

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: P892698

Luminaire Tested: 2MB-4HL-A-UNV-L935

Issue Date: 11/11/2024

**Test Information**

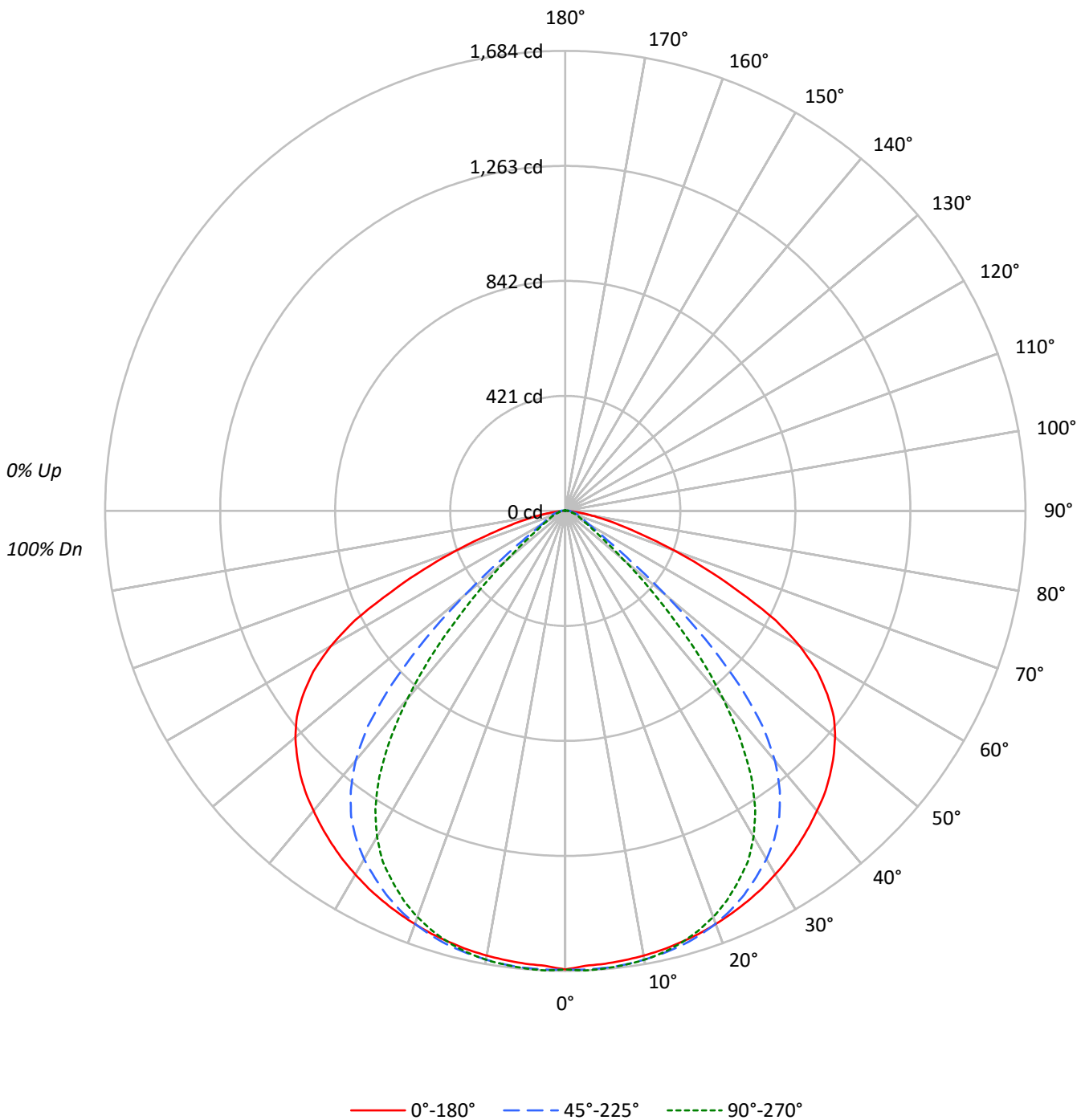
Test Method: LM-79-2019  
Report Number: P892698  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-2404-077-8)  
Test Lab: INNOVATION CENTER  
Issue Date: 11/11/2024  
Manufacturer: COOPER LIGHTING SOLUTIONS  
Product Line: METALUX  
Catalog Number: 2MB-4HL-A-UNV-L935  
Description: 4000 Lumen 2FT MICROBAY LINEAR BAY with AISLE OPTIC, 90CRI, 3500K CCT  
Light Source: -  
Ballast/Driver: -

