

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: P392627

Luminaire Tested: **MWL-4-00-25-UNV-L940-EDD**

Issue Date: 12/2/2019

**Test Information**

Test Method: LM-79-08  
Report Number: P392627  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-1910-565-6)  
Test Lab: INNOVATION CENTER  
Issue Date: 12/2/2019  
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)  
Product Line: FAIL-SAFE  
Catalog Number: MWL-4-00-25-UNV-L940-EDD  
Description: MWL 4FT MEDICAL LED FIXTURE  
Light Source: -  
Ballast/Driver: ELECTRONIC DRIVER

**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 2292.3 lumens  
Efficiency: N/A  
Efficacy: 97.8 lumens/watt  
Spacing Criteria (0/90/45): 1.16 / 1.19 / 1.25  
Luminous Opening: Rectangular w/ Sides (W: 0.42' x L: 4' x H: 0.42')  
CIE Type: Direct

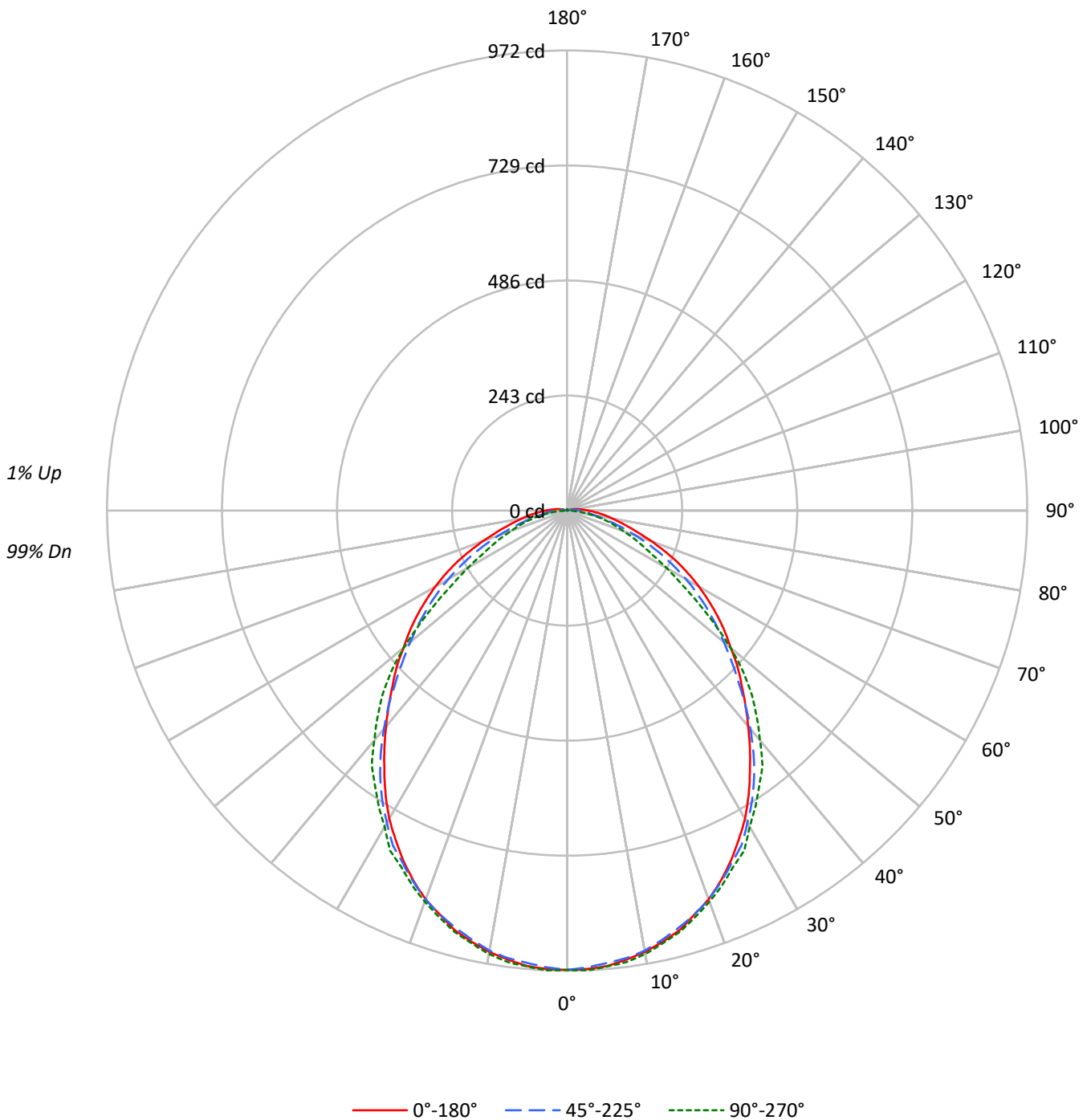
Input Watts (W): 23.432  
Input Voltage (V): NR  
Input Current (Ain): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 25 FT



