

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: P893586

Luminaire Tested: 4MB-5SL-AOL-UNV-L835

Issue Date: 11/11/2024

**Test Information**

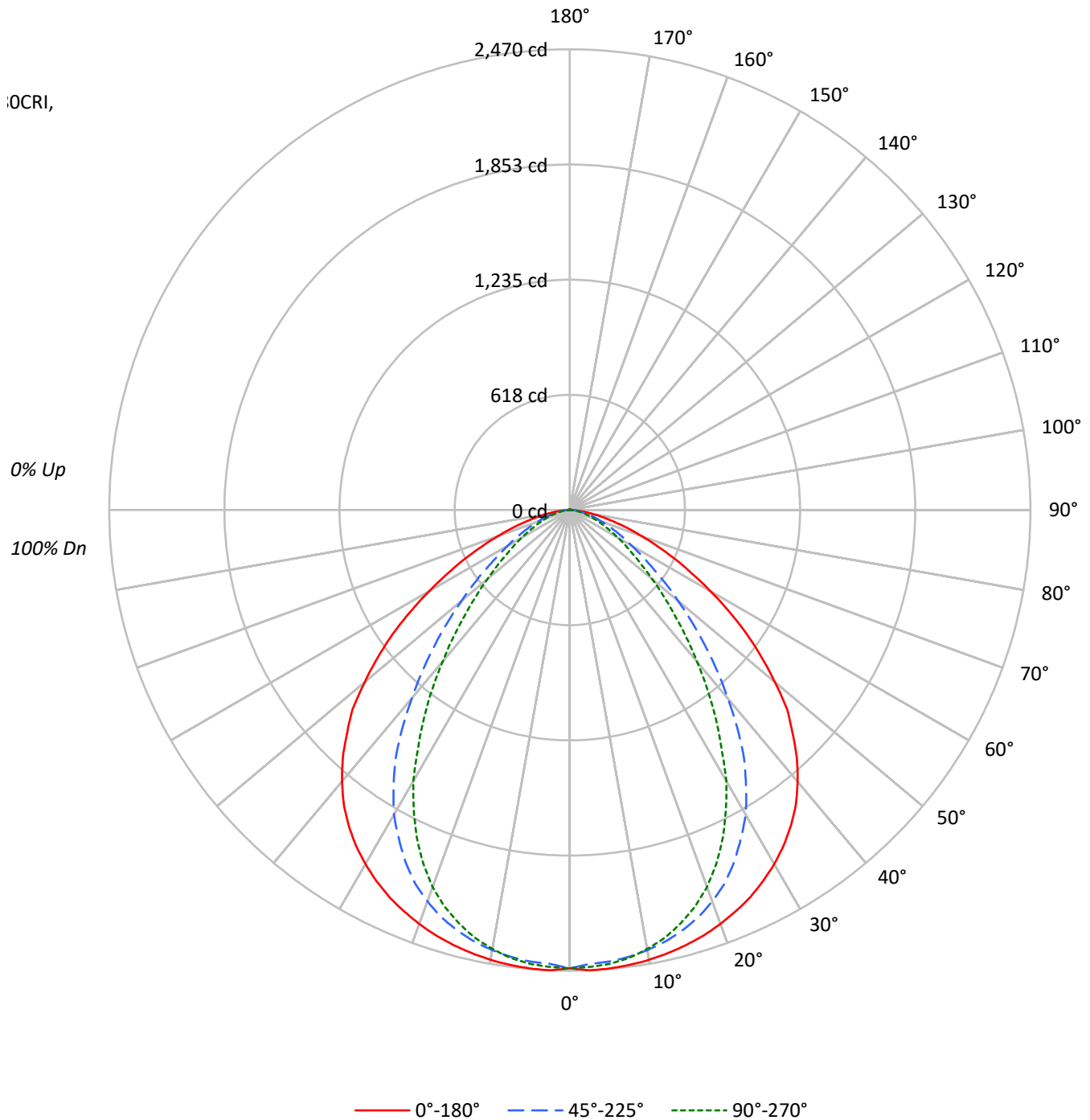
Test Method: LM-79-2019  
Report Number: P893586  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-2404-077-14)  
Test Lab: INNOVATION CENTER  
Issue Date: 11/11/2024  
Manufacturer: COOPER LIGHTING SOLUTIONS  
Product Line: METALUX  
Catalog Number: 4MB-5SL-AOL-UNV-L835  
Description: 5000 Lumen 4FT MICROBAY LINEAR BAY with AISLE OPTICS WITH CLEAR LENS NO UPLIGHT, 8  
3500K CCT  
Light Source: -  
Ballast/Driver: -

