

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: P392636

Luminaire Tested: **MWL-4-00-60-UNV-L840-EDD**

Issue Date: 12/2/2019

Test Information

Test Method: LM-79-08
Report Number: P392636
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-1910-565-2)
Test Lab: INNOVATION CENTER
Issue Date: 12/2/2019
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: FAIL-SAFE
Catalog Number: MWL-4-00-60-UNV-L840-EDD
Description: MWL 4FT MEDICAL LED FIXTURE
Light Source: -
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 6003.0 lumens
Efficiency: N/A
Efficacy: 92.9 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

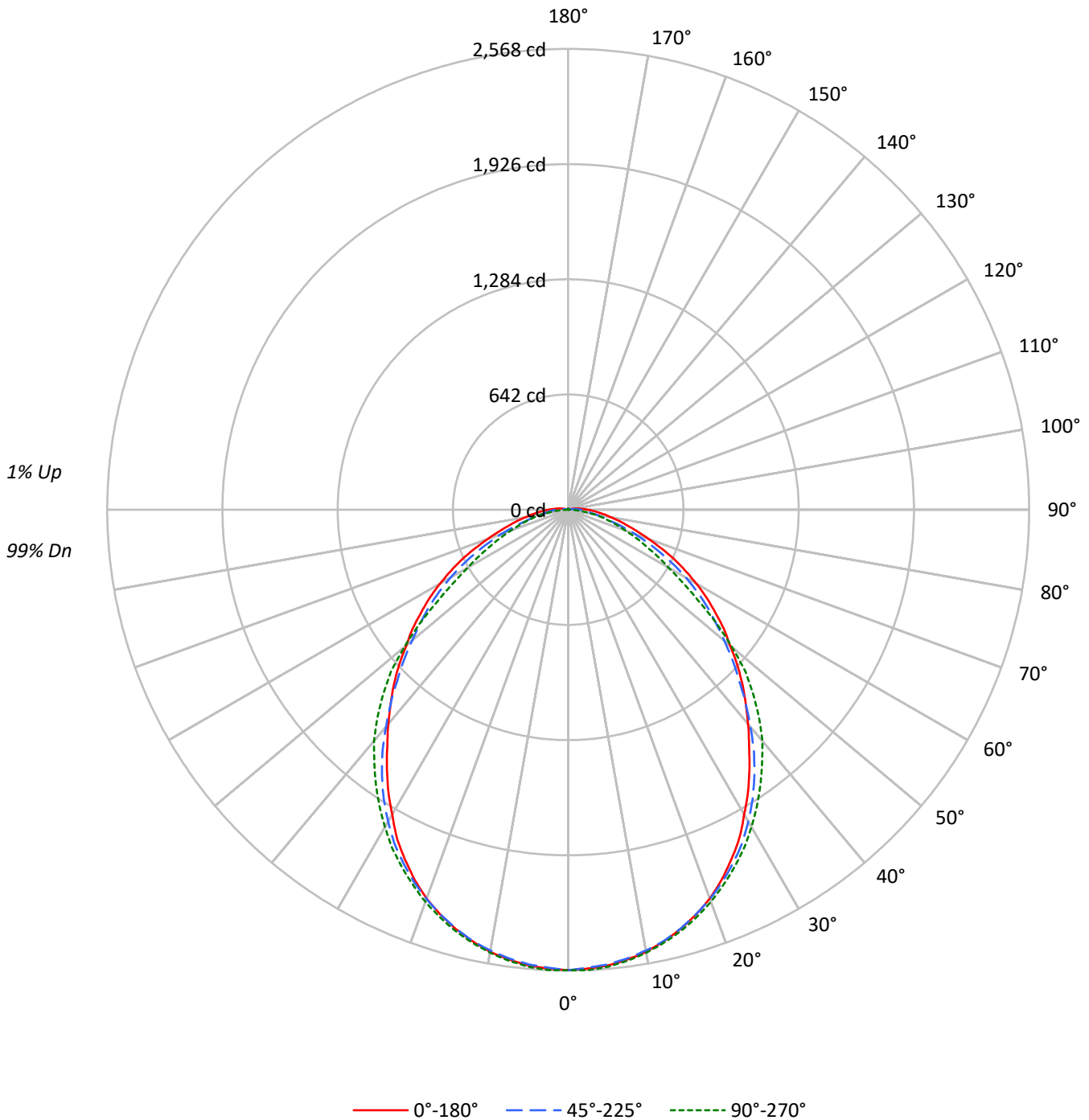
Input Watts (W): 64.6
Input Voltage (V): NR
Input Current (A_{in}): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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	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	92	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	68	77	71	66	74	69	65	72	67	64	62
4	85	73	65	59	82	72	64	58	69	63	57	67	61	56	65	60	55	53
5	78	66	57	51	76	65	57	51	63	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	46	40	52	45	40	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°	16572	16572	16572
5°	16376	15432	15237
10°	16112	14376	13976
15°	15735	13359	12814
20°	15270	12358	11720
25°	14618	11352	10667
30°	13794	10311	9654
35°	12933	9216	8662
40°	12087	8043	7711
45°	11341	6904	6658
50°	10520	5907	5460
55°	9802	5036	4113
60°	9017	4162	3049
65°	8107	3240	2313
70°	6974	2378	1708
75°	6109	1575	1244
80°	5635	1048	803
85°	5649	777	358



