

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: P893234

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

Issue Date: 11/11/2024

Test Information

Test Method: LM-79-2019
Report Number: P893234
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-L835
Description: 2000 Lumen 4FT MICROBAY LINEAR BAY with AISLE OPTIC, 80CRI, 3500K CCT
Light Source: -
Ballast/Driver: -

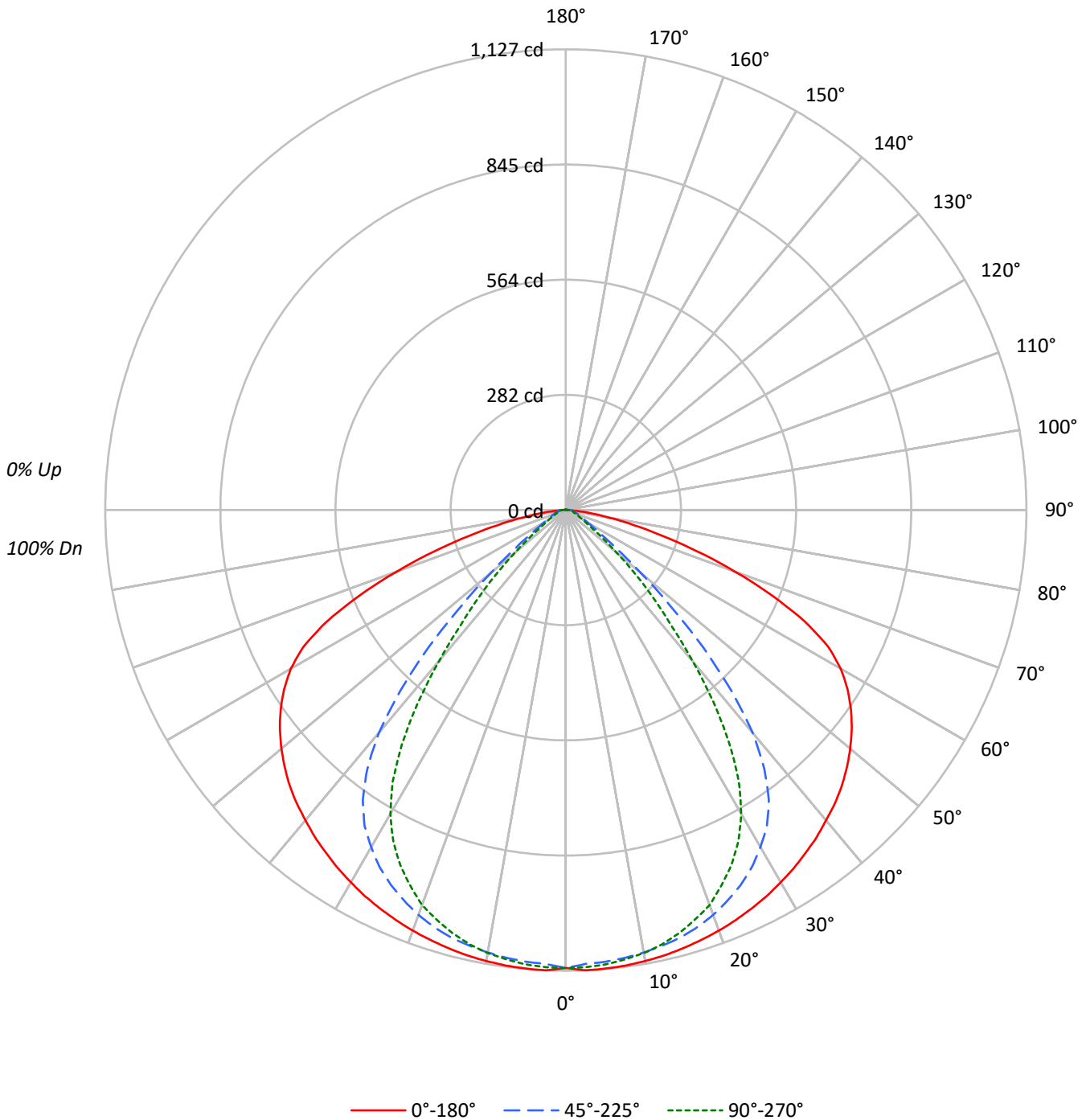
Summary

Lumens per Lamp: N/A
Luminaire Lumens: 2296.9 lumens
Efficiency: N/A
Efficacy: 166.4 lumens/watt
Spacing Criteria (0/90/45): 1.41 / 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	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	105	102	99	100	98	96	97	95	93	93	91	90	90	90	90	88
2	103	96	90	85	100	94	89	84	91	86	82	87	84	81	84	81	79	79	79	79	77
3	95	86	79	74	93	85	78	73	82	76	72	79	74	71	77	73	69	69	69	69	67
4	88	78	70	65	86	77	70	64	74	68	63	72	67	62	70	65	62	62	62	62	60
5	82	71	63	57	80	70	62	57	68	61	56	66	60	56	64	59	55	55	55	55	53
6	76	64	56	51	74	63	56	51	62	55	50	60	54	50	59	53	49	49	49	49	47
7	71	59	51	46	69	58	51	45	57	50	45	55	49	45	54	49	45	45	45	45	43
8	66	54	47	41	65	54	46	41	52	46	41	51	45	41	50	44	40	40	40	40	39
9	62	50	43	38	61	50	42	37	48	42	37	47	41	37	46	41	37	37	37	37	35
10	59	46	39	34	57	46	39	34	45	39	34	44	38	34	43	38	34	34	34	34	32

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	11411	11411	11411
5°	11512	11342	11408
10°	11584	11366	11383
15°	11700	11415	11297
20°	11865	11425	11146
25°	12087	11375	10770
30°	12368	11198	10092
35°	12721	10767	8677
40°	13174	9456	6413
45°	13755	6824	4314
50°	14393	3812	2575
55°	15128	1971	1410
60°	15826	1281	998
65°	15555	1053	793
70°	13120	971	738
75°	9648	988	795
80°	6440	1161	1003
85°	3517	1881	1519

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
 Vertical Angle: 62.5°
 Luminance: 15962 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	106.4	4.6
10°-20°	307.5	13.4
20°-30°	467.7	20.4
30°-40°	534.2	23.3
40°-50°	430.9	18.8
50°-60°	235.9	10.3
60°-70°	124.4	5.4
70°-80°	61.0	2.7
80°-90°	21.5	0.9
90°-100°	4.6	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°	881.6	38.4
0°-40°	1415.7	61.6
0°-60°	2082.5	90.7
0°-90°	2289.4	99.7
90°-120°	5.6	0.2
90°-150°	6.8	0.3
90°-180°	8.0	0.3
