

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: P893250

Luminaire Tested: 4MB-2SL-AOL-UNV-L835

Issue Date: 11/11/2024

Test Information

Test Method: LM-79-2019
Report Number: P893250
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-2SL-AOL-UNV-L835
Description: 2000 Lumen 4FT MICROBAY LINEAR BAY with AISLE OPTICS WITH CLEAR LENS NO UPLIGHT, 8
3500K CCT
Light Source: -
Ballast/Driver: -

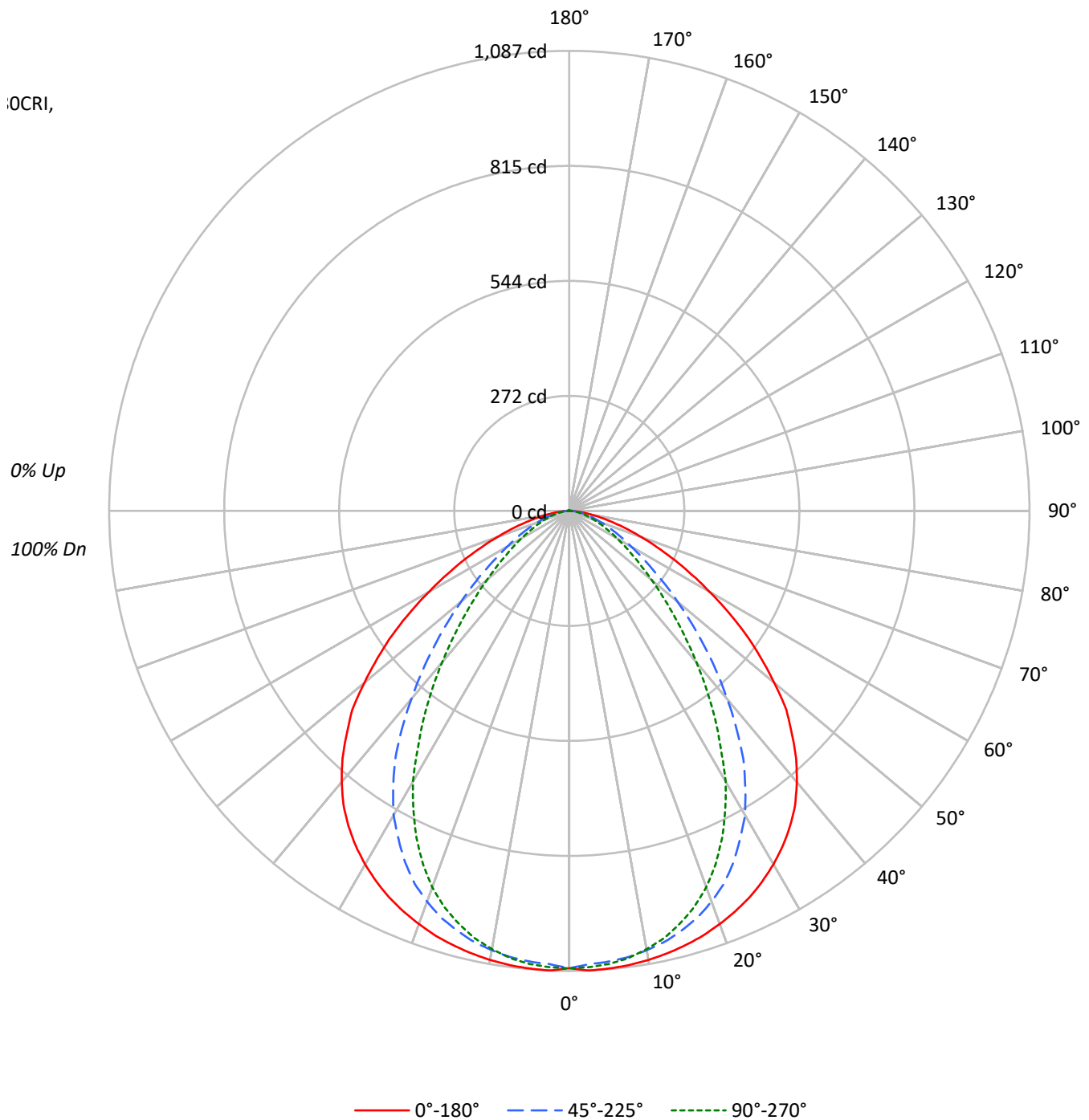
Summary

Lumens per Lamp: N/A
Luminaire Lumens: 2158.9 lumens
Efficiency: N/A
Efficacy: 156.4 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): 13.8
Input Voltage (V): 120
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: 0.996
Total Harmonic Distortion (THDi): 5.92
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	67	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°	11007	11007	11007
5°	11096	10929	10986
10°	11142	10901	10872
15°	11199	10823	10644
20°	11259	10648	10255
25°	11322	10302	9591
30°	11342	9761	8685
35°	11305	8915	7471
40°	11117	7716	6207
45°	10704	6484	5024
50°	10016	5281	4023
55°	9050	4244	3226
60°	7805	3454	2670
65°	6605	2877	2198
70°	5393	2448	1864
75°	4320	2062	1586
80°	3366	1765	1367
85°	2606	1554	1227

