

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: P893348

Luminaire Tested: 4MB-3SL-A-UNV-L850

Issue Date: 11/11/2024

**Test Information**

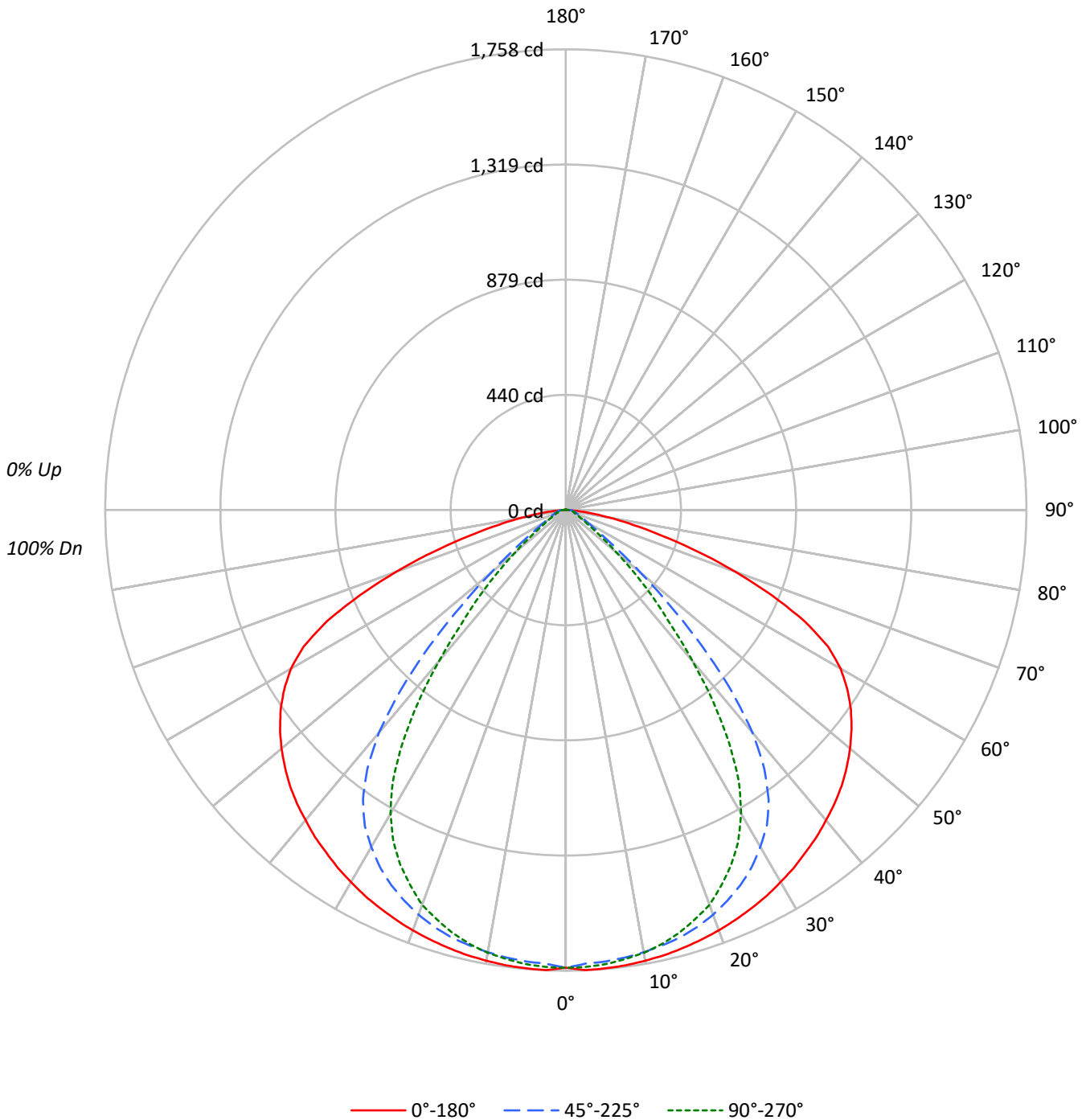
Test Method: LM-79-2019  
Report Number: P893348  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-2404-077-16)  
Test Lab: INNOVATION CENTER  
Issue Date: 11/11/2024  
Manufacturer: COOPER LIGHTING SOLUTIONS  
Product Line: METALUX  
Catalog Number: 4MB-3SL-A-UNV-L850  
Description: 3000 Lumen 4FT MICROBAY LINEAR BAY with AISLE OPTIC, 80CRI, 5000K CCT  
Light Source: -  
Ballast/Driver: -

