

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: P893480

Luminaire Tested: 4MB-4SL-AOL-UNV-L950

Issue Date: 11/11/2024

Test Information

Test Method: LM-79-2019
Report Number: P893480
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-L950
Description: 4000 Lumen 4FT MICROBAY LINEAR BAY with AISLE OPTICS WITH CLEAR LENS NO UPLIGHT, 9
5000K CCT
Light Source: -
Ballast/Driver: -

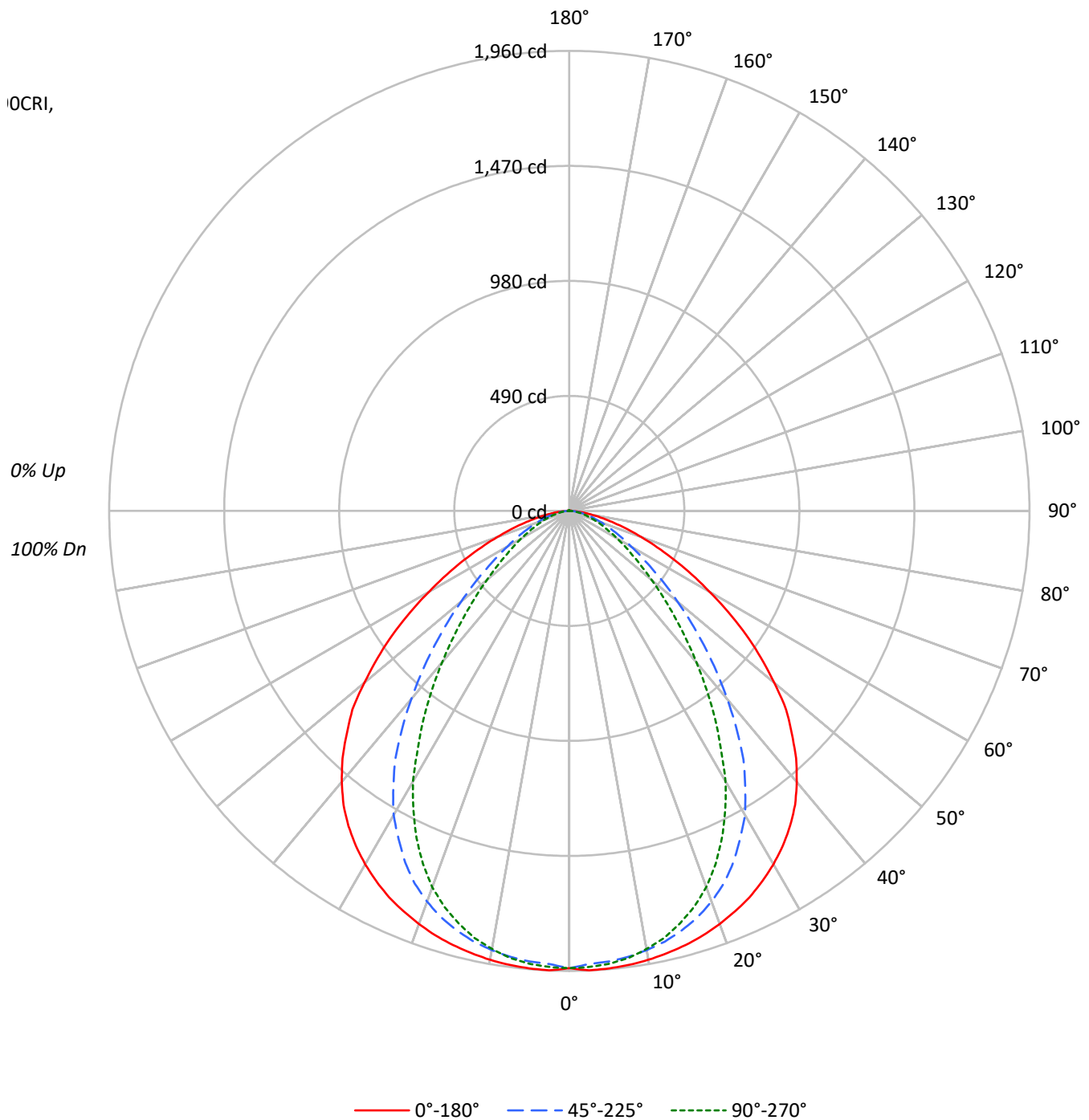
Summary

Lumens per Lamp: N/A
Luminaire Lumens: 3892.0 lumens
Efficiency: N/A
Efficacy: 130.6 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				
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°	19842	19842	19842
5°	20004	19701	19804
10°	20085	19652	19599
15°	20189	19511	19187
20°	20298	19196	18487
25°	20411	18571	17290
30°	20447	17595	15656
35°	20381	16072	13467
40°	20040	13910	11190
45°	19295	11688	9056
50°	18056	9519	7252
55°	16314	7651	5815
60°	14071	6227	4815
65°	11907	5186	3959
70°	9719	4410	3362
75°	7787	3718	2861
80°	6064	3179	2457
85°	4697	2804	2220

