

Cooper Lighting Solutions Photometric Lab
1121 Highway 74 South
Peachtree City, GA 30269



Scaled data based on original data using
LM-79-2019 Approved Method: Electrical and Photometric Measurements of Solid-
State Lighting Products

Test Report Prepared for
Cooper Lighting Solutions

Brand: METALUX

Report Number: P893876

Luminaire Tested: 4MB-7HL-RND-UNV-L850

Issue Date: 11/11/2024

Test Information

Test Method: LM-79-2019
Report Number: P893876
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-2403-334-1)
Test Lab: INNOVATION CENTER
Issue Date: 11/11/2024
Manufacturer: COOPER LIGHTING SOLUTIONS
Product Line: METALUX
Catalog Number: 4MB-7HL-RND-UNV-L850
Description: 7000 Lumen 4FT MICROBAY LINEAR BAY with ROUND FROSTED LENS, 80CRI, 5000K CCT
Light Source: -
Ballast/Driver: -

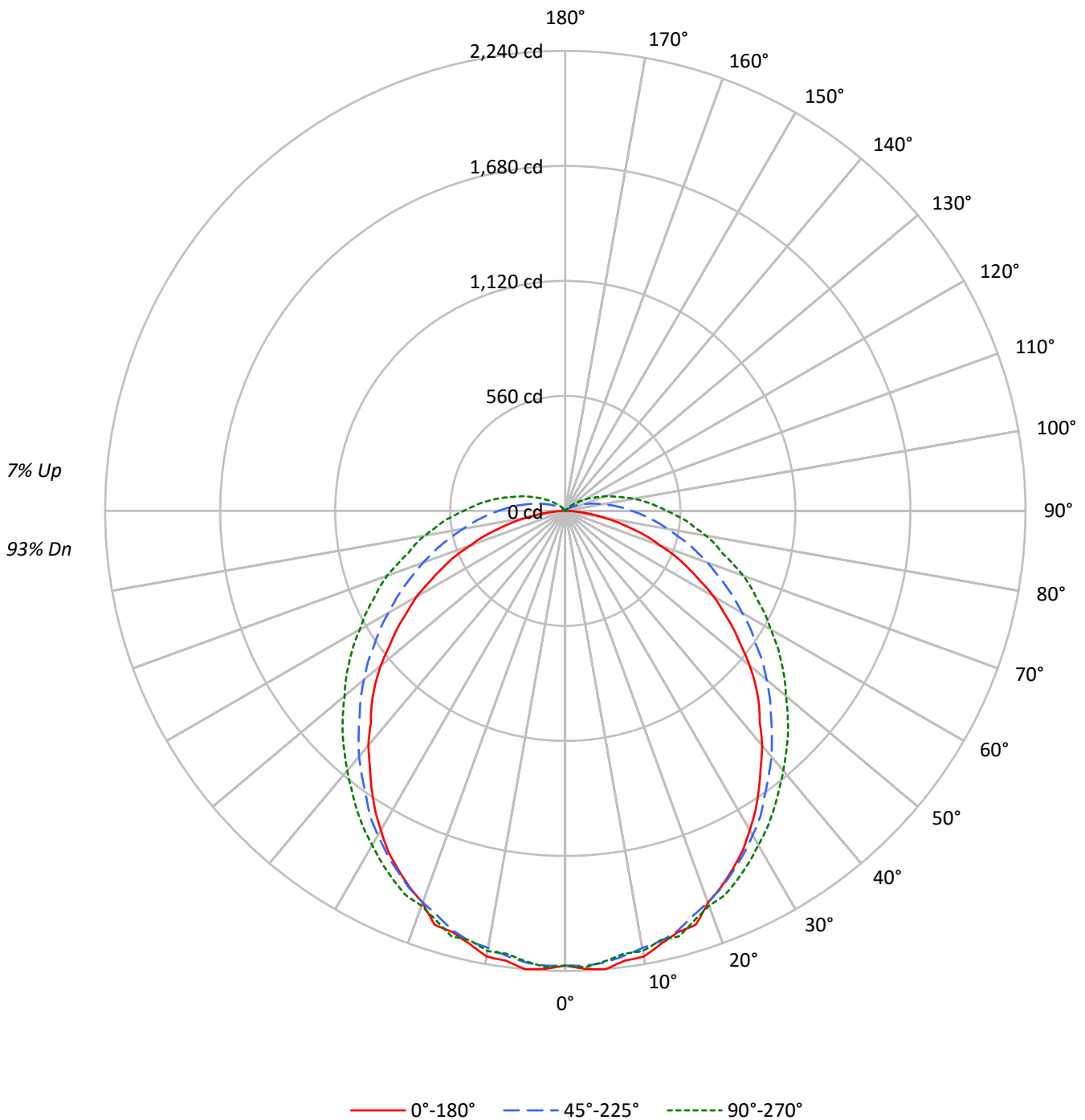
Summary

Lumens per Lamp: N/A
Luminaire Lumens: 7292.0 lumens
Efficiency: N/A
Efficacy: 140.8 lumens/watt
Spacing Criteria (0/90/45): 1.21 / 1.26 / 1.35
Luminous Opening: Rectangular (W 0.38' x L: 3.98' x H: 0')
CIE Type: Direct

Input Watts (W): 51.8
Input Voltage (V): 120
Input Current (A_{in}): NR
Voltage Rise (V): NR
Power Factor: 0.99
Total Harmonic Distortion (THDi): 4
