

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: P893478

Luminaire Tested: 4MB-4SL-AOL-UNV-L935

Issue Date: 11/11/2024

Test Information

Test Method: LM-79-2019
Report Number: P893478
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-L935
Description: 4000 Lumen 4FT MICROBAY LINEAR BAY with AISLE OPTICS WITH CLEAR LENS NO UPLIGHT, 9
3500K CCT
Light Source: -
Ballast/Driver: -

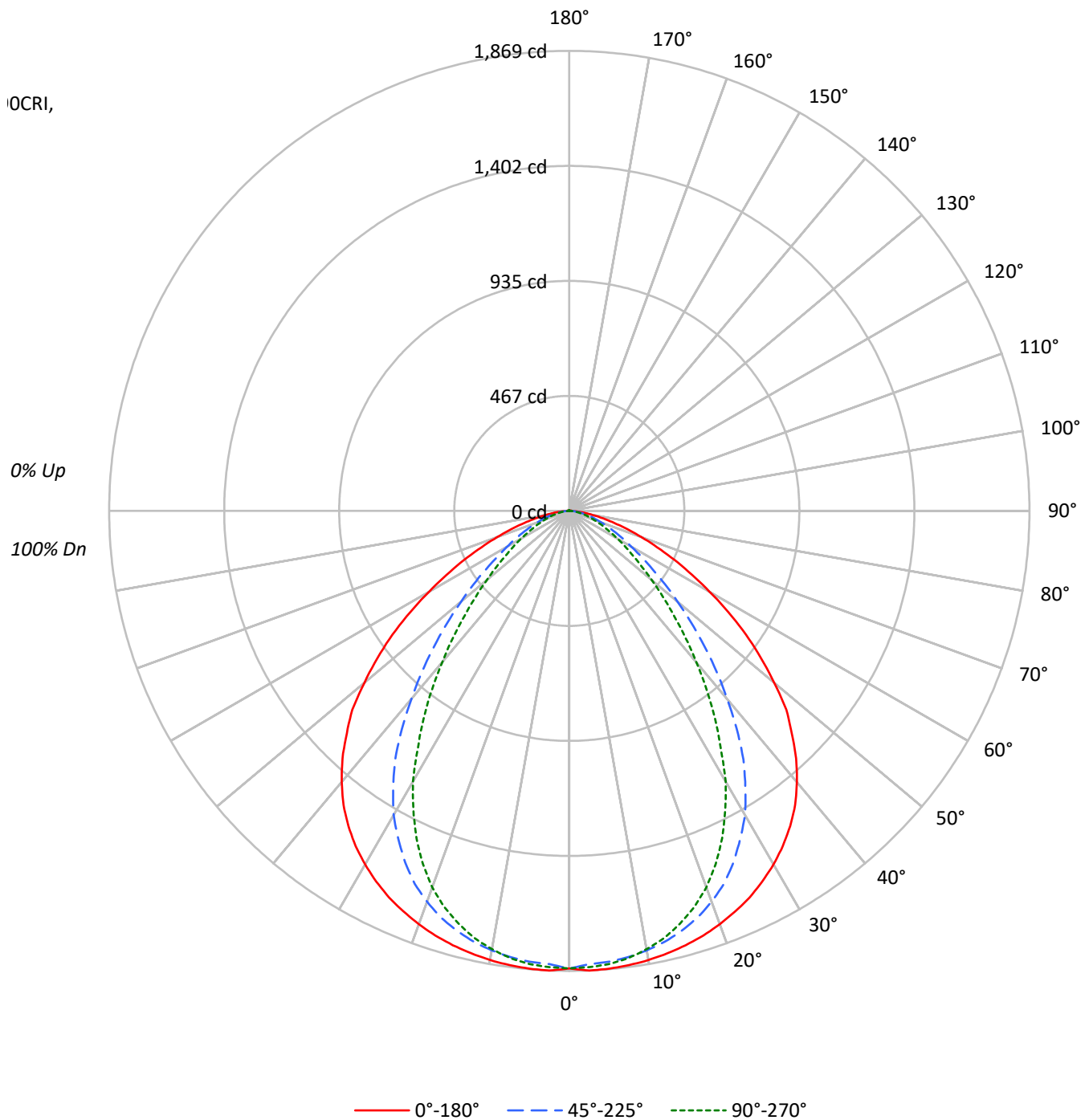
Summary

Lumens per Lamp: N/A
Luminaire Lumens: 3713.1 lumens
Efficiency: N/A
Efficacy: 124.6 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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CATALOG NUMBER: 4MB-4SL-AOL-UNV-L935

