

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: P893471

Luminaire Tested: 4MB-4SL-ACL-UNV-L940

Issue Date: 11/11/2024

**Test Information**

Test Method: LM-79-2019  
Report Number: P893471  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-2404-077-15)  
Test Lab: INNOVATION CENTER  
Issue Date: 11/11/2024  
Manufacturer: COOPER LIGHTING SOLUTIONS  
Product Line: METALUX  
Catalog Number: 4MB-4SL-ACL-UNV-L940  
Description: 4000 Lumen 4FT MICROBAY LINEAR BAY with AISLE OPTICS WITH CLEAR LENS, 90CRI, 4000K (C)  
Light Source: -  
Ballast/Driver: -

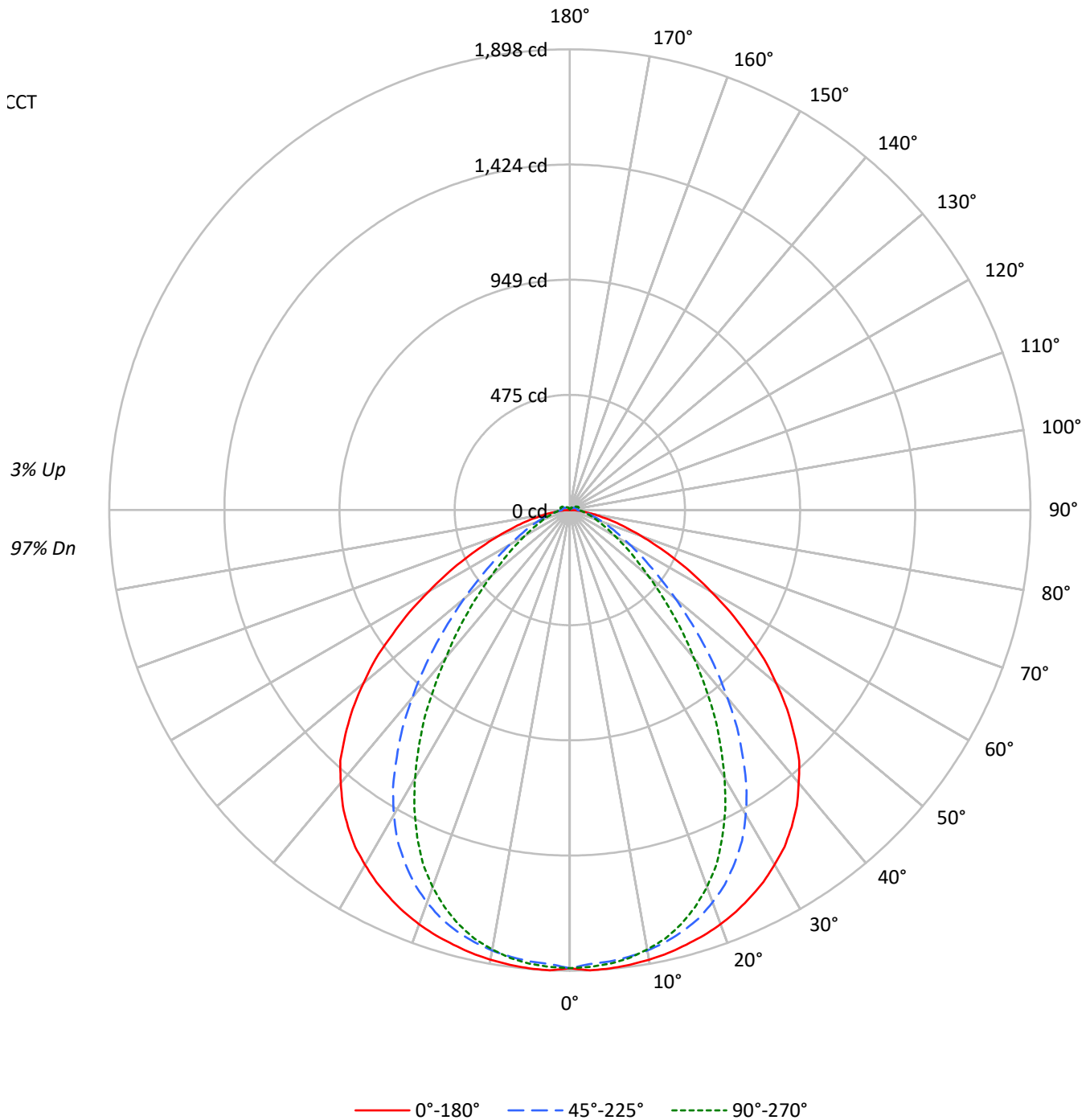
**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 3872.0 lumens  
Efficiency: N/A  
Efficacy: 129.9 lumens/watt  
Spacing Criteria (0/90/45): 1.32 / 1.06 / 1.16  
Luminous Opening: Rectangular w/ Sides (W: 0.27' x L: 3.98' x H: 0.08')  
CIE Type: Direct

