

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: P392633

Luminaire Tested: **MWL-4-00-45-UNV-L840-EDD**

Issue Date: 12/2/2019

Test Information

Test Method: LM-79-08
Report Number: P392633
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-1910-565-3)
Test Lab: INNOVATION CENTER
Issue Date: 12/2/2019
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: FAIL-SAFE
Catalog Number: MWL-4-00-45-UNV-L840-EDD
Description: MWL 4FT MEDICAL LED FIXTURE
Light Source: -
Ballast/Driver: ELECTRONIC DRIVER

Summary

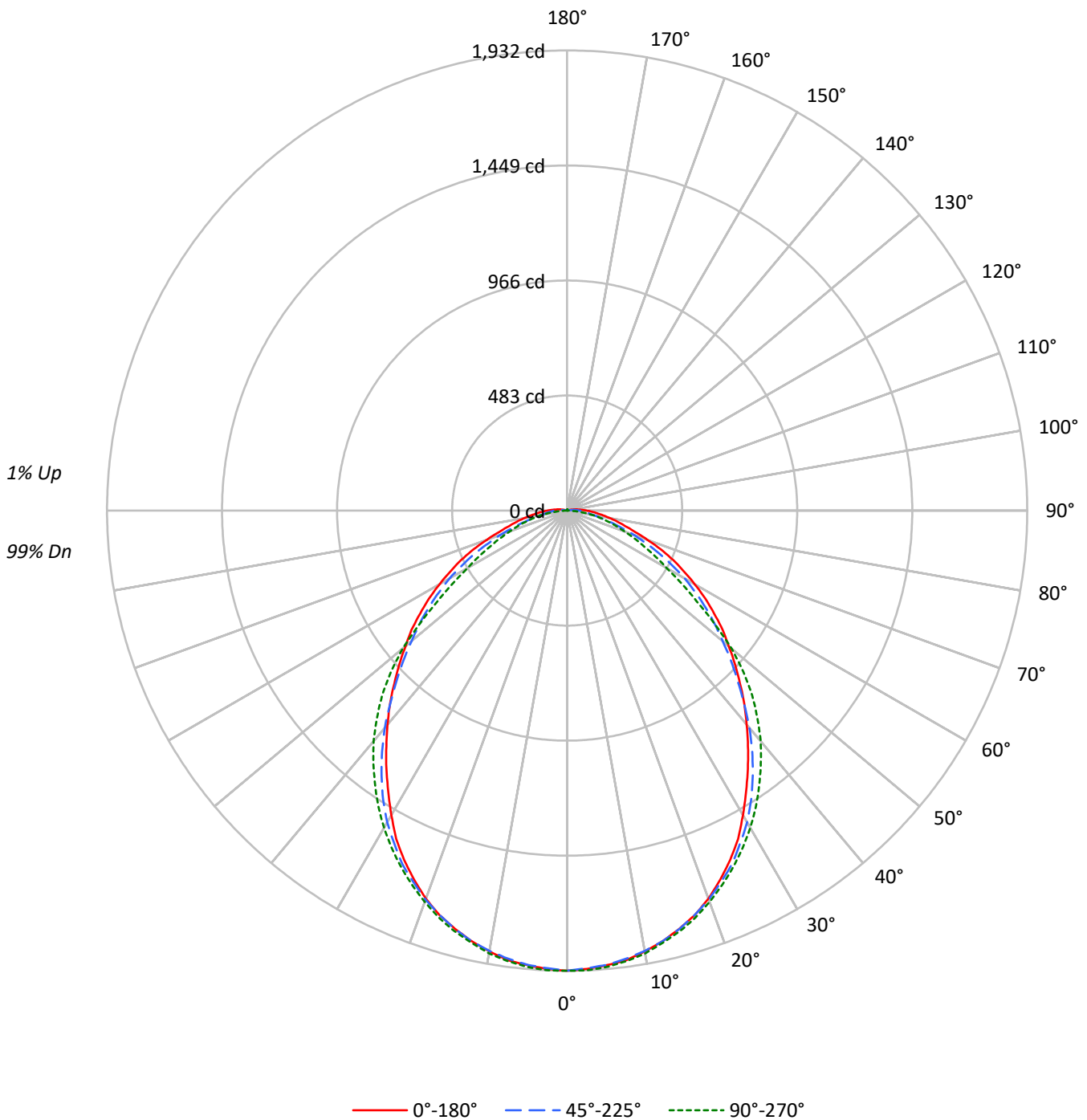
Lumens per Lamp: N/A
Luminaire Lumens: 4512.9 lumens
Efficiency: N/A
Efficacy: 99.2 lumens/watt
Spacing Criteria (0/90/45): 1.15 / 1.19 / 1.25
Luminous Opening: Rectangular w/ Sides (W: 0.42' x L: 4' x H: 0.42')
CIE Type: Direct