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	241.9	4.0
10°-20°	682.4	11.4
20°-30°	1000.4	16.7
30°-40°	1132.1	18.9
40°-50°	1066.2	17.8
50°-60°	852.2	14.2
60°-70°	559.2	9.3
70°-80°	284.3	4.7
80°-90°	119.0	2.0
90°-100°	42.5	0.7
100°-110°	7.7	0.1
110°-120°	3.0	0.0
120°-130°	3.2	0.1
130°-140°	3.0	0.0
140°-150°	2.6	0.0
150°-160°	1.8	0.0
160°-170°	1.2	0.0
170°-180°	0.4	0.0
0°-30°	1924.7	32.1
0°-40°	3056.7	50.9
0°-60°	4975.1	82.9
0°-90°	5937.6	98.9
90°-120°	53.2	0.9
90°-150°	62.0	1.0
90°-180°	65.0	1.1
0°-180°	6003.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	2566	2566	2566	2566	2566	
5°	2549	2553	2543	2555	2556	242
15°	2419	2418	2416	2430	2430	681
25°	2151	2158	2173	2195	2195	989
35°	1760	1770	1808	1862	1868	1101
45°	1371	1345	1346	1417	1458	1057
55°	1000	989	946	926	887	896
65°	649	635	567	480	476	641
75°	340	296	247	216	236	368
85°	167	138	104	68	60	152
90°	109	97	69	38	1	60
95°	68	68	41	7	1	50
105°	13	9	3	2	2	17
115°	4	3	3	2	2	4
125°	4	4	4	3	3	4
135°	4	4	4	4	3	3
145°	5	5	4	4	3	3
155°	4	4	4	4	4	2
165°	4	4	4	4	4	1
175°	2	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°	2566	2566	2566	2566	2566
2.5°	2559	2564	2554	2567	2568
5°	2549	2553	2543	2555	2556
7.5°	2528	2532	2522	2536	2535
10°	2502	2500	2494	2507	2507
12.5°	2463	2465	2462	2472	2471
15°	2419	2418	2416	2430	2430
17.5°	2366	2368	2365	2379	2380
20°	2306	2307	2309	2324	2326
22.5°	2233	2241	2245	2263	2262
25°	2151	2158	2173	2195	2195
27.5°	2065	2075	2097	2123	2124
30°	1961	1974	2006	2040	2042
32.5°	1865	1875	1912	1956	1957
35°	1760	1770	1808	1862	1868
37.5°	1655	1661	1699	1763	1774
40°	1559	1553	1579	1654	1682
42.5°	1463	1451	1464	1539	1574
45°	1371	1345	1346	1417	1458
47.5°	1277	1252	1242	1296	1340
50°	1177	1161	1135	1172	1191
52.5°	1094	1074	1037	1051	1043
55°	1000	989	946	926	887
57.5°	916	907	852	806	755
60°	824	824	758	684	645
62.5°	735	732	662	574	558
65°	649	635	567	480	476
67.5°	559	542	475	399	408
70°	475	451	396	329	339
72.5°	405	366	318	269	285
75°	340	296	247	216	236
77.5°	292	242	193	167	189
80°	241	198	153	124	144
82.5°	203	165	124	89	99
85°	167	138	104	68	60
87.5°	135	116	84	54	20
90°	109	97	69	38	1
92.5°	86	81	56	21	1
95°	68	68	41	7	1
97.5°	52	52	26	2	1
100°	38	36	12	2	2
102.5°	24	21	4	2	2
105°	13	9	3	2	2
107.5°	6	4	3	2	2
110°	4	4	3	2	2



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CANDELA DISTRIBUTION (continued):

	0°	22.5°	45°	67.5°	90°
112.5°	4	4	3	2	2
115°	4	3	3	2	2
117.5°	4	3	3	3	3
120°	4	4	3	3	3
122.5°	4	4	3	3	3
125°	4	4	4	3	3
127.5°	4	4	4	3	3
130°	4	4	4	3	3
132.5°	4	4	4	4	3
135°	4	4	4	4	3
137.5°	4	4	4	4	3
140°	4	4	4	4	3
142.5°	4	5	4	4	3
145°	5	5	4	4	3
147.5°	5	5	4	4	3
150°	4	4	4	4	3
152.5°	4	4	4	4	3
155°	4	4	4	4	4
157.5°	4	4	4	4	4
160°	4	4	4	4	4
162.5°	4	4	4	4	4
165°	4	4	4	4	4
167.5°	4	4	4	5	5
170°	3	4	4	4	5
172.5°	2	4	4	5	5
175°	2	4	4	5	5
177.5°	2	4	4	5	5
180°	4	4	4	4	4

(END OF REPORT)