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
 Vertical Angle: 45°
 Luminance: 19295 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	184.5	4.7
10°-20°	525.0	13.5
20°-30°	765.3	19.7
30°-40°	824.9	21.2
40°-50°	691.5	17.8
50°-60°	468.1	12.0
60°-70°	267.0	6.9
70°-80°	122.1	3.1
80°-90°	32.0	0.8
90°-100°	3.9	0.1
100°-110°	2.7	0.1
110°-120°	1.5	0.0
120°-130°	0.9	0.0
130°-140°	0.8	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
0°-30°	1474.8	37.9
0°-40°	2299.7	59.1
0°-60°	3459.3	88.9
0°-90°	3880.3	99.7
90°-120°	8.1	0.2
90°-150°	10.4	0.3
90°-180°	12.0	0.3
0°-180°	3892.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1948	1948	1948	1948	1948	
5°	1957	1951	1927	1943	1937	186
15°	1915	1898	1850	1838	1820	541
25°	1816	1768	1653	1577	1539	837
35°	1639	1516	1293	1135	1083	1023
45°	1340	1118	812	669	629	1031
55°	919	672	431	349	328	818
65°	494	344	215	174	164	493
75°	198	145	94	77	73	216
85°	40	34	24	20	19	47
90°	6	6	3	3	2	6
95°	8	5	3	2	2	7
105°	6	4	2	1	1	6
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°	1948.3	1948.3	1948.3	1948.3	1948.3
2.5°	1959.5	1954.5	1932.1	1950.6	1945.0
5°	1956.7	1950.6	1927.1	1942.7	1937.2
7.5°	1951.1	1943.3	1917.0	1928.8	1921.5
10°	1942.2	1932.7	1900.3	1907.0	1895.2
12.5°	1929.9	1918.2	1879.6	1877.9	1863.9
15°	1914.8	1898.0	1850.5	1838.2	1819.8
17.5°	1896.4	1875.1	1815.9	1791.3	1768.9
20°	1872.9	1845.5	1771.2	1732.0	1705.8
22.5°	1846.1	1809.2	1719.2	1656.6	1628.1
25°	1816.4	1768.4	1652.7	1576.7	1538.7
27.5°	1779.5	1719.2	1575.5	1477.2	1438.1
30°	1738.7	1662.2	1496.2	1370.4	1331.3
32.5°	1692.4	1596.8	1395.0	1255.3	1200.5
35°	1639.3	1515.7	1292.7	1134.6	1083.2
37.5°	1579.5	1431.4	1170.3	1012.7	960.8
40°	1507.4	1331.3	1046.3	890.3	841.7
42.5°	1429.7	1229.6	927.2	774.1	732.2
45°	1339.7	1117.8	811.5	669.0	628.8
47.5°	1253.1	1004.9	703.1	572.9	539.9
50°	1139.6	884.7	600.8	485.1	457.7
52.5°	1028.9	773.5	513.6	414.7	389.0
55°	918.8	672.4	430.9	349.3	327.5
57.5°	802.6	573.4	362.7	295.7	281.1
60°	690.8	487.9	305.7	248.2	236.4
62.5°	588.5	409.1	258.8	209.6	198.4
65°	494.1	343.7	215.2	174.4	164.3
67.5°	404.6	282.8	179.4	145.3	138.0
70°	326.4	229.2	148.1	119.6	112.9
72.5°	258.8	183.3	118.5	97.8	90.5
75°	197.9	145.3	94.5	77.1	72.7
77.5°	147.6	109.5	72.7	59.2	55.9
80°	103.4	79.4	54.2	44.7	41.9
82.5°	70.4	54.8	38.0	31.3	29.6
85°	40.2	34.1	24.0	20.1	19.0
87.5°	20.7	17.9	12.9	9.5	8.4
90°	5.6	5.6	3.4	2.8	2.2
92.5°	8.9	5.0	3.4	2.2	1.7
95°	8.4	5.0	2.8	1.7	1.7
97.5°	7.8	5.0	2.2	1.7	1.1
100°	7.3	4.5	2.2	1.1	1.1
102.5°	6.7	4.5	2.2	1.1	1.1
105°	5.6	3.9	1.7	1.1	0.6
107.5°	5.0	3.4	1.7	1.1	0.6
110°	3.9	2.8	1.7	1.1	0.6



