

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: P892701

Luminaire Tested: 2MB-4HL-ACL-UNV-L830

Issue Date: 11/11/2024

Test Information

Test Method: LM-79-2019
Report Number: P892701
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-2404-077-7)
Test Lab: INNOVATION CENTER
Issue Date: 11/11/2024
Manufacturer: COOPER LIGHTING SOLUTIONS
Product Line: METALUX
Catalog Number: 2MB-4HL-ACL-UNV-L830
Description: 4000 Lumen 2FT MICROBAY LINEAR BAY with AISLE OPTICS WITH CLEAR LENS, 80CRI, 3000K (C)
Light Source: -
Ballast/Driver: -

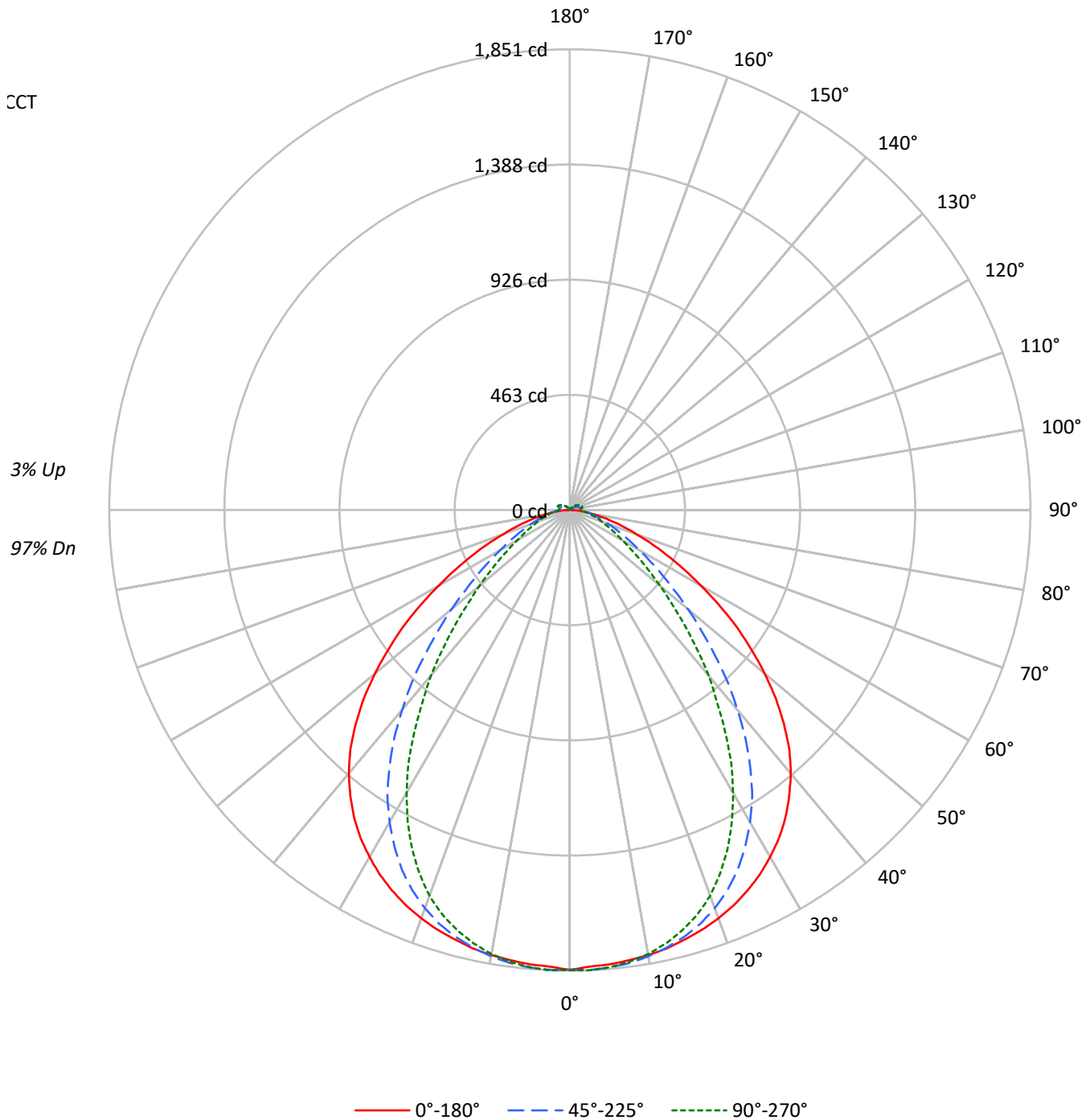
Summary

Lumens per Lamp: N/A
Luminaire Lumens: 3949.0 lumens
Efficiency: N/A
Efficacy: 143.1 lumens/watt
Spacing Criteria (0/90/45): 1.29 / 1.09 / 1.19
Luminous Opening: Rectangular w/ Sides (W: 0.27' x L: 1.98' x H: 0.08')
CIE Type: Direct

Input Watts (W): 27.6
Input Voltage (V): 120
Input Current (A_{in}): NR
Voltage Rise (V): NR
Power Factor: 6.5
Total Harmonic Distortion (THDi): 0.99
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	118	118	118	118	115	115	115	115	109	109	109	104	104	104	99	99	99	99	99	99	97
