

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: P893256

Luminaire Tested: 4MB-2SL-AOL-UNV-L950

Issue Date: 11/11/2024

**Test Information**

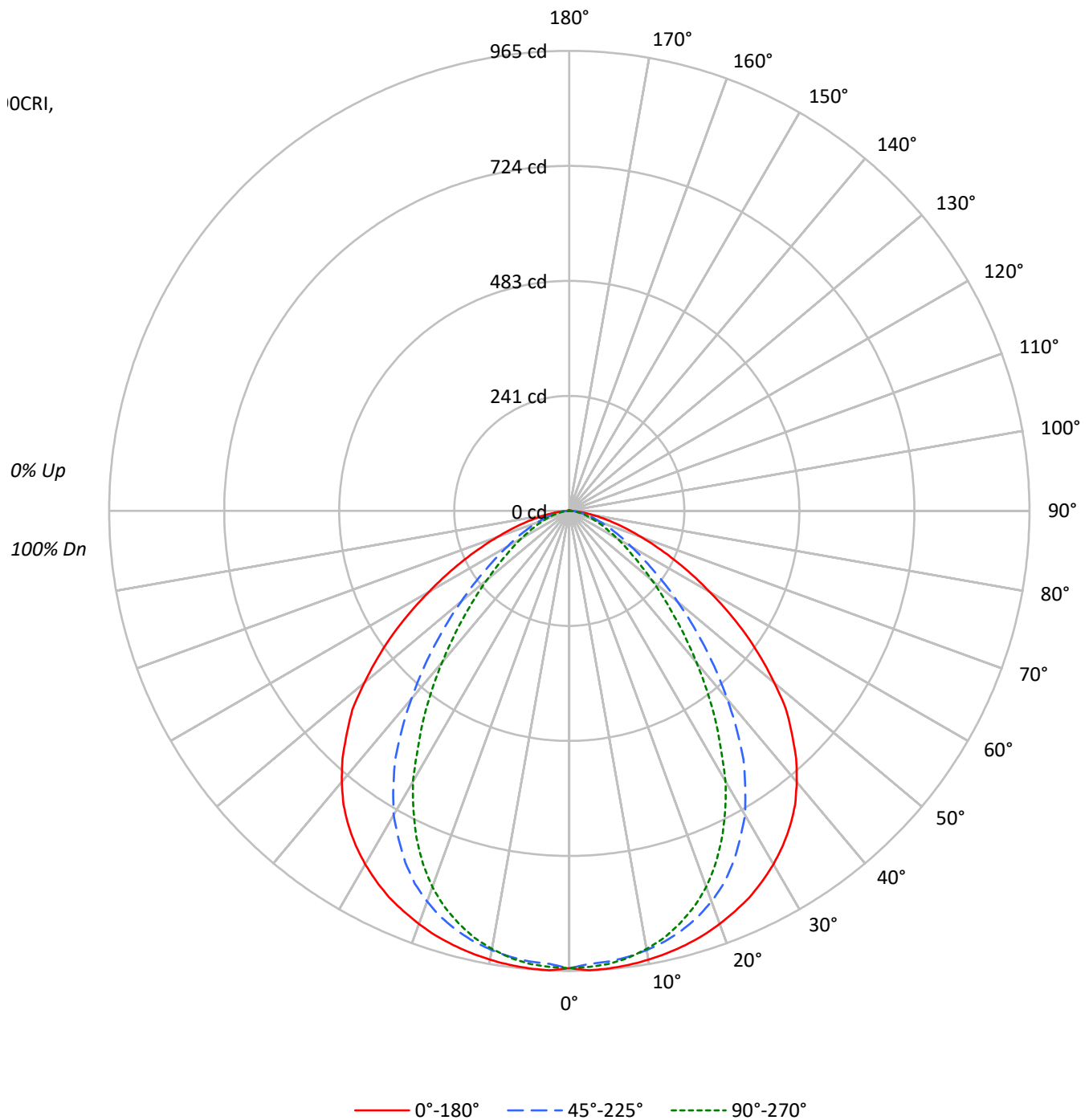
Test Method: LM-79-2019  
Report Number: P893256  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-2404-077-14)  
Test Lab: INNOVATION CENTER  
Issue Date: 11/11/2024  
Manufacturer: COOPER LIGHTING SOLUTIONS  
Product Line: METALUX  
Catalog Number: 4MB-2SL-AOL-UNV-L950  
Description: 2000 Lumen 4FT MICROBAY LINEAR BAY with AISLE OPTICS WITH CLEAR LENS NO UPLIGHT, 9  
5000K CCT  
Light Source: -  
Ballast/Driver: -

