

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: P893364

Luminaire Tested: 4MB-3SL-AOL-UNV-L850

Issue Date: 11/11/2024

Test Information

Test Method: LM-79-2019
Report Number: P893364
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-3SL-AOL-UNV-L850
Description: 3000 Lumen 4FT MICROBAY LINEAR BAY with AISLE OPTICS WITH CLEAR LENS NO UPLIGHT, 8
5000K CCT
Light Source: -
Ballast/Driver: -

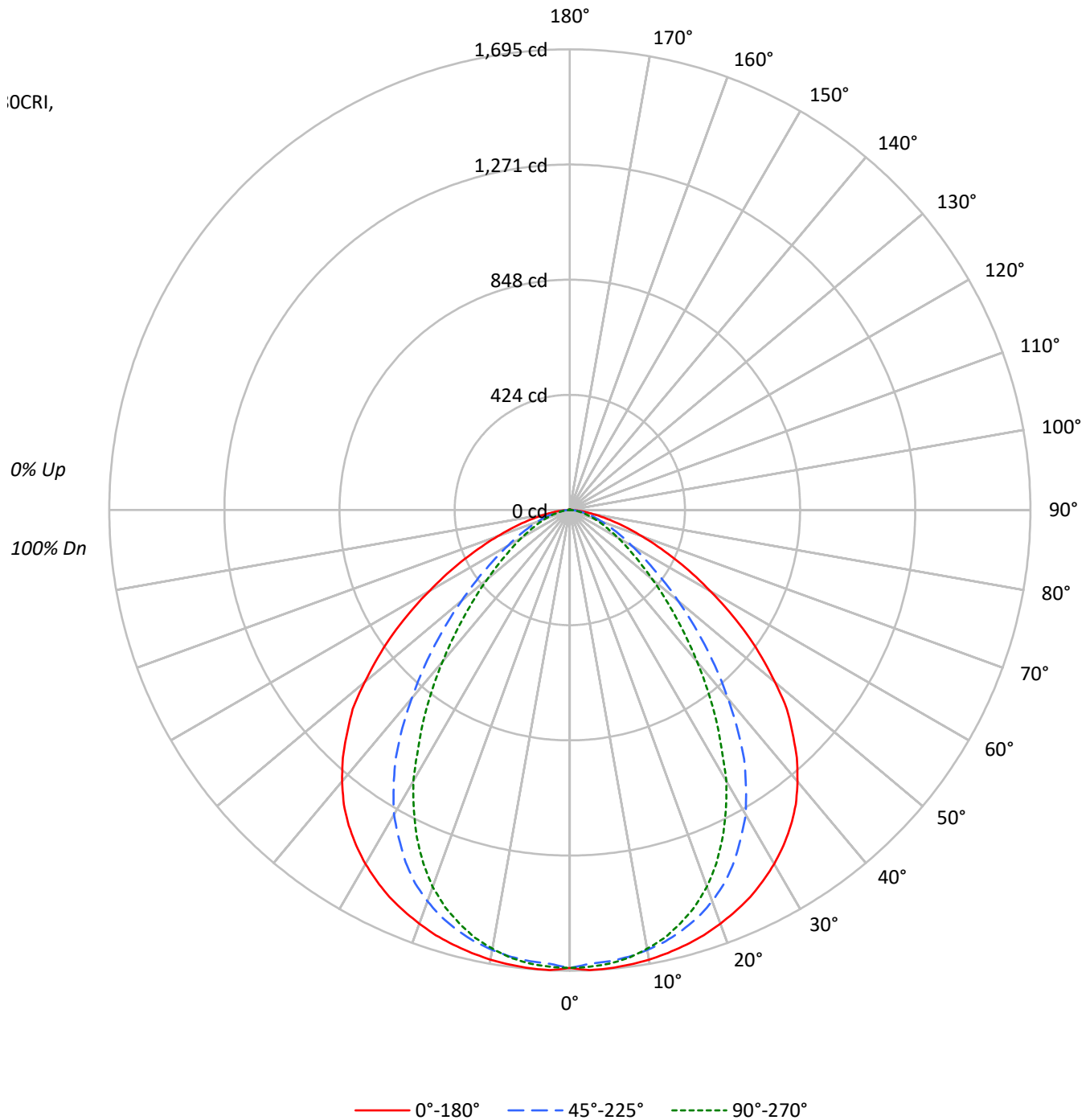
Summary

Lumens per Lamp: N/A
Luminaire Lumens: 3366.2 lumens
Efficiency: N/A
Efficacy: 159.5 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): 21.1
Input Voltage (V): 120
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: 0.99
Total Harmonic Distortion (THDi): 5.2
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 24 FT