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 24 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	117	117	117	117	114	114	114	114	107	107	107	101	101	101	96	96	96	96	96	96	93
1	105	100	95	90	102	97	92	88	91	87	84	86	83	80	81	79	77	77	77	77	74
2	95	86	79	72	92	84	77	71	79	73	68	74	70	66	70	67	63	63	63	63	60
3	86	75	66	60	83	73	65	59	69	62	57	65	60	55	62	57	53	53	53	53	50
4	79	66	57	50	76	65	56	49	61	54	48	58	52	47	55	50	45	45	45	45	43
5	73	59	50	43	70	58	49	42	55	47	41	52	45	40	49	44	39	39	39	39	37
6	67	53	44	37	65	52	43	37	49	42	36	47	40	35	45	39	34	34	34	34	32
7	62	48	39	33	60	47	39	33	45	37	32	43	36	31	41	35	30	30	30	30	28
8	58	44	35	29	56	43	35	29	41	34	28	39	33	28	38	32	27	27	27	27	25
9	54	40	32	26	52	39	32	26	38	31	26	36	30	25	35	29	25	25	25	25	23
10	51	37	29	24	49	36	29	24	35	28	23	34	27	23	32	27	22	22	22	22	21

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	15751	15751	15751
5°	15999	15768	15724
10°	15921	15613	15723
15°	15635	15583	15792
20°	15374	15359	15489
25°	15122	15185	15559
30°	14751	14985	15442
35°	14285	14698	15384
40°	13855	14504	15332
45°	13420	14246	15427
50°	12981	14158	15525
55°	12386	14057	15929
60°	11903	14152	16429
65°	11116	14526	17425
70°	10218	15338	19193
75°	9270	16983	21742
80°	7965	20749	28505
85°	6449	33568	48777