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°	18929	18929	18929
5°	19083	18795	18893
10°	19161	18748	18698
15°	19260	18613	18305
20°	19364	18313	17636
25°	19473	17717	16495
30°	19507	16786	14936
35°	19443	15333	12847
40°	19118	13269	10676
45°	18408	11151	8639
50°	17225	9082	6919
55°	15565	7299	5549
60°	13423	5941	4593
65°	11357	4947	3779
70°	9272	4207	3207
75°	7429	3545	2727
80°	5783	3032	2346
85°	4487	2676	2115

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
 Vertical Angle: 45°
 Luminance: 18408 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	176.0	4.7
10°-20°	500.9	13.5
20°-30°	730.1	19.7
30°-40°	786.9	21.2
40°-50°	659.7	17.8
50°-60°	446.6	12.0
60°-70°	254.7	6.9
70°-80°	116.5	3.1
80°-90°	30.5	0.8
90°-100°	3.8	0.1
100°-110°	2.6	0.1
110°-120°	1.4	0.0
120°-130°	0.8	0.0
130°-140°	0.8	0.0
140°-150°	0.7	0.0
150°-160°	0.6	0.0
160°-170°	0.4	0.0
170°-180°	0.2	0.0
0°-30°	1407.0	37.9
0°-40°	2193.9	59.1
0°-60°	3300.2	88.9
0°-90°	3701.9	99.7
90°-120°	7.7	0.2
90°-150°	10.0	0.3
90°-180°	11.0	0.3
0°-180°	3713.1	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1859	1859	1859	1859	1859	
5°	1867	1861	1838	1853	1848	178
15°	1827	1811	1765	1754	1736	516
25°	1733	1687	1577	1504	1468	798
35°	1564	1446	1233	1082	1033	976
45°	1278	1066	774	638	600	984
55°	877	641	411	333	312	781
65°	471	328	205	166	157	470
75°	189	139	90	74	69	206
85°	38	32	23	19	18	45
90°	5	5	3	3	2	5
95°	8	5	3	2	2	6
105°	5	4	2	1	0	6
115°	3	2	1	0	0	3
125°	1	1	1	0	0	1
135°	0	1	1	1	0	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°	1858.7	1858.7	1858.7	1858.7	1858.7
2.5°	1869.4	1864.6	1843.3	1860.9	1855.5
5°	1866.7	1860.9	1838.5	1853.4	1848.1
7.5°	1861.4	1853.9	1828.9	1840.1	1833.1
10°	1852.9	1843.8	1812.9	1819.3	1808.1
12.5°	1841.1	1829.9	1793.1	1791.5	1778.2
15°	1826.7	1810.7	1765.4	1753.7	1736.1
17.5°	1809.1	1788.9	1732.4	1708.9	1687.6
20°	1786.7	1760.6	1689.7	1652.4	1627.3
22.5°	1761.2	1726.0	1640.1	1580.4	1553.2
25°	1732.9	1687.0	1576.7	1504.2	1467.9
27.5°	1697.7	1640.1	1503.1	1409.2	1371.9
30°	1658.8	1585.7	1427.4	1307.4	1270.1
32.5°	1614.5	1523.3	1330.9	1197.6	1145.3
35°	1563.9	1446.0	1233.3	1082.4	1033.3
37.5°	1506.8	1365.5	1116.5	966.2	916.6
40°	1438.0	1270.1	998.1	849.4	803.0
42.5°	1363.9	1173.0	884.6	738.5	698.5
45°	1278.1	1066.4	774.2	638.2	599.8
47.5°	1195.4	958.7	670.8	546.5	515.1
50°	1087.2	844.1	573.2	462.8	436.7
52.5°	981.6	737.9	490.0	395.6	371.1
55°	876.6	641.4	411.1	333.2	312.5
57.5°	765.7	547.1	346.0	282.1	268.2
60°	659.0	465.5	291.7	236.7	225.5
62.5°	561.5	390.3	246.9	199.9	189.3
65°	471.3	327.9	205.3	166.4	156.8
67.5°	386.0	269.8	171.2	138.6	131.7
70°	311.4	218.6	141.3	114.1	107.7
72.5°	246.9	174.9	113.0	93.3	86.4
75°	188.8	138.6	90.1	73.6	69.3
77.5°	140.8	104.5	69.3	56.5	53.3
80°	98.6	75.7	51.7	42.7	40.0
82.5°	67.2	52.3	36.3	29.9	28.3
85°	38.4	32.5	22.9	19.2	18.1
87.5°	19.7	17.1	12.3	9.1	8.0
90°	5.3	5.3	3.2	2.7	2.1
92.5°	8.5	4.8	3.2	2.1	1.6
95°	8.0	4.8	2.7	1.6	1.6
97.5°	7.5	4.8	2.1	1.6	1.1
100°	6.9	4.3	2.1	1.1	1.1
102.5°	6.4	4.3	2.1	1.1	1.1
105°	5.3	3.7	1.6	1.1	0.5
107.5°	4.8	3.2	1.6	1.1	0.5
110°	3.7	2.7	1.6	1.1	0.5



