

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: P893239

Luminaire Tested: 4MB-2SL-A-UNV-L940

Issue Date: 11/11/2024

**Test Information**

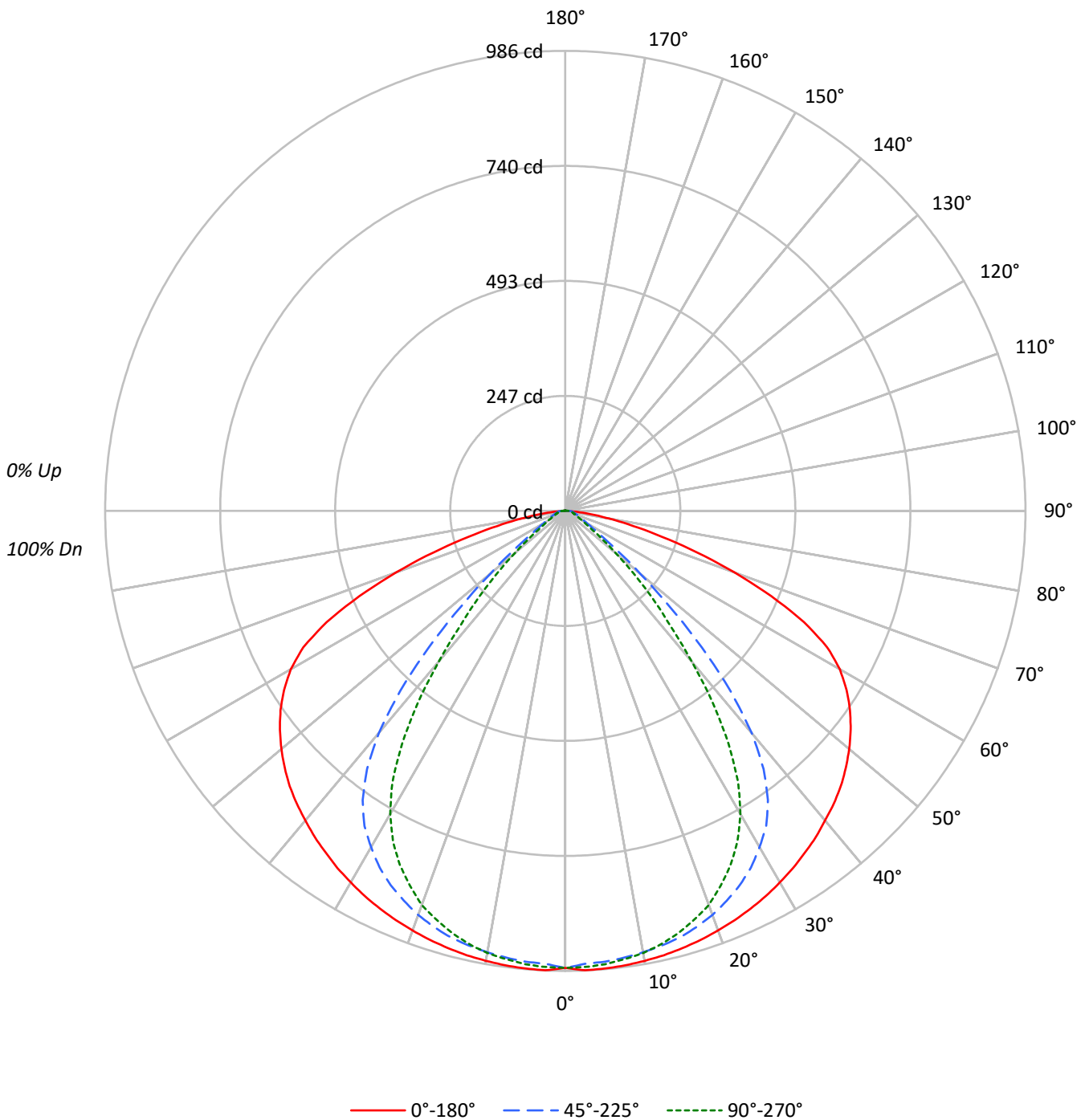
Test Method: LM-79-2019  
Report Number: P893239  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-2404-077-16)  
Test Lab: INNOVATION CENTER  
Issue Date: 11/11/2024  
Manufacturer: COOPER LIGHTING SOLUTIONS  
Product Line: METALUX  
Catalog Number: 4MB-2SL-A-UNV-L940  
Description: 2000 Lumen 4FT MICROBAY LINEAR BAY with AISLE OPTIC, 90CRI, 4000K CCT  
Light Source: -  
Ballast/Driver: -