**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 1916.2 lumens  
Efficiency: N/A  
Efficacy: 138.9 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): 13.8  
Input Voltage (V): 120  
Input Current (A<sub>in</sub>): NR  
Voltage Rise (V): NR  
Power Factor: 0.996  
Total Harmonic Distortion (THDi): 5.92  
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	100				100
1	111	107	103	100	108	104	101	98	100	98	95	96	94	92	93	91	89	87				87
2	102	95	89	85	100	93	88	84	90	85	82	87	83	80	84	81	78	76				76
3	94	85	78	73	92	84	77	72	81	75	71	78	73	70	76	72	68	66				66
4	87	77	69	63	85	76	68	63	73	67	62	71	66	61	69	64	60	58				58
5	81	70	62	56	79	69	61	55	66	60	55	65	59	54	63	58	54	52				52
6	75	63	55	50	74	63	55	49	61	54	49	59	53	49	58	52	48	46				46
7	70	58	50	45	69	57	50	44	56	49	44	54	48	44	53	48	43	42				42
8	66	53	46	40	64	53	45	40	51	45	40	50	44	40	49	44	39	38				38
9	62	49	42	37	60	49	42	37	48	41	36	47	41	36	46	40	36	34				34
10	58	46	38	34	57	45	38	33	44	38	33	43	37	33	43	37	33	31				31

**AVERAGE LUMINANCE (cd/sqm):**

	0°	45°	90°
0°	9769	9769	9769
5°	9848	9699	9749
10°	9887	9674	9648
15°	9938	9605	9446
20°	9992	9449	9101
25°	10048	9142	8512
30°	10066	8662	7707
35°	10033	7912	6629
40°	9866	6848	5509
45°	9499	5754	4458
50°	8888	4687	3570
55°	8031	3766	2862
60°	6927	3065	2371
65°	5861	2552	1950
70°	4785	2171	1656
75°	3833	1830	1409
80°	2985	1566	1208
85°	2314	1379	1098

**MAXIMUM LUMINANCE 45°-90°:**

Horizontal Angle: 0°  
 Vertical Angle: 45°  
 Luminance: 9499 cd/sqm



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	90.8	4.7
10°-20°	258.5	13.5
20°-30°	376.7	19.7
30°-40°	406.1	21.2
40°-50°	340.4	17.8
50°-60°	230.5	12.0
60°-70°	131.4	6.9
70°-80°	60.1	3.1
80°-90°	15.7	0.8
90°-100°	2.0	0.1
100°-110°	1.3	0.1
110°-120°	0.7	0.0
120°-130°	0.5	0.0
130°-140°	0.4	0.0
140°-150°	0.4	0.0
150°-160°	0.3	0.0
160°-170°	0.2	0.0
170°-180°	0.1	0.0
0°-30°	726.0	37.9
0°-40°	1132.1	59.1
0°-60°	1703.0	88.9
0°-90°	1910.3	99.7
90°-120°	4.0	0.2
90°-150°	5.3	0.3
90°-180°	6.0	0.3
0°-180°	1916.2	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	959	959	959	959	959	
5°	963	960	949	956	954	92
15°	943	934	911	905	896	266
25°	894	871	814	776	758	412
35°	807	746	636	558	533	504
45°	660	550	400	329	310	508
55°	452	331	212	172	161	403
65°	243	169	106	86	81	243
75°	97	72	46	38	36	106
85°	20	17	12	10	9	23
90°	3	3	2	1	1	3
95°	4	2	1	1	1	3
105°	3	2	1	1	0	3
115°	1	1	1	0	0	1
125°	1	1	1	0	0	1
135°	0	1	1	1	0	0
145°	1	1	1	1	1	0
155°	1	1	1	1	1	0
165°	1	1	1	1	1	0
175°	1	1	1	1	1	0
180°	1	1	1	1	1	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	959.2	959.2	959.2	959.2	959.2
2.5°	964.7	962.2	951.2	960.3	957.5
5°	963.3	960.3	948.7	956.4	953.6
7.5°	960.5	956.7	943.7	949.5	945.9
10°	956.1	951.4	935.5	938.8	933.0
12.5°	950.1	944.3	925.3	924.5	917.6
15°	942.6	934.4	911.0	904.9	895.9
17.5°	933.6	923.1	893.9	881.8	870.8
20°	922.0	908.5	871.9	852.7	839.7
22.5°	908.8	890.6	846.3	815.5	801.5
25°	894.2	870.6	813.6	776.2	757.5
27.5°	876.1	846.3	775.6	727.2	707.9
30°	856.0	818.3	736.6	674.7	655.4
32.5°	833.1	786.1	686.8	618.0	591.0
35°	807.0	746.2	636.4	558.5	533.2
37.5°	777.6	704.6	576.2	498.6	473.0
40°	742.1	655.4	515.1	438.3	414.4
42.5°	703.8	605.3	456.5	381.1	360.4
45°	659.5	550.3	399.5	329.3	309.5
47.5°	616.9	494.7	346.1	282.0	265.8
50°	561.0	435.6	295.8	238.8	225.3
52.5°	506.5	380.8	252.9	204.2	191.5
55°	452.3	331.0	212.1	172.0	161.2
57.5°	395.1	282.3	178.6	145.6	138.4
60°	340.1	240.2	150.5	122.2	116.4
62.5°	289.7	201.4	127.4	103.2	97.7
65°	243.2	169.2	105.9	85.8	80.9
67.5°	199.2	139.2	88.3	71.5	68.0
70°	160.7	112.8	72.9	58.9	55.6
72.5°	127.4	90.2	58.3	48.2	44.6
75°	97.4	71.5	46.5	38.0	35.8
77.5°	72.6	53.9	35.8	29.2	27.5
80°	50.9	39.1	26.7	22.0	20.6
82.5°	34.7	27.0	18.7	15.4	14.6
85°	19.8	16.8	11.8	9.9	9.4
87.5°	10.2	8.8	6.3	4.7	4.1
90°	2.8	2.8	1.7	1.4	1.1
92.5°	4.4	2.5	1.7	1.1	0.8
95°	4.1	2.5	1.4	0.8	0.8
97.5°	3.9	2.5	1.1	0.8	0.6
100°	3.6	2.2	1.1	0.6	0.6
102.5°	3.3	2.2	1.1	0.6	0.6
105°	2.8	1.9	0.8	0.6	0.3
107.5°	2.5	1.7	0.8	0.6	0.3
110°	1.9	1.4	0.8	0.6	0.3