1	109	105	102	98	106	103	99	96	98	95	93	94	91	89	89	88	86	89	88	86	84
2	101	94	88	83	98	92	86	82	88	83	79	84	80	77	81	77	75	81	77	75	73
3	93	84	77	71	90	82	75	70	79	73	68	76	71	67	73	69	65	73	69	65	63
4	86	75	68	62	84	74	67	61	71	65	60	68	63	59	66	61	58	66	61	58	56
5	80	68	60	54	78	67	59	54	65	58	53	62	57	52	60	55	51	60	55	51	49
6	74	62	54	48	72	61	53	48	59	52	47	57	51	46	55	50	46	55	50	46	44
7	69	57	49	43	67	56	48	43	54	47	42	52	46	42	51	45	41	51	45	41	39
8	65	52	44	39	63	51	44	39	50	43	38	48	42	38	47	42	37	47	42	37	36
9	61	48	40	35	59	47	40	35	46	39	35	45	39	35	44	38	34	44	38	34	32
10	57	45	37	32	56	44	37	32	43	36	32	42	36	32	41	35	31	41	35	31	30

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	37832	37832	37832
5°	37522	37097	36887
10°	37481	36247	35688
15°	37437	35254	34183
20°	37466	33987	32255
25°	37399	32272	29570
30°	37159	29906	26262
35°	36670	26863	22314
40°	35663	23109	18349
45°	33813	19062	14314
50°	31011	15215	10957
55°	27509	11864	8433
60°	23253	9205	6497
65°	19216	7290	5255
70°	15332	5877	4396
75°	12143	4852	3773
80°	9186	4126	3242
85°	6853	3559	2849

