

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-L940-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-L940-EDD
Description: MWL 4FT MEDICAL LED FIXTURE
Light Source: -
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 5469.1 lumens
Efficiency: N/A
Efficacy: 83.8 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

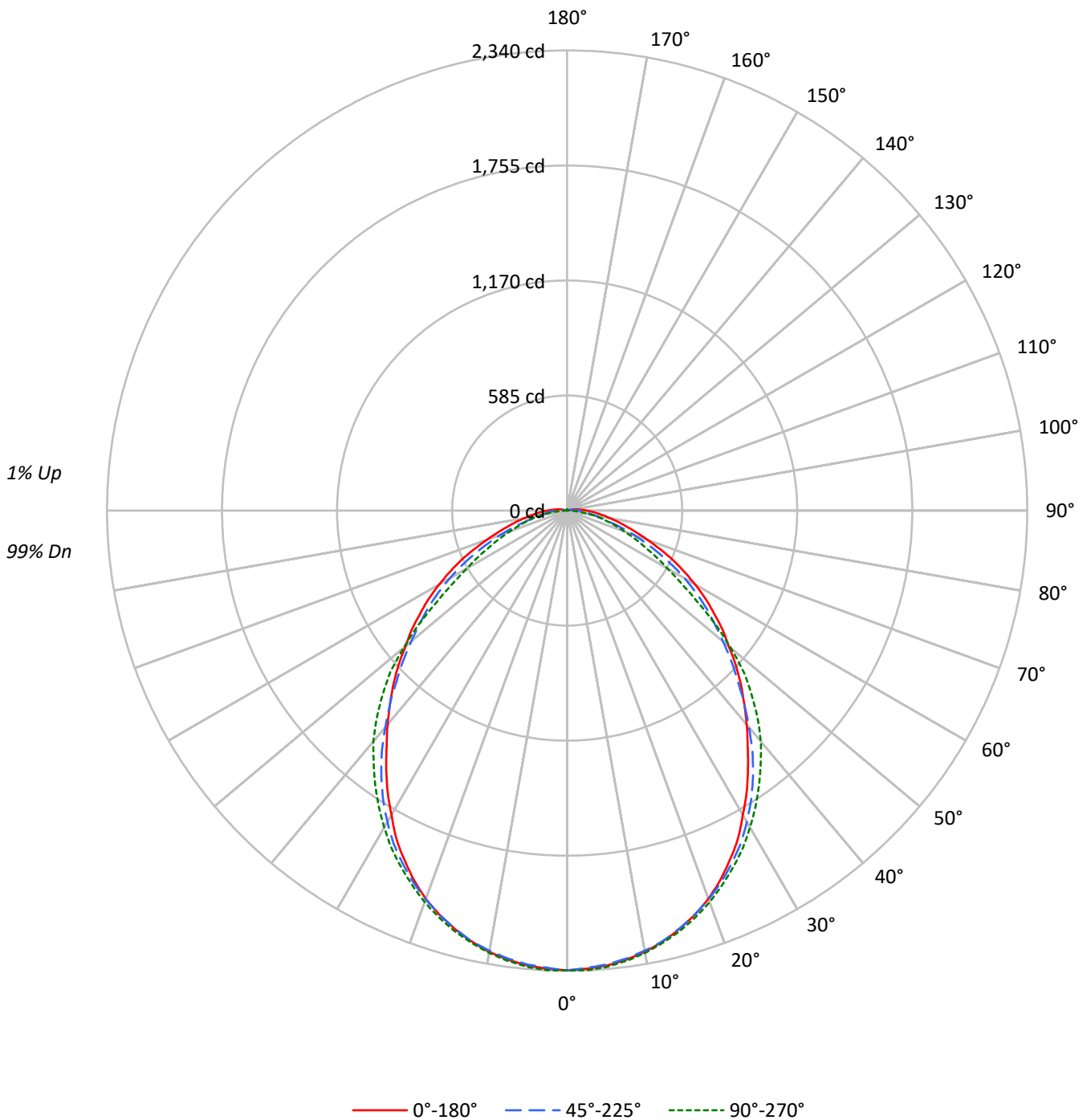
Input Watts (W): 65.246
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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	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°	15099	15099	15099
5°	14920	14060	13883
10°	14680	13098	12734
15°	14336	12171	11675
20°	13912	11259	10678
25°	13319	10343	9719
30°	12568	9395	8796
35°	11783	8397	7892
40°	11013	7328	7025
45°	10332	6290	6066
50°	9585	5382	4974
55°	8930	4588	3747
60°	8214	3792	2779
65°	7386	2952	2108
70°	6354	2166	1556
75°	5566	1435	1134
80°	5134	955	731
85°	5148	708	326