0°-180°	2296.9	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1120	1120	1120	1120	1120	
5°	1126	1123	1109	1119	1116	107
15°	1110	1103	1083	1081	1072	314
25°	1076	1060	1012	978	958	497
35°	1023	980	866	748	698	642
45°	955	820	474	324	300	737
55°	852	351	111	86	79	760
65°	646	81	44	35	33	624
75°	245	46	25	21	20	271
85°	30	24	16	15	13	41
90°	1	12	10	9	8	2
95°	1	2	3	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°	1120.5	1120.5	1120.5	1120.5	1120.5
2.5°	1127.3	1124.2	1111.5	1122.4	1119.3
5°	1126.1	1122.7	1109.4	1119.3	1115.9
7.5°	1123.9	1119.6	1105.0	1114.0	1108.7
10°	1120.2	1115.9	1099.1	1106.3	1100.7
12.5°	1115.9	1110.0	1091.4	1095.1	1088.0
15°	1109.7	1102.8	1082.7	1080.8	1071.5
17.5°	1102.8	1094.5	1070.0	1061.9	1050.8
20°	1094.8	1084.6	1054.2	1038.4	1028.4
22.5°	1085.8	1072.5	1034.3	1010.1	994.6
25°	1075.6	1060.1	1012.3	977.9	958.4
27.5°	1064.7	1043.6	985.6	940.4	914.0
30°	1051.7	1026.3	952.2	891.1	858.2
32.5°	1038.7	1004.6	916.2	827.5	788.5
35°	1023.2	980.1	866.0	748.1	697.9
37.5°	1008.6	950.6	798.1	648.6	594.7
40°	990.9	915.9	711.3	534.2	482.4
42.5°	974.2	875.6	598.7	423.8	378.9
45°	955.0	820.4	473.8	323.7	299.5
47.5°	932.6	745.0	344.5	240.9	225.7
50°	908.4	641.5	240.6	174.9	162.5
52.5°	881.8	501.7	162.2	121.5	114.7
55°	852.0	350.7	111.0	85.9	79.4
57.5°	817.6	228.2	80.6	64.8	60.5
60°	777.0	145.7	62.9	51.5	49.0
62.5°	723.7	102.3	51.8	42.5	40.3
65°	645.5	80.9	43.7	35.3	32.9
67.5°	546.6	68.5	37.5	29.8	28.2
70°	440.6	59.5	32.6	25.7	24.8
72.5°	338.6	52.1	28.2	22.9	22.3
75°	245.2	45.6	25.1	21.1	20.2
77.5°	169.9	39.4	22.3	18.9	18.3
80°	109.8	34.1	19.8	17.4	17.1
82.5°	62.9	28.5	18.0	16.7	16.4
85°	30.1	23.9	16.1	14.6	13.0
87.5°	9.6	17.7	12.7	11.2	9.9
90°	1.2	12.4	9.9	8.7	8.1
92.5°	1.2	6.8	7.1	7.1	6.8
95°	0.9	1.6	3.4	5.3	5.0
97.5°	0.9	0.6	2.2	3.7	3.7
100°	0.6	0.3	0.9	2.5	2.5
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	0.9	0.6
145°	0.6	0.6	0.6	0.9	0.6
147.5°	0.6	0.6	0.9	0.9	0.6
150°	0.6	0.6	0.9	0.9	0.6
152.5°	0.6	0.6	0.9	0.9	0.9
155°	0.6	0.6	0.9	1.2	0.9
157.5°	0.6	0.6	0.9	1.2	0.9
160°	0.6	0.9	1.2	1.2	0.9
162.5°	0.6	0.9	1.2	1.2	1.2
165°	0.6	0.9	1.2	1.2	1.2
167.5°	0.9	0.9	1.2	1.6	1.2
170°	0.9	0.9	1.2	1.6	1.2
172.5°	0.9	0.9	1.2	1.6	1.2
175°	0.9	0.9	1.2	1.6	1.2
177.5°	0.9	0.9	1.2	1.6	1.6
180°	1.2	1.2	1.2	1.2	1.2