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
 Vertical Angle: 45°
 Luminance: 33813 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	175.1	4.4
10°-20°	499.5	12.6
20°-30°	732.5	18.5
30°-40°	798.8	20.2
40°-50°	677.8	17.2
50°-60°	461.4	11.7
60°-70°	269.3	6.8
70°-80°	140.2	3.6
80°-90°	61.1	1.5
90°-100°	38.8	1.0
100°-110°	35.8	0.9
110°-120°	26.6	0.7
120°-130°	16.0	0.4
130°-140°	8.6	0.2
140°-150°	4.3	0.1
150°-160°	2.1	0.1
160°-170°	0.8	0.0
170°-180°	0.2	0.0
0°-30°	1407.1	35.6
0°-40°	2205.9	55.9
0°-60°	3345.1	84.7
0°-90°	3815.7	96.6
90°-120°	101.3	2.6
90°-150°	130.2	3.3
90°-180°	133.0	3.4
0°-180°	3949.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1848	1848	1848	1848	1848	
5°	1832	1841	1844	1846	1844	174
15°	1786	1790	1775	1759	1748	505
25°	1688	1664	1596	1533	1500	778
35°	1510	1433	1264	1137	1089	942
45°	1217	1066	824	694	649	935
55°	817	650	452	363	342	728
65°	432	341	232	192	181	433
75°	178	153	119	108	104	193
85°	43	52	59	57	56	46
90°	7	23	41	44	43	7
95°	13	26	42	46	46	10
105°	4	19	39	50	51	4
115°	3	12	30	42	46	3
125°	2	6	18	29	33	1
135°	2	5	11	17	20	1
145°	2	3	7	10	12	1
155°	2	2	5	7	7	1
165°	2	2	3	4	5	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°	1847.6	1847.6	1847.6	1847.6	1847.6
2.5°	1836.1	1844.5	1849.2	1852.3	1850.7
5°	1832.2	1840.7	1844.5	1846.1	1843.8
7.5°	1824.5	1833.7	1836.1	1834.5	1830.7
10°	1816.0	1823.7	1820.6	1816.8	1811.3
12.5°	1803.6	1809.0	1800.5	1792.0	1783.6
15°	1785.9	1790.5	1775.1	1758.8	1748.0
17.5°	1768.1	1766.6	1743.4	1717.2	1704.0
20°	1745.7	1737.2	1702.5	1664.6	1649.2
22.5°	1719.5	1704.8	1653.8	1602.9	1579.7
25°	1687.8	1663.9	1595.9	1533.4	1500.2
27.5°	1652.3	1618.3	1525.7	1447.7	1410.6
30°	1609.8	1563.5	1448.5	1352.7	1311.8
32.5°	1564.3	1504.8	1364.3	1244.6	1206.8
35°	1510.2	1433.0	1263.9	1137.3	1088.7
37.5°	1448.5	1350.4	1161.2	1022.3	971.3
40°	1381.3	1263.2	1047.0	908.0	867.1
42.5°	1305.6	1170.5	940.4	794.5	753.6
45°	1216.8	1065.5	823.8	694.1	649.3
47.5°	1123.4	962.0	716.5	589.9	552.8
50°	1022.3	853.2	620.8	505.0	472.5
52.5°	918.0	752.0	528.9	427.7	400.7
55°	816.9	650.1	451.7	362.9	342.0
57.5°	711.1	564.4	383.7	308.8	288.0
60°	609.2	477.9	322.7	261.0	244.8
62.5°	517.3	403.0	274.9	222.4	210.8
65°	432.4	341.3	231.6	191.5	181.4
67.5°	356.7	282.6	198.4	166.0	156.7
70°	285.7	230.9	166.0	142.8	136.7
72.5°	231.6	192.3	140.5	125.1	120.4
75°	177.6	152.9	118.9	108.1	103.5
77.5°	133.6	119.7	101.1	92.7	88.8
80°	96.5	92.7	84.9	80.3	76.4
82.5°	66.4	70.3	71.0	67.2	65.6
85°	43.2	51.7	58.7	57.1	55.6
87.5°	23.9	34.7	47.9	48.6	47.1
90°	6.9	23.2	40.9	44.0	43.2
92.5°	13.1	24.7	41.7	44.8	44.0
95°	13.1	25.5	42.5	46.3	45.6
97.5°	12.4	25.5	43.2	47.9	47.9
100°	6.2	24.7	43.2	49.4	49.4
102.5°	3.9	22.4	41.7	50.2	51.0
105°	3.9	19.3	39.4	50.2	51.0
107.5°	3.9	16.2	37.8	48.6	51.0
110°	3.1	13.9	35.5	46.3	49.4