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 90°
 Vertical Angle: 87.5°
 Luminance: 88539 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	209.9	2.9
10°-20°	597.5	8.2
20°-30°	895.4	12.3
30°-40°	1064.0	14.6
40°-50°	1101.6	15.1
50°-60°	1020.8	14.0
60°-70°	849.9	11.7
70°-80°	630.8	8.7
80°-90°	417.2	5.7
90°-100°	253.9	3.5
100°-110°	142.3	2.0
110°-120°	70.1	1.0
120°-130°	28.5	0.4
130°-140°	8.3	0.1
140°-150°	1.2	0.0
150°-160°	0.3	0.0
160°-170°	0.2	0.0
170°-180°	0.1	0.0
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0°-30°	1702.8	23.4
0°-40°	2766.8	37.9
0°-60°	4889.2	67.0
0°-90°	6787.1	93.1
90°-120°	466.3	6.4
90°-150°	504.3	6.9
90°-180°	505.0	6.9
0°-180°	7292.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	2214	2214	2214	2214	2214	
5°	2240	2216	2208	2219	2202	212
15°	2123	2114	2116	2119	2144	601
25°	1926	1924	1934	1972	1982	887
35°	1645	1657	1692	1746	1771	1029
45°	1334	1353	1416	1504	1533	1028
55°	998	1041	1133	1247	1284	893
65°	660	722	863	989	1035	656
75°	337	440	618	750	791	361
85°	79	222	411	557	598	89
90°	4	144	325	455	495	6
95°	1	89	252	376	417	1
105°	1	29	137	232	264	1
115°	1	7	64	128	153	1
125°	1	2	23	59	75	1
135°	2	1	6	19	26	1
145°	2	1	0	2	3	1
155°	2	2	0	0	0	1
165°	3	2	0	0	0	1
175°	3	2	0	0	0	0
180°	1	1	1	1	1	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	2213.8	2213.8	2213.8	2213.8	2213.8
2.5°	2232.0	2220.9	2216.8	2211.8	2223.9
5°	2240.1	2215.8	2207.7	2218.9	2201.6
7.5°	2208.7	2202.7	2185.4	2191.5	2175.3
10°	2203.7	2170.2	2161.1	2181.4	2176.3
12.5°	2158.1	2129.7	2145.9	2160.1	2140.9
15°	2122.6	2114.5	2115.6	2118.6	2143.9
17.5°	2113.5	2077.1	2066.9	2092.3	2090.2
20°	2030.5	2023.4	2028.5	2061.9	2045.7
22.5°	1981.9	1959.6	1986.9	2019.3	2026.4
25°	1926.2	1924.2	1934.3	1971.8	1981.9
27.5°	1867.4	1854.3	1881.6	1925.2	1933.3
30°	1795.5	1790.5	1823.9	1861.4	1879.6
32.5°	1724.6	1727.7	1766.2	1797.6	1829.0
35°	1644.6	1656.8	1692.2	1745.9	1771.2
37.5°	1563.6	1578.8	1626.4	1688.2	1709.5
40°	1491.7	1494.8	1561.6	1624.4	1650.7
42.5°	1401.6	1432.0	1488.7	1571.7	1592.0
45°	1333.7	1353.0	1415.8	1503.9	1533.2
47.5°	1256.8	1279.1	1351.0	1437.0	1468.4
50°	1172.7	1193.0	1279.1	1377.3	1402.6
52.5°	1079.6	1121.1	1211.2	1312.5	1345.9
55°	998.5	1041.1	1133.2	1246.6	1284.1
57.5°	911.4	954.0	1069.4	1174.7	1223.4
60°	836.5	877.0	994.5	1125.1	1154.5
62.5°	743.3	801.1	928.7	1057.3	1098.8
65°	660.3	722.1	862.8	989.4	1035.0
67.5°	584.3	648.1	795.0	930.7	980.3
70°	491.2	575.2	737.3	870.9	922.6
72.5°	422.3	506.4	675.5	808.1	854.7
75°	337.2	439.5	617.8	750.4	790.9
77.5°	266.3	376.7	558.0	706.9	747.4
80°	194.4	320.0	506.4	649.1	695.7
82.5°	132.7	267.4	458.8	595.5	640.0
85°	79.0	221.8	411.2	557.0	597.5
87.5°	34.4	181.3	367.6	501.3	542.8
90°	4.1	143.8	325.1	454.7	495.2
92.5°	1.0	115.4	287.6	413.2	452.7
95°	1.0	89.1	252.2	375.7	417.2
97.5°	1.0	68.9	216.7	337.2	376.7
100°	1.0	52.7	187.4	296.7	339.3
102.5°	1.0	39.5	159.0	263.3	299.8
105°	1.0	29.4	136.7	231.9	264.3
107.5°	1.0	21.3	114.4	202.5	234.9
110°	1.0	15.2	96.2	175.2	207.6



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CANDELA DISTRIBUTION (continued):

