

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: P893235

Luminaire Tested: 4MB-2SL-A-UNV-L840

Issue Date: 11/11/2024

Test Information

Test Method: LM-79-2019
Report Number: P893235
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-2404-077-16)
Test Lab: INNOVATION CENTER
Issue Date: 11/11/2024
Manufacturer: COOPER LIGHTING SOLUTIONS
Product Line: METALUX
Catalog Number: 4MB-2SL-A-UNV-L840
Description: 2000 Lumen 4FT MICROBAY LINEAR BAY with AISLE OPTIC, 80CRI, 4000K CCT
Light Source: -
Ballast/Driver: -

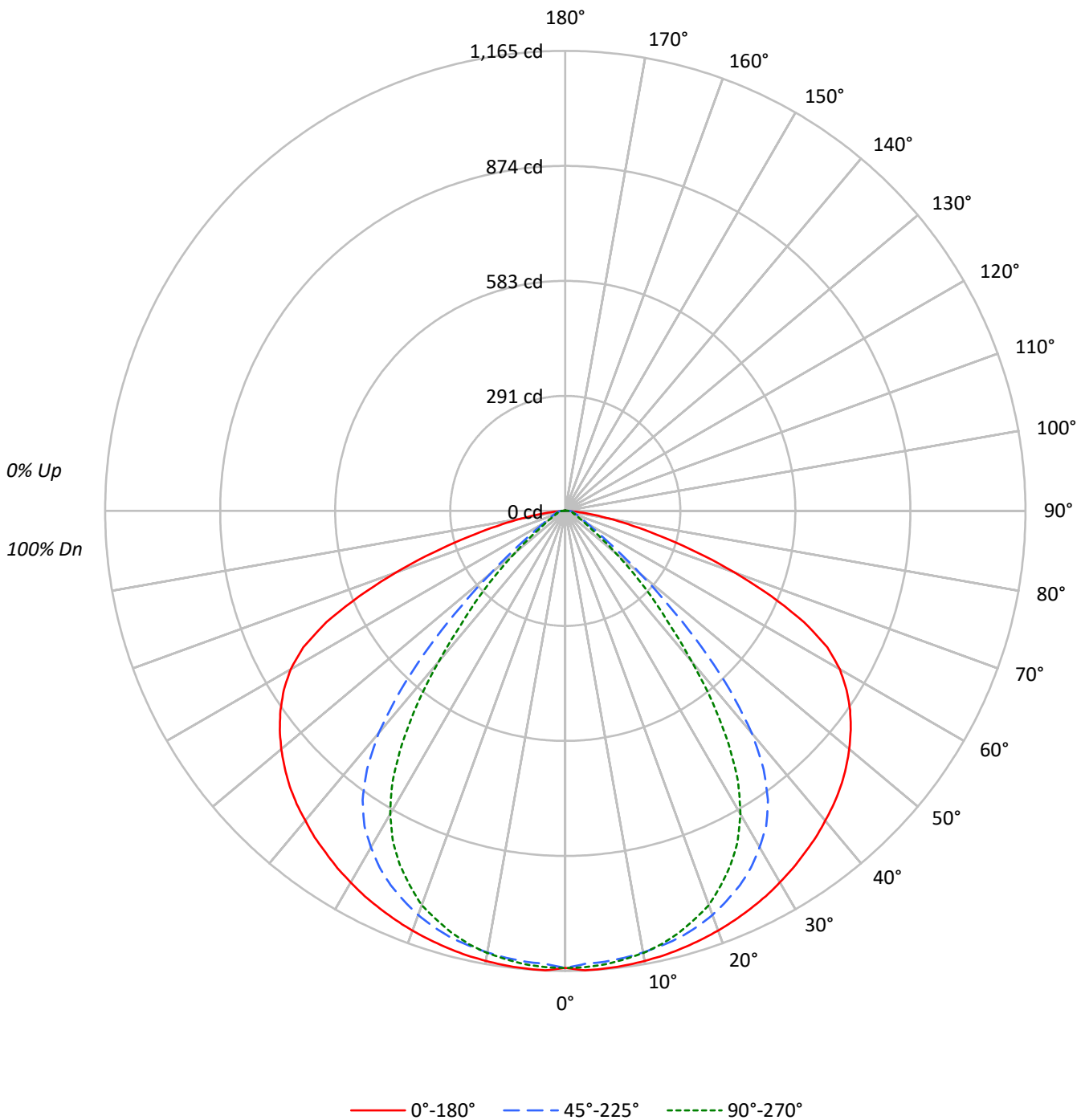
Summary

Lumens per Lamp: N/A
Luminaire Lumens: 2372.9 lumens
Efficiency: N/A
Efficacy: 172.0 lumens/watt
Spacing Criteria (0/90/45): 1.4 / 1.15 / 1.23
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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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
RCR																				
0	119	119	119	119	116	116	116	116	111	111	111	106	106	106	102	102	102	100		
1	111	107	103	100	108	105	102	99	100	98	96	97	95	93	93	91	90	88		
2	103	96	90	85	100	94	89	84	91	86	82	87	84	81	84	81	79	77		
3	95	86	79	74	93	85	78	73	82	76	72	79	74	71	77	73	69	67		
4	88	78	70	65	86	77	70	64	74	68	63	72	67	62	70	65	62	60		
5	82	71	63	57	80	70	62	57	68	61	56	66	60	56	64	59	55	53		
6	76	64	56	51	74	63	56	51	62	55	50	60	54	50	59	53	49	47		
7	71	59	51	46	69	58	51	45	57	50	45	55	49	45	54	49	45	43		
8	66	54	47	41	65	54	46	41	52	46	41	51	45	41	50	44	40	39		
9	62	50	43	38	61	50	42	37	48	42	37	47	41	37	46	41	37	35		
10	59	46	39	34	57	46	39	34	45	39	34	44	38	34	43	38	34	32		

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	11789	11789	11789
5°	11894	11717	11785
10°	11968	11743	11759
15°	12087	11793	11672
20°	12258	11802	11515
25°	12485	11752	11126
30°	12777	11568	10426
35°	13141	11122	8964
40°	13610	9769	6626
45°	14208	7049	4456
50°	14869	3939	2659
55°	15629	2037	1456
60°	16350	1324	1031
65°	16071	1089	819
70°	13554	1000	762
75°	9971	1019	818
80°	6651	1202	1032
85°	3634	1951	1577

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
 Vertical Angle: 62.5°
 Luminance: 16489 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	109.9	4.6
10°-20°	317.6	13.4
20°-30°	483.2	20.4
30°-40°	551.8	23.3
40°-50°	445.2	18.8
50°-60°	243.7	10.3
60°-70°	128.5	5.4
70°-80°	63.0	2.7
80°-90°	22.2	0.9
90°-100°	4.8	0.2
100°-110°	0.6	0.0
