

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: P893479

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

Issue Date: 11/11/2024

Test Information

Test Method: LM-79-2019
Report Number: P893479
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-L940
Description: 4000 Lumen 4FT MICROBAY LINEAR BAY with AISLE OPTICS WITH CLEAR LENS NO UPLIGHT, 9
4000K CCT
Light Source: -
Ballast/Driver: -

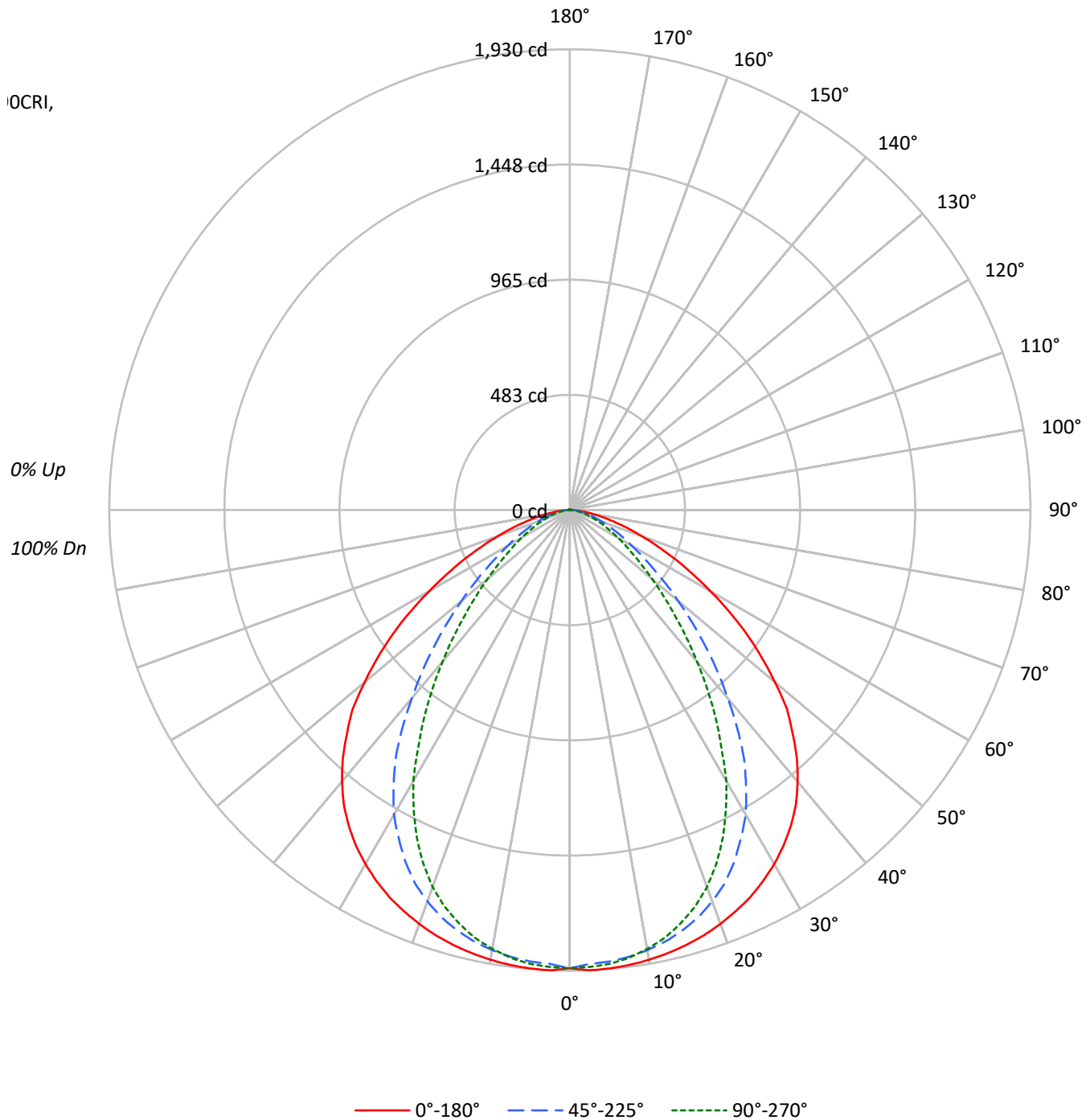
Summary

Lumens per Lamp: N/A
Luminaire Lumens: 3834.1 lumens
Efficiency: N/A
Efficacy: 128.7 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 (A_{in}): 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°	19547	19547	19547
5°	19706	19408	19509
10°	19785	19359	19307
15°	19888	19221	18901
20°	19996	18910	18212
25°	20108	18294	17032
30°	20142	17333	15423
35°	20076	15833	13266
40°	19741	13703	11024
45°	19007	11513	8921
50°	17786	9378	7144
55°	16071	7537	5728
60°	13861	6135	4744
65°	11728	5109	3901
70°	9573	4344	3311
75°	7669	3659	2817
80°	5976	3132	2422
85°	4627	2769	2185