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CANDELA DISTRIBUTION (continued):

	0°	22.5°	45°	67.5°	90°
112.5°	3.4	2.8	1.1	1.1	0.6
115°	2.8	2.2	1.1	0.6	0.6
117.5°	2.2	1.7	1.1	0.6	0.6
120°	1.7	1.7	1.1	0.6	0.6
122.5°	1.7	1.1	1.1	0.6	0.6
125°	1.1	1.1	1.1	0.6	0.6
127.5°	1.1	1.1	1.1	0.6	0.6
130°	1.1	1.1	1.1	0.6	0.6
132.5°	1.1	1.1	1.1	1.1	0.6
135°	0.6	1.1	1.1	1.1	0.6
137.5°	1.1	1.1	1.1	1.1	1.1
140°	1.1	1.1	1.1	1.1	1.1
142.5°	1.1	1.1	1.1	1.1	1.1
145°	1.1	1.1	1.1	1.1	1.1
147.5°	1.1	1.1	1.1	1.1	1.1
150°	1.1	1.1	1.1	1.1	1.1
152.5°	1.1	1.1	1.1	1.1	1.1
155°	1.1	1.1	1.1	1.7	1.7
157.5°	1.1	1.1	1.7	1.7	1.7
160°	1.1	1.1	1.7	1.7	1.7
162.5°	1.1	1.1	1.7	1.7	1.7
165°	1.1	1.7	1.7	1.7	1.7
167.5°	1.1	1.7	1.7	1.7	2.2
170°	1.1	1.7	1.7	2.2	2.2
172.5°	1.1	1.7	1.7	2.2	2.2
175°	1.7	1.7	1.7	2.2	2.2
177.5°	1.7	1.7	1.7	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	20.75	22.19	21.12	22.51	22.83	15.59	17.03	15.96	17.35	17.67
	3H	22.06	23.34	22.44	23.68	24.05	16.60	17.89	16.99	18.22	18.59
	4H	22.48	23.68	22.89	24.04	24.43	16.94	18.14	17.35	18.50	18.88
	6H	22.75	23.85	23.17	24.23	24.63	17.17	18.27	17.58	18.64	19.04
	8H	22.82	23.87	23.25	24.27	24.68	17.23	18.28	17.67	18.68	19.09
	12H	22.86	23.86	23.30	24.25	24.69	17.28	18.28	17.71	18.67	19.11
4H	2H	20.75	21.95	21.15	22.30	22.69	16.22	17.42	16.62	17.77	18.16
	3H	22.21	23.20	22.63	23.61	24.02	17.41	18.40	17.83	18.81	19.22
	4H	22.74	23.62	23.18	24.05	24.49	17.83	18.71	18.27	19.14	19.58
	6H	23.12	23.88	23.58	24.33	24.80	18.14	18.91	18.60	19.36	19.83
	8H	23.23	23.94	23.70	24.39	24.87	18.23	18.95	18.70	19.40	19.88
	12H	23.30	23.94	23.79	24.43	24.91	18.30	18.94	18.79	19.43	19.91
8H	4H	22.72	23.44	23.19	23.89	24.36	18.16	18.88	18.63	19.33	19.81
	6H	23.15	23.74	23.66	24.24	24.73	18.56	19.15	19.06	19.64	20.13
	8H	23.31	23.84	23.83	24.35	24.85	18.70	19.23	19.22	19.74	20.24
	12H	23.44	23.91	23.95	24.41	24.98	18.82	19.29	19.34	19.79	20.36
12H	4H	22.69	23.33	23.18	23.81	24.29	18.21	18.85	18.70	19.33	19.81
	6H	23.12	23.65	23.64	24.17	24.66	18.62	19.15	19.14	19.67	20.17
	8H	23.31	23.78	23.83	24.28	24.85	18.81	19.28	19.33	19.78	20.35