

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: P893591

Luminaire Tested: 4MB-5SL-AOL-UNV-L940

Issue Date: 11/11/2024

Test Information

Test Method: LM-79-2019
Report Number: P893591
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-5SL-AOL-UNV-L940
Description: 5000 Lumen 4FT MICROBAY LINEAR BAY with AISLE OPTICS WITH CLEAR LENS NO UPLIGHT, 9
4000K CCT
Light Source: -
Ballast/Driver: -

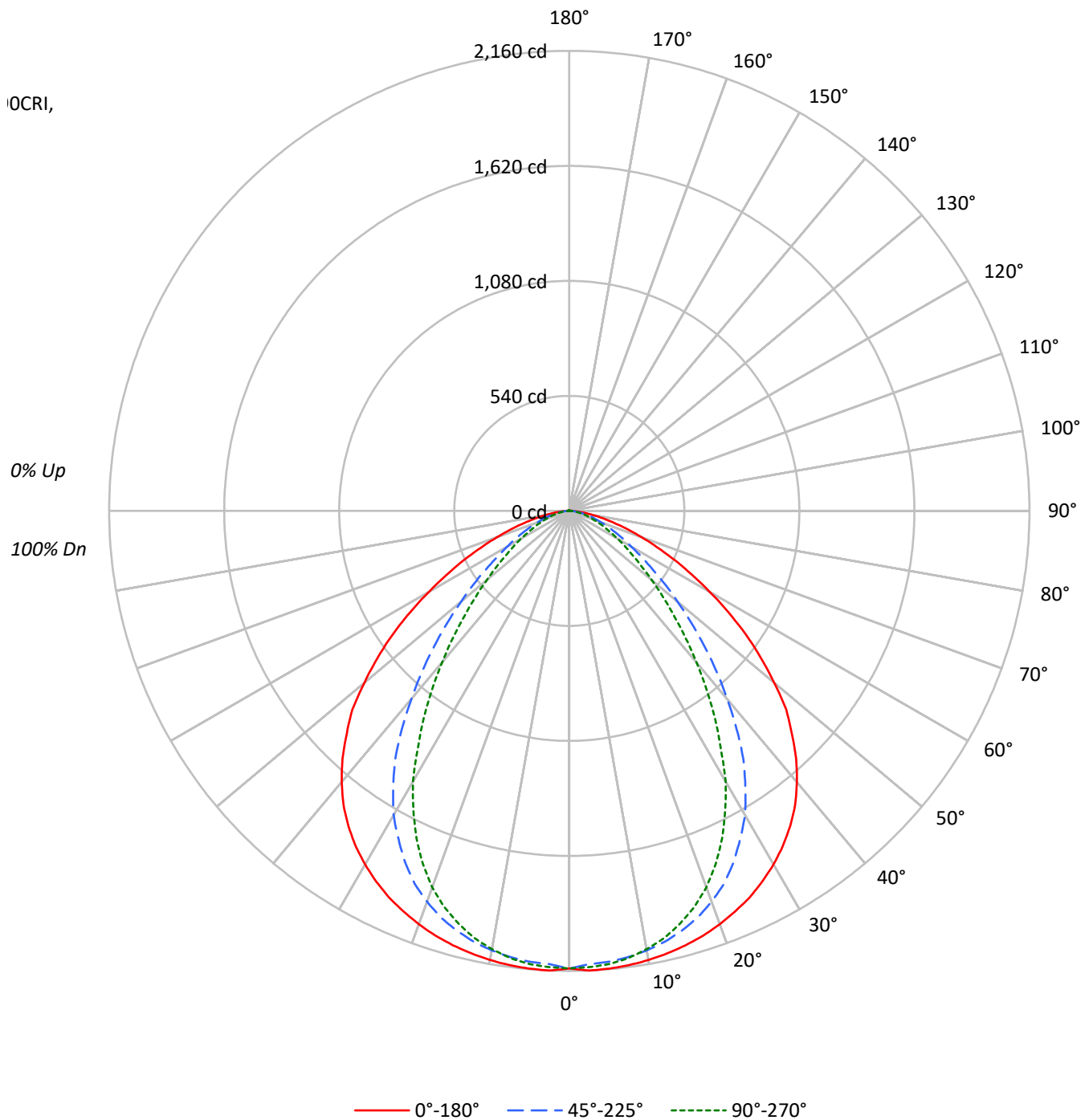
Summary

Lumens per Lamp: N/A
Luminaire Lumens: 4290.8 lumens
Efficiency: N/A
Efficacy: 122.6 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): 35
Input Voltage (V): 120
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: 0.995
Total Harmonic Distortion (THDi): 9.55
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				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°	21877	21877	21877
5°	22054	21721	21835
10°	22144	21666	21608
15°	22258	21511	21154
20°	22379	21163	20382
25°	22504	20475	19063
30°	22543	19399	17261
35°	22469	17720	14847
40°	22094	15335	12337
45°	21273	12886	9984
50°	19906	10495	7996
55°	17986	8436	6412
60°	15513	6866	5310
65°	13126	5716	4367
70°	10717	4863	3707
75°	8582	4096	3152
80°	6686	3507	2710
85°	5188	3097	2454