**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 3570.1 lumens  
Efficiency: N/A  
Efficacy: 129.4 lumens/watt  
Spacing Criteria (0/90/45): 1.37 / 1.21 / 1.29  
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 (A<sub>in</sub>): 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				
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	104	101	108	105	102	99	101	98	96	97	95	93	93	92	90	90	90	90	88
2	103	96	90	86	100	94	89	85	91	86	83	88	84	81	85	82	79	79	79	79	77
3	95	86	80	74	93	85	78	73	82	77	72	79	75	71	77	73	70	70	70	70	68
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	55	64	59	55	55	55	55	53
6	76	64	56	51	74	63	56	50	62	55	50	60	54	50	58	53	49	49	49	49	47
7	71	59	51	45	69	58	51	45	57	50	45	55	49	45	54	48	44	44	44	44	43
8	66	54	46	41	65	53	46	41	52	45	41	51	45	40	50	44	40	40	40	40	38
9	62	50	42	37	61	49	42	37	48	42	37	47	41	37	46	41	37	37	37	37	35
10	58	46	39	34	57	46	39	34	45	38	34	44	38	34	43	37	33	33	33	33	32

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

	0°	45°	90°
0°	34372	34372	34372
5°	34203	34518	34559
10°	34366	34682	34696
15°	34658	34910	34713
20°	35076	35048	34484
25°	35634	35022	33824
30°	36336	34818	32579
35°	37223	34144	29657
40°	38299	31908	24028
45°	39670	26030	16266
50°	41065	15342	8843
55°	41786	6833	4802
60°	40638	4177	3420
65°	34216	3498	2922
70°	25498	3371	2658
75°	17239	3513	2255
80°	11721	3207	2582
85°	7166	4675	4511

**MAXIMUM LUMINANCE 45°-90°:**

Horizontal Angle: 0°  
 Vertical Angle: 55°  
 Luminance: 41786 cd/sqm



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	159.7	4.5
10°-20°	463.9	13.0
20°-30°	711.8	19.9
30°-40°	838.5	23.5
40°-50°	715.1	20.0
50°-60°	390.7	10.9
60°-70°	173.2	4.9
70°-80°	76.0	2.1
80°-90°	27.2	0.8
90°-100°	8.4	0.2
100°-110°	2.1	0.1
110°-120°	0.6	0.0
120°-130°	0.6	0.0
130°-140°	0.5	0.0
140°-150°	0.6	0.0
150°-160°	0.6	0.0
160°-170°	0.5	0.0
170°-180°	0.2	0.0
0°-30°	1335.4	37.4
0°-40°	2173.9	60.9
0°-60°	3279.6	91.9
0°-90°	3556.0	99.6
90°-120°	11.1	0.3
90°-150°	12.9	0.4
90°-180°	14.0	0.4
0°-180°	3570.1	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	1679	1679	1679	1679	1679	
5°	1664	1673	1679	1683	1681	159
15°	1635	1644	1647	1642	1638	463
25°	1577	1577	1550	1518	1497	728
35°	1489	1461	1366	1241	1186	933
45°	1370	1257	899	626	562	1057
55°	1170	717	191	140	134	1039
65°	706	152	72	64	60	702
75°	218	77	44	34	28	246
85°	30	28	20	19	19	40
90°	3	11	15	15	13	3
95°	3	5	11	9	9	2
105°	1	1	1	3	4	0
115°	1	1	1	1	1	0
125°	1	1	1	1	1	1
135°	1	1	1	1	1	1
145°	1	1	1	1	1	0
155°	1	1	1	1	1	0
165°	1	1	2	2	2	0
175°	1	1	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°	1678.6	1678.6	1678.6	1678.6	1678.6
2.5°	1666.7	1675.3	1680.6	1684.6	1683.9
5°	1664.0	1673.3	1679.3	1683.2	1681.3
7.5°	1659.4	1669.3	1675.3	1679.3	1676.0
10°	1652.8	1662.7	1668.0	1670.7	1668.7
12.5°	1645.5	1654.8	1658.7	1660.1	1656.1
15°	1634.9	1644.2	1646.8	1642.2	1637.5
17.5°	1623.6	1631.6	1630.2	1621.6	1613.0
20°	1609.7	1616.3	1608.4	1591.8	1582.5
22.5°	1593.8	1598.4	1581.9	1557.4	1544.1
25°	1577.2	1577.2	1550.1	1518.3	1497.1
27.5°	1558.7	1554.1	1511.7	1469.3	1447.4
30°	1536.8	1526.2	1472.6	1412.3	1377.9
32.5°	1514.3	1497.1	1424.2	1338.1	1293.7
35°	1489.1	1461.3	1365.9	1241.4	1186.4
37.5°	1462.0	1422.9	1289.8	1118.8	1051.3
40°	1432.8	1375.9	1193.7	973.8	898.9
42.5°	1404.4	1322.2	1069.2	806.8	737.9
45°	1369.9	1257.3	898.9	626.0	561.7
47.5°	1331.5	1177.1	694.2	451.1	412.0
50°	1289.1	1067.8	481.6	310.7	277.6
52.5°	1238.7	919.5	303.4	206.7	190.8
55°	1170.5	717.4	191.4	140.4	134.5
57.5°	1093.0	501.5	130.5	106.7	102.7
60°	992.3	321.3	102.0	87.4	83.5
62.5°	867.8	213.3	84.8	74.2	70.2
65°	706.2	152.4	72.2	64.3	60.3
67.5°	559.8	121.9	63.6	56.3	51.0
70°	425.9	102.0	56.3	49.7	44.4
72.5°	303.4	88.8	50.3	42.4	37.1
75°	217.9	76.8	44.4	33.8	28.5
77.5°	150.4	66.9	37.1	25.8	24.5
80°	99.4	58.3	27.2	23.2	21.9
82.5°	60.3	47.0	23.2	19.9	21.2
85°	30.5	27.8	19.9	19.2	19.2
87.5°	11.9	16.6	16.6	18.5	18.5
90°	2.6	11.3	15.2	15.2	12.6
92.5°	2.6	8.6	13.9	10.6	9.3
95°	2.6	4.6	10.6	8.6	8.6
97.5°	2.0	2.0	7.3	7.3	7.3
100°	0.7	1.3	4.6	6.6	6.6
102.5°	0.7	0.7	2.6	4.6	5.3
105°	0.7	0.7	1.3	3.3	4.0
107.5°	0.0	0.0	0.7	2.0	2.6
110°	0.0	0.0	0.7	1.3	1.3