**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 2008.0 lumens  
Efficiency: N/A  
Efficacy: 145.5 lumens/watt  
Spacing Criteria (0/90/45): 1.4 / 1.15 / 1.23  
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	102	102	102	100
1	111	107	103	100	108	105	102	99	100	98	96	97	95	93	93	91	90	90	90	90	88
2	103	96	90	85	100	94	89	84	91	86	82	87	84	81	84	81	79	79	79	79	77
3	95	86	79	74	93	85	78	73	82	76	72	79	74	71	77	73	69	69	69	69	67
4	88	78	70	65	86	77	70	64	74	68	63	72	67	62	70	65	62	62	62	62	60
5	82	71	63	57	80	70	62	57	68	61	56	66	60	56	64	59	55	55	55	55	53
6	76	64	56	51	74	63	56	51	62	55	50	60	54	50	59	53	49	49	49	49	47
7	71	59	51	46	69	58	51	45	57	50	45	55	49	45	54	49	45	45	45	45	43
8	66	54	47	41	65	54	46	41	52	46	41	51	45	41	50	44	40	40	40	40	39
9	62	50	43	38	61	50	42	37	48	42	37	47	41	37	46	41	37	37	37	37	35
10	59	46	39	34	57	46	39	34	45	39	34	44	38	34	43	38	34	34	34	34	32

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

	0°	45°	90°
0°	9975	9975	9975
5°	10064	9914	9973
10°	10127	9936	9950
15°	10228	9979	9876
20°	10372	9987	9743
25°	10565	9944	9414
30°	10812	9789	8822
35°	11120	9411	7585
40°	11516	8267	5606
45°	12023	5964	3771
50°	12582	3332	2250
55°	13224	1722	1232
60°	13834	1120	872
65°	13598	921	692
70°	11467	849	646
75°	8436	866	693
80°	5624	1015	874
85°	3073	1648	1332

**MAXIMUM LUMINANCE 45°-90°:**

Horizontal Angle: 0°  
 Vertical Angle: 62.5°  
 Luminance: 13952 cd/sqm



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	93.0	4.6
10°-20°	268.8	13.4
20°-30°	408.9	20.4
30°-40°	467.0	23.3
40°-50°	376.7	18.8
50°-60°	206.2	10.3
60°-70°	108.7	5.4
70°-80°	53.3	2.7
80°-90°	18.8	0.9
90°-100°	4.0	0.2
100°-110°	0.6	0.0
110°-120°	0.3	0.0
120°-130°	0.3	0.0
130°-140°	0.3	0.0
140°-150°	0.4	0.0
150°-160°	0.3	0.0
160°-170°	0.3	0.0
170°-180°	0.1	0.0
0°-30°	770.6	38.4
0°-40°	1237.6	61.6
0°-60°	1820.5	90.7
0°-90°	2001.3	99.7
90°-120°	5.0	0.2
90°-150°	6.0	0.3
90°-180°	7.0	0.3
0°-180°	2008.0	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	980	980	980	980	980	
5°	984	981	970	978	976	94
15°	970	964	946	945	937	274
25°	940	927	885	855	838	434
35°	894	857	757	654	610	561
45°	835	717	414	283	262	644
55°	745	306	97	75	69	664
65°	564	71	38	31	29	546
75°	214	40	22	18	18	237
85°	26	21	14	13	11	36
90°	1	11	9	8	7	2
95°	1	1	3	5	4	1
105°	0	0	0	0	0	0
115°	0	0	0	0	0	0
125°	0	0	0	0	0	0
135°	0	0	0	0	0	0
145°	0	0	0	1	0	0
155°	0	0	1	1	1	0
165°	0	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°	979.5	979.5	979.5	979.5	979.5
2.5°	985.5	982.8	971.7	981.2	978.5
5°	984.4	981.4	969.8	978.5	975.5
7.5°	982.5	978.7	966.0	973.8	969.2
10°	979.3	975.5	960.8	967.1	962.2
12.5°	975.5	970.3	954.1	957.3	951.1
15°	970.1	964.1	946.5	944.8	936.7
17.5°	964.1	956.8	935.4	928.3	918.6
20°	957.0	948.1	921.5	907.7	899.0
22.5°	949.2	937.5	904.2	883.0	869.5
25°	940.2	926.7	884.9	854.9	837.8
27.5°	930.8	912.3	861.6	822.1	799.0
30°	919.4	897.1	832.4	779.0	750.2
32.5°	908.0	878.2	800.9	723.4	689.3
35°	894.4	856.8	757.0	654.0	610.1
37.5°	881.7	831.0	697.7	567.0	519.9
40°	866.2	800.7	621.8	467.0	421.7
42.5°	851.6	765.4	523.4	370.5	331.2
45°	834.8	717.2	414.1	283.0	261.8
47.5°	815.3	651.3	301.1	210.6	197.3
50°	794.1	560.8	210.3	152.9	142.0
52.5°	770.8	438.5	141.8	106.2	100.3
55°	744.8	306.5	97.0	75.1	69.4
57.5°	714.7	199.5	70.5	56.6	52.9
60°	679.2	127.4	55.0	45.0	42.8
62.5°	632.6	89.4	45.3	37.1	35.2
65°	564.3	70.7	38.2	30.9	28.7
67.5°	477.8	59.9	32.8	26.0	24.7
70°	385.1	52.0	28.5	22.5	21.7
72.5°	296.0	45.5	24.7	20.1	19.5
75°	214.4	39.8	22.0	18.4	17.6
77.5°	148.5	34.4	19.5	16.5	16.0
80°	95.9	29.8	17.3	15.2	14.9
82.5°	55.0	24.9	15.7	14.6	14.4
85°	26.3	20.9	14.1	12.7	11.4
87.5°	8.4	15.4	11.1	9.8	8.7
90°	1.1	10.8	8.7	7.6	7.0
92.5°	1.1	6.0	6.2	6.2	6.0
95°	0.8	1.4	3.0	4.6	4.3
97.5°	0.8	0.5	1.9	3.3	3.3
100°	0.5	0.3	0.8	2.2	2.2
102.5°	0.5	0.3	0.3	1.4	1.4
105°	0.3	0.0	0.3	0.5	0.5
107.5°	0.3	0.3	0.3	0.5	0.3
110°	0.3	0.3	0.3	0.5	0.3