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CATALOG NUMBER: 4MB-3SL-AOL-UNV-L850

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°	17160	17160	17160
5°	17301	17039	17128
10°	17370	16996	16950
15°	17460	16874	16593
20°	17555	16601	15988
25°	17652	16061	14953
30°	17684	15217	13540
35°	17626	13900	11647
40°	17331	12030	9678
45°	16687	10109	7832
50°	15616	8232	6273
55°	14110	6618	5030
60°	12168	5385	4165
65°	10297	4485	3424
70°	8406	3814	2906
75°	6733	3215	2471
80°	5243	2751	2129
85°	4066	2430	1916

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
 Vertical Angle: 45°
 Luminance: 16687 cd/sqm



TEST NUMBER: P893364
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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	159.6	4.7
10°-20°	454.1	13.5
20°-30°	661.8	19.7
30°-40°	713.4	21.2
40°-50°	598.1	17.8
50°-60°	404.9	12.0
60°-70°	230.9	6.9
70°-80°	105.6	3.1
80°-90°	27.7	0.8
90°-100°	3.4	0.1
100°-110°	2.3	0.1
110°-120°	1.3	0.0
120°-130°	0.8	0.0
130°-140°	0.7	0.0
140°-150°	0.6	0.0
150°-160°	0.5	0.0
160°-170°	0.4	0.0
170°-180°	0.2	0.0
0°-30°	1275.5	37.9
0°-40°	1988.9	59.1
0°-60°	2991.8	88.9
0°-90°	3355.9	99.7
90°-120°	7.0	0.2
90°-150°	9.1	0.3
90°-180°	10.0	0.3
0°-180°	3366.2	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1685	1685	1685	1685	1685	
5°	1692	1687	1667	1680	1675	161
15°	1656	1642	1600	1590	1574	468
25°	1571	1529	1429	1364	1331	724
35°	1418	1311	1118	981	937	885
45°	1159	967	702	579	544	892
55°	795	582	373	302	283	708
65°	427	297	186	151	142	426
75°	171	126	82	67	63	187
85°	35	30	21	17	16	41
90°	5	5	3	2	2	5
95°	7	4	2	2	2	6
105°	5	3	2	1	0	5
115°	2	2	1	0	0	2
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	0
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°	1685.0	1685.0	1685.0	1685.0	1685.0
2.5°	1694.7	1690.3	1671.0	1687.0	1682.1
5°	1692.3	1687.0	1666.7	1680.2	1675.4
7.5°	1687.4	1680.7	1658.0	1668.1	1661.8
10°	1679.7	1671.5	1643.5	1649.3	1639.1
12.5°	1669.1	1658.9	1625.6	1624.1	1612.0
15°	1656.0	1641.5	1600.4	1589.8	1573.8
17.5°	1640.1	1621.7	1570.5	1549.2	1529.9
20°	1619.8	1596.1	1531.8	1498.0	1475.2
22.5°	1596.6	1564.7	1486.8	1432.7	1408.1
25°	1570.9	1529.4	1429.3	1363.6	1330.7
27.5°	1539.0	1486.8	1362.6	1277.5	1243.7
30°	1503.8	1437.5	1294.0	1185.2	1151.4
32.5°	1463.6	1381.0	1206.5	1085.6	1038.3
35°	1417.7	1310.9	1118.0	981.2	936.8
37.5°	1366.0	1237.9	1012.2	875.9	830.9
40°	1303.6	1151.4	904.9	770.0	728.0
42.5°	1236.5	1063.4	801.9	669.5	633.2
45°	1158.6	966.7	701.9	578.6	543.8
47.5°	1083.7	869.1	608.1	495.5	466.9
50°	985.6	765.2	519.6	419.6	395.9
52.5°	889.9	669.0	444.2	358.7	336.4
55°	794.7	581.5	372.7	302.1	283.3
57.5°	694.1	495.9	313.7	255.7	243.1
60°	597.4	422.0	264.4	214.6	204.5
62.5°	509.0	353.8	223.8	181.3	171.6
65°	427.3	297.3	186.1	150.8	142.1
67.5°	350.0	244.6	155.2	125.7	119.4
70°	282.3	198.2	128.1	103.4	97.6
72.5°	223.8	158.5	102.5	84.6	78.3
75°	171.1	125.7	81.7	66.7	62.8
77.5°	127.6	94.7	62.8	51.2	48.3
80°	89.4	68.6	46.9	38.7	36.3
82.5°	60.9	47.4	32.9	27.1	25.6
85°	34.8	29.5	20.8	17.4	16.4
87.5°	17.9	15.5	11.1	8.2	7.3
90°	4.8	4.8	2.9	2.4	1.9
92.5°	7.7	4.4	2.9	1.9	1.5
95°	7.3	4.4	2.4	1.5	1.5
97.5°	6.8	4.4	1.9	1.5	1.0
100°	6.3	3.9	1.9	1.0	1.0
102.5°	5.8	3.9	1.9	1.0	1.0
105°	4.8	3.4	1.5	1.0	0.5
107.5°	4.4	2.9	1.5	1.0	0.5
110°	3.4	2.4	1.5	1.0	0.5