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
 Vertical Angle: 45°
 Luminance: 21273 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	203.4	4.7
10°-20°	578.8	13.5
20°-30°	843.7	19.7
30°-40°	909.4	21.2
40°-50°	762.4	17.8
50°-60°	516.1	12.0
60°-70°	294.3	6.9
70°-80°	134.6	3.1
80°-90°	35.3	0.8
90°-100°	4.3	0.1
100°-110°	2.9	0.1
110°-120°	1.6	0.0
120°-130°	0.9	0.0
130°-140°	0.9	0.0
140°-150°	0.8	0.0
150°-160°	0.6	0.0
160°-170°	0.5	0.0
170°-180°	0.2	0.0
0°-30°	1626.0	37.9
0°-40°	2535.4	59.1
0°-60°	3813.9	88.9
0°-90°	4278.1	99.7
90°-120°	8.9	0.2
90°-150°	11.4	0.3
90°-180°	13.0	0.3
0°-180°	4290.8	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	2148	2148	2148	2148	2148	
5°	2157	2150	2125	2142	2136	205
15°	2111	2093	2040	2027	2006	597
25°	2003	1950	1822	1738	1696	923
35°	1807	1671	1425	1251	1194	1128
45°	1477	1232	895	738	693	1137
55°	1013	741	475	385	361	902
65°	545	379	237	192	181	544
75°	218	160	104	85	80	238
85°	44	38	26	22	21	52
90°	6	6	4	3	2	6
95°	9	6	3	2	2	7
105°	6	4	2	1	1	7
115°	3	2	1	1	1	3
125°	1	1	1	1	1	1
135°	1	1	1	1	1	1
145°	1	1	1	1	1	1
155°	1	1	1	2	2	1
165°	1	2	2	2	2	0
175°	2	2	2	2	2	0
180°	2	2	2	2	2	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	2148.1	2148.1	2148.1	2148.1	2148.1
2.5°	2160.4	2154.9	2130.2	2150.5	2144.4
5°	2157.3	2150.5	2124.7	2141.9	2135.8
7.5°	2151.2	2142.5	2113.6	2126.5	2118.5
10°	2141.3	2130.8	2095.1	2102.5	2089.5
12.5°	2127.7	2114.8	2072.3	2070.4	2055.0
15°	2111.1	2092.6	2040.2	2026.7	2006.4
17.5°	2090.8	2067.4	2002.0	1974.9	1950.3
20°	2064.9	2034.7	1952.7	1909.6	1880.6
22.5°	2035.3	1994.6	1895.4	1826.4	1795.0
25°	2002.7	1949.7	1822.1	1738.3	1696.4
27.5°	1962.0	1895.4	1737.1	1628.6	1585.5
30°	1917.0	1832.6	1649.6	1510.9	1467.8
32.5°	1865.9	1760.5	1538.0	1384.0	1323.6
35°	1807.3	1671.1	1425.3	1250.9	1194.2
37.5°	1741.4	1578.1	1290.3	1116.6	1059.2
40°	1661.9	1467.8	1153.5	981.6	928.0
42.5°	1576.2	1355.6	1022.3	853.4	807.2
45°	1477.0	1232.4	894.7	737.6	693.2
47.5°	1381.5	1107.9	775.2	631.6	595.3
50°	1256.4	975.4	662.4	534.9	504.7
52.5°	1134.4	852.8	566.3	457.2	428.9
55°	1013.0	741.3	475.1	385.1	361.1
57.5°	884.9	632.2	399.9	326.0	309.9
60°	761.6	537.9	337.1	273.6	260.7
62.5°	648.9	451.1	285.3	231.1	218.8
65°	544.7	379.0	237.2	192.3	181.2
67.5°	446.1	311.8	197.8	160.2	152.2
70°	359.9	252.6	163.3	131.9	124.5
72.5°	285.3	202.1	130.6	107.8	99.8
75°	218.1	160.2	104.1	85.0	80.1
77.5°	162.7	120.8	80.1	65.3	61.6
80°	114.0	87.5	59.8	49.3	46.2
82.5°	77.6	60.4	41.9	34.5	32.7
85°	44.4	37.6	26.5	22.2	21.0
87.5°	22.8	19.7	14.2	10.5	9.2
90°	6.2	6.2	3.7	3.1	2.5
92.5°	9.9	5.5	3.7	2.5	1.8
95°	9.2	5.5	3.1	1.8	1.8
97.5°	8.6	5.5	2.5	1.8	1.2
100°	8.0	4.9	2.5	1.2	1.2
102.5°	7.4	4.9	2.5	1.2	1.2
105°	6.2	4.3	1.8	1.2	0.6
107.5°	5.5	3.7	1.8	1.2	0.6
110°	4.3	3.1	1.8	1.2	0.6