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**CANDELA DISTRIBUTION (continued):**

	0°	22.5°	45°	67.5°	90°
112.5°	0.0	0.0	0.7	0.7	0.7
115°	0.7	0.7	0.7	0.7	0.7
117.5°	0.7	0.7	0.7	0.7	0.7
120°	0.7	0.7	0.7	0.7	0.7
122.5°	0.7	0.7	0.7	0.7	0.7
125°	0.7	0.7	0.7	0.7	0.7
127.5°	0.7	0.7	0.7	0.7	0.7
130°	0.7	0.7	0.7	0.7	0.7
132.5°	0.7	0.7	0.7	0.7	0.7
135°	0.7	0.7	0.7	0.7	0.7
137.5°	0.7	0.7	0.7	0.7	0.7
140°	0.7	0.7	0.7	0.7	0.7
142.5°	0.7	0.7	0.7	1.3	0.7
145°	0.7	0.7	1.3	1.3	1.3
147.5°	0.7	0.7	1.3	1.3	1.3
150°	0.7	0.7	1.3	1.3	1.3
152.5°	0.7	1.3	1.3	1.3	1.3
155°	0.7	1.3	1.3	1.3	1.3
157.5°	0.7	1.3	1.3	2.0	1.3
160°	1.3	1.3	1.3	2.0	1.3
162.5°	1.3	1.3	2.0	2.0	2.0
165°	1.3	1.3	2.0	2.0	2.0
167.5°	1.3	1.3	2.0	2.0	2.0
170°	1.3	1.3	2.0	2.0	2.0
172.5°	1.3	1.3	2.0	2.0	2.0
175°	1.3	1.3	2.0	2.0	2.0
177.5°	1.3	1.3	2.0	2.6	2.0
180°	2.0	2.0	2.0	2.0	2.0



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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	23.38	24.78	23.75	25.10	25.43	11.28	12.68	11.65	13.00	13.33
	3H	24.67	25.91	25.06	26.25	26.63	12.45	13.69	12.83	14.03	14.40
	4H	25.07	26.23	25.48	26.59	26.98	12.88	14.04	13.28	14.39	14.79
	6H	25.30	26.37	25.72	26.74	27.15	13.25	14.32	13.68	14.70	15.10
	8H	25.35	26.36	25.79	26.76	27.18	13.50	14.52	13.94	14.91	15.33
	12H	25.37	26.33	25.80	26.72	27.16	13.84	14.81	14.28	15.20	15.64
4H	2H	23.19	24.35	23.60	24.71	25.10	11.80	12.96	12.21	13.32	13.71
	3H	24.53	25.48	24.95	25.89	26.30	13.26	14.20	13.67	14.61	15.03
	4H	24.96	25.80	25.40	26.23	26.68	13.81	14.66	14.25	15.09	15.54
	6H	25.28	26.02	25.75	26.47	26.94	14.32	15.05	14.79	15.51	15.98
	8H	25.37	26.06	25.85	26.51	26.99	14.64	15.32	15.11	15.78	16.25
	12H	25.42	26.03	25.91	26.52	27.00	15.08	15.69	15.57	16.17	16.66
8H	4H	24.86	25.54	25.33	26.00	26.48	14.39	15.08	14.86	15.53	16.01
	6H	25.21	25.77	25.71	26.27	26.76	15.02	15.58	15.53	16.09	16.58
	8H	25.34	25.85	25.86	26.37	26.87	15.42	15.93	15.95	16.45	16.95
	12H	25.43	25.88	25.95	26.39	26.96	16.02	16.47	16.53	16.97	17.55
12H	4H	24.82	25.43	25.31	25.92	26.40	14.59	15.20	15.08	15.69	16.17
	6H	25.15	25.66	25.68	26.18	26.68	15.26	15.77	15.79	16.29	16.79
	8H	25.31	25.77	25.83	26.27	26.85	15.74	16.19	16.26	16.70	17.27