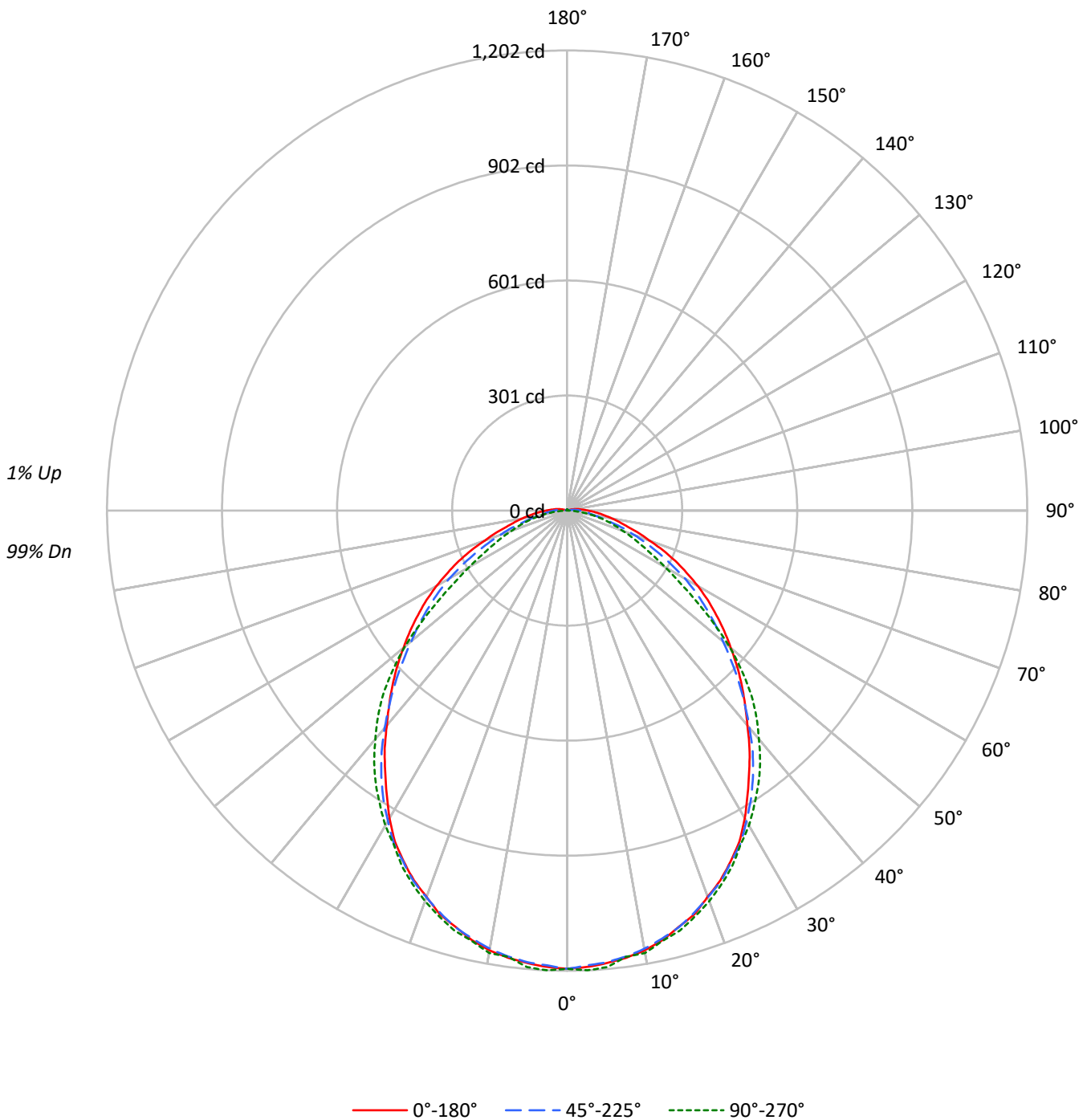
Lumens per Lamp: N/A
Luminaire Lumens: 2819.6 lumens
Efficiency: N/A
Efficacy: 82.8 lumens/watt
Spacing Criteria (0/90/45): 1.16 / 1.18 / 1.25
Luminous Opening: Rectangular w/ Sides (W: 0.42' x L: 4' x H: 0.42')
CIE Type: Direct

Input Watts (W): 34.037
Input Voltage (V): NR
Input Current (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



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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	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°	7730	7730	7730
5°	7623	7186	7135
10°	7511	6699	6541
15°	7323	6230	5990
20°	7108	5754	5469
25°	6870	5290	4970
30°	6528	4814	4492
35°	6093	4313	4041
40°	5681	3776	3572
45°	5335	3256	3107
50°	4986	2767	2542
55°	4664	2353	1901
60°	4309	1949	1402
65°	3896	1517	1043
70°	3362	1122	780
75°	2945	771	575
80°	2787	498	367
85°	2804	379	166