Input Watts (W): 29.8  
Input Voltage (V): 120  
Input Current (A<sub>in</sub>): 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	118	118	118	118	115	115	115	115	110	110	110	104	104	104	100	100	100	97				97
1	110	106	102	99	107	103	100	97	99	96	93	94	92	90	90	89	87	85				85
2	101	94	88	84	99	92	87	82	88	84	80	85	81	78	82	79	76	74				74
3	94	85	77	72	91	83	76	71	80	74	69	77	72	68	74	70	66	64				64
4	87	76	68	62	84	75	67	62	72	66	61	69	64	60	67	62	59	57				57
5	80	69	61	55	78	68	60	55	65	59	54	63	58	53	61	56	52	50				50
6	75	63	55	49	73	62	54	49	60	53	48	58	52	47	56	51	47	45				45
7	70	57	50	44	68	57	49	44	55	48	43	53	47	43	52	46	42	40				40
8	65	53	45	40	64	52	45	40	51	44	39	49	43	39	48	42	38	37				37
9	61	49	41	36	60	48	41	36	47	40	36	46	40	35	45	39	35	33				33
10	58	45	38	33	56	45	38	33	44	37	33	43	37	32	42	36	32	31				31

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

	0°	45°	90°
0°	19223	19223	19223
5°	19346	18701	18671
10°	19379	18295	18016
15°	19438	17819	17196
20°	19532	17164	16074
25°	19589	16255	14580
30°	19609	15006	12703
35°	19525	13261	10625
40°	19178	11201	8362
45°	18441	9043	6484
50°	17168	7017	4865
55°	15368	5371	3721
60°	13203	4129	2834
65°	11010	3257	2253
70°	8805	2613	1841
75°	7015	2107	1566
80°	5138	1738	1372
85°	3526	1476	1264

**MAXIMUM LUMINANCE 45°-90°:**

Horizontal Angle: 0°  
 Vertical Angle: 45°  
 Luminance: 18441 cd/sqm



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	178.8	4.6
10°-20°	509.3	13.2
20°-30°	742.5	19.2
30°-40°	797.8	20.6
40°-50°	664.0	17.1
50°-60°	444.1	11.5
60°-70°	254.2	6.6
70°-80°	126.4	3.3
80°-90°	51.7	1.3
90°-100°	30.0	0.8
100°-110°	26.5	0.7
110°-120°	19.4	0.5
120°-130°	12.5	0.3
130°-140°	7.4	0.2
140°-150°	4.2	0.1
150°-160°	2.1	0.1
160°-170°	0.9	0.0
170°-180°	0.2	0.0
<b>0°-30°</b>	<b>1430.6</b>	<b>36.9</b>
<b>0°-40°</b>	<b>2228.4</b>	<b>57.6</b>
<b>0°-60°</b>	<b>3336.4</b>	<b>86.2</b>
<b>0°-90°</b>	<b>3768.7</b>	<b>97.3</b>
90°-120°	75.9	2.0
90°-150°	100.1	2.6
<b>90°-180°</b>	<b>103.0</b>	<b>2.7</b>
<b>0°-180°</b>	<b>3872.0</b>	<b>100.0</b>