110°-120°	0.4	0.0
120°-130°	0.3	0.0
130°-140°	0.4	0.0
140°-150°	0.4	0.0
150°-160°	0.4	0.0
160°-170°	0.3	0.0
170°-180°	0.1	0.0
0°-30°	910.7	38.4
0°-40°	1462.6	61.6
0°-60°	2151.4	90.7
0°-90°	2365.1	99.7
90°-120°	5.8	0.2
90°-150°	6.9	0.3
90°-180°	8.0	0.3
0°-180°	2372.9	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1158	1158	1158	1158	1158	
5°	1163	1160	1146	1156	1153	111
15°	1146	1139	1118	1117	1107	324
25°	1111	1095	1046	1010	990	513
35°	1057	1012	895	773	721	663
45°	986	848	489	334	309	761
55°	880	362	115	89	82	785
65°	667	84	45	36	34	645
75°	253	47	26	22	21	280
85°	31	25	17	15	14	43
90°	1	13	10	9	8	2
95°	1	2	4	5	5	1
105°	0	0	0	1	1	0
115°	0	0	0	1	0	0
125°	0	0	0	1	0	0
135°	0	0	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	2	1	0
180°	1	1	1	1	1	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1157.6	1157.6	1157.6	1157.6	1157.6
2.5°	1164.6	1161.4	1148.3	1159.5	1156.3
5°	1163.4	1159.8	1146.1	1156.3	1152.8
7.5°	1161.1	1156.6	1141.6	1150.9	1145.4
10°	1157.3	1152.8	1135.5	1142.9	1137.1
12.5°	1152.8	1146.7	1127.5	1131.3	1124.0
15°	1146.4	1139.3	1118.5	1116.6	1107.0
17.5°	1139.3	1130.7	1105.4	1097.1	1085.5
20°	1131.0	1120.4	1089.0	1072.7	1062.5
22.5°	1121.7	1107.9	1068.5	1043.6	1027.5
25°	1111.1	1095.1	1045.8	1010.3	990.1
27.5°	1099.9	1078.2	1018.3	971.5	944.3
30°	1086.5	1060.2	983.7	920.6	886.6
32.5°	1073.0	1037.8	946.5	854.9	814.5
35°	1057.0	1012.5	894.6	772.9	721.0
37.5°	1042.0	982.1	824.5	670.1	614.4
40°	1023.7	946.2	734.8	551.9	498.4
42.5°	1006.4	904.6	618.5	437.9	391.4
45°	986.5	847.5	489.4	334.4	309.4
47.5°	963.5	769.7	355.9	248.9	233.2
50°	938.5	662.7	248.6	180.7	167.8
52.5°	911.0	518.3	167.5	125.6	118.5
55°	880.2	362.3	114.7	88.7	82.0
57.5°	844.7	235.7	83.3	66.9	62.5
60°	802.7	150.5	65.0	53.2	50.6
62.5°	747.6	105.7	53.5	43.9	41.6
65°	666.9	83.6	45.2	36.5	34.0
67.5°	564.7	70.8	38.8	30.7	29.1
70°	455.2	61.5	33.6	26.6	25.6
72.5°	349.8	53.8	29.1	23.7	23.1
75°	253.4	47.1	25.9	21.8	20.8
77.5°	175.5	40.7	23.1	19.5	18.9
80°	113.4	35.2	20.5	17.9	17.6
82.5°	65.0	29.5	18.6	17.3	17.0
85°	31.1	24.7	16.7	15.1	13.5
87.5°	9.9	18.3	13.1	11.5	10.2
90°	1.3	12.8	10.2	9.0	8.3
92.5°	1.3	7.0	7.4	7.4	7.0
95°	1.0	1.6	3.5	5.4	5.1
97.5°	1.0	0.6	2.2	3.8	3.8
100°	0.6	0.3	1.0	2.6	2.6
102.5°	0.6	0.3	0.3	1.6	1.6
105°	0.3	0.0	0.3	0.6	0.6
107.5°	0.3	0.3	0.3	0.6	0.3
110°	0.3	0.3	0.3	0.6	0.3