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
 Vertical Angle: 45°
 Luminance: 10704 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	102.3	4.7
10°-20°	291.2	13.5
20°-30°	424.5	19.7
30°-40°	457.6	21.2
40°-50°	383.6	17.8
50°-60°	259.7	12.0
60°-70°	148.1	6.9
70°-80°	67.7	3.1
80°-90°	17.7	0.8
90°-100°	2.2	0.1
100°-110°	1.5	0.1
110°-120°	0.8	0.0
120°-130°	0.5	0.0
130°-140°	0.4	0.0
140°-150°	0.4	0.0
150°-160°	0.3	0.0
160°-170°	0.2	0.0
170°-180°	0.1	0.0
0°-30°	818.1	37.9
0°-40°	1275.7	59.1
0°-60°	1919.0	88.9
0°-90°	2152.6	99.7
90°-120°	4.5	0.2
90°-150°	5.7	0.3
90°-180°	6.0	0.3
0°-180°	2158.9	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1081	1081	1081	1081	1081	
5°	1085	1082	1069	1078	1075	103
15°	1062	1053	1026	1020	1010	300
25°	1008	981	917	875	854	464
35°	909	841	717	629	601	568
45°	743	620	450	371	349	572
55°	510	373	239	194	182	454
65°	274	191	119	97	91	273
75°	110	81	52	43	40	120
85°	22	19	13	11	10	26
90°	3	3	2	2	1	3
95°	5	3	2	1	1	4
105°	3	2	1	1	0	3
115°	2	1	1	0	0	2
125°	1	1	1	0	0	1
135°	0	1	1	1	0	0
145°	1	1	1	1	1	0
155°	1	1	1	1	1	0
165°	1	1	1	1	1	0
175°	1	1	1	1	1	0
180°	1	1	1	1	1	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1080.8	1080.8	1080.8	1080.8	1080.8
2.5°	1087.0	1084.2	1071.8	1082.0	1078.9
5°	1085.4	1082.0	1069.0	1077.7	1074.6
7.5°	1082.3	1078.0	1063.4	1069.9	1065.9
10°	1077.4	1072.1	1054.1	1057.9	1051.3
12.5°	1070.6	1064.1	1042.7	1041.7	1034.0
15°	1062.2	1052.9	1026.5	1019.7	1009.5
17.5°	1052.0	1040.2	1007.3	993.7	981.3
20°	1038.9	1023.7	982.5	960.8	946.2
22.5°	1024.1	1003.6	953.7	919.0	903.1
25°	1007.6	981.0	916.8	874.6	853.5
27.5°	987.2	953.7	874.0	819.4	797.7
30°	964.5	922.1	830.0	760.2	738.5
32.5°	938.8	885.8	773.9	696.3	666.0
35°	909.3	840.8	717.1	629.4	600.9
37.5°	876.2	794.0	649.2	561.8	533.0
40°	836.2	738.5	580.4	493.9	466.9
42.5°	793.1	682.1	514.4	429.4	406.2
45°	743.2	620.1	450.2	371.1	348.8
47.5°	695.1	557.5	390.0	317.8	299.5
50°	632.2	490.8	333.3	269.1	253.9
52.5°	570.8	429.1	284.9	230.0	215.8
55°	509.7	373.0	239.0	193.8	181.7
57.5°	445.2	318.1	201.2	164.0	155.9
60°	383.2	270.7	169.6	137.7	131.1
62.5°	326.5	226.9	143.5	116.3	110.1
65°	274.1	190.7	119.4	96.7	91.2
67.5°	224.5	156.9	99.5	80.6	76.6
70°	181.1	127.1	82.2	66.3	62.6
72.5°	143.5	101.7	65.7	54.3	50.2
75°	109.8	80.6	52.4	42.8	40.3
77.5°	81.9	60.8	40.3	32.9	31.0
80°	57.4	44.0	30.1	24.8	23.3
82.5°	39.1	30.4	21.1	17.4	16.4
85°	22.3	18.9	13.3	11.2	10.5
87.5°	11.5	9.9	7.1	5.3	4.7
90°	3.1	3.1	1.9	1.6	1.2
92.5°	5.0	2.8	1.9	1.2	0.9
95°	4.7	2.8	1.6	0.9	0.9
97.5°	4.3	2.8	1.2	0.9	0.6
100°	4.0	2.5	1.2	0.6	0.6
102.5°	3.7	2.5	1.2	0.6	0.6
105°	3.1	2.2	0.9	0.6	0.3
107.5°	2.8	1.9	0.9	0.6	0.3
110°	2.2	1.6	0.9	0.6	0.3