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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	64	56	50	62	55	50	60	54	49	58	53	49	46
6	72	59	51	45	70	58	50	45	57	49	44	55	48	44	53	47	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	47	40	35	46	40	35	45	39	35	33
9	59	46	38	32	57	45	37	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°	6266	6266	6266
5°	6204	5822	5762
10°	6095	5440	5302
15°	5967	5042	4857
20°	5785	4676	4430
25°	5554	4293	4033
30°	5287	3915	3644
35°	4947	3511	3282
40°	4612	3067	2906
45°	4310	2626	2521
50°	4030	2252	2063
55°	3794	1921	1551
60°	3519	1591	1146
65°	3198	1260	850
70°	2782	919	633
75°	2440	633	466
80°	2280	412	300
85°	2310	306	131



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	91.5	4.0
10°-20°	258.2	11.3
20°-30°	379.1	16.5
30°-40°	430.5	18.8
40°-50°	404.9	17.7
50°-60°	324.5	14.2
60°-70°	215.3	9.4
70°-80°	111.7	4.9
80°-90°	47.4	2.1
90°-100°	18.2	0.8
100°-110°	3.9	0.2
110°-120°	1.5	0.1
120°-130°	1.6	0.1
130°-140°	1.4	0.1
140°-150°	1.2	0.1
150°-160°	0.8	0.0
160°-170°	0.5	0.0
170°-180°	0.2	0.0
0°-30°	728.8	31.8
0°-40°	1159.3	50.6
0°-60°	1888.6	82.4
0°-90°	2263.0	98.7
90°-120°	23.6	1.0
90°-150°	27.7	1.2
90°-180°	29.0	1.3
0°-180°	2292.3	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	970	970	970	970	970	
5°	966	964	959	968	967	92
15°	917	914	912	920	921	258
25°	817	818	822	829	830	376
35°	673	676	689	707	708	421
45°	521	514	512	538	552	403
55°	387	378	361	351	334	346
65°	256	249	220	180	175	253
75°	136	118	99	84	88	146
85°	68	55	41	27	22	62
90°	46	39	28	16	0	25
95°	29	28	17	4	1	22
105°	8	6	1	1	1	9
115°	2	2	2	1	1	2
125°	2	2	2	2	2	2
135°	2	2	2	2	2	1
145°	2	2	2	2	2	1
155°	2	2	2	2	2	1
165°	2	2	2	2	2	1
175°	1	2	2	2	3	0
180°	2	2	2	2	2	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	970.2	970.2	970.2	970.2	970.2
2.5°	969.3	967.5	965.7	975.7	972.1
5°	965.7	963.9	959.3	967.5	966.6
7.5°	956.6	954.7	953.8	959.3	962.0
10°	946.5	945.6	943.8	949.3	951.1
12.5°	932.9	935.6	928.3	933.8	935.6
15°	917.4	913.7	911.9	920.1	921.0
17.5°	894.6	897.3	894.6	900.1	900.1
20°	873.7	873.7	873.7	879.1	879.1
22.5°	847.2	850.0	849.1	853.6	856.3
25°	817.2	818.1	821.7	829.0	829.9
27.5°	784.4	788.0	797.1	805.3	809.9
30°	751.6	751.6	761.6	769.8	770.7
32.5°	713.3	713.3	727.0	740.6	740.6
35°	673.2	675.9	688.7	706.9	707.8
37.5°	634.0	632.2	646.8	667.7	677.8
40°	594.9	591.2	602.1	626.7	634.0
42.5°	557.5	551.1	557.5	582.1	593.0
45°	521.1	513.8	511.9	538.4	552.0
47.5°	488.3	478.2	470.9	488.3	504.7
50°	450.9	442.7	432.7	440.9	450.0
52.5°	419.9	409.9	396.2	397.1	390.8
55°	387.1	378.0	360.8	350.8	334.4
57.5°	354.4	348.0	325.3	304.3	283.4
60°	321.6	315.2	289.7	256.0	242.4
62.5°	288.8	284.3	254.2	215.9	204.1
65°	256.0	248.7	220.5	180.4	174.9
67.5°	221.4	214.1	185.9	152.2	151.2
70°	189.5	178.6	153.1	125.7	125.7
72.5°	160.4	146.7	124.8	103.9	107.5
75°	135.8	118.4	99.3	83.8	88.4
77.5°	114.8	96.6	77.4	65.6	71.1
80°	97.5	79.3	60.1	49.2	53.8
82.5°	82.9	65.6	49.2	34.6	37.4
85°	68.3	54.7	41.0	27.3	21.9
87.5°	55.6	46.5	33.7	21.0	7.3
90°	45.6	39.2	28.2	15.5	0.0
92.5°	36.4	33.7	22.8	9.1	0.9
95°	29.2	28.2	17.3	3.6	0.9
97.5°	22.8	23.7	11.8	0.9	0.9
100°	18.2	17.3	6.4	0.9	0.9
102.5°	12.8	10.9	1.8	0.9	0.9
105°	8.2	6.4	0.9	0.9	0.9
107.5°	3.6	1.8	0.9	0.9	0.9
110°	1.8	1.8	0.9	0.9	0.9



