

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: P893474

Luminaire Tested: 4MB-4SL-AOL-UNV-L835

Issue Date: 11/11/2024

**Test Information**

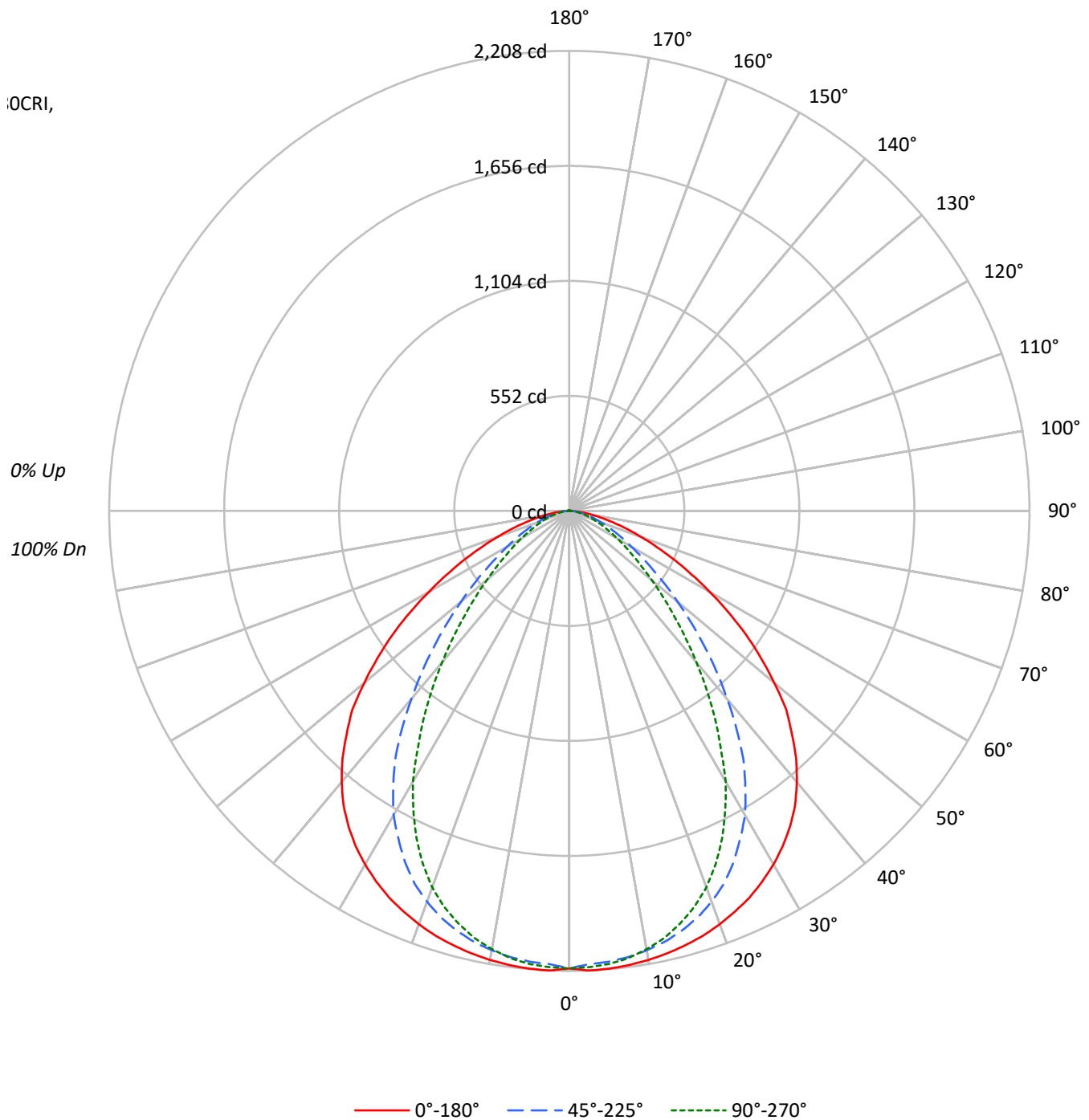
Test Method: LM-79-2019  
Report Number: P893474  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-2404-077-14)  
Test Lab: INNOVATION CENTER  
Issue Date: 11/11/2024  
Manufacturer: COOPER LIGHTING SOLUTIONS  
Product Line: METALUX  
Catalog Number: 4MB-4SL-AOL-UNV-L835  
Description: 4000 Lumen 4FT MICROBAY LINEAR BAY with AISLE OPTICS WITH CLEAR LENS NO UPLIGHT, 8  
3500K CCT  
Light Source: -  
Ballast/Driver: -

