

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: P893245

Luminaire Tested: 4MB-2SL-ACL-UNV-L930

Issue Date: 11/11/2024

Test Information

Test Method: LM-79-2019
Report Number: P893245
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-2404-077-15)
Test Lab: INNOVATION CENTER
Issue Date: 11/11/2024
Manufacturer: COOPER LIGHTING SOLUTIONS
Product Line: METALUX
Catalog Number: 4MB-2SL-ACL-UNV-L930
Description: 2000 Lumen 4FT MICROBAY LINEAR BAY with AISLE OPTICS WITH CLEAR LENS, 90CRI, 3000K (C)
Light Source: -
Ballast/Driver: -

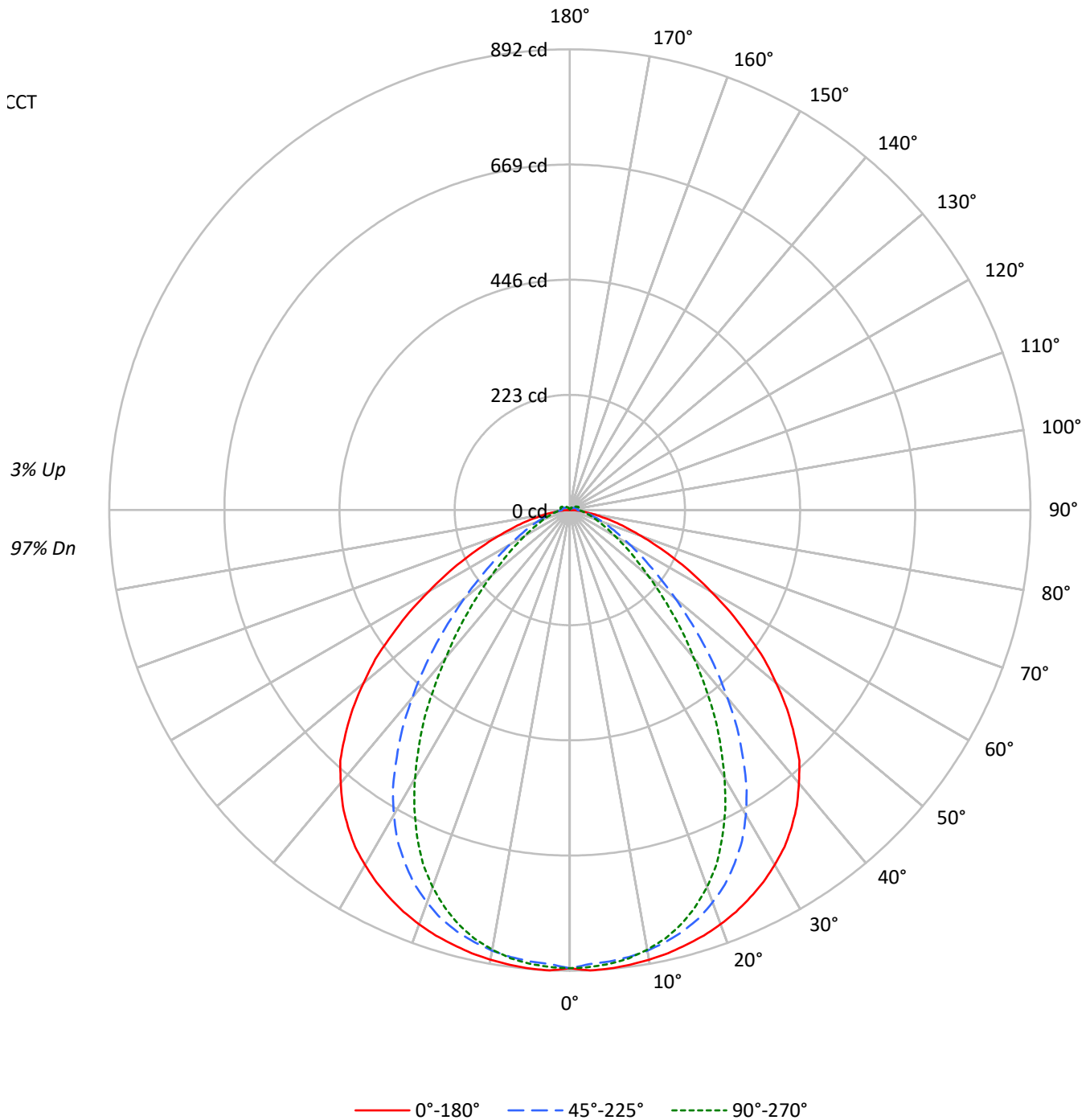
Summary

Lumens per Lamp: N/A
Luminaire Lumens: 1820.0 lumens
Efficiency: N/A
Efficacy: 131.9 lumens/watt
Spacing Criteria (0/90/45): 1.32 / 1.06 / 1.16
Luminous Opening: Rectangular w/ Sides (W: 0.27' x L: 3.98' x H: 0.08')
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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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	110	110	110	104	104	104	100	100	100	100	100	100	97
1	110	106	102	99	107	103	100	97	99	96	93	94	92	90	90	89	87	87	87	87	85
2	101	94	88	84	99	92	87	82	88	84	80	85	81	78	82	79	76	76	76	76	74
3	94	85	77	72	91	83	76	71	80	74	69	77	72	68	74	70	66	66	66	66	64
4	87	76	68	62	84	75	67	62	72	66	61	69	64	60	67	62	59	59	59	59	57
5	80	69	61	55	78	68	60	55	65	59	54	63	58	53	61	56	52	52	52	52	50
6	75	63	55	49	73	62	54	49	60	53	48	58	52	47	56	51	47	47	47	47	45
7	70	57	50	44	68	57	49	44	55	48	43	53	47	43	52	46	42	42	42	42	40
8	65	53	45	40	64	52	45	40	51	44	39	49	43	39	48	42	38	38	38	38	37
9	61	49	41	36	60	48	41	36	47	40	36	46	40	35	45	39	35	35	35	35	33
10	58	45	38	33	56	45	38	33	44	37	33	43	37	32	42	36	32	32	32	32	31

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	9035	9035	9035
5°	9093	8790	8776
10°	9109	8599	8469
15°	9136	8376	8082
20°	9181	8068	7555
25°	9208	7641	6853
30°	9218	7053	5971
35°	9178	6233	4994
40°	9015	5266	3931
45°	8668	4250	3048
50°	8069	3298	2286
55°	7224	2524	1749
60°	6205	1940	1332
65°	5175	1532	1059
70°	4139	1229	865
75°	3296	991	736
80°	2417	817	644
85°	1659	694	594

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
 Vertical Angle: 45°
 Luminance: 8668 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	84.0	4.6
10°-20°	239.4	13.2
20°-30°	349.0	19.2
30°-40°	375.0	20.6
40°-50°	312.1	17.1
50°-60°	208.7	11.5
60°-70°	119.5	6.6