**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 4906.9 lumens  
Efficiency: N/A  
Efficacy: 140.2 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	66	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°	25016	25016	25016
5°	25220	24839	24969
10°	25323	24776	24711
15°	25454	24599	24191
20°	25591	24202	23308
25°	25734	23415	21799
30°	25780	22184	19739
35°	25696	20264	16978
40°	25266	17537	14108
45°	24328	14737	11417
50°	22764	12002	9143
55°	20570	9647	7331
60°	17741	7850	6072
65°	15011	6538	4993
70°	12253	5559	4237
75°	9814	4686	3604
80°	7648	4012	3097
85°	5924	3541	2804

**MAXIMUM LUMINANCE 45°-90°:**

Horizontal Angle: 0°  
 Vertical Angle: 45°  
 Luminance: 24328 cd/sqm



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	232.6	4.7
10°-20°	661.9	13.5
20°-30°	964.8	19.7
30°-40°	1040.0	21.2
40°-50°	871.8	17.8
50°-60°	590.3	12.0
60°-70°	336.6	6.9
70°-80°	153.9	3.1
80°-90°	40.3	0.8
90°-100°	4.9	0.1
100°-110°	3.4	0.1
110°-120°	1.8	0.0
120°-130°	1.1	0.0
130°-140°	1.0	0.0
140°-150°	0.9	0.0
150°-160°	0.7	0.0
160°-170°	0.6	0.0
170°-180°	0.2	0.0
0°-30°	1859.4	37.9
0°-40°	2899.4	59.1
0°-60°	4361.5	88.9
0°-90°	4892.3	99.7
90°-120°	10.1	0.2
90°-150°	13.1	0.3
90°-180°	15.0	0.3
0°-180°	4906.9	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	2456	2456	2456	2456	2456	
5°	2467	2459	2430	2449	2442	235
15°	2414	2393	2333	2318	2294	682
25°	2290	2230	2084	1988	1940	1055
35°	2067	1911	1630	1430	1366	1290
45°	1689	1409	1023	844	793	1300
55°	1158	848	543	440	413	1032
65°	623	433	271	220	207	622
75°	249	183	119	97	92	272
85°	51	43	30	25	24	59
90°	7	7	4	4	3	7
95°	11	6	4	2	2	8
105°	7	5	2	1	1	8
115°	4	3	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	3	3	0
180°	2	2	2	2	2	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	2456.4	2456.4	2456.4	2456.4	2456.4
2.5°	2470.5	2464.2	2436.0	2459.3	2452.2
5°	2467.0	2459.3	2429.7	2449.4	2442.4
7.5°	2460.0	2450.1	2417.0	2431.8	2422.6
10°	2448.7	2436.7	2395.8	2404.3	2389.5
12.5°	2433.2	2418.4	2369.8	2367.7	2350.0
15°	2414.2	2393.0	2333.1	2317.6	2294.4
17.5°	2390.9	2364.1	2289.4	2258.4	2230.3
20°	2361.3	2326.8	2233.1	2183.7	2150.6
22.5°	2327.5	2281.0	2167.5	2088.6	2052.7
25°	2290.1	2229.5	2083.7	1987.8	1939.9
27.5°	2243.6	2167.5	1986.4	1862.4	1813.1
30°	2192.2	2095.7	1886.4	1727.8	1678.5
32.5°	2133.7	2013.2	1758.8	1582.7	1513.6
35°	2066.8	1911.0	1629.9	1430.5	1365.6
37.5°	1991.4	1804.6	1475.6	1276.8	1211.3
40°	1900.5	1678.5	1319.1	1122.5	1061.2
42.5°	1802.5	1550.3	1169.0	976.0	923.1
45°	1689.1	1409.3	1023.2	843.5	792.7
47.5°	1579.8	1267.0	886.5	722.3	680.7
50°	1436.8	1115.5	757.5	611.6	577.1
52.5°	1297.3	975.3	647.6	522.9	490.4
55°	1158.5	847.7	543.3	440.4	412.9
57.5°	1011.9	723.0	457.3	372.8	354.4
60°	871.0	615.2	385.4	312.9	298.1
62.5°	742.0	515.8	326.3	264.2	250.2
65°	622.9	433.4	271.3	219.9	207.2
67.5°	510.2	356.6	226.2	183.2	174.1
70°	411.5	288.9	186.7	150.8	142.3
72.5°	326.3	231.1	149.4	123.3	114.2
75°	249.4	183.2	119.1	97.2	91.6
77.5°	186.0	138.1	91.6	74.7	70.5
80°	130.4	100.1	68.4	56.4	52.8
82.5°	88.8	69.1	47.9	39.5	37.3
85°	50.7	43.0	30.3	25.4	24.0
87.5°	26.1	22.5	16.2	12.0	10.6
90°	7.0	7.0	4.2	3.5	2.8
92.5°	11.3	6.3	4.2	2.8	2.1
95°	10.6	6.3	3.5	2.1	2.1
97.5°	9.9	6.3	2.8	2.1	1.4
100°	9.2	5.6	2.8	1.4	1.4
102.5°	8.5	5.6	2.8	1.4	1.4
105°	7.0	4.9	2.1	1.4	0.7
107.5°	6.3	4.2	2.1	1.4	0.7
110°	4.9	3.5	2.1	1.4	0.7



