

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: P894113

Luminaire Tested: 4MB-SC3-ACL-UNV-CC93-LOW-5000K

Issue Date: 11/11/2024

**Test Information**

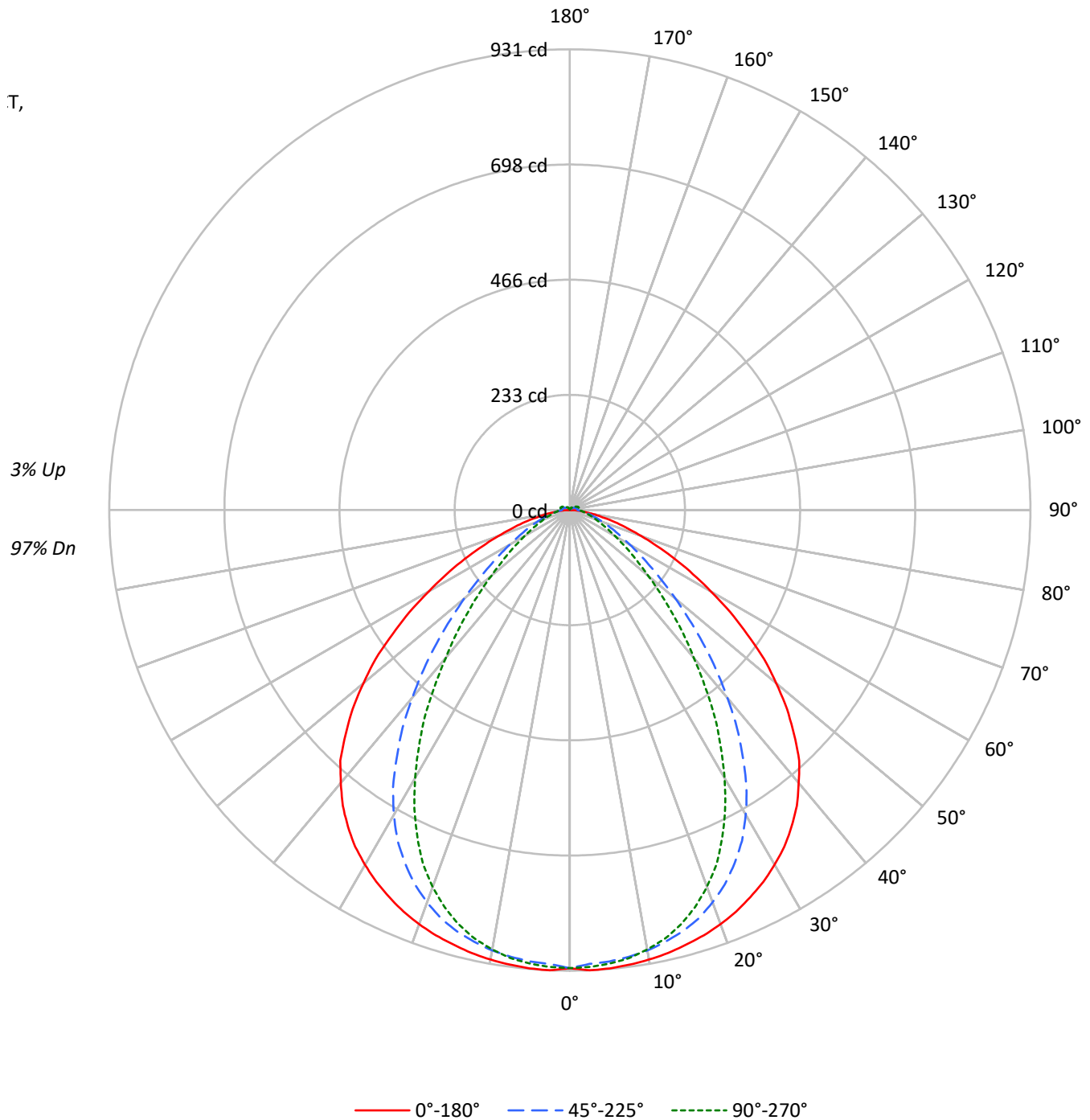
Test Method: LM-79-2019  
Report Number: P894113  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-2404-077-15)  
Test Lab: INNOVATION CENTER  
Issue Date: 11/11/2024  
Manufacturer: COOPER LIGHTING SOLUTIONS  
Product Line: METALUX  
Catalog Number: 4MB-SC3-ACL-UNV-CC93-LOW-5000K  
Description: Selectable 4FT MICROBAY LINEAR BAY with AISLE OPTICS WITH CLEAR LENS, 90CRI, 5000K CC  
LOW lumen setting  
Light Source: -  
Ballast/Driver: -