70°-80°	59.4	3.3
80°-90°	24.3	1.3
90°-100°	14.1	0.8
100°-110°	12.4	0.7
110°-120°	9.1	0.5
120°-130°	5.9	0.3
130°-140°	3.5	0.2
140°-150°	2.0	0.1
150°-160°	1.0	0.1
160°-170°	0.4	0.0
170°-180°	0.1	0.0
0°-30°	672.5	36.9
0°-40°	1047.4	57.6
0°-60°	1568.2	86.2
0°-90°	1771.5	97.3
90°-120°	35.7	2.0
90°-150°	47.1	2.6
90°-180°	49.0	2.7
0°-180°	1820.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	887	887	887	887	887	
5°	891	888	878	885	882	85
15°	871	866	845	838	831	246
25°	827	808	755	717	699	382
35°	749	695	584	512	490	468
45°	614	511	365	295	278	472
55°	419	302	190	150	143	375
65°	224	152	96	78	74	224
75°	90	66	47	42	41	97
85°	18	20	22	23	23	21
90°	3	8	15	18	18	2
95°	4	8	15	18	18	3
105°	3	7	13	17	18	3
115°	1	4	10	14	16	1
125°	1	3	7	10	11	1
135°	0	2	5	7	8	0
145°	0	2	3	5	5	0
155°	0	1	2	3	4	0
165°	1	1	2	2	2	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°	887.2	887.2	887.2	887.2	887.2
2.5°	892.4	890.1	880.0	888.0	885.7
5°	891.1	888.2	877.6	884.9	882.0
7.5°	888.2	885.1	873.0	878.7	875.6
10°	884.1	880.2	866.2	869.1	864.2
12.5°	878.9	874.0	856.7	855.9	850.5
15°	871.4	865.5	844.8	838.5	831.0
17.5°	863.7	854.9	829.5	816.8	806.5
20°	853.6	841.9	808.5	789.6	776.7
22.5°	841.9	826.1	785.0	756.0	742.5
25°	827.4	807.7	755.0	716.9	699.0
27.5°	811.9	785.7	722.3	672.4	651.9
30°	793.3	760.9	681.7	621.7	599.7
32.5°	773.6	729.3	637.2	568.3	544.3
35°	749.0	694.6	584.4	512.4	489.9
37.5°	722.3	653.2	532.1	455.2	429.9
40°	690.0	609.5	474.7	398.6	373.5
42.5°	657.9	561.9	419.5	347.3	325.6
45°	614.4	510.6	364.9	295.3	278.0
47.5°	570.7	455.8	312.6	253.1	236.0
50°	522.0	401.9	266.8	212.5	198.2
52.5°	474.7	351.7	225.2	179.6	167.5
55°	419.0	302.3	190.2	150.4	142.6
57.5°	368.8	256.5	160.5	127.3	120.1
60°	315.7	217.4	134.3	107.7	100.9
62.5°	269.2	182.7	113.1	91.4	86.7
65°	224.4	152.2	95.8	77.6	73.5
67.5°	183.2	127.1	80.7	66.3	62.9
70°	147.0	103.0	68.1	56.4	54.1
72.5°	115.7	82.8	56.7	48.7	46.6
75°	90.3	65.7	47.4	41.9	40.6
77.5°	65.2	51.2	39.6	36.0	35.2
80°	46.1	38.8	32.6	31.1	30.5
82.5°	30.5	28.2	26.9	26.9	26.7
85°	17.6	19.7	22.0	23.0	23.3
87.5°	9.1	13.2	17.6	19.7	19.9
90°	2.6	8.3	15.0	17.9	18.4
92.5°	3.9	8.3	14.8	17.9	18.4
95°	3.9	8.3	14.8	17.9	18.4
97.5°	3.6	8.0	14.8	17.9	18.4
100°	3.4	7.5	14.5	17.9	18.4
102.5°	2.8	7.2	14.0	17.6	18.4
105°	2.6	6.7	13.2	17.3	18.1
107.5°	2.3	5.7	12.4	16.6	17.6
110°	1.8	4.9	11.9	15.8	17.1