TEST NUMBER: P893364

CATALOG NUMBER: 4MB-3SL-AOL-UNV-L850

CANDELA DISTRIBUTION (continued):

	0°	22.5°	45°	67.5°	90°
112.5°	2.9	2.4	1.0	1.0	0.5
115°	2.4	1.9	1.0	0.5	0.5
117.5°	1.9	1.5	1.0	0.5	0.5
120°	1.5	1.5	1.0	0.5	0.5
122.5°	1.5	1.0	1.0	0.5	0.5
125°	1.0	1.0	1.0	0.5	0.5
127.5°	1.0	1.0	1.0	0.5	0.5
130°	1.0	1.0	1.0	0.5	0.5
132.5°	1.0	1.0	1.0	1.0	0.5
135°	0.5	1.0	1.0	1.0	0.5
137.5°	1.0	1.0	1.0	1.0	1.0
140°	1.0	1.0	1.0	1.0	1.0
142.5°	1.0	1.0	1.0	1.0	1.0
145°	1.0	1.0	1.0	1.0	1.0
147.5°	1.0	1.0	1.0	1.0	1.0
150°	1.0	1.0	1.0	1.0	1.0
152.5°	1.0	1.0	1.0	1.0	1.0
155°	1.0	1.0	1.0	1.5	1.5
157.5°	1.0	1.0	1.5	1.5	1.5
160°	1.0	1.0	1.5	1.5	1.5
162.5°	1.0	1.0	1.5	1.5	1.5
165°	1.0	1.5	1.5	1.5	1.5
167.5°	1.0	1.5	1.5	1.5	1.9
170°	1.0	1.5	1.5	1.9	1.9
172.5°	1.0	1.5	1.5	1.9	1.9
175°	1.5	1.5	1.5	1.9	1.9
177.5°	1.5	1.5	1.5	1.9	1.9
180°	1.5	1.5	1.5	1.5	1.5



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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	20.24	21.68	20.62	22.00	22.33	15.09	16.53	15.46	16.85	17.17
	3H	21.55	22.84	21.94	23.17	23.54	16.10	17.38	16.48	17.72	18.09
	4H	21.98	23.18	22.38	23.53	23.92	16.43	17.63	16.84	17.99	18.38
	6H	22.24	23.35	22.66	23.72	24.12	16.66	17.76	17.08	18.14	18.54
	8H	22.32	23.37	22.75	23.76	24.17	16.73	17.78	17.16	18.17	18.58
	12H	22.35	23.36	22.79	23.75	24.18	16.77	17.77	17.21	18.16	18.60
4H	2H	20.24	21.44	20.65	21.80	22.19	15.71	16.91	16.12	17.27	17.65
	3H	21.71	22.70	22.13	23.10	23.51	16.91	17.90	17.33	18.30	18.71
	4H	22.23	23.12	22.67	23.54	23.99	17.32	18.21	17.76	18.63	19.08
	6H	22.61	23.38	23.08	23.83	24.30	17.63	18.40	18.10	18.85	19.32
	8H	22.72	23.44	23.19	23.89	24.37	17.73	18.44	18.20	18.90	19.37
	12H	22.80	23.44	23.29	23.92	24.40	17.80	18.44	18.29	18.92	19.40
8H	4H	22.21	22.93	22.69	23.38	23.86	17.66	18.37	18.13	18.83	19.30
	6H	22.65	23.24	23.15	23.74	24.22	18.05	18.64	18.55	19.14	19.63
	8H	22.80	23.33	23.32	23.85	24.35	18.19	18.72	18.71	19.24	19.74
	12H	22.93	23.40	23.45	23.90	24.47	18.31	18.78	18.83	19.28	19.86
12H	4H	22.19	22.82	22.68	23.31	23.79	17.70	18.34	18.19	18.83	19.31
	6H	22.61	23.14	23.14	23.66	24.16	18.12	18.65	18.64	19.17	19.66
	8H	22.80	23.27	23.32	23.77	24.35	18.31	18.78	18.83	19.28	19.85