**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 3581.1 lumens  
Efficiency: N/A  
Efficacy: 169.7 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): 21.1  
Input Voltage (V): 120  
Input Current (Ain): NR  
Voltage Rise (V): NR  
Power Factor: 0.99  
Total Harmonic Distortion (THDi): 5.2  
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	93	91	90	88
2	103	96	90	85	100	94	89	84	91	86	82	87	84	81	84	81	79	84	81	79	77
3	95	86	79	74	93	85	78	73	82	76	72	79	74	71	77	73	69	77	73	69	67
4	88	78	70	65	86	77	70	64	74	68	63	72	67	62	70	65	62	70	65	62	60
5	82	71	63	57	80	70	62	57	68	61	56	66	60	55	64	59	55	64	59	55	53
6	76	64	56	51	74	63	56	51	62	55	50	60	54	50	59	53	49	59	53	49	47
7	71	59	51	46	69	58	51	45	57	50	45	55	49	45	54	49	45	54	49	45	43
8	66	54	47	41	65	54	46	41	52	46	41	51	45	41	50	44	40	50	44	40	39
9	62	50	43	38	61	50	42	37	48	42	37	47	41	37	46	41	37	46	41	37	35
10	59	46	39	34	57	46	39	34	45	39	34	44	38	34	43	38	34	43	38	34	32

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

	0°	45°	90°
0°	17791	17791	17791
5°	17948	17681	17784
10°	18060	17720	17745
15°	18240	17796	17613
20°	18498	17811	17376
25°	18842	17734	16789
30°	19281	17456	15734
35°	19831	16784	13528
40°	20537	14741	9999
45°	21443	10638	6725
50°	22440	5943	4013
55°	23585	3072	2196
60°	24672	1998	1556
65°	24252	1643	1234
70°	20454	1513	1152
75°	15043	1542	1236
80°	10035	1812	1560
85°	5480	2933	2372

**MAXIMUM LUMINANCE 45°-90°:**

Horizontal Angle: 0°  
 Vertical Angle: 62.5°  
 Luminance: 24883 cd/sqm



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	165.9	4.6
10°-20°	479.3	13.4
20°-30°	729.1	20.4
30°-40°	832.7	23.3
40°-50°	671.8	18.8
50°-60°	367.7	10.3
60°-70°	193.9	5.4
70°-80°	95.1	2.7
80°-90°	33.5	0.9
90°-100°	7.2	0.2
100°-110°	1.0	0.0
110°-120°	0.6	0.0
120°-130°	0.6	0.0
130°-140°	0.6	0.0
140°-150°	0.7	0.0
150°-160°	0.6	0.0
160°-170°	0.5	0.0
170°-180°	0.2	0.0
<b>0°-30°</b>	<b>1374.3</b>	<b>38.4</b>
<b>0°-40°</b>	<b>2207.1</b>	<b>61.6</b>
<b>0°-60°</b>	<b>3246.6</b>	<b>90.7</b>
<b>0°-90°</b>	<b>3569.1</b>	<b>99.7</b>
90°-120°	8.8	0.2
90°-150°	10.7	0.3
<b>90°-180°</b>	<b>12.0</b>	<b>0.3</b>
<b>0°-180°</b>	<b>3581.1</b>	<b>100.0</b>

