

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: P894112

Luminaire Tested: 4MB-SC3-ACL-UNV-CC93-LOW-4000K

Issue Date: 11/11/2024

**Test Information**

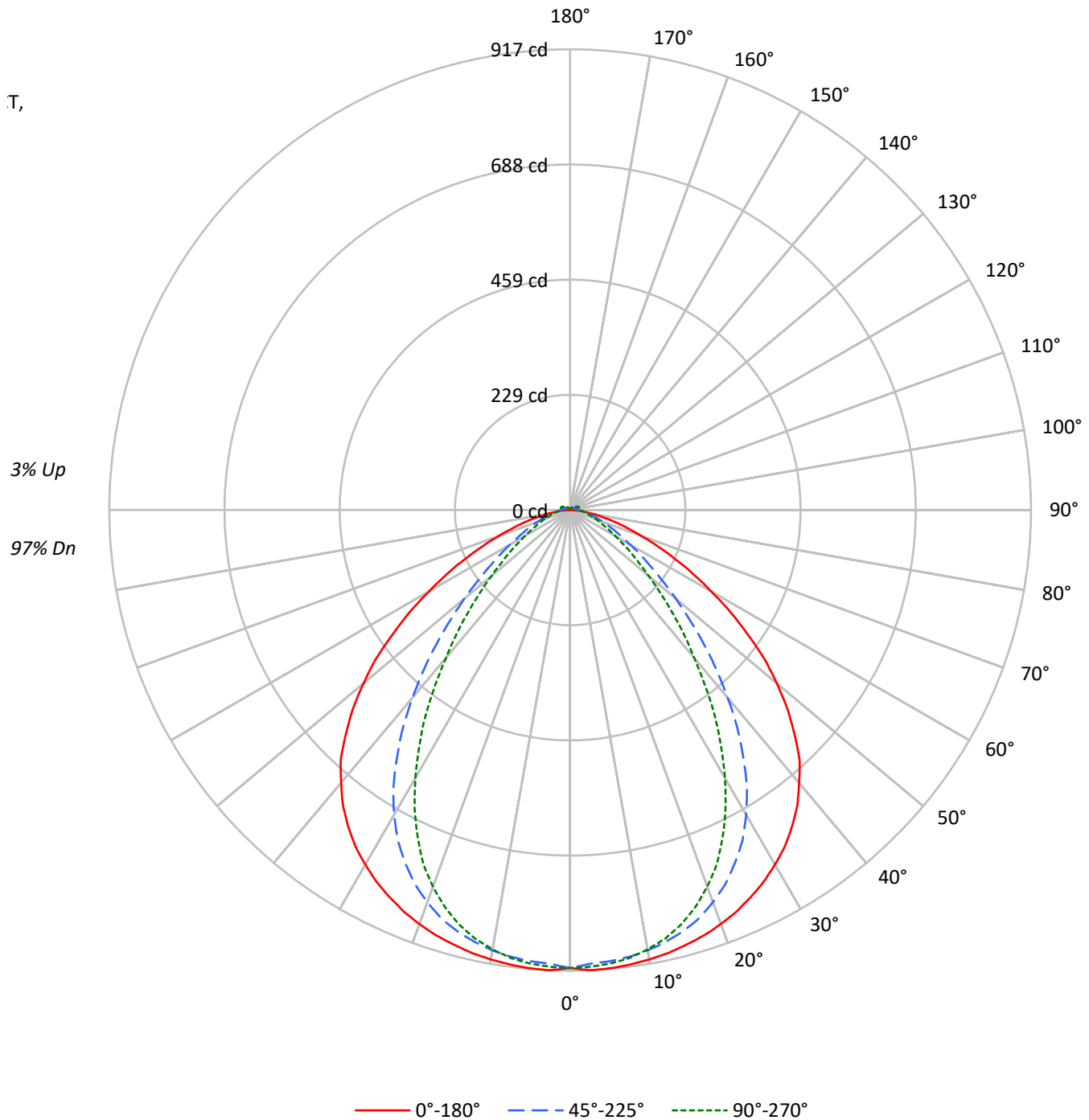
Test Method: LM-79-2019  
Report Number: P894112  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-2404-077-15)  
Test Lab: INNOVATION CENTER  
Issue Date: 11/11/2024  
Manufacturer: COOPER LIGHTING SOLUTIONS  
Product Line: METALUX  
Catalog Number: 4MB-SC3-ACL-UNV-CC93-LOW-4000K  
Description: Selectable 4FT MICROBAY LINEAR BAY with AISLE OPTICS WITH CLEAR LENS, 90CRI, 4000K CC  
LOW lumen setting  
Light Source: -  
Ballast/Driver: -

