

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: P892707

Luminaire Tested: 2MB-4HL-ACL-UNV-L940

Issue Date: 11/11/2024

**Test Information**

Test Method: LM-79-2019  
Report Number: P892707  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-2404-077-7)  
Test Lab: INNOVATION CENTER  
Issue Date: 11/11/2024  
Manufacturer: COOPER LIGHTING SOLUTIONS  
Product Line: METALUX  
Catalog Number: 2MB-4HL-ACL-UNV-L940  
Description: 4000 Lumen 2FT MICROBAY LINEAR BAY with AISLE OPTICS WITH CLEAR LENS, 90CRI, 4000K (C)  
Light Source: -  
Ballast/Driver: -

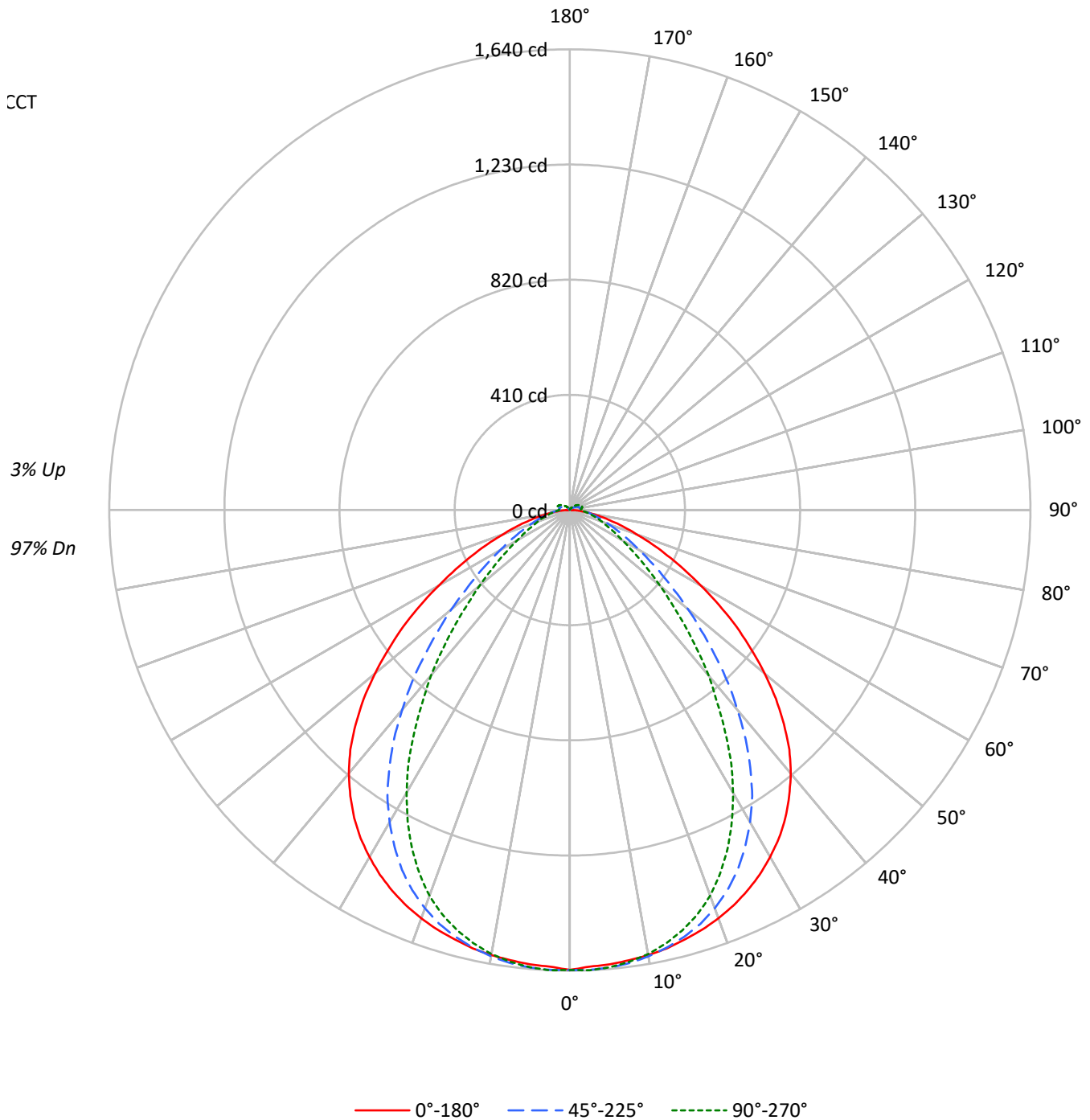
**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 3499.0 lumens  
Efficiency: N/A  
Efficacy: 126.8 lumens/watt  
Spacing Criteria (0/90/45): 1.29 / 1.09 / 1.19  
Luminous Opening: Rectangular w/ Sides (W: 0.27' x L: 1.98' x H: 0.08')  
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				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	118	118	118	118	115	115	115	115	109	109	109	104	104	104	99	99	99	99	99	99	97
1	109	105	102	98	106	103	99	96	98	95	93	94	91	89	89	88	86	89	88	86	84
2	101	94	88	83	98	92	86	82	88	83	79	84	80	77	81	77	75	81	77	75	73
3	93	84	77	71	90	82	75	70	79	73	68	76	71	67	73	69	65	73	69	65	63
4	86	75	68	62	84	74	67	61	71	65	60	68	63	59	66	61	58	66	61	58	56
5	80	68	60	54	78	67	59	54	65	58	53	62	57	52	60	55	51	60	55	51	49
6	74	62	54	48	72	61	53	48	59	52	47	57	51	46	55	50	46	55	50	46	44
7	69	57	49	43	67	56	48	43	54	47	42	52	46	42	51	45	41	51	45	41	39
8	65	52	44	39	63	51	44	39	50	43	38	48	42	38	47	42	37	47	42	37	36
9	61	48	40	35	59	47	40	35	46	39	35	45	39	35	44	38	34	44	38	34	32
10	57	45	37	32	56	44	37	32	43	36	32	42	36	32	41	35	31	41	35	31	30