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	1747	1747	1747	1747	1747	
5°	1756	1750	1730	1745	1740	167
15°	1730	1719	1688	1685	1670	490
25°	1677	1653	1578	1524	1494	775
35°	1595	1528	1350	1166	1088	1001
45°	1489	1279	739	505	467	1149
55°	1328	547	173	134	124	1185
65°	1006	126	68	55	51	973
75°	382	71	39	33	31	422
85°	47	37	25	23	20	65
90°	2	19	16	14	13	3
95°	2	2	5	8	8	1
105°	0	0	0	1	1	1
115°	0	0	0	1	0	0
125°	0	0	0	1	0	0
135°	0	0	1	1	0	0
145°	1	1	1	2	1	1
155°	1	1	2	2	2	0
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°	1746.9	1746.9	1746.9	1746.9	1746.9
2.5°	1757.5	1752.7	1732.9	1749.8	1744.9
5°	1755.6	1750.3	1729.5	1744.9	1739.6
7.5°	1752.2	1745.4	1722.7	1736.7	1728.5
10°	1746.4	1739.6	1713.5	1724.6	1715.9
12.5°	1739.6	1730.4	1701.4	1707.2	1696.1
15°	1730.0	1719.3	1687.9	1685.0	1670.5
17.5°	1719.3	1706.3	1668.1	1655.5	1638.1
20°	1706.8	1690.8	1643.4	1618.8	1603.3
22.5°	1692.7	1672.0	1612.5	1574.8	1550.6
25°	1676.8	1652.6	1578.2	1524.5	1494.1
27.5°	1659.9	1627.0	1536.6	1466.0	1425.0
30°	1639.6	1599.9	1484.4	1389.2	1338.0
32.5°	1619.3	1566.1	1428.3	1290.1	1229.2
35°	1595.1	1527.9	1350.0	1166.4	1088.1
37.5°	1572.4	1482.0	1244.2	1011.2	927.1
40°	1544.8	1427.9	1108.8	832.8	752.1
42.5°	1518.7	1365.0	933.4	660.8	590.7
45°	1488.8	1279.0	738.6	504.6	466.9
47.5°	1454.0	1161.5	537.0	375.6	351.9
50°	1416.3	1000.1	375.1	272.6	253.3
52.5°	1374.7	782.1	252.8	189.5	178.8
55°	1328.3	546.7	173.0	133.9	123.7
57.5°	1274.6	355.8	125.7	101.0	94.3
60°	1211.3	227.2	98.1	80.2	76.4
62.5°	1128.2	159.5	80.7	66.2	62.8
65°	1006.4	126.2	68.2	55.1	51.2
67.5°	852.2	106.8	58.5	46.4	44.0
70°	686.9	92.8	50.8	40.1	38.7
72.5°	527.8	81.2	44.0	35.8	34.8
75°	382.3	71.1	39.2	32.9	31.4
77.5°	264.9	61.4	34.8	29.5	28.5
80°	171.1	53.2	30.9	27.1	26.6
82.5°	98.1	44.5	28.0	26.1	25.6
85°	46.9	37.2	25.1	22.7	20.3
87.5°	15.0	27.6	19.8	17.4	15.5
90°	1.9	19.3	15.5	13.5	12.6
92.5°	1.9	10.6	11.1	11.1	10.6
95°	1.5	2.4	5.3	8.2	7.7
97.5°	1.5	1.0	3.4	5.8	5.8
100°	1.0	0.5	1.5	3.9	3.9
102.5°	1.0	0.5	0.5	2.4	2.4
105°	0.5	0.0	0.5	1.0	1.0
107.5°	0.5	0.5	0.5	1.0	0.5
110°	0.5	0.5	0.5	1.0	0.5



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**CANDELA DISTRIBUTION (continued):**