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**CANDELA DISTRIBUTION (continued):**

	0°	22.5°	45°	67.5°	90°
112.5°	1.8	1.8	0.9	0.9	0.9
115°	1.8	1.8	1.8	0.9	0.9
117.5°	1.8	1.8	1.8	1.8	0.9
120°	1.8	1.8	1.8	1.8	1.8
122.5°	1.8	1.8	1.8	1.8	1.8
125°	1.8	1.8	1.8	1.8	1.8
127.5°	1.8	1.8	1.8	1.8	1.8
130°	1.8	1.8	1.8	1.8	1.8
132.5°	1.8	1.8	1.8	1.8	1.8
135°	1.8	1.8	1.8	1.8	1.8
137.5°	1.8	1.8	1.8	1.8	1.8
140°	1.8	1.8	1.8	1.8	1.8
142.5°	1.8	2.7	1.8	1.8	1.8
145°	1.8	1.8	1.8	1.8	1.8
147.5°	1.8	1.8	1.8	1.8	1.8
150°	1.8	1.8	1.8	1.8	1.8
152.5°	1.8	1.8	1.8	1.8	1.8
155°	1.8	1.8	1.8	1.8	1.8
157.5°	1.8	1.8	1.8	1.8	1.8
160°	1.8	1.8	1.8	1.8	1.8
162.5°	1.8	1.8	1.8	1.8	1.8
165°	1.8	1.8	1.8	1.8	1.8
167.5°	1.8	1.8	1.8	1.8	1.8
170°	1.8	1.8	1.8	1.8	1.8
172.5°	0.9	1.8	1.8	1.8	2.7
175°	0.9	1.8	1.8	1.8	2.7
177.5°	0.9	1.8	1.8	1.8	2.7
180°	1.8	1.8	1.8	1.8	1.8

(END OF REPORT)