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CANDELA DISTRIBUTION (continued):

	0°	22.5°	45°	67.5°	90°
112.5°	3.7	3.1	1.2	1.2	0.6
115°	3.1	2.5	1.2	0.6	0.6
117.5°	2.5	1.8	1.2	0.6	0.6
120°	1.8	1.8	1.2	0.6	0.6
122.5°	1.8	1.2	1.2	0.6	0.6
125°	1.2	1.2	1.2	0.6	0.6
127.5°	1.2	1.2	1.2	0.6	0.6
130°	1.2	1.2	1.2	0.6	0.6
132.5°	1.2	1.2	1.2	1.2	0.6
135°	0.6	1.2	1.2	1.2	0.6
137.5°	1.2	1.2	1.2	1.2	1.2
140°	1.2	1.2	1.2	1.2	1.2
142.5°	1.2	1.2	1.2	1.2	1.2
145°	1.2	1.2	1.2	1.2	1.2
147.5°	1.2	1.2	1.2	1.2	1.2
150°	1.2	1.2	1.2	1.2	1.2
152.5°	1.2	1.2	1.2	1.2	1.2
155°	1.2	1.2	1.2	1.8	1.8
157.5°	1.2	1.2	1.8	1.8	1.8
160°	1.2	1.2	1.8	1.8	1.8
162.5°	1.2	1.2	1.8	1.8	1.8
165°	1.2	1.8	1.8	1.8	1.8
167.5°	1.2	1.8	1.8	1.8	2.5
170°	1.2	1.8	1.8	2.5	2.5
172.5°	1.2	1.8	1.8	2.5	2.5
175°	1.8	1.8	1.8	2.5	2.5
177.5°	1.8	1.8	1.8	2.5	2.5
180°	1.8	1.8	1.8	1.8	1.8



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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	21.09	22.53	21.46	22.85	23.17	15.93	17.37	16.30	17.69	18.01
	3H	22.40	23.68	22.78	24.01	24.39	16.94	18.23	17.33	18.56	18.93
	4H	22.82	24.02	23.23	24.38	24.76	17.28	18.48	17.69	18.83	19.22
	6H	23.09	24.19	23.51	24.57	24.97	17.50	18.61	17.92	18.98	19.38
	8H	23.16	24.21	23.59	24.61	25.02	17.57	18.62	18.00	19.02	19.43
	12H	23.20	24.20	23.63	24.59	25.03	17.62	18.62	18.05	19.01	19.44
4H	2H	21.09	22.29	21.49	22.64	23.03	16.56	17.75	16.96	18.11	18.50
	3H	22.55	23.54	22.97	23.95	24.36	17.75	18.74	18.17	19.15	19.56
	4H	23.08	23.96	23.52	24.39	24.83	18.17	19.05	18.61	19.48	19.92
	6H	23.45	24.22	23.92	24.67	25.14	18.48	19.25	18.94	19.70	20.16
	8H	23.57	24.28	24.04	24.73	25.21	18.57	19.29	19.04	19.74	20.22
	12H	23.64	24.28	24.13	24.77	25.25	18.64	19.28	19.13	19.77	20.25
8H	4H	23.06	23.78	23.53	24.23	24.70	18.50	19.22	18.97	19.67	20.15
	6H	23.49	24.08	23.99	24.58	25.07	18.89	19.48	19.40	19.98	20.47
	8H	23.65	24.18	24.17	24.69	25.19	19.04	19.57	19.56	20.08	20.58
	12H	23.78	24.25	24.29	24.74	25.32	19.16	19.63	19.68	20.13	20.70
12H	4H	23.03	23.67	23.52	24.15	24.63	18.55	19.19	19.04	19.67	20.15
	6H	23.46	23.99	23.98	24.51	25.00	18.96	19.49	19.48	20.01	20.51
	8H	23.65	24.12	24.16	24.62	25.19	19.15	19.62	19.67	20.12	20.69