**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 1899.0 lumens  
Efficiency: N/A  
Efficacy: 113.7 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): 16.7  
Input Voltage (V): 120  
Input Current (Ain): NR  
Voltage Rise (V): NR  
Power Factor: 0.9915  
Total Harmonic Distortion (THDi): 6.67573310469889  
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	118	118	118	118	115	115	115	115	110	110	110	104	104	104	100	100	100	97				97
1	110	106	102	99	107	103	100	97	99	96	93	94	92	90	90	89	87	85				85
2	101	94	88	84	99	92	87	82	88	84	80	85	81	78	82	79	76	74				74
3	94	85	77	72	91	83	76	71	80	74	69	77	72	68	74	70	66	64				64
4	87	76	68	62	84	75	67	62	72	66	61	69	64	60	67	62	59	57				57
5	80	69	61	55	78	68	60	55	65	59	54	63	58	53	61	56	52	50				50
6	75	63	55	49	73	62	54	49	60	53	48	58	52	47	56	51	47	45				45
7	70	57	50	44	68	57	49	44	55	48	43	53	47	43	52	46	42	40				40
8	65	53	45	40	64	52	45	40	51	44	39	49	43	39	48	42	38	37				37
9	61	49	41	36	60	48	41	36	47	40	36	46	40	35	45	39	35	33				33
10	58	45	38	33	56	45	38	33	44	37	33	43	37	32	42	36	32	31				31

**AVERAGE LUMINANCE (cd/sqm):**

	0°	45°	90°
0°	9428	9428	9428
5°	9488	9171	9157
10°	9505	8972	8836
15°	9533	8739	8434
20°	9579	8418	7883
25°	9607	7972	7151
30°	9617	7360	6230
35°	9576	6504	5211
40°	9406	5494	4102
45°	9044	4435	3180
50°	8420	3441	2386
55°	7537	2634	1825
60°	6477	2026	1390
65°	5399	1597	1105
70°	4319	1281	902
75°	3438	1032	769
80°	2522	852	673
85°	1735	726	619

**MAXIMUM LUMINANCE 45°-90°:**

Horizontal Angle: 0°  
 Vertical Angle: 45°  
 Luminance: 9044 cd/sqm



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	87.7	4.6
10°-20°	249.8	13.2
20°-30°	364.2	19.2
30°-40°	391.3	20.6
40°-50°	325.6	17.1
50°-60°	217.8	11.5
60°-70°	124.7	6.6
70°-80°	62.0	3.3
80°-90°	25.4	1.3
90°-100°	14.7	0.8
100°-110°	13.0	0.7
110°-120°	9.5	0.5
120°-130°	6.1	0.3
130°-140°	3.7	0.2
140°-150°	2.1	0.1
150°-160°	1.0	0.1
160°-170°	0.4	0.0
170°-180°	0.1	0.0
0°-30°	701.6	36.9
0°-40°	1092.9	57.6
0°-60°	1636.3	86.2
0°-90°	1848.4	97.3
90°-120°	37.2	2.0
90°-150°	49.1	2.6
90°-180°	51.0	2.7
0°-180°	1899.0	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	926	926	926	926	926	
5°	930	927	916	923	920	88
15°	909	903	881	875	867	257
25°	863	843	788	748	729	398
35°	782	725	610	535	511	488
45°	641	533	381	308	290	493
55°	437	315	198	157	149	392
65°	234	159	100	81	77	234
75°	94	69	49	44	42	101
85°	18	20	23	24	24	22
90°	3	9	16	19	19	3
95°	4	9	15	19	19	3
105°	3	7	14	18	19	3
115°	1	4	11	15	16	1
125°	1	3	7	11	12	1
135°	0	2	5	7	8	0
145°	0	2	3	5	6	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°	925.7	925.7	925.7	925.7	925.7
2.5°	931.1	928.7	918.2	926.5	924.1
5°	929.8	926.8	915.7	923.3	920.3
7.5°	926.8	923.6	910.9	916.8	913.6
10°	922.5	918.4	903.8	906.8	901.7
12.5°	917.1	911.9	893.8	893.0	887.4
15°	909.2	903.0	881.4	874.9	867.1
17.5°	901.1	892.0	865.5	852.3	841.5
20°	890.6	878.5	843.6	823.9	810.4
22.5°	878.5	862.0	819.0	788.8	774.8
25°	863.3	842.8	787.7	748.0	729.4
27.5°	847.1	819.9	753.7	701.6	680.2
30°	827.7	793.9	711.3	648.6	625.7
32.5°	807.2	761.0	664.9	593.0	567.9
35°	781.5	724.8	609.8	534.7	511.2
37.5°	753.7	681.6	555.2	475.0	448.5
40°	719.9	636.0	495.3	415.9	389.7
42.5°	686.5	586.3	437.7	362.4	339.7
45°	641.1	532.8	380.8	308.1	290.0
47.5°	595.4	475.5	326.2	264.1	246.3
50°	544.7	419.4	278.4	221.7	206.9
52.5°	495.3	367.0	234.9	187.4	174.7
55°	437.2	315.4	198.5	156.9	148.8
57.5°	384.8	267.6	167.4	132.9	125.3
60°	329.5	226.8	140.2	112.3	105.3
62.5°	280.8	190.7	118.0	95.3	90.5
65°	234.1	158.8	99.9	81.0	76.7
67.5°	191.2	132.6	84.3	69.1	65.6
70°	153.4	107.5	71.0	58.9	56.4
72.5°	120.7	86.4	59.1	50.8	48.6
75°	94.2	68.6	49.4	43.7	42.4
77.5°	68.1	53.5	41.3	37.5	36.7
80°	48.1	40.5	34.0	32.4	31.9
82.5°	31.9	29.4	28.1	28.1	27.8
85°	18.4	20.5	23.0	24.0	24.3
87.5°	9.5	13.8	18.4	20.5	20.8
90°	2.7	8.6	15.7	18.6	19.2
92.5°	4.1	8.6	15.4	18.6	19.2
95°	4.1	8.6	15.4	18.6	19.2
97.5°	3.8	8.4	15.4	18.6	19.2
100°	3.5	7.8	15.1	18.6	19.2
102.5°	3.0	7.6	14.6	18.4	19.2
105°	2.7	7.0	13.8	18.1	18.9
107.5°	2.4	5.9	13.0	17.3	18.4
110°	1.9	5.1	12.4	16.5	17.8