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	112.7	4.0
10°-20°	318.1	11.3
20°-30°	467.2	16.6
30°-40°	530.4	18.8
40°-50°	499.6	17.7
50°-60°	398.4	14.1
60°-70°	262.6	9.3
70°-80°	136.2	4.8
80°-90°	57.9	2.1
90°-100°	22.2	0.8
100°-110°	4.9	0.2
110°-120°	1.8	0.1
120°-130°	2.0	0.1
130°-140°	1.9	0.1
140°-150°	1.6	0.1
150°-160°	1.2	0.0
160°-170°	0.7	0.0
170°-180°	0.2	0.0
0°-30°	898.0	31.8
0°-40°	1428.4	50.7
0°-60°	2326.3	82.5
0°-90°	2783.0	98.7
90°-120°	28.9	1.0
90°-150°	34.4	1.2
90°-180°	37.0	1.3
0°-180°	2819.6	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1197	1197	1197	1197	1197	
5°	1187	1187	1184	1192	1197	113
15°	1126	1130	1127	1132	1136	318
25°	1011	1011	1013	1024	1023	465
35°	829	832	846	871	871	519
45°	645	634	635	663	680	498
55°	476	463	442	429	410	426
65°	312	303	265	223	215	308
75°	164	144	121	101	109	178
85°	83	68	51	33	28	75
90°	55	48	35	19	1	30
95°	36	36	21	3	1	27
105°	10	8	2	1	1	12
115°	3	2	2	2	2	3
125°	3	3	3	2	2	2
135°	3	3	3	3	2	2
145°	3	3	3	3	2	2
155°	3	3	3	3	3	1
165°	3	3	3	3	3	1
175°	2	3	3	3	3	0
180°	3	3	3	3	3	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1196.9	1196.9	1196.9	1196.9	1196.9
2.5°	1193.4	1190.9	1189.2	1195.1	1201.9
5°	1186.6	1186.6	1184.2	1191.8	1196.9
7.5°	1178.2	1180.0	1174.9	1181.6	1175.7
10°	1166.4	1165.5	1162.2	1169.7	1173.2
12.5°	1149.5	1145.3	1145.3	1150.4	1151.2
15°	1125.8	1130.0	1126.7	1131.7	1135.9
17.5°	1105.6	1106.4	1102.2	1106.4	1111.5
20°	1073.4	1076.0	1075.1	1084.4	1085.3
22.5°	1045.5	1047.3	1048.1	1048.9	1055.7
25°	1010.9	1010.9	1012.6	1023.6	1022.7
27.5°	974.5	972.9	980.4	987.2	982.1
30°	928.0	929.7	936.5	952.5	950.1
32.5°	877.3	884.1	893.4	914.5	910.3
35°	829.2	831.7	846.1	870.6	871.4
37.5°	782.7	778.5	796.2	822.4	828.3
40°	732.8	733.6	741.3	773.3	779.3
42.5°	688.0	679.6	687.1	719.3	732.0
45°	644.9	633.9	634.8	662.7	680.4
47.5°	601.8	588.3	581.5	604.4	618.7
50°	557.9	545.2	531.6	546.0	554.5
52.5°	517.3	502.9	486.8	488.5	480.9
55°	475.8	463.1	442.0	429.3	410.0
57.5°	435.3	426.0	399.0	372.7	346.6
60°	393.8	386.3	355.0	317.0	296.6
62.5°	351.6	345.7	309.3	265.4	250.2
65°	311.9	302.6	265.4	223.1	214.7
67.5°	270.5	259.5	224.0	186.0	184.3
70°	229.0	218.1	186.8	153.8	154.7
72.5°	197.0	178.3	152.9	126.8	131.0
75°	163.9	143.7	120.9	101.4	109.0
77.5°	140.3	117.5	93.9	81.2	86.2
80°	119.2	95.5	72.7	60.8	65.9
82.5°	100.6	80.3	60.1	43.1	45.6
85°	82.9	67.6	50.7	32.9	27.9
87.5°	67.6	56.6	41.4	25.4	7.6
90°	54.9	48.2	34.7	18.6	0.9
92.5°	44.8	41.4	27.0	11.0	0.9
95°	35.5	35.5	21.1	3.3	0.9
97.5°	29.6	28.7	14.4	0.9	0.9
100°	22.8	21.1	7.6	0.9	0.9
102.5°	16.0	13.6	2.6	0.9	0.9
105°	10.1	7.6	1.7	0.9	0.9
107.5°	5.1	2.6	1.7	0.9	0.9
110°	2.6	1.7	1.7	1.7	0.9



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CANDELA DISTRIBUTION (continued):

	0°	22.5°	45°	67.5°	90°
112.5°	2.6	1.7	1.7	1.7	0.9
115°	2.6	1.7	1.7	1.7	1.7
117.5°	2.6	2.6	1.7	1.7	1.7
120°	2.6	2.6	1.7	1.7	1.7
122.5°	2.6	2.6	2.6	1.7	1.7
125°	2.6	2.6	2.6	1.7	1.7
127.5°	2.6	2.6	2.6	1.7	1.7
130°	2.6	2.6	2.6	1.7	1.7
132.5°	2.6	2.6	2.6	2.6	1.7
135°	2.6	2.6	2.6	2.6	1.7
137.5°	2.6	2.6	2.6	2.6	1.7
140°	2.6	2.6	2.6	2.6	1.7
142.5°	2.6	2.6	2.6	2.6	1.7
145°	2.6	2.6	2.6	2.6	1.7
147.5°	2.6	2.6	2.6	2.6	1.7
150°	2.6	2.6	2.6	2.6	1.7
152.5°	2.6	2.6	2.6	2.6	1.7
155°	2.6	2.6	2.6	2.6	2.6
157.5°	2.6	2.6	2.6	2.6	2.6
160°	2.6	2.6	2.6	2.6	2.6
162.5°	2.6	2.6	2.6	2.6	2.6
165°	2.6	2.6	2.6	2.6	2.6
167.5°	2.6	2.6	2.6	2.6	2.6
170°	1.7	1.7	2.6	2.6	2.6
172.5°	1.7	2.6	2.6	2.6	2.6
175°	1.7	2.6	2.6	2.6	2.6
177.5°	1.7	2.6	2.6	2.6	2.6
180°	2.6	2.6	2.6	2.6	2.6

(END OF REPORT)