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CANDELA DISTRIBUTION (continued):

	0°	22.5°	45°	67.5°	90°
112.5°	0.3	0.3	0.3	0.6	0.3
115°	0.3	0.3	0.3	0.6	0.3
117.5°	0.3	0.3	0.3	0.6	0.3
120°	0.3	0.3	0.3	0.6	0.3
122.5°	0.3	0.3	0.3	0.6	0.3
125°	0.3	0.3	0.3	0.6	0.3
127.5°	0.3	0.3	0.3	0.6	0.3
130°	0.3	0.3	0.6	0.6	0.3
132.5°	0.3	0.3	0.6	0.6	0.3
135°	0.3	0.3	0.6	0.6	0.3
137.5°	0.3	0.3	0.6	0.6	0.6
140°	0.6	0.3	0.6	0.6	0.6
142.5°	0.6	0.6	0.6	1.0	0.6
145°	0.6	0.6	0.6	1.0	0.6
147.5°	0.6	0.6	1.0	1.0	0.6
150°	0.6	0.6	1.0	1.0	0.6
152.5°	0.6	0.6	1.0	1.0	1.0
155°	0.6	0.6	1.0	1.3	1.0
157.5°	0.6	0.6	1.0	1.3	1.0
160°	0.6	1.0	1.3	1.3	1.0
162.5°	0.6	1.0	1.3	1.3	1.3
165°	0.6	1.0	1.3	1.3	1.3
167.5°	1.0	1.0	1.3	1.6	1.3
170°	1.0	1.0	1.3	1.6	1.3
172.5°	1.0	1.0	1.3	1.6	1.3
175°	1.0	1.0	1.3	1.6	1.3
177.5°	1.0	1.0	1.3	1.6	1.6
180°	1.3	1.3	1.3	1.3	1.3



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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	18.48	19.88	18.85	20.20	20.52	6.99	8.39	7.36	8.71	9.03
	3H	21.39	22.63	21.77	22.97	23.34	7.92	9.17	8.31	9.51	9.88
	4H	22.28	23.44	22.69	23.80	24.19	8.44	9.61	8.85	9.96	10.35
	6H	22.78	23.85	23.20	24.22	24.63	9.08	10.15	9.50	10.52	10.92
	8H	22.89	23.91	23.33	24.30	24.72	9.50	10.51	9.93	10.91	11.32
	12H	22.93	23.91	23.37	24.30	24.73	9.95	10.92	10.38	11.31	11.75
4H	2H	18.29	19.45	18.70	19.81	20.20	7.51	8.67	7.92	9.03	9.42
	3H	21.22	22.18	21.64	22.59	23.00	8.70	9.66	9.12	10.06	10.48
	4H	22.12	22.98	22.56	23.40	23.85	9.37	10.22	9.81	10.65	11.10
	6H	22.72	23.46	23.18	23.91	24.38	10.19	10.93	10.66	11.38	11.85
	8H	22.88	23.57	23.35	24.02	24.50	10.72	11.42	11.20	11.87	12.35
	12H	22.97	23.59	23.46	24.07	24.55	11.31	11.92	11.80	12.41	12.89
8H	4H	22.02	22.71	22.49	23.16	23.64	9.96	10.65	10.43	11.11	11.58
	6H	22.61	23.18	23.12	23.69	24.17	10.96	11.53	11.47	12.03	12.52
	8H	22.80	23.32	23.33	23.83	24.33	11.64	12.15	12.16	12.67	13.17
	12H	22.95	23.40	23.47	23.90	24.48	12.41	12.86	12.93	13.36	13.94
12H	4H	21.98	22.59	22.47	23.08	23.56	10.22	10.84	10.71	11.32	11.80
	6H	22.56	23.08	23.09	23.60	24.09	11.27	11.79	11.80	12.31	12.80
	8H	22.78	23.24	23.30	23.73	24.31	12.04	12.49	12.56	12.99	13.57