**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 1870.0 lumens  
Efficiency: N/A  
Efficacy: 112.0 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				
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			
1	110	106	102	99	107	103	100	97	99	96	93	94	92	90	90	89	87	85			
2	101	94	88	84	99	92	87	82	88	84	80	85	81	78	82	79	76	74			
3	94	85	77	72	91	83	76	71	80	74	69	77	72	68	74	70	66	64			
4	87	76	68	62	84	75	67	62	72	66	61	69	64	60	67	62	59	57			
5	80	69	61	55	78	68	60	55	65	59	54	63	58	53	61	56	52	50			
6	75	63	55	49	73	62	54	49	60	53	48	58	52	47	56	51	47	45			
7	70	57	50	44	68	57	49	44	55	48	43	53	47	43	52	46	42	40			
8	65	53	45	40	64	52	45	40	51	44	39	49	43	39	48	42	38	37			
9	61	49	41	36	60	48	41	36	47	40	36	46	40	35	45	39	35	33			
10	58	45	38	33	56	45	38	33	44	37	33	43	37	32	42	36	32	31			

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

	0°	45°	90°
0°	9284	9284	9284
5°	9343	9031	9018
10°	9360	8835	8701
15°	9388	8606	8305
20°	9433	8289	7763
25°	9460	7851	7042
30°	9470	7247	6134
35°	9430	6404	5132
40°	9262	5410	4038
45°	8906	4367	3131
50°	8292	3389	2349
55°	7422	2595	1797
60°	6376	1994	1369
65°	5318	1573	1088
70°	4252	1262	889
75°	3387	1018	756
80°	2480	839	663
85°	1707	713	609

**MAXIMUM LUMINANCE 45°-90°:**

Horizontal Angle: 0°  
 Vertical Angle: 45°  
 Luminance: 8906 cd/sqm



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	86.3	4.6
10°-20°	246.0	13.2
20°-30°	358.6	19.2
30°-40°	385.3	20.6
40°-50°	320.7	17.1
50°-60°	214.5	11.5
60°-70°	122.8	6.6
70°-80°	61.0	3.3
80°-90°	25.0	1.3
90°-100°	14.5	0.8
100°-110°	12.8	0.7
110°-120°	9.4	0.5
120°-130°	6.0	0.3
130°-140°	3.6	0.2
140°-150°	2.0	0.1
150°-160°	1.0	0.1
160°-170°	0.4	0.0
170°-180°	0.1	0.0
<b>0°-30°</b>	<b>690.9</b>	<b>36.9</b>
<b>0°-40°</b>	<b>1076.2</b>	<b>57.5</b>
<b>0°-60°</b>	<b>1611.3</b>	<b>86.2</b>
<b>0°-90°</b>	<b>1820.2</b>	<b>97.3</b>
90°-120°	36.7	2.0
90°-150°	48.3	2.6
<b>90°-180°</b>	<b>50.0</b>	<b>2.7</b>
<b>0°-180°</b>	<b>1870.0</b>	<b>100.0</b>

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	912	912	912	912	912	
5°	916	913	902	909	906	87
15°	895	889	868	862	854	253
25°	850	830	776	737	718	392
35°	770	714	600	526	503	481
45°	631	525	375	303	286	485
55°	430	311	196	154	146	386
65°	231	156	98	80	76	230
75°	93	68	49	43	42	100
85°	18	20	23	24	24	21
90°	3	8	15	18	19	3
95°	4	8	15	18	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°	911.6	911.6	911.6	911.6	911.6
2.5°	916.9	914.5	904.1	912.4	910.0
5°	915.6	912.6	901.7	909.2	906.3
7.5°	912.6	909.5	897.0	902.8	899.6
10°	908.4	904.4	890.0	893.0	887.9
12.5°	903.1	898.0	880.2	879.4	873.8
15°	895.4	889.2	868.0	861.6	853.9
17.5°	887.4	878.3	852.3	839.2	828.6
20°	877.0	865.0	830.7	811.3	798.0
22.5°	865.0	848.8	806.5	776.8	762.9
25°	850.1	829.9	775.7	736.6	718.3
27.5°	834.2	807.3	742.2	690.9	669.9
30°	815.0	781.8	700.4	638.7	616.1
32.5°	794.8	749.4	654.7	584.0	559.2
35°	769.6	713.7	600.4	526.5	503.4
37.5°	742.2	671.2	546.7	467.8	441.7
40°	708.9	626.2	487.7	409.5	383.7
42.5°	676.0	577.3	431.1	356.9	334.5
45°	631.3	524.7	374.9	303.4	285.6
47.5°	586.4	468.3	321.2	260.1	242.5
50°	536.4	413.0	274.2	218.3	203.7
52.5°	487.7	361.4	231.4	184.5	172.1
55°	430.5	310.6	195.5	154.5	146.5
57.5°	378.9	263.5	164.9	130.8	123.4
60°	324.4	223.4	138.0	110.6	103.7
62.5°	276.6	187.7	116.2	93.9	89.1
65°	230.6	156.4	98.4	79.8	75.5
67.5°	188.3	130.6	83.0	68.1	64.6
70°	151.0	105.8	69.9	58.0	55.6
72.5°	118.9	85.1	58.2	50.0	47.9
75°	92.8	67.5	48.7	43.1	41.7
77.5°	67.0	52.7	40.7	37.0	36.2
80°	47.3	39.9	33.5	31.9	31.4
82.5°	31.4	29.0	27.7	27.7	27.4
85°	18.1	20.2	22.6	23.7	23.9
87.5°	9.3	13.6	18.1	20.2	20.5
90°	2.7	8.5	15.4	18.3	18.9
92.5°	4.0	8.5	15.2	18.3	18.9
95°	4.0	8.5	15.2	18.3	18.9
97.5°	3.7	8.2	15.2	18.3	18.9
100°	3.5	7.7	14.9	18.3	18.9
102.5°	2.9	7.4	14.4	18.1	18.9
105°	2.7	6.9	13.6	17.8	18.6
107.5°	2.4	5.9	12.8	17.0	18.1
110°	1.9	5.1	12.2	16.2	17.6