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CANDELA DISTRIBUTION (continued):

	0°	22.5°	45°	67.5°	90°
112.5°	3.1	12.4	33.2	44.8	47.9
115°	3.1	11.6	30.1	42.5	45.6
117.5°	2.3	10.0	26.3	39.4	43.2
120°	2.3	8.5	23.2	36.3	40.1
122.5°	1.5	7.7	20.1	32.4	37.1
125°	1.5	6.2	17.8	28.6	33.2
127.5°	1.5	6.2	16.2	25.5	29.3
130°	1.5	5.4	13.9	22.4	25.5
132.5°	1.5	5.4	12.4	19.3	22.4
135°	1.5	4.6	10.8	17.0	20.1
137.5°	1.5	4.6	10.0	14.7	17.8
140°	1.5	3.9	8.5	13.1	15.4
142.5°	1.5	3.9	7.7	11.6	13.1
145°	1.5	3.1	6.9	10.0	11.6
147.5°	1.5	3.1	6.2	8.5	10.0
150°	1.5	3.1	6.2	7.7	8.5
152.5°	1.5	2.3	5.4	6.9	7.7
155°	1.5	2.3	4.6	6.9	6.9
157.5°	1.5	2.3	3.9	6.2	6.9
160°	1.5	2.3	3.9	5.4	6.2
162.5°	1.5	2.3	3.1	3.9	5.4
165°	1.5	1.5	3.1	3.9	4.6
167.5°	1.5	1.5	2.3	3.1	3.9
170°	1.5	1.5	2.3	2.3	2.3
172.5°	1.5	1.5	2.3	2.3	1.5
175°	1.5	1.5	2.3	2.3	1.5
177.5°	1.5	1.5	2.3	2.3	1.5
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	21.31	22.71	21.74	23.09	23.50	17.42	18.81	17.84	19.20	19.60
	3H	22.34	23.59	22.77	23.99	24.43	18.62	19.86	19.05	20.27	20.71
	4H	22.63	23.80	23.09	24.22	24.69	19.15	20.32	19.61	20.74	21.20
	6H	22.78	23.86	23.25	24.30	24.77	19.66	20.74	20.13	21.17	21.65
	8H	22.81	23.83	23.29	24.29	24.78	19.90	20.93	20.39	21.39	21.87
	12H	22.81	23.79	23.30	24.24	24.75	20.16	21.14	20.64	21.59	22.10
4H	2H	21.35	22.52	21.80	22.93	23.40	17.92	19.08	18.37	19.50	19.97
	3H	22.54	23.51	23.01	23.97	24.46	19.30	20.27	19.77	20.73	21.22
	4H	22.93	23.80	23.42	24.28	24.80	19.94	20.81	20.43	21.29	21.81
	6H	23.18	23.93	23.69	24.44	24.98	20.57	21.33	21.09	21.84	22.38
	8H	23.23	23.93	23.75	24.44	24.99	20.87	21.58	21.39	22.09	22.64
	12H	23.25	23.88	23.79	24.42	24.97	21.20	21.83	21.74	22.37	22.93
8H	4H	22.95	23.66	23.47	24.17	24.72	20.18	20.89	20.70	21.39	21.94
	6H	23.26	23.85	23.82	24.40	24.96	20.93	21.51	21.48	22.07	22.62
	8H	23.36	23.88	23.92	24.45	25.02	21.31	21.84	21.88	22.41	22.98
	12H	23.42	23.89	23.99	24.44	25.08	21.76	22.22	22.32	22.78	23.42
12H	4H	22.94	23.57	23.48	24.11	24.66	20.19	20.83	20.73	21.37	21.92
	6H	23.26	23.78	23.83	24.35	24.92	20.97	21.50	21.54	22.06	22.63
	8H	23.39	23.86	23.95	24.41	25.05	21.41	21.88	21.98	22.43	23.08