

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: P893477

Luminaire Tested: 4MB-4SL-AOL-UNV-L930

Issue Date: 11/11/2024

Test Information

Test Method: LM-79-2019
Report Number: P893477
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-2404-077-14)
Test Lab: INNOVATION CENTER
Issue Date: 11/11/2024
Manufacturer: COOPER LIGHTING SOLUTIONS
Product Line: METALUX
Catalog Number: 4MB-4SL-AOL-UNV-L930
Description: 4000 Lumen 4FT MICROBAY LINEAR BAY with AISLE OPTICS WITH CLEAR LENS NO UPLIGHT, 9
3000K CCT
Light Source: -
Ballast/Driver: -

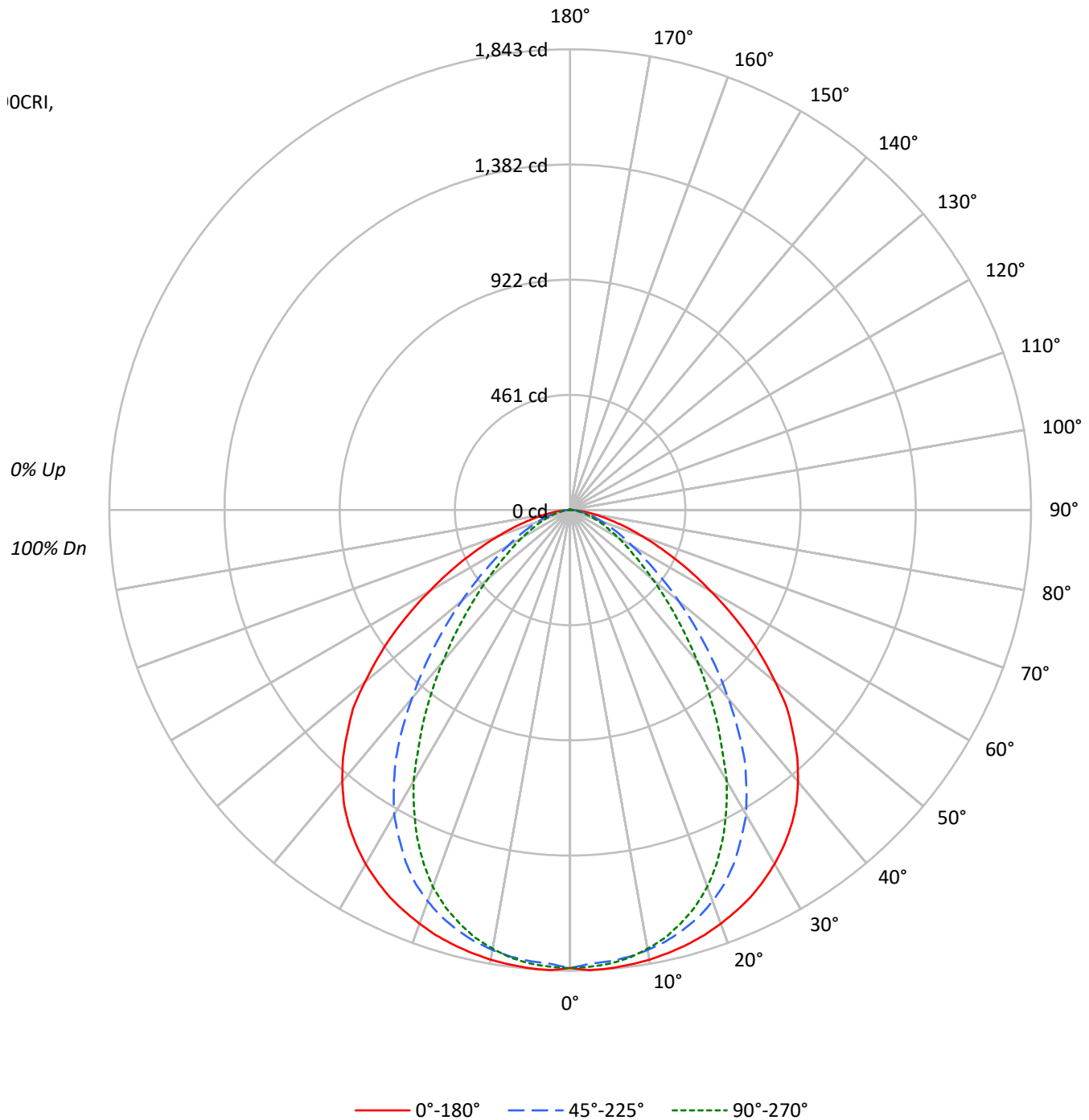
Summary

Lumens per Lamp: N/A
Luminaire Lumens: 3660.1 lumens
Efficiency: N/A
Efficacy: 122.8 lumens/watt
Spacing Criteria (0/90/45): 1.32 / 1.06 / 1.16
Luminous Opening: Rectangular (W 0.27' x L: 3.98' x H: 0')
CIE Type: Direct

