

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: P892712

Luminaire Tested: 2MB-4HL-AOL-UNV-L850

Issue Date: 11/11/2024

Test Information

Test Method: LM-79-2019
Report Number: P892712
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-2404-077-6)
Test Lab: INNOVATION CENTER
Issue Date: 11/11/2024
Manufacturer: COOPER LIGHTING SOLUTIONS
Product Line: METALUX
Catalog Number: 2MB-4HL-AOL-UNV-L850
Description: 4000 Lumen 2FT MICROBAY LINEAR BAY with AISLE OPTICS WITH CLEAR LENS NO UPLIGHT, 8
5000K CCT
Light Source: -
Ballast/Driver: -

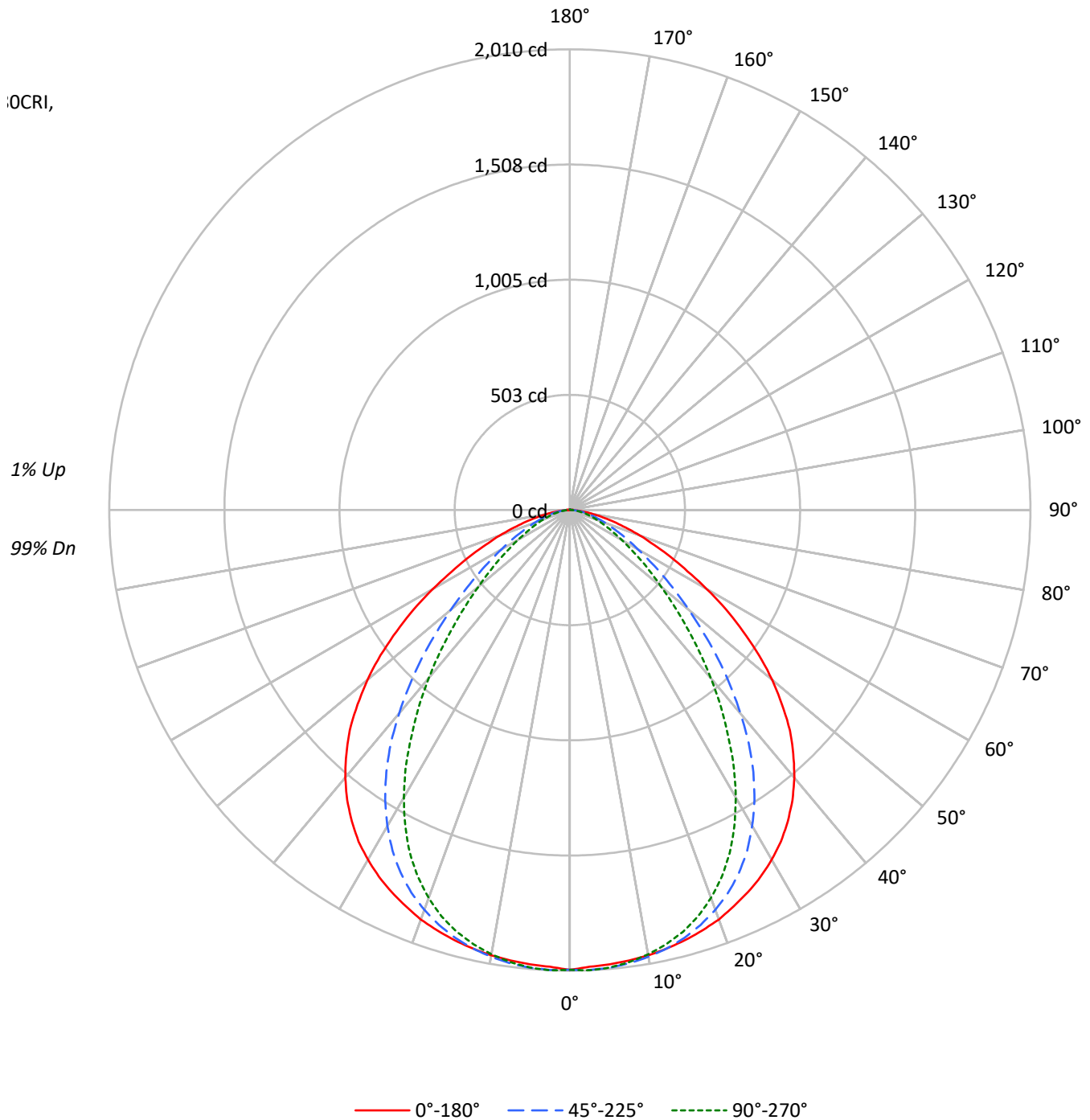
Summary

Lumens per Lamp: N/A
Luminaire Lumens: 4158.0 lumens
Efficiency: N/A
Efficacy: 150.7 lumens/watt
Spacing Criteria (0/90/45): 1.3 / 1.1 / 1.2
Luminous Opening: Rectangular (W 0.27' x L: 1.98' x H: 0')
CIE Type: Direct