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**CANDELA DISTRIBUTION (continued):**

	0°	22.5°	45°	67.5°	90°
112.5°	1.7	1.4	0.6	0.6	0.3
115°	1.4	1.1	0.6	0.3	0.3
117.5°	1.1	0.8	0.6	0.3	0.3
120°	0.8	0.8	0.6	0.3	0.3
122.5°	0.8	0.6	0.6	0.3	0.3
125°	0.6	0.6	0.6	0.3	0.3
127.5°	0.6	0.6	0.6	0.3	0.3
130°	0.6	0.6	0.6	0.3	0.3
132.5°	0.6	0.6	0.6	0.6	0.3
135°	0.3	0.6	0.6	0.6	0.3
137.5°	0.6	0.6	0.6	0.6	0.6
140°	0.6	0.6	0.6	0.6	0.6
142.5°	0.6	0.6	0.6	0.6	0.6
145°	0.6	0.6	0.6	0.6	0.6
147.5°	0.6	0.6	0.6	0.6	0.6
150°	0.6	0.6	0.6	0.6	0.6
152.5°	0.6	0.6	0.6	0.6	0.6
155°	0.6	0.6	0.6	0.8	0.8
157.5°	0.6	0.6	0.8	0.8	0.8
160°	0.6	0.6	0.8	0.8	0.8
162.5°	0.6	0.6	0.8	0.8	0.8
165°	0.6	0.8	0.8	0.8	0.8
167.5°	0.6	0.8	0.8	0.8	1.1
170°	0.6	0.8	0.8	1.1	1.1
172.5°	0.6	0.8	0.8	1.1	1.1
175°	0.8	0.8	0.8	1.1	1.1
177.5°	0.8	0.8	0.8	1.1	1.1
180°	0.8	0.8	0.8	0.8	0.8



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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	18.29	19.73	18.66	20.05	20.37	13.13	14.57	13.50	14.89	15.21
	3H	19.59	20.88	19.98	21.21	21.58	14.14	15.43	14.53	15.76	16.13
	4H	20.02	21.22	20.43	21.57	21.96	14.48	15.68	14.89	16.03	16.42
	6H	20.28	21.39	20.70	21.76	22.16	14.70	15.81	15.12	16.18	16.58
	8H	20.36	21.41	20.79	21.80	22.21	14.77	15.82	15.20	16.22	16.63
	12H	20.40	21.40	20.83	21.79	22.23	14.81	15.82	15.25	16.21	16.64
4H	2H	18.28	19.48	18.69	19.84	20.23	13.75	14.95	14.16	15.31	15.70
	3H	19.75	20.74	20.17	21.15	21.56	14.95	15.94	15.37	16.35	16.76
	4H	20.27	21.16	20.71	21.58	22.03	15.37	16.25	15.81	16.68	17.12
	6H	20.65	21.42	21.12	21.87	22.34	15.68	16.44	16.14	16.89	17.36
	8H	20.76	21.48	21.23	21.93	22.41	15.77	16.49	16.24	16.94	17.42
	12H	20.84	21.48	21.33	21.96	22.44	15.84	16.48	16.33	16.97	17.45
8H	4H	20.26	20.97	20.73	21.42	21.90	15.70	16.42	16.17	16.87	17.35
	6H	20.69	21.28	21.19	21.78	22.26	16.09	16.68	16.60	17.18	17.67
	8H	20.84	21.37	21.37	21.89	22.39	16.23	16.76	16.76	17.28	17.78
	12H	20.97	21.44	21.49	21.94	22.52	16.36	16.83	16.88	17.33	17.90
12H	4H	20.23	20.87	20.72	21.35	21.83	15.75	16.38	16.24	16.87	17.35
	6H	20.66	21.19	21.18	21.70	22.20	16.16	16.69	16.68	17.21	17.71
	8H	20.85	21.31	21.36	21.81	22.39	16.35	16.82	16.87	17.32	17.89