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	220.4	4.0
10°-20°	621.7	11.4
20°-30°	911.4	16.7
30°-40°	1031.4	18.9
40°-50°	971.4	17.8
50°-60°	776.5	14.2
60°-70°	509.5	9.3
70°-80°	259.0	4.7
80°-90°	108.4	2.0
90°-100°	38.8	0.7
100°-110°	7.0	0.1
110°-120°	2.7	0.0
120°-130°	2.8	0.1
130°-140°	2.7	0.0
140°-150°	2.3	0.0
150°-160°	1.6	0.0
160°-170°	1.0	0.0
170°-180°	0.4	0.0
0°-30°	1753.6	32.1
0°-40°	2785.0	50.9
0°-60°	4532.8	82.9
0°-90°	5409.8	98.9
90°-120°	48.4	0.9
90°-150°	56.3	1.0
90°-180°	59.0	1.1
0°-180°	5469.1	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	2338	2338	2338	2338	2338	
5°	2322	2326	2317	2328	2329	220
15°	2204	2203	2201	2214	2214	621
25°	1960	1966	1980	2000	2000	901
35°	1604	1613	1647	1696	1702	1003
45°	1249	1225	1226	1291	1328	963
55°	911	901	862	844	808	817
65°	591	578	517	437	434	584
75°	310	270	225	197	215	335
85°	152	126	95	62	55	138
90°	99	88	63	35	1	55
95°	62	62	37	6	1	45
105°	12	8	3	2	2	16
115°	4	3	3	2	2	4
125°	4	4	4	3	3	3
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°	2337.9	2337.9	2337.9	2337.9	2337.9
2.5°	2331.5	2336.1	2326.9	2338.8	2339.7
5°	2322.4	2326.0	2316.9	2327.9	2328.8
7.5°	2303.3	2306.9	2297.8	2310.5	2309.6
10°	2279.6	2277.8	2272.3	2284.1	2284.1
12.5°	2244.0	2245.9	2243.1	2252.2	2251.3
15°	2204.0	2203.0	2201.2	2214.0	2214.0
17.5°	2155.7	2157.5	2154.8	2167.5	2168.4
20°	2101.0	2101.9	2103.7	2117.4	2119.2
22.5°	2034.5	2041.8	2045.4	2061.8	2060.9
25°	1959.8	1966.2	1979.8	1999.9	1999.9
27.5°	1881.4	1890.5	1910.6	1934.3	1935.2
30°	1786.7	1798.5	1827.7	1858.6	1860.5
32.5°	1699.2	1708.3	1742.0	1782.1	1783.0
35°	1603.5	1612.6	1647.3	1696.5	1701.9
37.5°	1507.9	1513.3	1548.0	1606.3	1616.3
40°	1420.4	1414.9	1438.6	1507.0	1532.5
42.5°	1332.9	1322.0	1333.9	1402.2	1434.1
45°	1249.1	1225.4	1226.3	1291.0	1328.4
47.5°	1163.5	1140.7	1131.6	1180.8	1220.9
50°	1072.4	1057.8	1034.1	1067.8	1085.1
52.5°	996.7	978.5	944.8	957.6	950.3
55°	911.1	901.1	861.9	843.7	808.1
57.5°	834.6	826.4	776.3	734.3	687.9
60°	750.7	750.7	690.6	623.2	587.7
62.5°	669.7	666.9	603.1	523.0	508.4
65°	591.3	578.5	516.6	437.3	433.7
67.5°	509.3	493.8	432.8	363.5	371.7
70°	432.8	410.9	360.8	299.8	308.9
72.5°	369.0	333.5	289.7	245.1	259.7
75°	309.8	269.7	225.0	196.8	215.0
77.5°	266.0	220.5	175.8	152.2	172.2
80°	219.6	180.4	139.4	113.0	131.2
82.5°	185.0	150.3	113.0	81.1	90.2
85°	152.2	125.7	94.8	62.0	54.7
87.5°	123.0	105.7	76.5	49.2	18.2
90°	99.3	88.4	62.9	34.6	0.9
92.5°	78.4	73.8	51.0	19.1	0.9
95°	62.0	62.0	37.4	6.4	0.9
97.5°	47.4	47.4	23.7	1.8	0.9
100°	34.6	32.8	10.9	1.8	1.8
102.5°	21.9	19.1	3.6	1.8	1.8
105°	11.8	8.2	2.7	1.8	1.8
107.5°	5.5	3.6	2.7	1.8	1.8
110°	3.6	3.6	2.7	1.8	1.8



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CANDELA DISTRIBUTION (continued):

	0°	22.5°	45°	67.5°	90°
112.5°	3.6	3.6	2.7	1.8	1.8
115°	3.6	2.7	2.7	1.8	1.8
117.5°	3.6	2.7	2.7	2.7	2.7
120°	3.6	3.6	2.7	2.7	2.7
122.5°	3.6	3.6	2.7	2.7	2.7
125°	3.6	3.6	3.6	2.7	2.7
127.5°	3.6	3.6	3.6	2.7	2.7
130°	3.6	3.6	3.6	2.7	2.7
132.5°	3.6	3.6	3.6	3.6	2.7
135°	3.6	3.6	3.6	3.6	2.7
137.5°	3.6	3.6	3.6	3.6	2.7
140°	3.6	3.6	3.6	3.6	2.7
142.5°	3.6	4.6	3.6	3.6	2.7
145°	4.6	4.6	3.6	3.6	2.7
147.5°	4.6	4.6	3.6	3.6	2.7
150°	3.6	3.6	3.6	3.6	2.7
152.5°	3.6	3.6	3.6	3.6	2.7
155°	3.6	3.6	3.6	3.6	3.6
157.5°	3.6	3.6	3.6	3.6	3.6
160°	3.6	3.6	3.6	3.6	3.6
162.5°	3.6	3.6	3.6	3.6	3.6
165°	3.6	3.6	3.6	3.6	3.6
167.5°	3.6	3.6	3.6	4.6	4.6
170°	2.7	3.6	3.6	3.6	4.6
172.5°	1.8	3.6	3.6	4.6	4.6
175°	1.8	3.6	3.6	4.6	4.6
177.5°	1.8	3.6	3.6	4.6	4.6
180°	3.6	3.6	3.6	3.6	3.6

(END OF REPORT)