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	1888	1888	1888	1888	1888	
5°	1896	1890	1867	1882	1876	180
15°	1854	1841	1797	1784	1768	524
25°	1760	1718	1606	1525	1487	812
35°	1594	1478	1243	1090	1042	995
45°	1307	1086	776	628	591	1005
55°	891	643	405	320	303	798
65°	477	324	204	165	156	477
75°	192	140	101	89	86	206
85°	37	42	47	49	50	44
90°	6	18	32	38	39	5
95°	8	18	31	38	39	6
105°	6	14	28	37	38	6
115°	3	8	22	30	33	3
125°	2	6	15	22	24	1
135°	1	4	10	15	16	1
145°	1	3	7	10	12	1
155°	1	3	4	6	8	1
165°	2	2	3	4	5	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°	1887.5	1887.5	1887.5	1887.5	1887.5
2.5°	1898.5	1893.6	1872.1	1889.2	1884.2
5°	1895.8	1889.7	1867.1	1882.5	1876.5
7.5°	1889.7	1883.1	1857.2	1869.3	1862.7
10°	1880.9	1872.6	1842.9	1849.0	1838.5
12.5°	1869.9	1859.4	1822.5	1820.9	1809.3
15°	1853.9	1841.3	1797.2	1784.0	1768.0
17.5°	1837.4	1818.7	1764.7	1737.7	1715.7
20°	1815.9	1791.1	1720.1	1679.9	1652.4
22.5°	1791.1	1757.6	1670.0	1608.3	1579.7
25°	1760.3	1718.5	1606.1	1525.2	1487.2
27.5°	1727.3	1671.7	1536.8	1430.5	1387.0
30°	1687.6	1618.8	1450.3	1322.6	1275.8
32.5°	1645.8	1551.6	1355.6	1209.1	1157.9
35°	1593.5	1477.8	1243.3	1090.2	1042.3
37.5°	1536.8	1389.7	1132.1	968.5	914.6
40°	1467.9	1296.7	1009.8	847.9	794.5
42.5°	1399.7	1195.4	892.5	738.9	692.7
45°	1307.2	1086.4	776.4	628.2	591.4
47.5°	1214.1	969.6	665.1	538.5	502.2
50°	1110.6	855.1	567.7	452.1	421.8
52.5°	1009.8	748.3	479.0	382.1	356.2
55°	891.4	643.1	404.7	319.9	303.4
57.5°	784.6	545.7	341.4	270.9	255.5
60°	671.7	462.5	285.8	229.1	214.7
62.5°	572.6	388.7	240.6	194.4	184.5
65°	477.4	323.8	203.7	165.2	156.4
67.5°	389.8	270.4	171.8	141.0	133.8
70°	312.7	219.1	144.8	120.0	115.1
72.5°	246.1	176.2	120.6	103.5	99.1
75°	192.2	139.9	100.8	89.2	86.4
77.5°	138.8	109.0	84.2	76.5	74.9
80°	98.0	82.6	69.4	66.1	65.0
82.5°	65.0	60.0	57.3	57.3	56.7
85°	37.4	41.8	46.8	49.0	49.6
87.5°	19.3	28.1	37.4	41.8	42.4
90°	5.5	17.6	31.9	38.0	39.1
92.5°	8.3	17.6	31.4	38.0	39.1
95°	8.3	17.6	31.4	38.0	39.1
97.5°	7.7	17.1	31.4	38.0	39.1
100°	7.2	16.0	30.8	38.0	39.1
102.5°	6.1	15.4	29.7	37.4	39.1
105°	5.5	14.3	28.1	36.9	38.5
107.5°	5.0	12.1	26.4	35.2	37.4
110°	3.9	10.5	25.3	33.6	36.3