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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	18.36	19.76	18.74	20.08	20.41	6.88	8.28	7.25	8.60	8.92
	3H	21.28	22.52	21.66	22.86	23.23	7.82	9.06	8.20	9.40	9.77
	4H	22.17	23.33	22.58	23.69	24.08	8.33	9.50	8.74	9.85	10.24
	6H	22.67	23.74	23.09	24.11	24.51	8.97	10.04	9.39	10.42	10.82
	8H	22.78	23.79	23.21	24.19	24.60	9.39	10.40	9.82	10.80	11.21
	12H	22.82	23.79	23.26	24.18	24.62	9.83	10.80	10.27	11.19	11.63
4H	2H	18.18	19.34	18.59	19.70	20.09	7.40	8.56	7.81	8.92	9.31
	3H	21.11	22.06	21.53	22.47	22.88	8.59	9.54	9.01	9.95	10.36
	4H	22.01	22.87	22.45	23.29	23.74	9.26	10.11	9.70	10.54	10.99
	6H	22.60	23.35	23.07	23.80	24.27	10.08	10.82	10.55	11.28	11.75
	8H	22.77	23.46	23.24	23.91	24.39	10.61	11.31	11.09	11.76	12.24
	12H	22.86	23.47	23.35	23.96	24.44	11.19	11.81	11.68	12.29	12.77
8H	4H	21.90	22.59	22.37	23.05	23.52	9.85	10.54	10.32	10.99	11.47
	6H	22.50	23.07	23.01	23.57	24.06	10.86	11.43	11.36	11.93	12.41
	8H	22.69	23.20	23.21	23.72	24.22	11.53	12.04	12.05	12.56	13.06
	12H	22.83	23.29	23.35	23.79	24.37	12.29	12.75	12.81	13.25	13.82
12H	4H	21.86	22.48	22.35	22.97	23.45	10.11	10.72	10.60	11.21	11.69
	6H	22.45	22.96	22.97	23.48	23.98	11.16	11.68	11.69	12.20	12.69
	8H	22.67	23.12	23.18	23.62	24.20	11.93	12.38	12.44	12.88	13.46