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

	0°	45°	90°
0°	33522	33522	33522
5°	33246	32871	32684
10°	33208	32116	31621
15°	33171	31236	30288
20°	33197	30114	28580
25°	33138	28595	26200
30°	32926	26497	23269
35°	32491	23802	19771
40°	31599	20476	16258
45°	29962	16891	12682
50°	27477	13480	9709
55°	24374	10511	7473
60°	20604	8158	5756
65°	17025	6459	4658
70°	13582	5208	3895
75°	10755	4301	3343
80°	8139	3659	2873
85°	6075	3153	2526

**MAXIMUM LUMINANCE 45°-90°:**

Horizontal Angle: 0°  
 Vertical Angle: 45°  
 Luminance: 29962 cd/sqm



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	155.2	4.4
10°-20°	442.6	12.6
20°-30°	649.0	18.5
30°-40°	707.7	20.2
40°-50°	600.6	17.2
50°-60°	408.8	11.7
60°-70°	238.6	6.8
70°-80°	124.2	3.6
80°-90°	54.1	1.5
90°-100°	34.4	1.0
100°-110°	31.8	0.9
110°-120°	23.6	0.7
120°-130°	14.2	0.4
130°-140°	7.6	0.2
140°-150°	3.8	0.1
150°-160°	1.9	0.1
160°-170°	0.7	0.0
170°-180°	0.2	0.0
0°-30°	1246.8	35.6
0°-40°	1954.5	55.9
0°-60°	2963.9	84.7
0°-90°	3380.9	96.6
90°-120°	89.7	2.6
90°-150°	115.4	3.3
90°-180°	118.0	3.4
0°-180°	3499.0	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	1637	1637	1637	1637	1637	
5°	1623	1631	1634	1636	1634	155
15°	1582	1586	1573	1558	1549	447
25°	1496	1474	1414	1359	1329	689
35°	1338	1270	1120	1008	965	835
45°	1078	944	730	615	575	828
55°	724	576	400	322	303	645
65°	383	302	205	170	161	384
75°	157	136	105	96	92	171
85°	38	46	52	51	49	41
90°	6	20	36	39	38	6
95°	12	23	38	41	40	8
105°	3	17	35	44	45	4
115°	3	10	27	38	40	2
125°	1	6	16	25	29	1
135°	1	4	10	15	18	1
145°	1	3	6	9	10	1
155°	1	2	4	6	6	1
165°	1	1	3	3	4	0
175°	1	1	2	2	1	0
180°	1	1	1	1	1	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	1637.1	1637.1	1637.1	1637.1	1637.1
2.5°	1626.8	1634.4	1638.5	1641.2	1639.8
5°	1623.4	1630.9	1634.4	1635.7	1633.7
7.5°	1616.6	1624.8	1626.8	1625.5	1622.0
10°	1609.0	1615.9	1613.1	1609.7	1604.9
12.5°	1598.1	1602.9	1595.4	1587.8	1580.3
15°	1582.4	1586.5	1572.8	1558.4	1548.8
17.5°	1566.6	1565.3	1544.7	1521.5	1509.8
20°	1546.8	1539.3	1508.5	1475.0	1461.3
22.5°	1523.5	1510.5	1465.4	1420.2	1399.7
25°	1495.5	1474.3	1414.1	1358.7	1329.2
27.5°	1464.0	1433.9	1351.8	1282.7	1249.9
30°	1426.4	1385.3	1283.4	1198.6	1162.3
32.5°	1386.0	1333.3	1208.8	1102.8	1069.3
35°	1338.1	1269.7	1119.9	1007.7	964.6
37.5°	1283.4	1196.5	1028.9	905.8	860.6
40°	1223.9	1119.2	927.7	804.5	768.3
42.5°	1156.8	1037.1	833.3	704.0	667.7
45°	1078.2	944.1	730.0	615.0	575.3
47.5°	995.4	852.4	634.9	522.7	489.8
50°	905.8	756.0	550.0	447.4	418.7
52.5°	813.4	666.3	468.6	379.0	355.1
55°	723.8	576.0	400.2	321.5	303.1
57.5°	630.1	500.1	340.0	273.6	255.2
60°	539.8	423.5	286.0	231.2	216.9
62.5°	458.4	357.1	243.5	197.0	186.8
65°	383.1	302.4	205.2	169.7	160.8
67.5°	316.1	250.4	175.8	147.1	138.9
70°	253.1	204.6	147.1	126.6	121.1
72.5°	205.2	170.3	124.5	110.8	106.7
75°	157.3	135.5	105.4	95.8	91.7
77.5°	118.4	106.0	89.6	82.1	78.7
80°	85.5	82.1	75.3	71.1	67.7
82.5°	58.8	62.3	62.9	59.5	58.2
85°	38.3	45.8	52.0	50.6	49.3
87.5°	21.2	30.8	42.4	43.1	41.7
90°	6.2	20.5	36.3	39.0	38.3
92.5°	11.6	21.9	36.9	39.7	39.0
95°	11.6	22.6	37.6	41.0	40.4
97.5°	10.9	22.6	38.3	42.4	42.4
100°	5.5	21.9	38.3	43.8	43.8
102.5°	3.4	19.8	36.9	44.5	45.2
105°	3.4	17.1	34.9	44.5	45.2
107.5°	3.4	14.4	33.5	43.1	45.2
110°	2.7	12.3	31.5	41.0	43.8