Input Watts (W): 45.5
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



TEST NUMBER: P392633
CATALOG NUMBER: MWL-4-00-45-UNV-L840-EDD

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	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	56	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°	12478	12478	12478
5°	12309	11615	11464
10°	12100	10820	10526
15°	11825	10058	9639
20°	11482	9302	8808
25°	11003	8557	8024
30°	10383	7767	7271
35°	9722	6927	6520
40°	9094	6067	5794
45°	8487	5196	5019
50°	7910	4434	4126
55°	7381	3774	3084
60°	6773	3130	2279
65°	6133	2440	1735
70°	5271	1783	1295
75°	4546	1199	939
80°	4255	781	597
85°	4228	582	274



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	182.0	4.0
10°-20°	513.4	11.4
20°-30°	752.5	16.7
30°-40°	851.3	18.9
40°-50°	801.7	17.8
50°-60°	639.9	14.2
60°-70°	420.2	9.3
70°-80°	213.6	4.7
80°-90°	89.1	2.0
90°-100°	31.9	0.7
100°-110°	5.7	0.1
110°-120°	2.4	0.1
120°-130°	2.4	0.1
130°-140°	2.2	0.0
140°-150°	1.8	0.0
150°-160°	1.4	0.0
160°-170°	0.8	0.0
170°-180°	0.3	0.0
0°-30°	1448.0	32.1
0°-40°	2299.3	50.9
0°-60°	3740.9	82.9
0°-90°	4463.9	98.9
90°-120°	40.0	0.9
90°-150°	46.5	1.0
90°-180°	49.0	1.1
0°-180°	4512.9	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1932	1932	1932	1932	1932	
5°	1916	1920	1914	1922	1923	182
15°	1818	1819	1819	1829	1828	512
25°	1619	1626	1638	1650	1651	744
35°	1323	1331	1359	1400	1406	827
45°	1026	1013	1013	1067	1099	793
55°	753	743	709	700	665	674
65°	491	480	427	359	357	484
75°	253	224	188	162	178	275
85°	125	104	78	51	46	114
90°	82	73	52	28	1	45
95°	50	51	31	6	1	37
105°	10	7	2	1	1	13
115°	3	3	2	2	2	3
125°	3	3	3	2	2	3
135°	3	3	3	3	2	2
145°	3	3	3	3	3	2
155°	3	3	3	3	3	1
165°	3	3	3	3	3	1
175°	2	3	3	3	4	0
180°	3	3	3	3	3	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1932	1932	1932	1932	1932
2.5°	1926	1930	1923	1933	1932
5°	1916	1920	1914	1922	1923
7.5°	1904	1903	1898	1908	1908
10°	1879	1882	1877	1888	1888
12.5°	1852	1854	1852	1861	1858
15°	1818	1819	1819	1829	1828
17.5°	1781	1782	1780	1791	1792
20°	1734	1734	1738	1747	1748
22.5°	1678	1684	1688	1701	1701
25°	1619	1626	1638	1650	1651
27.5°	1554	1562	1574	1596	1596
30°	1476	1488	1511	1534	1538
32.5°	1398	1410	1438	1468	1475
35°	1323	1331	1359	1400	1406
37.5°	1247	1249	1276	1325	1336
40°	1173	1168	1191	1242	1264
42.5°	1101	1090	1099	1159	1182
45°	1026	1013	1013	1067	1099
47.5°	956	940	933	979	1004
50°	885	872	852	880	900
52.5°	824	806	780	789	778
55°	753	743	709	700	665
57.5°	687	681	638	602	569
60°	619	616	570	515	482
62.5°	552	548	497	431	418
65°	491	480	427	359	357
67.5°	424	407	357	300	305
70°	359	337	297	249	257
72.5°	300	275	239	203	216
75°	253	224	188	162	178
77.5°	217	181	144	125	143
80°	182	150	114	93	107
82.5°	151	122	93	66	75
85°	125	104	78	51	46
87.5°	102	86	63	40	16
90°	82	73	52	28	1
92.5°	64	61	42	17	1
95°	50	51	31	6	1
97.5°	38	39	19	1	1
100°	28	27	9	1	1
102.5°	19	16	3	1	1
105°	10	7	2	1	1
107.5°	4	3	2	2	1
110°	3	3	2	2	2



TEST NUMBER: P392633

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CANDELA DISTRIBUTION (continued):

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

(END OF REPORT)