

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: P893255

Luminaire Tested: 4MB-2SL-AOL-UNV-L940

Issue Date: 11/11/2024

Test Information

Test Method: LM-79-2019
Report Number: P893255
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-L940
Description: 2000 Lumen 4FT MICROBAY LINEAR BAY with AISLE OPTICS WITH CLEAR LENS NO UPLIGHT, 9
4000K CCT
Light Source: -
Ballast/Driver: -

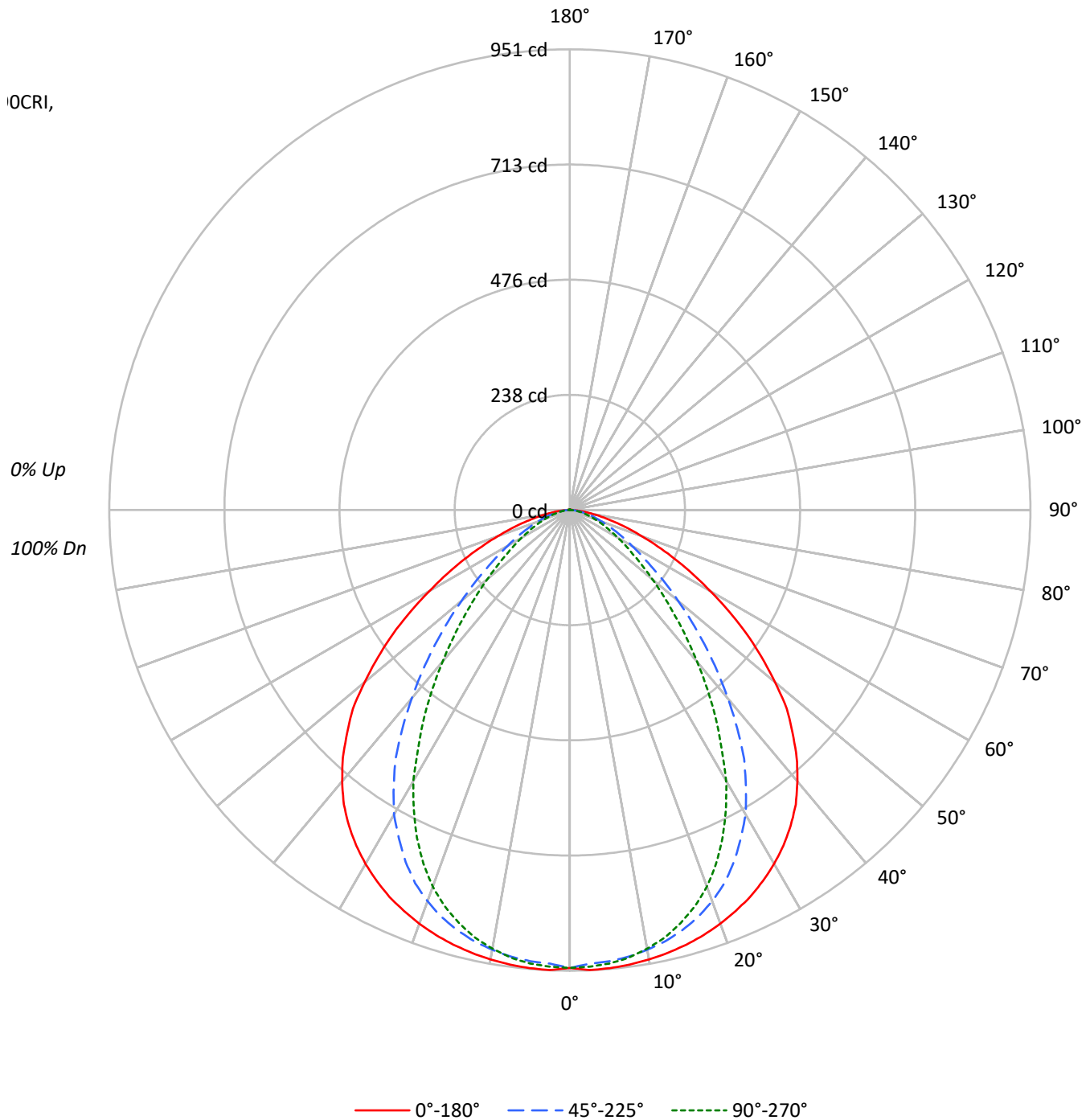
Summary

Lumens per Lamp: N/A
Luminaire Lumens: 1887.9 lumens
Efficiency: N/A
Efficacy: 136.8 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 (A_{in}): 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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CATALOG NUMBER: 4MB-2SL-AOL-UNV-L940