	0°	22.5°	45°	67.5°	90°
112.5°	1.0	11.1	78.0	150.9	178.2
115°	1.0	7.1	63.8	127.6	152.9
117.5°	1.0	5.1	50.6	107.3	131.7
120°	1.0	4.1	40.5	89.1	110.4
122.5°	1.0	3.0	31.4	72.9	93.2
125°	1.0	2.0	23.3	58.7	74.9
127.5°	1.0	2.0	17.2	46.6	60.8
130°	1.0	1.0	12.2	35.4	47.6
132.5°	1.0	1.0	8.1	26.3	35.4
135°	2.0	1.0	6.1	19.2	26.3
137.5°	2.0	1.0	4.1	13.2	18.2
140°	2.0	1.0	2.0	8.1	11.1
142.5°	2.0	1.0	1.0	4.1	6.1
145°	2.0	1.0	0.0	2.0	3.0
147.5°	2.0	1.0	0.0	1.0	1.0
150°	2.0	1.0	0.0	0.0	0.0
152.5°	2.0	1.0	0.0	0.0	0.0
155°	2.0	2.0	0.0	0.0	0.0
157.5°	2.0	2.0	0.0	0.0	0.0
160°	2.0	2.0	0.0	0.0	0.0
162.5°	2.0	2.0	0.0	0.0	0.0
165°	3.0	2.0	0.0	0.0	0.0
167.5°	3.0	2.0	0.0	0.0	0.0
170°	3.0	2.0	0.0	0.0	0.0
172.5°	3.0	2.0	0.0	0.0	0.0
175°	3.0	2.0	0.0	0.0	0.0
177.5°	3.0	2.0	0.0	0.0	0.0
180°	1.0	1.0	1.0	1.0	1.0



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CIE UGR TABLE:

Reflectances:											
Ceiling		0.7	0.7	0.5	0.5	0.3	0.7	0.7	0.5	0.5	0.3
Wall		0.5	0.3	0.5	0.3	0.3	0.5	0.3	0.5	0.3	0.3
Reference plane		0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2
Room dimensions		Viewed crosswise					Viewed endwise				
X=2H	Y=2H	19.81	21.35	20.28	21.80	22.28	21.38	22.92	21.85	23.37	23.86
	3H	21.57	22.97	22.05	23.44	23.96	23.97	25.37	24.45	25.84	26.36
	4H	22.23	23.56	22.73	24.04	24.58	25.22	26.56	25.73	27.04	27.58
	6H	22.71	23.95	23.22	24.44	25.00	26.61	27.85	27.12	28.34	28.90
	8H	22.85	24.04	23.38	24.56	25.12	27.34	28.53	27.86	29.04	29.60
	12H	22.95	24.09	23.49	24.61	25.20	28.18	29.32	28.71	29.83	30.42
4H	2H	20.76	22.09	21.27	22.58	23.11	21.95	23.28	22.46	23.77	24.30
	3H	22.80	23.94	23.32	24.46	25.03	24.82	25.96	25.34	26.48	27.04
	4H	23.62	24.66	24.15	25.19	25.79	26.30	27.34	26.83	27.88	28.47
	6H	24.27	25.19	24.82	25.75	26.35	27.92	28.84	28.47	29.40	30.01
	8H	24.49	25.36	25.05	25.92	26.54	28.77	29.64	29.33	30.20	30.82
	12H	24.66	25.45	25.24	26.04	26.66	29.77	30.55	30.35	31.14	31.77
8H	4H	24.46	25.33	25.02	25.89	26.51	26.67	27.54	27.23	28.10	28.72
	6H	25.39	26.13	25.98	26.73	27.35	28.55	29.28	29.14	29.89	30.51
	8H	25.77	26.44	26.37	27.05	27.69	29.61	30.27	30.21	30.89	31.52
	12H	26.09	26.69	26.70	27.29	27.99	30.87	31.46	31.47	32.06	32.77
12H	4H	24.73	25.51	25.31	26.10	26.73	26.71	27.50	27.29	28.09	28.71
	6H	25.81	26.48	26.42	27.09	27.73	28.66	29.33	29.26	29.94	30.58
	8H	26.35	26.95	26.96	27.55	28.25	29.83	30.43	30.44	31.03	31.73