TEST NUMBER: P892707

CATALOG NUMBER: 2MB-4HL-ACL-UNV-L940

**CANDELA DISTRIBUTION (continued):**

	0°	22.5°	45°	67.5°	90°
112.5°	2.7	10.9	29.4	39.7	42.4
115°	2.7	10.3	26.7	37.6	40.4
117.5°	2.1	8.9	23.3	34.9	38.3
120°	2.1	7.5	20.5	32.2	35.6
122.5°	1.4	6.8	17.8	28.7	32.8
125°	1.4	5.5	15.7	25.3	29.4
127.5°	1.4	5.5	14.4	22.6	26.0
130°	1.4	4.8	12.3	19.8	22.6
132.5°	1.4	4.8	10.9	17.1	19.8
135°	1.4	4.1	9.6	15.1	17.8
137.5°	1.4	4.1	8.9	13.0	15.7
140°	1.4	3.4	7.5	11.6	13.7
142.5°	1.4	3.4	6.8	10.3	11.6
145°	1.4	2.7	6.2	8.9	10.3
147.5°	1.4	2.7	5.5	7.5	8.9
150°	1.4	2.7	5.5	6.8	7.5
152.5°	1.4	2.1	4.8	6.2	6.8
155°	1.4	2.1	4.1	6.2	6.2
157.5°	1.4	2.1	3.4	5.5	6.2
160°	1.4	2.1	3.4	4.8	5.5
162.5°	1.4	2.1	2.7	3.4	4.8
165°	1.4	1.4	2.7	3.4	4.1
167.5°	1.4	1.4	2.1	2.7	3.4
170°	1.4	1.4	2.1	2.1	2.1
172.5°	1.4	1.4	2.1	2.1	1.4
175°	1.4	1.4	2.1	2.1	1.4
177.5°	1.4	1.4	2.1	2.1	1.4
180°	1.4	1.4	1.4	1.4	1.4



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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	20.89	22.29	21.31	22.67	23.08	16.99	18.39	17.42	18.78	19.18
	3H	21.92	23.17	22.35	23.57	24.01	18.20	19.44	18.63	19.85	20.29
	4H	22.21	23.38	22.67	23.80	24.27	18.73	19.90	19.19	20.32	20.78
	6H	22.36	23.44	22.83	23.88	24.35	19.24	20.32	19.71	20.75	21.23
	8H	22.39	23.41	22.87	23.87	24.36	19.48	20.51	19.97	20.97	21.45
	12H	22.39	23.37	22.88	23.82	24.33	19.74	20.72	20.23	21.17	21.68
4H	2H	20.93	22.09	21.38	22.51	22.98	17.49	18.66	17.95	19.08	19.55
	3H	22.12	23.09	22.59	23.55	24.04	18.88	19.85	19.35	20.31	20.80
	4H	22.51	23.38	23.00	23.86	24.38	19.52	20.39	20.01	20.87	21.39
	6H	22.75	23.51	23.27	24.02	24.56	20.15	20.91	20.67	21.42	21.95
	8H	22.81	23.51	23.33	24.02	24.57	20.45	21.16	20.97	21.67	22.22
	12H	22.83	23.46	23.37	24.00	24.55	20.78	21.42	21.32	21.95	22.51
8H	4H	22.53	23.24	23.05	23.75	24.30	19.76	20.47	20.28	20.97	21.52
	6H	22.84	23.43	23.39	23.98	24.54	20.51	21.09	21.06	21.65	22.20
	8H	22.93	23.46	23.50	24.03	24.60	20.89	21.42	21.46	21.99	22.56
	12H	23.00	23.47	23.57	24.02	24.66	21.34	21.80	21.90	22.36	23.00
12H	4H	22.52	23.15	23.06	23.69	24.24	19.77	20.41	20.31	20.95	21.50
	6H	22.84	23.36	23.41	23.93	24.50	20.55	21.08	21.12	21.64	22.21
	8H	22.97	23.44	23.53	23.99	24.63	20.99	21.46	21.56	22.01	22.65