Input Watts (W): 29.8
Input Voltage (V): 120
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: 0.99
Total Harmonic Distortion (THDi): 5.5
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	119	119	119	119	116	116	116	116	111	111	111	106	106	106	102	102	102	102	102	102	100
1	111	107	103	100	108	104	101	98	100	98	95	96	94	92	93	91	89	89	89	89	87
2	102	95	89	85	100	93	88	84	90	85	82	87	83	80	84	81	78	78	78	78	76
3	94	85	78	73	92	84	77	72	81	75	71	78	73	70	76	72	68	68	68	68	66
4	87	77	69	63	85	76	68	63	73	67	62	71	66	61	69	64	60	60	60	60	58
5	81	70	62	56	79	69	61	55	66	60	55	65	59	54	63	58	54	54	54	54	52
6	75	63	55	50	74	63	55	49	61	54	49	59	53	49	58	52	48	48	48	48	46
7	70	58	50	45	69	57	50	44	56	49	44	54	48	44	53	48	43	43	43	43	42
8	66	53	46	40	64	53	45	40	51	45	40	50	44	40	49	44	39	39	39	39	38
9	62	49	42	37	60	49	42	37	48	41	36	47	41	36	46	40	36	36	36	36	34
10	58	46	38	34	57	45	38	33	44	38	33	43	37	33	43	37	33	33	33	33	31

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	18660	18660	18660
5°	18812	18526	18623
10°	18887	18480	18431
15°	18986	18348	18043
20°	19088	18051	17385
25°	19195	17465	16259
30°	19228	16546	14722
35°	19165	15114	12664
40°	18845	13081	10523
45°	18144	10992	8516
50°	16980	8952	6821
55°	15343	7195	5469
60°	13231	5856	4528
65°	11196	4877	3723
70°	9138	4148	3162
75°	7323	3494	2688
80°	5701	2991	2311
85°	4417	2641	2092

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
 Vertical Angle: 45°
 Luminance: 18144 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	173.5	4.7
10°-20°	493.7	13.5
20°-30°	719.6	19.7
30°-40°	775.7	21.2
40°-50°	650.3	17.8
50°-60°	440.3	12.0
60°-70°	251.0	6.9
70°-80°	114.8	3.1
80°-90°	30.1	0.8
90°-100°	3.7	0.1
100°-110°	2.5	0.1
110°-120°	1.4	0.0
120°-130°	0.8	0.0
130°-140°	0.8	0.0
140°-150°	0.7	0.0
150°-160°	0.6	0.0
160°-170°	0.4	0.0
170°-180°	0.2	0.0
0°-30°	1386.9	37.9
0°-40°	2162.6	59.1
0°-60°	3253.1	88.9
0°-90°	3649.0	99.7
90°-120°	7.6	0.2
90°-150°	9.9	0.3
90°-180°	11.0	0.3
0°-180°	3660.1	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1832	1832	1832	1832	1832	
5°	1840	1834	1812	1827	1822	175
15°	1801	1785	1740	1729	1711	509
25°	1708	1663	1554	1483	1447	787
35°	1542	1425	1216	1067	1019	962
45°	1260	1051	763	629	591	970
55°	864	632	405	328	308	770
65°	465	323	202	164	154	464
75°	186	137	89	72	68	203
85°	38	32	23	19	18	44
90°	5	5	3	3	2	5
95°	8	5	3	2	2	6
105°	5	4	2	1	0	6
115°	3	2	1	0	0	3
125°	1	1	1	0	0	1
135°	0	1	1	1	0	1
145°	1	1	1	1	1	1
155°	1	1	1	2	2	1
165°	1	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°	1832.2	1832.2	1832.2	1832.2	1832.2
2.5°	1842.7	1838.0	1817.0	1834.3	1829.0
5°	1840.1	1834.3	1812.2	1826.9	1821.7
7.5°	1834.8	1827.5	1802.8	1813.8	1807.0
10°	1826.4	1817.5	1787.0	1793.3	1782.3
12.5°	1814.9	1803.8	1767.6	1766.0	1752.8
15°	1800.7	1784.9	1740.2	1728.7	1711.3
17.5°	1783.3	1763.3	1707.6	1684.5	1663.5
20°	1761.2	1735.5	1665.6	1628.8	1604.1
22.5°	1736.0	1701.3	1616.7	1557.8	1531.0
25°	1708.2	1663.0	1554.2	1482.7	1446.9
27.5°	1673.5	1616.7	1481.6	1389.1	1352.3
30°	1635.1	1563.1	1407.0	1288.7	1251.9
32.5°	1591.5	1501.6	1311.9	1180.5	1129.0
35°	1541.5	1425.4	1215.7	1066.9	1018.6
37.5°	1485.3	1346.0	1100.6	952.4	903.5
40°	1417.5	1251.9	983.9	837.3	791.5
42.5°	1344.5	1156.3	871.9	727.9	688.5
45°	1259.8	1051.2	763.2	629.1	591.3
47.5°	1178.4	945.0	661.2	538.7	507.7
50°	1071.7	832.0	565.0	456.2	430.5
52.5°	967.6	727.4	483.0	390.0	365.8
55°	864.1	632.3	405.2	328.5	308.0
57.5°	754.7	539.3	341.1	278.0	264.4
60°	649.6	458.8	287.5	233.4	222.3
62.5°	553.4	384.7	243.3	197.1	186.6
65°	464.6	323.2	202.4	164.0	154.5
67.5°	380.5	265.9	168.7	136.7	129.8
70°	306.9	215.5	139.3	112.5	106.2
72.5°	243.3	172.4	111.4	92.0	85.1
75°	186.1	136.7	88.8	72.5	68.3
77.5°	138.8	103.0	68.3	55.7	52.6
80°	97.2	74.6	51.0	42.0	39.4
82.5°	66.2	51.5	35.7	29.4	27.9
85°	37.8	32.1	22.6	18.9	17.9
87.5°	19.4	16.8	12.1	8.9	7.9
90°	5.3	5.3	3.2	2.6	2.1
92.5°	8.4	4.7	3.2	2.1	1.6
95°	7.9	4.7	2.6	1.6	1.6
97.5°	7.4	4.7	2.1	1.6	1.1
100°	6.8	4.2	2.1	1.1	1.1
102.5°	6.3	4.2	2.1	1.1	1.1
105°	5.3	3.7	1.6	1.1	0.5
107.5°	4.7	3.2	1.6	1.1	0.5
110°	3.7	2.6	1.6	1.1	0.5