**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 4386.1 lumens  
Efficiency: N/A  
Efficacy: 147.2 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				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°	22360	22360	22360
5°	22543	22202	22317
10°	22634	22146	22087
15°	22751	21987	21623
20°	22874	21632	20834
25°	23002	20928	19485
30°	23042	19828	17643
35°	22967	18112	15175
40°	22583	15676	12610
45°	21744	13171	10206
50°	20348	10728	8172
55°	18386	8622	6554
60°	15857	7017	5426
65°	13418	5844	4463
70°	10952	4970	3788
75°	8775	4187	3223
80°	6833	3583	2768
85°	5293	3167	2501

**MAXIMUM LUMINANCE 45°-90°:**

Horizontal Angle: 0°  
 Vertical Angle: 45°  
 Luminance: 21744 cd/sqm



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	207.9	4.7
10°-20°	591.7	13.5
20°-30°	862.4	19.7
30°-40°	929.6	21.2
40°-50°	779.3	17.8
50°-60°	527.6	12.0
60°-70°	300.9	6.9
70°-80°	137.6	3.1
80°-90°	36.0	0.8
90°-100°	4.4	0.1
100°-110°	3.0	0.1
110°-120°	1.6	0.0
120°-130°	1.0	0.0
130°-140°	0.9	0.0
140°-150°	0.8	0.0
150°-160°	0.7	0.0
160°-170°	0.5	0.0
170°-180°	0.2	0.0
0°-30°	1662.0	37.9
0°-40°	2591.5	59.1
0°-60°	3898.4	88.9
0°-90°	4372.9	99.7
90°-120°	9.1	0.2
90°-150°	11.8	0.3
90°-180°	13.0	0.3
0°-180°	4386.1	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	2196	2196	2196	2196	2196	
5°	2205	2198	2172	2189	2183	210
15°	2158	2139	2085	2072	2051	610
25°	2047	1993	1862	1777	1734	943
35°	1847	1708	1457	1279	1221	1153
45°	1510	1260	914	754	709	1162
55°	1036	758	486	394	369	922
65°	557	387	242	196	185	556
75°	223	164	106	87	82	243
85°	45	38	27	23	21	53
90°	6	6	4	3	2	6
95°	9	6	3	2	2	7
105°	6	4	2	1	1	7
115°	3	2	1	1	1	3
125°	1	1	1	1	1	1
135°	1	1	1	1	1	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°	2195.6	2195.6	2195.6	2195.6	2195.6
2.5°	2208.2	2202.6	2177.4	2198.2	2191.9
5°	2205.1	2198.2	2171.7	2189.3	2183.0
7.5°	2198.8	2190.0	2160.4	2173.6	2165.4
10°	2188.7	2178.0	2141.5	2149.0	2135.8
12.5°	2174.8	2161.6	2118.2	2116.3	2100.5
15°	2157.8	2138.9	2085.4	2071.6	2050.8
17.5°	2137.1	2113.1	2046.4	2018.6	1993.5
20°	2110.6	2079.7	1996.0	1951.9	1922.3
22.5°	2080.4	2038.8	1937.4	1866.9	1834.7
25°	2047.0	1992.8	1862.4	1776.8	1734.0
27.5°	2005.4	1937.4	1775.5	1664.7	1620.6
30°	1959.4	1873.2	1686.1	1544.4	1500.3
32.5°	1907.2	1799.5	1572.1	1414.6	1352.9
35°	1847.3	1708.1	1456.8	1278.6	1220.6
37.5°	1779.9	1613.0	1318.9	1141.3	1082.7
40°	1698.7	1500.3	1179.1	1003.3	948.5
42.5°	1611.1	1385.7	1044.9	872.3	825.1
45°	1509.7	1259.7	914.5	753.9	708.6
47.5°	1412.1	1132.5	792.3	645.6	608.4
50°	1284.3	997.0	677.1	546.7	515.8
52.5°	1159.5	871.7	578.8	467.3	438.4
55°	1035.5	757.7	485.6	393.7	369.1
57.5°	904.5	646.2	408.8	333.2	316.8
60°	778.5	549.9	344.5	279.7	266.4
62.5°	663.2	461.0	291.6	236.2	223.6
65°	556.8	387.4	242.5	196.5	185.2
67.5°	456.0	318.7	202.2	163.8	155.6
70°	367.8	258.2	166.9	134.8	127.2
72.5°	291.6	206.6	133.5	110.2	102.0
75°	223.0	163.8	106.4	86.9	81.9
77.5°	166.3	123.4	81.9	66.8	63.0
80°	116.5	89.4	61.1	50.4	47.2
82.5°	79.4	61.7	42.8	35.3	33.4
85°	45.3	38.4	27.1	22.7	21.4
87.5°	23.3	20.2	14.5	10.7	9.4
90°	6.3	6.3	3.8	3.1	2.5
92.5°	10.1	5.7	3.8	2.5	1.9
95°	9.4	5.7	3.1	1.9	1.9
97.5°	8.8	5.7	2.5	1.9	1.3
100°	8.2	5.0	2.5	1.3	1.3
102.5°	7.6	5.0	2.5	1.3	1.3
105°	6.3	4.4	1.9	1.3	0.6
107.5°	5.7	3.8	1.9	1.3	0.6
110°	4.4	3.1	1.9	1.3	0.6