TEST NUMBER: P893239

CATALOG NUMBER: 4MB-2SL-A-UNV-L940

**CANDELA DISTRIBUTION (continued):**

	0°	22.5°	45°	67.5°	90°
112.5°	0.3	0.3	0.3	0.5	0.3
115°	0.3	0.3	0.3	0.5	0.3
117.5°	0.3	0.3	0.3	0.5	0.3
120°	0.3	0.3	0.3	0.5	0.3
122.5°	0.3	0.3	0.3	0.5	0.3
125°	0.3	0.3	0.3	0.5	0.3
127.5°	0.3	0.3	0.3	0.5	0.3
130°	0.3	0.3	0.5	0.5	0.3
132.5°	0.3	0.3	0.5	0.5	0.3
135°	0.3	0.3	0.5	0.5	0.3
137.5°	0.3	0.3	0.5	0.5	0.5
140°	0.5	0.3	0.5	0.5	0.5
142.5°	0.5	0.5	0.5	0.8	0.5
145°	0.5	0.5	0.5	0.8	0.5
147.5°	0.5	0.5	0.8	0.8	0.5
150°	0.5	0.5	0.8	0.8	0.5
152.5°	0.5	0.5	0.8	0.8	0.8
155°	0.5	0.5	0.8	1.1	0.8
157.5°	0.5	0.5	0.8	1.1	0.8
160°	0.5	0.8	1.1	1.1	0.8
162.5°	0.5	0.8	1.1	1.1	1.1
165°	0.5	0.8	1.1	1.1	1.1
167.5°	0.8	0.8	1.1	1.4	1.1
170°	0.8	0.8	1.1	1.4	1.1
172.5°	0.8	0.8	1.1	1.4	1.1
175°	0.8	0.8	1.1	1.4	1.1
177.5°	0.8	0.8	1.1	1.4	1.4
180°	1.1	1.1	1.1	1.1	1.1



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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	17.90	19.30	18.27	19.62	19.94	6.41	7.81	6.78	8.13	8.45
	3H	20.81	22.05	21.19	22.39	22.76	7.35	8.59	7.73	8.93	9.30
	4H	21.70	22.86	22.11	23.22	23.61	7.86	9.03	8.27	9.38	9.77
	6H	22.20	23.27	22.62	23.64	24.05	8.50	9.57	8.92	9.94	10.35
	8H	22.31	23.33	22.74	23.72	24.13	8.92	9.93	9.35	10.33	10.74
	12H	22.35	23.32	22.79	23.71	24.15	9.37	10.34	9.80	10.73	11.17
4H	2H	17.71	18.87	18.12	19.23	19.62	6.93	8.09	7.33	8.45	8.84
	3H	20.64	21.60	21.06	22.01	22.42	8.12	9.08	8.54	9.49	9.90
	4H	21.54	22.40	21.98	22.82	23.27	8.79	9.64	9.23	10.07	10.52
	6H	22.14	22.88	22.60	23.33	23.80	9.61	10.35	10.08	10.80	11.28
	8H	22.30	22.99	22.77	23.44	23.92	10.14	10.84	10.62	11.29	11.77
	12H	22.39	23.00	22.88	23.49	23.97	10.72	11.34	11.21	11.83	12.31
8H	4H	21.43	22.13	21.91	22.58	23.06	9.38	10.07	9.85	10.52	11.00
	6H	22.03	22.60	22.54	23.10	23.59	10.38	10.95	10.89	11.46	11.94
	8H	22.22	22.73	22.74	23.25	23.75	11.06	11.57	11.58	12.09	12.59
	12H	22.37	22.82	22.88	23.32	23.90	11.82	12.28	12.34	12.78	13.36
12H	4H	21.40	22.01	21.89	22.50	22.98	9.64	10.25	10.13	10.74	11.22
	6H	21.98	22.50	22.51	23.01	23.51	10.69	11.21	11.22	11.73	12.22
	8H	22.20	22.65	22.72	23.15	23.73	11.46	11.91	11.97	12.41	12.99