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CANDELA DISTRIBUTION (continued):

	0°	22.5°	45°	67.5°	90°
112.5°	1.6	4.4	11.1	15.0	16.3
115°	1.3	3.9	10.4	14.2	15.5
117.5°	1.0	3.6	9.3	13.2	14.5
120°	0.8	3.4	8.5	12.4	13.5
122.5°	0.8	3.1	7.5	11.4	12.4
125°	0.8	2.6	7.0	10.4	11.4
127.5°	0.5	2.3	6.2	9.3	10.4
130°	0.5	2.3	5.7	8.5	9.3
132.5°	0.5	2.1	5.2	7.8	8.5
135°	0.5	2.1	4.7	7.0	7.8
137.5°	0.5	1.8	4.1	6.5	7.2
140°	0.5	1.8	3.9	5.7	6.5
142.5°	0.5	1.6	3.4	5.4	6.0
145°	0.5	1.6	3.1	4.7	5.4
147.5°	0.5	1.6	2.8	4.4	4.9
150°	0.5	1.3	2.6	3.6	4.4
152.5°	0.5	1.3	2.3	3.4	4.1
155°	0.5	1.3	2.1	2.8	3.6
157.5°	0.5	1.3	2.1	2.6	3.1
160°	0.8	1.0	1.8	2.3	2.8
162.5°	0.8	1.0	1.6	2.1	2.6
165°	0.8	1.0	1.6	1.8	2.3
167.5°	0.8	1.0	1.3	1.6	1.8
170°	0.8	0.8	1.3	1.3	1.3
172.5°	0.8	0.8	1.0	1.3	1.0
175°	0.8	0.8	1.0	1.0	1.0
177.5°	0.8	0.8	1.0	1.0	1.0
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	16.38	17.77	16.79	18.15	18.53	11.68	13.07	12.09	13.44	13.82
	3H	17.48	18.72	17.90	19.10	19.53	12.82	14.06	13.24	14.45	14.88
	4H	17.78	18.95	18.23	19.35	19.80	13.32	14.48	13.76	14.89	15.33
	6H	17.93	19.00	18.39	19.42	19.88	13.82	14.89	14.28	15.31	15.77
	8H	17.95	18.97	18.42	19.41	19.88	14.08	15.10	14.55	15.54	16.01
	12H	17.94	18.92	18.42	19.35	19.85	14.37	15.35	14.85	15.78	16.28
4H	2H	16.36	17.53	16.81	17.93	18.38	12.17	13.34	12.62	13.74	14.19
	3H	17.60	18.56	18.06	19.02	19.48	13.49	14.45	13.95	14.90	15.37
	4H	17.99	18.85	18.46	19.32	19.82	14.08	14.95	14.56	15.41	15.92
	6H	18.22	18.97	18.72	19.46	19.99	14.70	15.45	15.21	15.95	16.47
	8H	18.26	18.96	18.77	19.45	19.99	15.02	15.73	15.53	16.22	16.75
	12H	18.27	18.90	18.80	19.42	19.96	15.40	16.02	15.93	16.55	17.09
8H	4H	17.97	18.67	18.48	19.17	19.70	14.32	15.02	14.83	15.52	16.05
	6H	18.25	18.83	18.79	19.37	19.91	15.05	15.63	15.59	16.17	16.71
	8H	18.32	18.84	18.88	19.40	19.95	15.45	15.97	16.01	16.53	17.08
	12H	18.37	18.83	18.92	19.37	20.00	15.94	16.40	16.50	16.94	17.57
12H	4H	17.95	18.58	18.48	19.10	19.64	14.34	14.96	14.86	15.49	16.02
	6H	18.23	18.75	18.79	19.31	19.86	15.08	15.60	15.64	16.16	16.71
	8H	18.33	18.80	18.89	19.34	19.96	15.54	16.01	16.10	16.55	17.17