	0°	22.5°	45°	67.5°	90°
112.5°	0.5	0.5	0.5	1.0	0.5
115°	0.5	0.5	0.5	1.0	0.5
117.5°	0.5	0.5	0.5	1.0	0.5
120°	0.5	0.5	0.5	1.0	0.5
122.5°	0.5	0.5	0.5	1.0	0.5
125°	0.5	0.5	0.5	1.0	0.5
127.5°	0.5	0.5	0.5	1.0	0.5
130°	0.5	0.5	1.0	1.0	0.5
132.5°	0.5	0.5	1.0	1.0	0.5
135°	0.5	0.5	1.0	1.0	0.5
137.5°	0.5	0.5	1.0	1.0	1.0
140°	1.0	0.5	1.0	1.0	1.0
142.5°	1.0	1.0	1.0	1.5	1.0
145°	1.0	1.0	1.0	1.5	1.0
147.5°	1.0	1.0	1.5	1.5	1.0
150°	1.0	1.0	1.5	1.5	1.0
152.5°	1.0	1.0	1.5	1.5	1.5
155°	1.0	1.0	1.5	1.9	1.5
157.5°	1.0	1.0	1.5	1.9	1.5
160°	1.0	1.5	1.9	1.9	1.5
162.5°	1.0	1.5	1.9	1.9	1.9
165°	1.0	1.5	1.9	1.9	1.9
167.5°	1.5	1.5	1.9	2.4	1.9
170°	1.5	1.5	1.9	2.4	1.9
172.5°	1.5	1.5	1.9	2.4	1.9
175°	1.5	1.5	1.9	2.4	1.9
177.5°	1.5	1.5	1.9	2.4	2.4
180°	1.9	1.9	1.9	1.9	1.9



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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	19.91	21.31	20.28	21.63	21.95	8.42	9.82	8.79	10.14	10.46
	3H	22.82	24.06	23.20	24.40	24.77	9.36	10.60	9.74	10.94	11.31
	4H	23.71	24.87	24.12	25.23	25.62	9.88	11.04	10.28	11.39	11.78
	6H	24.21	25.28	24.63	25.65	26.06	10.51	11.58	10.93	11.96	12.36
	8H	24.32	25.34	24.75	25.73	26.14	10.93	11.94	11.36	12.34	12.75
	12H	24.36	25.34	24.80	25.72	26.16	11.37	12.35	11.81	12.74	13.17
4H	2H	19.72	20.88	20.13	21.24	21.63	8.94	10.10	9.35	10.46	10.85
	3H	22.65	23.61	23.07	24.02	24.43	10.13	11.09	10.55	11.50	11.91
	4H	23.55	24.41	23.99	24.83	25.28	10.80	11.66	11.24	12.08	12.53
	6H	24.15	24.89	24.61	25.34	25.81	11.62	12.37	12.09	12.82	13.29
	8H	24.31	25.00	24.78	25.45	25.93	12.16	12.85	12.63	13.30	13.78
	12H	24.40	25.02	24.89	25.50	25.98	12.73	13.35	13.22	13.84	14.32
8H	4H	23.44	24.14	23.92	24.59	25.07	11.39	12.08	11.87	12.54	13.01
	6H	24.04	24.61	24.55	25.11	25.60	12.40	12.97	12.90	13.47	13.96
	8H	24.23	24.75	24.76	25.26	25.76	13.07	13.59	13.60	14.10	14.60
	12H	24.38	24.83	24.90	25.33	25.91	13.84	14.29	14.35	14.79	15.37
12H	4H	23.41	24.02	23.90	24.51	24.99	11.65	12.27	12.14	12.76	13.24
	6H	23.99	24.51	24.52	25.03	25.52	12.71	13.22	13.23	13.74	14.24
	8H	24.21	24.66	24.73	25.16	25.74	13.47	13.93	13.99	14.42	15.00