Input Watts (W): 27.6
Input Voltage (V): 120
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: 6.5
Total Harmonic Distortion (THDi): 0.99
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				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				99
1	110	106	103	100	108	104	101	98	100	97	95	96	94	92	92	91	89	87				87
2	102	95	89	84	99	93	88	83	89	85	81	86	83	79	83	80	77	75				75
3	94	85	78	72	92	83	77	72	80	75	70	78	73	69	75	71	68	66				66
4	87	76	69	63	85	75	68	62	73	66	61	70	65	61	68	64	60	58				58
5	81	69	61	55	79	68	61	55	66	59	54	64	58	54	62	57	53	51				51
6	75	63	55	49	73	62	54	49	60	53	48	59	53	48	57	52	48	46				46
7	70	58	50	44	68	57	49	44	55	48	43	54	48	43	53	47	43	41				41
8	65	53	45	40	64	52	45	40	51	44	39	50	44	39	49	43	39	37				37
9	61	49	41	36	60	48	41	36	47	40	36	46	40	36	45	40	35	34				34
10	58	45	38	33	56	45	38	33	44	37	33	43	37	33	42	36	32	31				31

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	41074	41074	41074
5°	40894	41198	41181
10°	41028	41146	40926
15°	41187	40960	40388
20°	41426	40446	39249
25°	41565	39457	37311
30°	41659	37632	34246
35°	41445	34896	30127
40°	40750	30967	25583
45°	39334	26390	20818
50°	36723	21621	16562
55°	32912	17507	13359
60°	28299	14116	10730
65°	23562	11662	8925
70°	19559	9950	7597
75°	15744	8552	6606
80°	12452	7629	5790
85°	10972	7495	5780

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
 Vertical Angle: 45°
 Luminance: 39334 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	190.2	4.6
10°-20°	543.7	13.1
20°-30°	801.8	19.3
30°-40°	880.5	21.2
40°-50°	749.4	18.0
50°-60°	508.5	12.2
60°-70°	286.6	6.9
70°-80°	133.6	3.2
80°-90°	39.0	0.9
90°-100°	9.3	0.2
100°-110°	6.0	0.1
110°-120°	3.7	0.1
120°-130°	2.1	0.0
130°-140°	1.2	0.0
140°-150°	0.9	0.0
150°-160°	0.7	0.0
160°-170°	0.5	0.0
170°-180°	0.2	0.0
0°-30°	1535.8	36.9
0°-40°	2416.3	58.1
0°-60°	3674.3	88.4
0°-90°	4133.4	99.4
90°-120°	18.9	0.5
90°-150°	23.1	0.6
90°-180°	25.0	0.6
0°-180°	4158.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	2006	2006	2006	2006	2006	
5°	1990	1999	2004	2006	2004	189
15°	1943	1945	1932	1916	1905	549
25°	1840	1817	1746	1681	1651	848
35°	1658	1574	1396	1260	1205	1036
45°	1358	1184	911	761	719	1041
55°	922	723	490	396	374	825
65°	486	367	241	196	184	487
75°	199	156	108	88	84	215
85°	47	41	32	26	25	50
90°	8	10	9	7	7	8
95°	14	11	8	6	6	10
105°	4	8	6	4	4	4
115°	2	5	3	3	3	3
125°	2	2	2	2	2	1
135°	1	2	2	2	2	1
145°	1	2	2	2	2	1
155°	1	2	2	2	2	0
165°	2	2	2	2	2	0
175°	2	2	2	2	2	0
180°	2	2	2	2	2	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	2005.9	2005.9	2005.9	2005.9	2005.9
2.5°	1994.5	2002.6	2008.4	2011.7	2010.0
5°	1989.5	1999.4	2004.3	2005.9	2003.5
7.5°	1982.2	1992.0	1994.5	1993.6	1989.5
10°	1973.2	1980.5	1978.9	1974.8	1968.3
12.5°	1959.3	1965.0	1959.3	1948.6	1940.4
15°	1942.9	1945.3	1932.2	1915.9	1905.2
17.5°	1923.2	1921.6	1897.8	1874.1	1859.4
20°	1901.1	1892.1	1856.1	1820.1	1801.2
22.5°	1870.8	1856.9	1807.0	1755.4	1732.5
25°	1839.7	1816.8	1746.4	1680.9	1651.4
27.5°	1803.7	1766.9	1676.0	1592.5	1555.6
30°	1761.9	1712.8	1591.6	1492.6	1448.4
32.5°	1715.3	1648.1	1499.9	1380.4	1332.9
35°	1658.0	1573.6	1396.0	1260.0	1205.2
37.5°	1595.7	1488.5	1283.0	1129.0	1083.2
40°	1524.5	1393.5	1158.5	1002.1	957.1
42.5°	1443.4	1291.2	1034.9	876.1	835.9
45°	1358.3	1183.9	911.3	760.6	718.9
47.5°	1256.0	1065.2	788.5	650.9	614.1
50°	1152.8	946.5	678.7	553.5	519.9
52.5°	1041.4	833.5	577.2	470.0	442.1
55°	921.9	723.0	490.4	396.3	374.2
57.5°	808.9	619.0	412.6	331.6	311.1
60°	691.0	522.4	344.7	279.2	262.0
62.5°	579.7	438.0	291.5	232.5	218.6
65°	486.3	366.8	240.7	195.7	184.2
67.5°	396.3	304.6	200.6	162.9	153.1
70°	326.7	246.4	166.2	134.3	126.9
72.5°	254.6	199.8	134.3	109.7	103.2
75°	199.0	155.6	108.1	88.4	83.5
77.5°	147.4	120.4	85.1	69.6	66.3
80°	105.6	89.2	64.7	53.2	49.1
82.5°	73.7	62.2	46.7	38.5	36.0
85°	46.7	40.9	31.9	26.2	24.6
87.5°	24.6	22.9	18.8	15.6	14.7
90°	8.2	9.8	9.0	7.4	7.4
92.5°	13.9	10.6	8.2	7.4	6.5
95°	13.9	10.6	8.2	6.5	6.5
97.5°	13.1	9.8	7.4	6.5	5.7
100°	6.5	9.8	6.5	5.7	4.9
102.5°	4.1	9.0	6.5	4.9	4.9
105°	4.1	8.2	5.7	4.1	4.1
107.5°	3.3	7.4	4.9	4.1	4.1
110°	3.3	6.5	4.9	4.1	3.3