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
 Vertical Angle: 45°
 Luminance: 19007 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	181.8	4.7
10°-20°	517.2	13.5
20°-30°	753.9	19.7
30°-40°	812.6	21.2
40°-50°	681.2	17.8
50°-60°	461.2	12.0
60°-70°	263.0	6.9
70°-80°	120.3	3.1
80°-90°	31.5	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°	1452.8	37.9
0°-40°	2265.4	59.1
0°-60°	3407.8	88.9
0°-90°	3822.5	99.7
90°-120°	8.0	0.2
90°-150°	10.4	0.3
90°-180°	12.0	0.3
0°-180°	3834.1	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1919	1919	1919	1919	1919	
5°	1928	1922	1898	1914	1908	184
15°	1886	1870	1823	1811	1793	533
25°	1789	1742	1628	1553	1516	824
35°	1615	1493	1274	1118	1067	1008
45°	1320	1101	799	659	619	1016
55°	905	662	424	344	323	806
65°	487	339	212	172	162	486
75°	195	143	93	76	72	213
85°	40	34	24	20	19	46
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°	1919.3	1919.3	1919.3	1919.3	1919.3
2.5°	1930.3	1925.4	1903.3	1921.5	1916.0
5°	1927.6	1921.5	1898.4	1913.8	1908.3
7.5°	1922.1	1914.3	1888.5	1900.0	1892.9
10°	1913.2	1903.9	1872.0	1878.6	1867.0
12.5°	1901.1	1889.6	1851.6	1849.9	1836.2
15°	1886.3	1869.8	1823.0	1810.8	1792.7
17.5°	1868.1	1847.2	1788.8	1764.6	1742.6
20°	1845.0	1818.0	1744.8	1706.2	1680.4
22.5°	1818.5	1782.2	1693.6	1631.9	1603.8
25°	1789.4	1742.0	1628.0	1553.2	1515.7
27.5°	1753.0	1693.6	1552.1	1455.2	1416.6
30°	1712.8	1637.4	1473.9	1350.0	1311.5
32.5°	1667.1	1573.0	1374.2	1236.6	1182.6
35°	1614.8	1493.2	1273.5	1117.7	1067.0
37.5°	1555.9	1410.0	1152.9	997.6	946.4
40°	1484.9	1311.5	1030.7	877.1	829.2
42.5°	1408.4	1211.3	913.4	762.5	721.3
45°	1319.7	1101.1	799.4	659.0	619.4
47.5°	1234.4	989.9	692.6	564.3	531.9
50°	1122.6	871.6	591.9	477.9	450.9
52.5°	1013.6	762.0	506.0	408.5	383.2
55°	905.1	662.3	424.5	344.1	322.6
57.5°	790.6	564.9	357.3	291.3	276.9
60°	680.5	480.7	301.2	244.5	232.9
62.5°	579.8	403.0	254.9	206.5	195.5
65°	486.7	338.6	212.0	171.8	161.9
67.5°	398.6	278.6	176.7	143.1	136.0
70°	321.5	225.7	145.9	117.8	111.2
72.5°	254.9	180.6	116.7	96.4	89.2
75°	194.9	143.1	93.0	76.0	71.6
77.5°	145.4	107.9	71.6	58.4	55.1
80°	101.9	78.2	53.4	44.0	41.3
82.5°	69.4	54.0	37.4	30.8	29.2
85°	39.6	33.6	23.7	19.8	18.7
87.5°	20.4	17.6	12.7	9.4	8.3
90°	5.5	5.5	3.3	2.8	2.2
92.5°	8.8	5.0	3.3	2.2	1.7
95°	8.3	5.0	2.8	1.7	1.7
97.5°	7.7	5.0	2.2	1.7	1.1
100°	7.2	4.4	2.2	1.1	1.1
102.5°	6.6	4.4	2.2	1.1	1.1
105°	5.5	3.9	1.7	1.1	0.6
107.5°	5.0	3.3	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°	3.3	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	20.70	22.14	21.07	22.46	22.78	15.54	16.98	15.91	17.30	17.62
	3H	22.01	23.29	22.39	23.62	23.99	16.55	17.83	16.94	18.17	18.54
	4H	22.43	23.63	22.84	23.98	24.37	16.89	18.09	17.29	18.44	18.83
	6H	22.70	23.80	23.11	24.18	24.58	17.11	18.22	17.53	18.59	18.99
	8H	22.77	23.82	23.20	24.21	24.62	17.18	18.23	17.61	18.63	19.04
	12H	22.81	23.81	23.24	24.20	24.64	17.22	18.23	17.66	18.62	19.05
4H	2H	20.69	21.89	21.10	22.25	22.64	16.16	17.36	16.57	17.72	18.11
	3H	22.16	23.15	22.58	23.56	23.97	17.36	18.35	17.78	18.76	19.17
	4H	22.69	23.57	23.12	23.99	24.44	17.78	18.66	18.22	19.09	19.53
	6H	23.06	23.83	23.53	24.28	24.75	18.09	18.85	18.55	19.30	19.77
	8H	23.17	23.89	23.65	24.34	24.82	18.18	18.90	18.65	19.35	19.82
	12H	23.25	23.89	23.74	24.37	24.85	18.25	18.89	18.74	19.38	19.86
8H	4H	22.67	23.38	23.14	23.83	24.31	18.11	18.83	18.58	19.28	19.75
	6H	23.10	23.69	23.60	24.19	24.67	18.50	19.09	19.01	19.59	20.08
	8H	23.26	23.78	23.78	24.30	24.80	18.64	19.17	19.17	19.69	20.19
	12H	23.39	23.85	23.90	24.35	24.93	18.77	19.24	19.28	19.73	20.31
12H	4H	22.64	23.28	23.13	23.76	24.24	18.16	18.79	18.65	19.28	19.76
	6H	23.07	23.60	23.59	24.11	24.61	18.57	19.10	19.09	19.62	20.12
	8H	23.26	23.73	23.77	24.22	24.80	18.76	19.23	19.28	19.73	20.30