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°	9625	9625	9625
5°	9704	9557	9607
10°	9744	9533	9508
15°	9794	9465	9308
20°	9846	9312	8968
25°	9901	9009	8387
30°	9919	8535	7594
35°	9886	7796	6532
40°	9721	6747	5428
45°	9360	5670	4393
50°	8758	4618	3517
55°	7914	3711	2821
60°	6825	3021	2336
65°	5776	2516	1921
70°	4714	2138	1632
75°	3777	1802	1385
80°	2944	1542	1191
85°	2279	1367	1075

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
 Vertical Angle: 45°
 Luminance: 9360 cd/sqm



TEST NUMBER: P893255
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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	89.5	4.7
10°-20°	254.7	13.5
20°-30°	371.2	19.7
30°-40°	400.1	21.2
40°-50°	335.4	17.8
50°-60°	227.1	12.0
60°-70°	129.5	6.9
70°-80°	59.2	3.1
80°-90°	15.5	0.8
90°-100°	1.9	0.1
100°-110°	1.3	0.1
110°-120°	0.7	0.0
120°-130°	0.4	0.0
130°-140°	0.4	0.0
140°-150°	0.3	0.0
150°-160°	0.3	0.0
160°-170°	0.2	0.0
170°-180°	0.1	0.0
0°-30°	715.4	37.9
0°-40°	1115.6	59.1
0°-60°	1678.1	88.9
0°-90°	1882.3	99.7
90°-120°	3.9	0.2
90°-150°	5.0	0.3
90°-180°	6.0	0.3
0°-180°	1887.9	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	945	945	945	945	945	
5°	949	946	935	942	940	90
15°	929	921	898	892	883	262
25°	881	858	802	765	746	406
35°	795	735	627	550	525	496
45°	650	542	394	324	305	500
55°	446	326	209	170	159	397
65°	240	167	104	85	80	239
75°	96	70	46	37	35	105
85°	20	16	12	10	9	23
90°	3	3	2	1	1	3
95°	4	2	1	1	1	3
105°	3	2	1	0	0	3
115°	1	1	0	0	0	1
125°	0	0	0	0	0	1
135°	0	0	0	0	0	0
145°	0	0	0	0	0	0
155°	0	0	0	1	1	0
165°	0	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°	945.1	945.1	945.1	945.1	945.1
2.5°	950.6	948.1	937.3	946.2	943.5
5°	949.2	946.2	934.8	942.4	939.7
7.5°	946.5	942.7	930.0	935.6	932.1
10°	942.2	937.5	921.8	925.1	919.4
12.5°	936.2	930.5	911.8	911.0	904.2
15°	928.9	920.7	897.7	891.7	882.8
17.5°	919.9	909.6	880.9	868.9	858.1
20°	908.5	895.2	859.2	840.2	827.5
22.5°	895.5	877.6	834.0	803.6	789.8
25°	881.1	857.8	801.7	764.8	746.4
27.5°	863.3	834.0	764.3	716.6	697.6
30°	843.5	806.3	725.8	664.8	645.8
32.5°	821.0	774.6	676.7	608.9	582.4
35°	795.2	735.3	627.1	550.4	525.4
37.5°	766.2	694.3	567.7	491.3	466.1
40°	731.2	645.8	507.5	431.9	408.3
42.5°	693.5	596.5	449.8	375.5	355.2
45°	649.9	542.2	393.7	324.5	305.0
47.5°	607.9	487.5	341.1	277.9	261.9
50°	552.8	429.2	291.5	235.3	222.0
52.5°	499.1	375.2	249.2	201.2	188.7
55°	445.7	326.2	209.0	169.5	158.9
57.5°	389.3	278.2	176.0	143.4	136.4
60°	335.1	236.7	148.3	120.4	114.7
62.5°	285.5	198.5	125.5	101.7	96.2
65°	239.7	166.7	104.4	84.6	79.7
67.5°	196.3	137.2	87.0	70.5	67.0
70°	158.3	111.2	71.8	58.0	54.8
72.5°	125.5	88.9	57.5	47.4	43.9
75°	96.0	70.5	45.8	37.4	35.2
77.5°	71.6	53.1	35.2	28.7	27.1
80°	50.2	38.5	26.3	21.7	20.3
82.5°	34.2	26.6	18.4	15.2	14.4
85°	19.5	16.5	11.7	9.8	9.2
87.5°	10.0	8.7	6.2	4.6	4.1
90°	2.7	2.7	1.6	1.4	1.1
92.5°	4.3	2.4	1.6	1.1	0.8
95°	4.1	2.4	1.4	0.8	0.8
97.5°	3.8	2.4	1.1	0.8	0.5
100°	3.5	2.2	1.1	0.5	0.5
102.5°	3.3	2.2	1.1	0.5	0.5
105°	2.7	1.9	0.8	0.5	0.3
107.5°	2.4	1.6	0.8	0.5	0.3
110°	1.9	1.4	0.8	0.5	0.3