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**CANDELA DISTRIBUTION (continued):**

	0°	22.5°	45°	67.5°	90°
112.5°	3.3	9.4	23.7	31.9	34.7
115°	2.8	8.3	22.0	30.3	33.0
117.5°	2.2	7.7	19.8	28.1	30.8
120°	1.7	7.2	18.2	26.4	28.6
122.5°	1.7	6.6	16.0	24.2	26.4
125°	1.7	5.5	14.9	22.0	24.2
127.5°	1.1	5.0	13.2	19.8	22.0
130°	1.1	5.0	12.1	18.2	19.8
132.5°	1.1	4.4	11.0	16.5	18.2
135°	1.1	4.4	9.9	14.9	16.5
137.5°	1.1	3.9	8.8	13.8	15.4
140°	1.1	3.9	8.3	12.1	13.8
142.5°	1.1	3.3	7.2	11.6	12.7
145°	1.1	3.3	6.6	9.9	11.6
147.5°	1.1	3.3	6.1	9.4	10.5
150°	1.1	2.8	5.5	7.7	9.4
152.5°	1.1	2.8	5.0	7.2	8.8
155°	1.1	2.8	4.4	6.1	7.7
157.5°	1.1	2.8	4.4	5.5	6.6
160°	1.7	2.2	3.9	5.0	6.1
162.5°	1.7	2.2	3.3	4.4	5.5
165°	1.7	2.2	3.3	3.9	5.0
167.5°	1.7	2.2	2.8	3.3	3.9
170°	1.7	1.7	2.8	2.8	2.8
172.5°	1.7	1.7	2.2	2.8	2.2
175°	1.7	1.7	2.2	2.2	2.2
177.5°	1.7	1.7	2.2	2.2	2.2
180°	1.7	1.7	1.7	1.7	1.7



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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	19.01	20.40	19.42	20.77	21.15	14.30	15.69	14.71	16.06	16.45
	3H	20.10	21.34	20.52	21.73	22.16	15.44	16.68	15.86	17.07	17.50
	4H	20.41	21.57	20.85	21.97	22.42	15.94	17.10	16.39	17.51	17.96
	6H	20.55	21.62	21.01	22.05	22.51	16.44	17.51	16.90	17.94	18.40
	8H	20.57	21.59	21.04	22.03	22.50	16.70	17.72	17.17	18.17	18.63
	12H	20.56	21.54	21.04	21.97	22.47	17.00	17.97	17.47	18.41	18.90
4H	2H	18.99	20.15	19.43	20.56	21.00	14.80	15.96	15.24	16.37	16.81
	3H	20.22	21.18	20.68	21.64	22.11	16.11	17.07	16.57	17.53	17.99
	4H	20.61	21.47	21.09	21.94	22.45	16.70	17.57	17.18	18.04	18.54
	6H	20.84	21.59	21.34	22.08	22.61	17.33	18.08	17.83	18.57	19.09
	8H	20.88	21.58	21.39	22.08	22.61	17.65	18.35	18.16	18.84	19.37
	12H	20.89	21.52	21.42	22.05	22.58	18.02	18.65	18.55	19.18	19.71
8H	4H	20.59	21.30	21.10	21.79	22.32	16.94	17.65	17.45	18.14	18.67
	6H	20.87	21.45	21.42	21.99	22.53	17.67	18.25	18.21	18.79	19.33
	8H	20.95	21.47	21.50	22.02	22.58	18.07	18.60	18.63	19.15	19.70
	12H	20.99	21.45	21.55	21.99	22.62	18.57	19.03	19.12	19.57	20.19
12H	4H	20.57	21.20	21.10	21.73	22.26	16.96	17.58	17.49	18.11	18.65
	6H	20.85	21.37	21.41	21.93	22.48	17.71	18.23	18.26	18.78	19.34
	8H	20.96	21.42	21.51	21.96	22.59	18.17	18.63	18.72	19.17	19.79