

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: P893363

Luminaire Tested: 4MB-3SL-AOL-UNV-L840

Issue Date: 11/11/2024

Test Information

Test Method: LM-79-2019
Report Number: P893363
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-L840
Description: 3000 Lumen 4FT MICROBAY LINEAR BAY with AISLE OPTICS WITH CLEAR LENS NO UPLIGHT, 8
4000K CCT
Light Source: -
Ballast/Driver: -

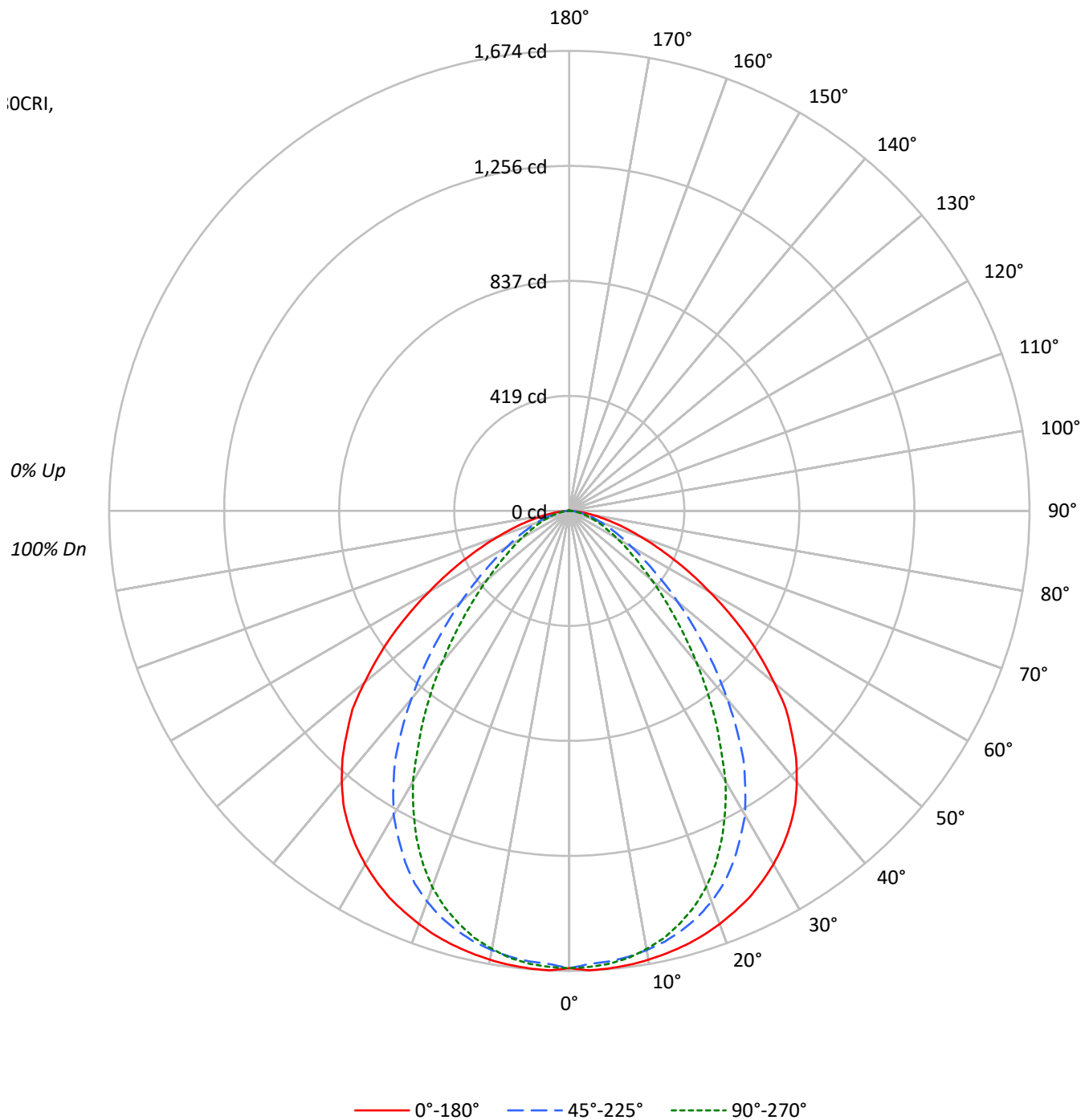
Summary

Lumens per Lamp: N/A
Luminaire Lumens: 3324.1 lumens
Efficiency: N/A
Efficacy: 157.5 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