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**CANDELA DISTRIBUTION (continued):**

	0°	22.5°	45°	67.5°	90°
112.5°	3.8	3.1	1.3	1.3	0.6
115°	3.1	2.5	1.3	0.6	0.6
117.5°	2.5	1.9	1.3	0.6	0.6
120°	1.9	1.9	1.3	0.6	0.6
122.5°	1.9	1.3	1.3	0.6	0.6
125°	1.3	1.3	1.3	0.6	0.6
127.5°	1.3	1.3	1.3	0.6	0.6
130°	1.3	1.3	1.3	0.6	0.6
132.5°	1.3	1.3	1.3	1.3	0.6
135°	0.6	1.3	1.3	1.3	0.6
137.5°	1.3	1.3	1.3	1.3	1.3
140°	1.3	1.3	1.3	1.3	1.3
142.5°	1.3	1.3	1.3	1.3	1.3
145°	1.3	1.3	1.3	1.3	1.3
147.5°	1.3	1.3	1.3	1.3	1.3
150°	1.3	1.3	1.3	1.3	1.3
152.5°	1.3	1.3	1.3	1.3	1.3
155°	1.3	1.3	1.3	1.9	1.9
157.5°	1.3	1.3	1.9	1.9	1.9
160°	1.3	1.3	1.9	1.9	1.9
162.5°	1.3	1.3	1.9	1.9	1.9
165°	1.3	1.9	1.9	1.9	1.9
167.5°	1.3	1.9	1.9	1.9	2.5
170°	1.3	1.9	1.9	2.5	2.5
172.5°	1.3	1.9	1.9	2.5	2.5
175°	1.9	1.9	1.9	2.5	2.5
177.5°	1.9	1.9	1.9	2.5	2.5
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	21.17	22.60	21.54	22.92	23.25	16.01	17.45	16.38	17.77	18.09
	3H	22.47	23.76	22.86	24.09	24.46	17.02	18.30	17.40	18.64	19.01
	4H	22.90	24.10	23.30	24.45	24.84	17.35	18.55	17.76	18.91	19.30
	6H	23.16	24.27	23.58	24.64	25.04	17.58	18.69	18.00	19.06	19.46
	8H	23.24	24.29	23.67	24.68	25.09	17.65	18.70	18.08	19.09	19.50
	12H	23.27	24.28	23.71	24.67	25.10	17.69	18.69	18.13	19.08	19.52
4H	2H	21.16	22.36	21.57	22.72	23.11	16.63	17.83	17.04	18.19	18.57
	3H	22.63	23.62	23.05	24.02	24.43	17.83	18.82	18.25	19.22	19.63
	4H	23.15	24.04	23.59	24.46	24.91	18.24	19.13	18.68	19.55	20.00
	6H	23.53	24.30	24.00	24.75	25.22	18.55	19.32	19.02	19.77	20.24
	8H	23.64	24.36	24.11	24.81	25.29	18.65	19.36	19.12	19.82	20.29
	12H	23.72	24.36	24.21	24.84	25.32	18.72	19.36	19.21	19.84	20.32
8H	4H	23.13	23.85	23.61	24.30	24.78	18.58	19.29	19.05	19.75	20.22
	6H	23.57	24.16	24.07	24.66	25.14	18.97	19.56	19.48	20.06	20.55
	8H	23.72	24.25	24.24	24.77	25.27	19.11	19.64	19.63	20.16	20.66
	12H	23.85	24.32	24.37	24.82	25.39	19.24	19.70	19.75	20.20	20.78
12H	4H	23.11	23.74	23.60	24.23	24.71	18.62	19.26	19.11	19.75	20.23
	6H	23.53	24.06	24.06	24.58	25.08	19.04	19.57	19.56	20.09	20.58
	8H	23.72	24.19	24.24	24.69	25.27	19.23	19.70	19.75	20.20	20.77