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CANDELA DISTRIBUTION (continued):

	0°	22.5°	45°	67.5°	90°
112.5°	1.9	1.6	0.6	0.6	0.3
115°	1.6	1.2	0.6	0.3	0.3
117.5°	1.2	0.9	0.6	0.3	0.3
120°	0.9	0.9	0.6	0.3	0.3
122.5°	0.9	0.6	0.6	0.3	0.3
125°	0.6	0.6	0.6	0.3	0.3
127.5°	0.6	0.6	0.6	0.3	0.3
130°	0.6	0.6	0.6	0.3	0.3
132.5°	0.6	0.6	0.6	0.6	0.3
135°	0.3	0.6	0.6	0.6	0.3
137.5°	0.6	0.6	0.6	0.6	0.6
140°	0.6	0.6	0.6	0.6	0.6
142.5°	0.6	0.6	0.6	0.6	0.6
145°	0.6	0.6	0.6	0.6	0.6
147.5°	0.6	0.6	0.6	0.6	0.6
150°	0.6	0.6	0.6	0.6	0.6
152.5°	0.6	0.6	0.6	0.6	0.6
155°	0.6	0.6	0.6	0.9	0.9
157.5°	0.6	0.6	0.9	0.9	0.9
160°	0.6	0.6	0.9	0.9	0.9
162.5°	0.6	0.6	0.9	0.9	0.9
165°	0.6	0.9	0.9	0.9	0.9
167.5°	0.6	0.9	0.9	0.9	1.2
170°	0.6	0.9	0.9	1.2	1.2
172.5°	0.6	0.9	0.9	1.2	1.2
175°	0.9	0.9	0.9	1.2	1.2
177.5°	0.9	0.9	0.9	1.2	1.2
180°	0.9	0.9	0.9	0.9	0.9



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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	18.70	20.14	19.07	20.46	20.78	13.55	14.98	13.92	15.30	15.63
	3H	20.01	21.29	20.39	21.63	22.00	14.56	15.84	14.94	16.17	16.54
	4H	20.44	21.63	20.84	21.99	22.38	14.89	16.09	15.30	16.45	16.83
	6H	20.70	21.81	21.12	22.18	22.58	15.12	16.22	15.54	16.60	17.00
	8H	20.77	21.82	21.21	22.22	22.63	15.18	16.23	15.62	16.63	17.04
	12H	20.81	21.82	21.25	22.21	22.64	15.23	16.23	15.66	16.62	17.06
4H	2H	18.70	19.90	19.11	20.26	20.64	14.17	15.37	14.57	15.72	16.11
	3H	20.17	21.15	20.58	21.56	21.97	15.37	16.35	15.78	16.76	17.17
	4H	20.69	21.58	21.13	22.00	22.45	15.78	16.67	16.22	17.09	17.54
	6H	21.07	21.84	21.53	22.29	22.76	16.09	16.86	16.56	17.31	17.78
	8H	21.18	21.90	21.65	22.35	22.82	16.19	16.90	16.66	17.35	17.83
	12H	21.26	21.89	21.75	22.38	22.86	16.26	16.89	16.75	17.38	17.86
8H	4H	20.67	21.39	21.14	21.84	22.32	16.12	16.83	16.59	17.28	17.76
	6H	21.11	21.69	21.61	22.19	22.68	16.51	17.10	17.01	17.60	18.08
	8H	21.26	21.79	21.78	22.31	22.80	16.65	17.18	17.17	17.70	18.19
	12H	21.39	21.86	21.91	22.36	22.93	16.77	17.24	17.29	17.74	18.31
12H	4H	20.64	21.28	21.13	21.77	22.25	16.16	16.80	16.65	17.29	17.76
	6H	21.07	21.60	21.59	22.12	22.62	16.58	17.11	17.10	17.62	18.12
	8H	21.26	21.73	21.78	22.23	22.80	16.77	17.24	17.28	17.73	18.31