TEST NUMBER: P893363
CATALOG NUMBER: 4MB-3SL-AOL-UNV-L840

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°	16947	16947	16947
5°	17085	16826	16913
10°	17153	16783	16738
15°	17243	16664	16387
20°	17336	16394	15789
25°	17432	15861	14767
30°	17463	15027	13371
35°	17406	13727	11501
40°	17115	11880	9557
45°	16480	9982	7734
50°	15421	8129	6193
55°	13933	6534	4966
60°	12017	5318	4112
65°	10169	4429	3381
70°	8302	3767	2870
75°	6650	3175	2444
80°	5179	2715	2100
85°	4020	2395	1893

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
 Vertical Angle: 45°
 Luminance: 16480 cd/sqm



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 CATALOG NUMBER: 4MB-3SL-AOL-UNV-L840

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	157.6	4.7
10°-20°	448.4	13.5
20°-30°	653.6	19.7
30°-40°	704.5	21.2
40°-50°	590.6	17.8
50°-60°	399.8	12.0
60°-70°	228.0	6.9
70°-80°	104.3	3.1
80°-90°	27.3	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°	0.1	0.0
0°-30°	1259.6	37.9
0°-40°	1964.0	59.1
0°-60°	2954.5	88.9
0°-90°	3314.1	99.7
90°-120°	6.9	0.2
90°-150°	9.0	0.3
90°-180°	10.0	0.3
0°-180°	3324.1	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1664	1664	1664	1664	1664	
5°	1671	1666	1646	1659	1654	159
15°	1635	1621	1580	1570	1554	462
25°	1551	1510	1412	1347	1314	715
35°	1400	1294	1104	969	925	874
45°	1144	955	693	571	537	881
55°	785	574	368	298	280	699
65°	422	294	184	149	140	421
75°	169	124	81	66	62	184
85°	34	29	20	17	16	40
90°	5	5	3	2	2	5
95°	7	4	2	1	1	6
105°	5	3	1	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	1	1	0
165°	1	1	1	1	1	0
175°	1	1	1	2	2	0
180°	1	1	1	1	1	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1664.0	1664.0	1664.0	1664.0	1664.0
2.5°	1673.5	1669.2	1650.2	1665.9	1661.1
5°	1671.2	1665.9	1645.9	1659.2	1654.4
7.5°	1666.4	1659.7	1637.3	1647.3	1641.1
10°	1658.7	1650.6	1622.9	1628.7	1618.6
12.5°	1648.2	1638.2	1605.3	1603.9	1591.9
15°	1635.4	1621.0	1580.5	1570.0	1554.2
17.5°	1619.6	1601.5	1550.9	1529.9	1510.8
20°	1599.6	1576.2	1512.7	1479.3	1456.8
22.5°	1576.6	1545.1	1468.3	1414.8	1390.5
25°	1551.3	1510.3	1411.5	1346.6	1314.1
27.5°	1519.8	1468.3	1345.6	1261.6	1228.2
30°	1485.0	1419.6	1277.8	1170.4	1137.0
32.5°	1445.4	1363.8	1191.4	1072.1	1025.3
35°	1400.0	1294.5	1104.1	969.0	925.1
37.5°	1349.0	1222.5	999.5	864.9	820.5
40°	1287.4	1137.0	893.6	760.4	718.9
42.5°	1221.0	1050.1	791.9	661.1	625.3
45°	1144.2	954.7	693.1	571.4	537.0
47.5°	1070.2	858.3	600.5	489.3	461.1
50°	973.3	755.6	513.1	414.3	390.9
52.5°	878.8	660.6	438.7	354.2	332.2
55°	784.7	574.2	368.0	298.3	279.7
57.5°	685.5	489.7	309.8	252.5	240.1
60°	590.0	416.7	261.1	211.9	201.9
62.5°	502.6	349.4	221.0	179.0	169.5
65°	422.0	293.6	183.8	148.9	140.3
67.5°	345.6	241.5	153.2	124.1	117.9
70°	278.8	195.7	126.5	102.2	96.4
72.5°	221.0	156.6	101.2	83.5	77.3
75°	169.0	124.1	80.7	65.9	62.1
77.5°	126.0	93.6	62.1	50.6	47.7
80°	88.3	67.8	46.3	38.2	35.8
82.5°	60.1	46.8	32.5	26.7	25.3
85°	34.4	29.1	20.5	17.2	16.2
87.5°	17.7	15.3	11.0	8.1	7.2
90°	4.8	4.8	2.9	2.4	1.9
92.5°	7.6	4.3	2.9	1.9	1.4
95°	7.2	4.3	2.4	1.4	1.4
97.5°	6.7	4.3	1.9	1.4	1.0
100°	6.2	3.8	1.9	1.0	1.0
102.5°	5.7	3.8	1.9	1.0	1.0
105°	4.8	3.3	1.4	1.0	0.5
107.5°	4.3	2.9	1.4	1.0	0.5
110°	3.3	2.4	1.4	1.0	0.5