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**CANDELA DISTRIBUTION (continued):**

	0°	22.5°	45°	67.5°	90°
112.5°	1.6	4.6	11.6	15.7	17.0
115°	1.4	4.1	10.8	14.9	16.2
117.5°	1.1	3.8	9.7	13.8	15.1
120°	0.8	3.5	8.9	13.0	14.0
122.5°	0.8	3.2	7.8	11.9	13.0
125°	0.8	2.7	7.3	10.8	11.9
127.5°	0.5	2.4	6.5	9.7	10.8
130°	0.5	2.4	5.9	8.9	9.7
132.5°	0.5	2.2	5.4	8.1	8.9
135°	0.5	2.2	4.9	7.3	8.1
137.5°	0.5	1.9	4.3	6.8	7.6
140°	0.5	1.9	4.1	5.9	6.8
142.5°	0.5	1.6	3.5	5.7	6.2
145°	0.5	1.6	3.2	4.9	5.7
147.5°	0.5	1.6	3.0	4.6	5.1
150°	0.5	1.4	2.7	3.8	4.6
152.5°	0.5	1.4	2.4	3.5	4.3
155°	0.5	1.4	2.2	3.0	3.8
157.5°	0.5	1.4	2.2	2.7	3.2
160°	0.8	1.1	1.9	2.4	3.0
162.5°	0.8	1.1	1.6	2.2	2.7
165°	0.8	1.1	1.6	1.9	2.4
167.5°	0.8	1.1	1.4	1.6	1.9
170°	0.8	0.8	1.4	1.4	1.4
172.5°	0.8	0.8	1.1	1.4	1.1
175°	0.8	0.8	1.1	1.1	1.1
177.5°	0.8	0.8	1.1	1.1	1.1
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	16.53	17.92	16.94	18.29	18.68	11.83	13.22	12.24	13.59	13.97
	3H	17.62	18.87	18.05	19.25	19.68	12.97	14.21	13.39	14.59	15.02
	4H	17.93	19.09	18.38	19.50	19.94	13.47	14.63	13.91	15.03	15.48
	6H	18.08	19.15	18.53	19.57	20.03	13.97	15.04	14.42	15.46	15.92
	8H	18.09	19.11	18.57	19.56	20.03	14.23	15.25	14.70	15.69	16.16
	12H	18.09	19.06	18.56	19.50	19.99	14.52	15.50	15.00	15.93	16.43
4H	2H	16.51	17.67	16.96	18.08	18.53	12.32	13.49	12.77	13.89	14.34
	3H	17.75	18.71	18.21	19.16	19.63	13.64	14.60	14.09	15.05	15.52
	4H	18.13	19.00	18.61	19.47	19.97	14.23	15.09	14.71	15.56	16.07
	6H	18.36	19.11	18.87	19.61	20.13	14.85	15.60	15.35	16.09	16.62
	8H	18.41	19.11	18.92	19.60	20.13	15.17	15.87	15.68	16.37	16.90
	12H	18.42	19.04	18.95	19.57	20.11	15.55	16.17	16.07	16.70	17.23
8H	4H	18.12	18.82	18.63	19.32	19.85	14.47	15.17	14.98	15.67	16.20
	6H	18.40	18.98	18.94	19.52	20.06	15.19	15.77	15.73	16.31	16.85
	8H	18.47	18.99	19.03	19.55	20.10	15.60	16.12	16.16	16.68	17.23
	12H	18.52	18.98	19.07	19.52	20.14	16.09	16.55	16.64	17.09	17.72
12H	4H	18.10	18.72	18.63	19.25	19.79	14.48	15.11	15.01	15.64	16.17
	6H	18.38	18.90	18.94	19.46	20.01	15.23	15.75	15.79	16.31	16.86
	8H	18.48	18.94	19.04	19.48	20.11	15.69	16.15	16.25	16.69	17.32