TEST NUMBER: P893478

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CANDELA DISTRIBUTION (continued):

	0°	22.5°	45°	67.5°	90°
112.5°	3.2	2.7	1.1	1.1	0.5
115°	2.7	2.1	1.1	0.5	0.5
117.5°	2.1	1.6	1.1	0.5	0.5
120°	1.6	1.6	1.1	0.5	0.5
122.5°	1.6	1.1	1.1	0.5	0.5
125°	1.1	1.1	1.1	0.5	0.5
127.5°	1.1	1.1	1.1	0.5	0.5
130°	1.1	1.1	1.1	0.5	0.5
132.5°	1.1	1.1	1.1	1.1	0.5
135°	0.5	1.1	1.1	1.1	0.5
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	1.6	1.6
157.5°	1.1	1.1	1.6	1.6	1.6
160°	1.1	1.1	1.6	1.6	1.6
162.5°	1.1	1.1	1.6	1.6	1.6
165°	1.1	1.6	1.6	1.6	1.6
167.5°	1.1	1.6	1.6	1.6	2.1
170°	1.1	1.6	1.6	2.1	2.1
172.5°	1.1	1.6	1.6	2.1	2.1
175°	1.6	1.6	1.6	2.1	2.1
177.5°	1.6	1.6	1.6	2.1	2.1
180°	1.6	1.6	1.6	1.6	1.6



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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	20.59	22.02	20.96	22.34	22.67	15.43	16.87	15.80	17.19	17.51
	3H	21.89	23.18	22.28	23.51	23.88	16.44	17.72	16.82	18.06	18.43
	4H	22.32	23.52	22.72	23.87	24.26	16.78	17.98	17.18	18.33	18.72
	6H	22.58	23.69	23.00	24.06	24.46	17.00	18.11	17.42	18.48	18.88
	8H	22.66	23.71	23.09	24.10	24.51	17.07	18.12	17.50	18.52	18.93
	12H	22.70	23.70	23.13	24.09	24.53	17.11	18.12	17.55	18.50	18.94
4H	2H	20.58	21.78	20.99	22.14	22.53	16.05	17.25	16.46	17.61	18.00
	3H	22.05	23.04	22.47	23.45	23.85	17.25	18.24	17.67	18.64	19.05
	4H	22.57	23.46	23.01	23.88	24.33	17.66	18.55	18.10	18.97	19.42
	6H	22.95	23.72	23.42	24.17	24.64	17.98	18.74	18.44	19.19	19.66
	8H	23.06	23.78	23.53	24.23	24.71	18.07	18.79	18.54	19.24	19.71
	12H	23.14	23.78	23.63	24.26	24.74	18.14	18.78	18.63	19.26	19.74
8H	4H	22.56	23.27	23.03	23.72	24.20	18.00	18.72	18.47	19.17	19.64
	6H	22.99	23.58	23.49	24.08	24.56	18.39	18.98	18.90	19.48	19.97
	8H	23.14	23.67	23.67	24.19	24.69	18.53	19.06	19.06	19.58	20.08
	12H	23.27	23.74	23.79	24.24	24.82	18.66	19.13	19.17	19.62	20.20
12H	4H	22.53	23.17	23.02	23.65	24.13	18.05	18.68	18.53	19.17	19.65
	6H	22.95	23.49	23.48	24.00	24.50	18.46	18.99	18.98	19.51	20.00
	8H	23.15	23.61	23.66	24.11	24.69	18.65	19.12	19.17	19.62	20.19