TEST NUMBER: P893255

CATALOG NUMBER: 4MB-2SL-AOL-UNV-L940

CANDELA DISTRIBUTION (continued):

	0°	22.5°	45°	67.5°	90°
112.5°	1.6	1.4	0.5	0.5	0.3
115°	1.4	1.1	0.5	0.3	0.3
117.5°	1.1	0.8	0.5	0.3	0.3
120°	0.8	0.8	0.5	0.3	0.3
122.5°	0.8	0.5	0.5	0.3	0.3
125°	0.5	0.5	0.5	0.3	0.3
127.5°	0.5	0.5	0.5	0.3	0.3
130°	0.5	0.5	0.5	0.3	0.3
132.5°	0.5	0.5	0.5	0.5	0.3
135°	0.3	0.5	0.5	0.5	0.3
137.5°	0.5	0.5	0.5	0.5	0.5
140°	0.5	0.5	0.5	0.5	0.5
142.5°	0.5	0.5	0.5	0.5	0.5
145°	0.5	0.5	0.5	0.5	0.5
147.5°	0.5	0.5	0.5	0.5	0.5
150°	0.5	0.5	0.5	0.5	0.5
152.5°	0.5	0.5	0.5	0.5	0.5
155°	0.5	0.5	0.5	0.8	0.8
157.5°	0.5	0.5	0.8	0.8	0.8
160°	0.5	0.5	0.8	0.8	0.8
162.5°	0.5	0.5	0.8	0.8	0.8
165°	0.5	0.8	0.8	0.8	0.8
167.5°	0.5	0.8	0.8	0.8	1.1
170°	0.5	0.8	0.8	1.1	1.1
172.5°	0.5	0.8	0.8	1.1	1.1
175°	0.8	0.8	0.8	1.1	1.1
177.5°	0.8	0.8	0.8	1.1	1.1
180°	0.8	0.8	0.8	0.8	0.8



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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	18.24	19.68	18.61	20.00	20.32	13.08	14.52	13.45	14.84	15.16
	3H	19.55	20.83	19.93	21.16	21.53	14.09	15.37	14.48	15.71	16.08
	4H	19.97	21.17	20.38	21.52	21.91	14.43	15.63	14.83	15.98	16.37
	6H	20.24	21.34	20.65	21.72	22.12	14.65	15.76	15.07	16.13	16.53
	8H	20.31	21.36	20.74	21.75	22.16	14.72	15.77	15.15	16.16	16.57
	12H	20.35	21.35	20.78	21.74	22.18	14.76	15.77	15.20	16.15	16.59
4H	2H	18.23	19.43	18.64	19.79	20.18	13.70	14.90	14.11	15.26	15.65
	3H	19.70	20.69	20.12	21.10	21.51	14.90	15.89	15.32	16.30	16.70
	4H	20.23	21.11	20.66	21.53	21.98	15.31	16.20	15.75	16.62	17.07
	6H	20.60	21.37	21.07	21.82	22.29	15.62	16.39	16.09	16.84	17.31
	8H	20.71	21.43	21.19	21.88	22.36	15.72	16.44	16.19	16.89	17.36
	12H	20.79	21.43	21.28	21.91	22.39	15.79	16.43	16.28	16.91	17.39
8H	4H	20.21	20.92	20.68	21.37	21.85	15.65	16.37	16.12	16.82	17.29
	6H	20.64	21.23	21.14	21.73	22.21	16.04	16.63	16.55	17.13	17.62
	8H	20.80	21.32	21.32	21.84	22.34	16.18	16.71	16.70	17.23	17.73
	12H	20.93	21.39	21.44	21.89	22.47	16.31	16.77	16.82	17.27	17.85
12H	4H	20.18	20.82	20.67	21.30	21.78	15.70	16.33	16.18	16.82	17.30
	6H	20.61	21.14	21.13	21.65	22.15	16.11	16.64	16.63	17.16	17.65
	8H	20.80	21.27	21.31	21.76	22.34	16.30	16.77	16.82	17.27	17.84