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CANDELA DISTRIBUTION (continued):

	0°	22.5°	45°	67.5°	90°
112.5°	3.3	5.7	4.1	3.3	3.3
115°	2.5	4.9	3.3	3.3	3.3
117.5°	2.5	4.1	3.3	3.3	3.3
120°	1.6	3.3	2.5	2.5	2.5
122.5°	1.6	2.5	2.5	2.5	2.5
125°	1.6	2.5	2.5	2.5	2.5
127.5°	1.6	1.6	2.5	2.5	2.5
130°	0.8	1.6	1.6	2.5	2.5
132.5°	0.8	1.6	1.6	1.6	1.6
135°	0.8	1.6	1.6	1.6	1.6
137.5°	0.8	1.6	1.6	1.6	1.6
140°	0.8	1.6	1.6	1.6	1.6
142.5°	0.8	1.6	1.6	1.6	1.6
145°	0.8	1.6	1.6	1.6	1.6
147.5°	0.8	1.6	1.6	1.6	1.6
150°	0.8	1.6	1.6	1.6	1.6
152.5°	0.8	1.6	1.6	1.6	1.6
155°	0.8	1.6	1.6	1.6	1.6
157.5°	1.6	1.6	1.6	1.6	2.5
160°	1.6	1.6	1.6	1.6	2.5
162.5°	1.6	1.6	1.6	2.5	2.5
165°	1.6	1.6	1.6	2.5	2.5
167.5°	1.6	1.6	1.6	2.5	2.5
170°	1.6	1.6	1.6	2.5	2.5
172.5°	1.6	1.6	1.6	2.5	2.5
175°	1.6	1.6	2.5	2.5	2.5
177.5°	1.6	1.6	2.5	2.5	2.5
180°	2.5	2.5	2.5	2.5	2.5



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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	23.34	24.78	23.72	25.11	25.44	18.55	19.99	18.92	20.32	20.65
	3H	24.57	25.85	24.95	26.19	26.57	19.56	20.85	19.95	21.19	21.56
	4H	24.97	26.17	25.38	26.53	26.93	19.91	21.11	20.32	21.48	21.87
	6H	25.22	26.33	25.64	26.71	27.12	20.17	21.28	20.59	21.66	22.06
	8H	25.29	26.35	25.73	26.75	27.17	20.25	21.30	20.69	21.71	22.12
	12H	25.34	26.35	25.78	26.75	27.19	20.31	21.32	20.75	21.71	22.16
4H	2H	23.36	24.56	23.77	24.93	25.32	19.17	20.38	19.58	20.74	21.13
	3H	24.76	25.75	25.18	26.16	26.58	20.37	21.36	20.79	21.78	22.19
	4H	25.26	26.15	25.71	26.58	27.04	20.81	21.70	21.25	22.13	22.58
	6H	25.64	26.41	26.11	26.86	27.34	21.16	21.93	21.63	22.38	22.86
	8H	25.75	26.47	26.23	26.93	27.41	21.27	21.99	21.75	22.45	22.93
	12H	25.85	26.49	26.34	26.98	27.46	21.37	22.01	21.86	22.50	22.99
8H	4H	25.26	25.98	25.74	26.44	26.92	21.15	21.87	21.62	22.33	22.81
	6H	25.70	26.30	26.21	26.80	27.29	21.59	22.19	22.10	22.69	23.18
	8H	25.87	26.41	26.40	26.93	27.43	21.76	22.30	22.29	22.82	23.32
	12H	26.03	26.50	26.55	27.00	27.58	21.92	22.40	22.44	22.90	23.48
12H	4H	25.24	25.88	25.73	26.37	26.86	21.20	21.84	21.69	22.33	22.82
	6H	25.68	26.21	26.20	26.73	27.24	21.67	22.20	22.19	22.72	23.23
	8H	25.88	26.36	26.41	26.86	27.44	21.89	22.36	22.41	22.87	23.45