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CANDELA DISTRIBUTION (continued):

	0°	22.5°	45°	67.5°	90°
112.5°	3.2	2.6	1.1	1.1	0.5
115°	2.6	2.1	1.1	0.5	0.5
117.5°	2.1	1.6	1.1	0.5	0.5
120°	1.6	1.6	1.1	0.5	0.5
122.5°	1.6	1.1	1.1	0.5	0.5
125°	1.1	1.1	1.1	0.5	0.5
127.5°	1.1	1.1	1.1	0.5	0.5
130°	1.1	1.1	1.1	0.5	0.5
132.5°	1.1	1.1	1.1	1.1	0.5
135°	0.5	1.1	1.1	1.1	0.5
137.5°	1.1	1.1	1.1	1.1	1.1
140°	1.1	1.1	1.1	1.1	1.1
142.5°	1.1	1.1	1.1	1.1	1.1
145°	1.1	1.1	1.1	1.1	1.1
147.5°	1.1	1.1	1.1	1.1	1.1
150°	1.1	1.1	1.1	1.1	1.1
152.5°	1.1	1.1	1.1	1.1	1.1
155°	1.1	1.1	1.1	1.6	1.6
157.5°	1.1	1.1	1.6	1.6	1.6
160°	1.1	1.1	1.6	1.6	1.6
162.5°	1.1	1.1	1.6	1.6	1.6
165°	1.1	1.6	1.6	1.6	1.6
167.5°	1.1	1.6	1.6	1.6	2.1
170°	1.1	1.6	1.6	2.1	2.1
172.5°	1.1	1.6	1.6	2.1	2.1
175°	1.6	1.6	1.6	2.1	2.1
177.5°	1.6	1.6	1.6	2.1	2.1
180°	1.6	1.6	1.6	1.6	1.6



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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	20.54	21.97	20.91	22.29	22.62	15.38	16.82	15.75	17.14	17.46
	3H	21.84	23.13	22.23	23.46	23.83	16.39	17.67	16.77	18.01	18.38
	4H	22.27	23.47	22.67	23.82	24.21	16.73	17.92	17.13	18.28	18.67
	6H	22.53	23.64	22.95	24.01	24.41	16.95	18.06	17.37	18.43	18.83
	8H	22.61	23.66	23.04	24.05	24.46	17.02	18.07	17.45	18.46	18.87
	12H	22.65	23.65	23.08	24.04	24.47	17.06	18.07	17.50	18.45	18.89
4H	2H	20.53	21.73	20.94	22.09	22.48	16.00	17.20	16.41	17.56	17.94
	3H	22.00	22.99	22.42	23.40	23.80	17.20	18.19	17.62	18.59	19.00
	4H	22.52	23.41	22.96	23.83	24.28	17.61	18.50	18.05	18.92	19.37
	6H	22.90	23.67	23.37	24.12	24.59	17.92	18.69	18.39	19.14	19.61
	8H	23.01	23.73	23.48	24.18	24.66	18.02	18.74	18.49	19.19	19.66
	12H	23.09	23.73	23.58	24.21	24.69	18.09	18.73	18.58	19.21	19.69
8H	4H	22.51	23.22	22.98	23.67	24.15	17.95	18.67	18.42	19.12	19.59
	6H	22.94	23.53	23.44	24.03	24.51	18.34	18.93	18.85	19.43	19.92
	8H	23.09	23.62	23.62	24.14	24.64	18.48	19.01	19.00	19.53	20.03
	12H	23.22	23.69	23.74	24.19	24.77	18.61	19.07	19.12	19.57	20.15
12H	4H	22.48	23.12	22.97	23.60	24.08	17.99	18.63	18.48	19.12	19.60
	6H	22.90	23.43	23.43	23.95	24.45	18.41	18.94	18.93	19.46	19.95
	8H	23.09	23.56	23.61	24.06	24.64	18.60	19.07	19.12	19.57	20.14