TEST NUMBER: P893586

CATALOG NUMBER: 4MB-5SL-AOL-UNV-L835

**CANDELA DISTRIBUTION (continued):**

	0°	22.5°	45°	67.5°	90°
112.5°	4.2	3.5	1.4	1.4	0.7
115°	3.5	2.8	1.4	0.7	0.7
117.5°	2.8	2.1	1.4	0.7	0.7
120°	2.1	2.1	1.4	0.7	0.7
122.5°	2.1	1.4	1.4	0.7	0.7
125°	1.4	1.4	1.4	0.7	0.7
127.5°	1.4	1.4	1.4	0.7	0.7
130°	1.4	1.4	1.4	0.7	0.7
132.5°	1.4	1.4	1.4	1.4	0.7
135°	0.7	1.4	1.4	1.4	0.7
137.5°	1.4	1.4	1.4	1.4	1.4
140°	1.4	1.4	1.4	1.4	1.4
142.5°	1.4	1.4	1.4	1.4	1.4
145°	1.4	1.4	1.4	1.4	1.4
147.5°	1.4	1.4	1.4	1.4	1.4
150°	1.4	1.4	1.4	1.4	1.4
152.5°	1.4	1.4	1.4	1.4	1.4
155°	1.4	1.4	1.4	2.1	2.1
157.5°	1.4	1.4	2.1	2.1	2.1
160°	1.4	1.4	2.1	2.1	2.1
162.5°	1.4	1.4	2.1	2.1	2.1
165°	1.4	2.1	2.1	2.1	2.1
167.5°	1.4	2.1	2.1	2.1	2.8
170°	1.4	2.1	2.1	2.8	2.8
172.5°	1.4	2.1	2.1	2.8	2.8
175°	2.1	2.1	2.1	2.8	2.8
177.5°	2.1	2.1	2.1	2.8	2.8
180°	2.1	2.1	2.1	2.1	2.1



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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	21.56	22.99	21.93	23.31	23.64	16.40	17.84	16.77	18.16	18.48
	3H	22.86	24.15	23.25	24.48	24.85	17.41	18.69	17.79	19.03	19.40
	4H	23.29	24.49	23.69	24.84	25.23	17.75	18.94	18.15	19.30	19.69
	6H	23.55	24.66	23.97	25.03	25.43	17.97	19.08	18.39	19.45	19.85
	8H	23.63	24.68	24.06	25.07	25.48	18.04	19.09	18.47	19.48	19.89
	12H	23.66	24.67	24.10	25.06	25.49	18.08	19.08	18.52	19.47	19.91
4H	2H	21.55	22.75	21.96	23.11	23.50	17.02	18.22	17.43	18.58	18.96
	3H	23.02	24.01	23.44	24.41	24.82	18.22	19.21	18.64	19.61	20.02
	4H	23.54	24.43	23.98	24.85	25.30	18.63	19.52	19.07	19.94	20.39
	6H	23.92	24.69	24.39	25.14	25.61	18.94	19.71	19.41	20.16	20.63
	8H	24.03	24.75	24.50	25.20	25.68	19.04	19.75	19.51	20.21	20.68
	12H	24.11	24.75	24.60	25.23	25.71	19.11	19.75	19.60	20.23	20.71
8H	4H	23.53	24.24	24.00	24.69	25.17	18.97	19.68	19.44	20.14	20.61
	6H	23.96	24.55	24.46	25.05	25.53	19.36	19.95	19.87	20.45	20.94
	8H	24.11	24.64	24.64	25.16	25.66	19.50	20.03	20.02	20.55	21.05
	12H	24.24	24.71	24.76	25.21	25.78	19.63	20.09	20.14	20.59	21.17
12H	4H	23.50	24.13	23.99	24.62	25.10	19.01	19.65	19.50	20.14	20.62
	6H	23.92	24.45	24.45	24.97	25.47	19.43	19.96	19.95	20.48	20.97
	8H	24.11	24.58	24.63	25.08	25.66	19.62	20.09	20.14	20.59	21.16