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**CANDELA DISTRIBUTION (continued):**

	0°	22.5°	45°	67.5°	90°
112.5°	1.6	4.5	11.4	15.4	16.8
115°	1.3	4.0	10.6	14.6	16.0
117.5°	1.1	3.7	9.6	13.6	14.9
120°	0.8	3.5	8.8	12.8	13.8
122.5°	0.8	3.2	7.7	11.7	12.8
125°	0.8	2.7	7.2	10.6	11.7
127.5°	0.5	2.4	6.4	9.6	10.6
130°	0.5	2.4	5.9	8.8	9.6
132.5°	0.5	2.1	5.3	8.0	8.8
135°	0.5	2.1	4.8	7.2	8.0
137.5°	0.5	1.9	4.3	6.6	7.4
140°	0.5	1.9	4.0	5.9	6.6
142.5°	0.5	1.6	3.5	5.6	6.1
145°	0.5	1.6	3.2	4.8	5.6
147.5°	0.5	1.6	2.9	4.5	5.1
150°	0.5	1.3	2.7	3.7	4.5
152.5°	0.5	1.3	2.4	3.5	4.3
155°	0.5	1.3	2.1	2.9	3.7
157.5°	0.5	1.3	2.1	2.7	3.2
160°	0.8	1.1	1.9	2.4	2.9
162.5°	0.8	1.1	1.6	2.1	2.7
165°	0.8	1.1	1.6	1.9	2.4
167.5°	0.8	1.1	1.3	1.6	1.9
170°	0.8	0.8	1.3	1.3	1.3
172.5°	0.8	0.8	1.1	1.3	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	16.48	17.87	16.89	18.24	18.62	11.77	13.16	12.18	13.53	13.92
	3H	17.57	18.81	17.99	19.20	19.63	12.91	14.15	13.34	14.54	14.97
	4H	17.88	19.04	18.32	19.44	19.89	13.41	14.57	13.86	14.98	15.43
	6H	18.02	19.09	18.48	19.52	19.98	13.91	14.99	14.37	15.41	15.87
	8H	18.04	19.06	18.51	19.50	19.97	14.17	15.19	14.65	15.64	16.10
	12H	18.03	19.01	18.51	19.45	19.94	14.47	15.44	14.94	15.88	16.37
4H	2H	16.46	17.62	16.90	18.03	18.47	12.27	13.43	12.71	13.84	14.28
	3H	17.69	18.66	18.15	19.11	19.58	13.58	14.54	14.04	15.00	15.47
	4H	18.08	18.94	18.56	19.41	19.92	14.18	15.04	14.65	15.51	16.01
	6H	18.31	19.06	18.81	19.56	20.08	14.80	15.55	15.30	16.04	16.57
	8H	18.35	19.05	18.86	19.55	20.08	15.12	15.82	15.63	16.32	16.85
	12H	18.36	18.99	18.89	19.52	20.05	15.49	16.12	16.02	16.65	17.18
8H	4H	18.07	18.77	18.58	19.26	19.79	14.42	15.12	14.93	15.61	16.14
	6H	18.34	18.92	18.89	19.46	20.00	15.14	15.72	15.68	16.26	16.80
	8H	18.42	18.94	18.98	19.49	20.05	15.55	16.07	16.11	16.62	17.18
	12H	18.46	18.92	19.02	19.46	20.09	16.04	16.50	16.59	17.04	17.67
12H	4H	18.04	18.67	18.57	19.20	19.73	14.43	15.06	14.96	15.58	16.12
	6H	18.32	18.84	18.88	19.40	19.95	15.18	15.70	15.74	16.26	16.81
	8H	18.43	18.89	18.98	19.43	20.06	15.64	16.10	16.19	16.64	17.27