TEST NUMBER: P893363

CATALOG NUMBER: 4MB-3SL-AOL-UNV-L840

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	1.4	1.0	0.5	0.5
120°	1.4	1.4	1.0	0.5	0.5
122.5°	1.4	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	1.4	1.4
157.5°	1.0	1.0	1.4	1.4	1.4
160°	1.0	1.0	1.4	1.4	1.4
162.5°	1.0	1.0	1.4	1.4	1.4
165°	1.0	1.4	1.4	1.4	1.4
167.5°	1.0	1.4	1.4	1.4	1.9
170°	1.0	1.4	1.4	1.9	1.9
172.5°	1.0	1.4	1.4	1.9	1.9
175°	1.4	1.4	1.4	1.9	1.9
177.5°	1.4	1.4	1.4	1.9	1.9
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	20.20	21.64	20.57	21.96	22.28	15.04	16.48	15.41	16.80	17.12
	3H	21.51	22.79	21.89	23.13	23.50	16.06	17.34	16.44	17.67	18.04
	4H	21.93	23.13	22.34	23.49	23.88	16.39	17.59	16.80	17.95	18.33
	6H	22.20	23.30	22.62	23.68	24.08	16.62	17.72	17.03	18.10	18.50
	8H	22.27	23.32	22.71	23.72	24.13	16.68	17.73	17.12	18.13	18.54
	12H	22.31	23.31	22.75	23.70	24.14	16.73	17.73	17.16	18.12	18.56
4H	2H	20.20	21.40	20.60	21.75	22.14	15.67	16.87	16.07	17.22	17.61
	3H	21.67	22.65	22.08	23.06	23.47	16.86	17.85	17.28	18.26	18.67
	4H	22.19	23.07	22.63	23.50	23.95	17.28	18.17	17.72	18.59	19.04
	6H	22.57	23.33	23.03	23.78	24.25	17.59	18.36	18.06	18.81	19.28
	8H	22.68	23.40	23.15	23.85	24.32	17.68	18.40	18.16	18.85	19.33
	12H	22.75	23.39	23.24	23.88	24.36	17.76	18.39	18.24	18.88	19.36
8H	4H	22.17	22.89	22.64	23.34	23.82	17.61	18.33	18.09	18.78	19.26
	6H	22.60	23.19	23.11	23.69	24.18	18.01	18.60	18.51	19.10	19.58
	8H	22.76	23.29	23.28	23.81	24.30	18.15	18.68	18.67	19.20	19.69
	12H	22.89	23.36	23.41	23.86	24.43	18.27	18.74	18.79	19.24	19.81
12H	4H	22.14	22.78	22.63	23.27	23.75	17.66	18.30	18.15	18.78	19.26
	6H	22.57	23.10	23.09	23.62	24.11	18.07	18.61	18.60	19.12	19.62
	8H	22.76	23.23	23.28	23.73	24.30	18.27	18.73	18.78	19.23	19.81