

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: P894107

Luminaire Tested: 4MB-SC3-ACL-UNV-CC83-MID-5000K

Issue Date: 11/11/2024

**Test Information**

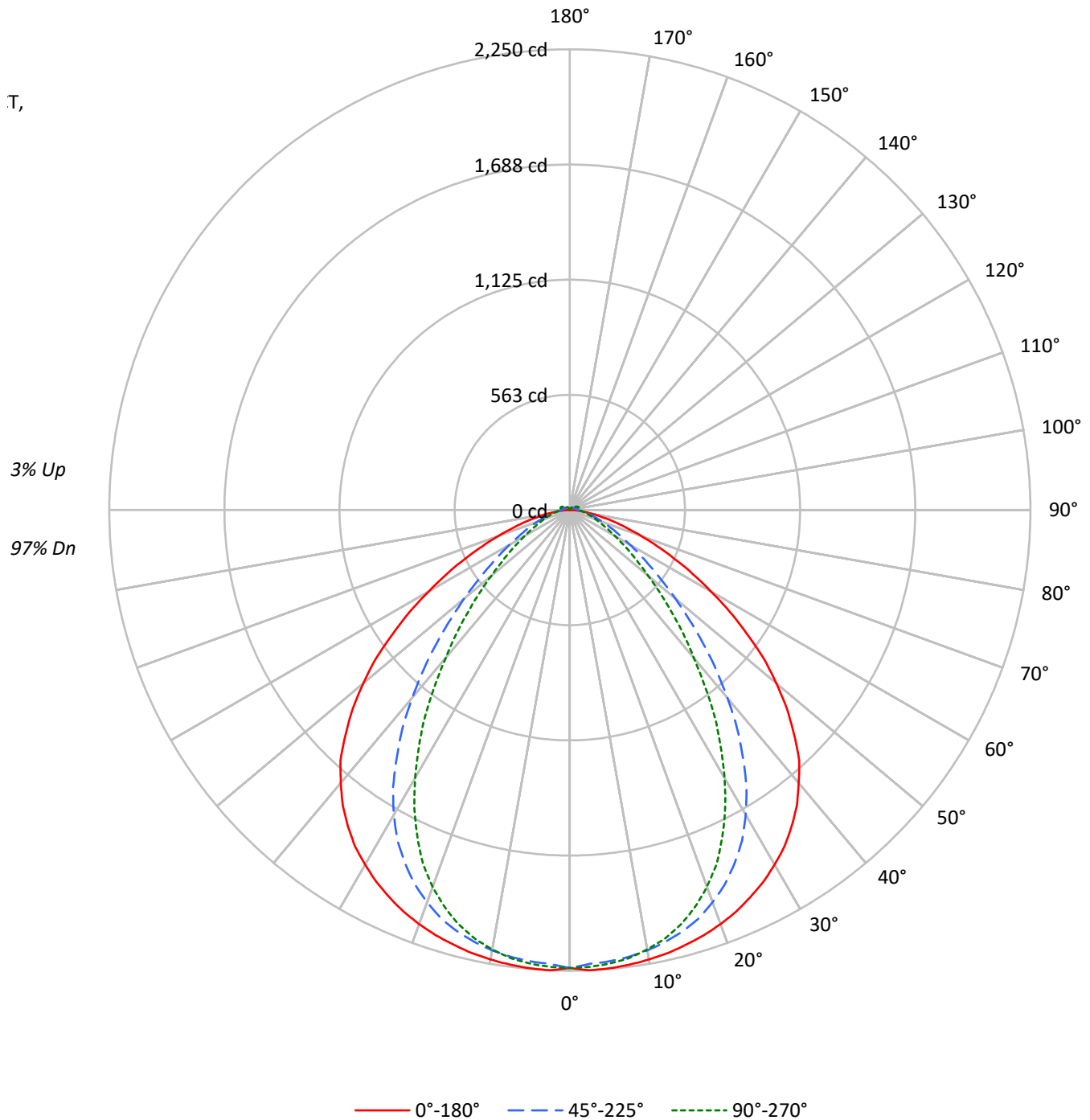
Test Method: LM-79-2019  
Report Number: P894107  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-2404-077-15)  
Test Lab: INNOVATION CENTER  
Issue Date: 11/11/2024  
Manufacturer: COOPER LIGHTING SOLUTIONS  
Product Line: METALUX  
Catalog Number: 4MB-SC3-ACL-UNV-CC83-MID-5000K  
Description: Selectable 4FT MICROBAY LINEAR BAY with AISLE OPTICS WITH CLEAR LENS, 80CRI, 5000K CC  
MID lumen setting  
Light Source: -  
Ballast/Driver: -

**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 4589.0 lumens  
Efficiency: N/A  
Efficacy: 137.0 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): 33.5  
Input Voltage (V): 120  
Input Current (Ain): NR  
Voltage Rise (V): NR  
Power Factor: 0.9948  
Total Harmonic Distortion (THDi): 5.65231997856897  
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°	22782	22782	22782
5°	22927	22164	22129
10°	22968	21683	21352
15°	23037	21119	20380
20°	23149	20343	19050
25°	23217	19266	17280
30°	23240	17785	15055
35°	23140	15716	12593
40°	22731	13276	9911
45°	21855	10717	7685
50°	20346	8315	5766
55°	18214	6365	4410
60°	15648	4894	3359
65°	13049	3861	2670
70°	10438	3097	2182
75°	8310	2495	1858
80°	6092	2059	1625
85°	4186	1751	1496

**MAXIMUM LUMINANCE 45°-90°:**

Horizontal Angle: 0°  
 Vertical Angle: 45°  
 Luminance: 21855 cd/sqm



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	211.9	4.6
10°-20°	603.6	13.2
20°-30°	880.0	19.2
30°-40°	945.5	20.6
40°-50°	786.9	17.1
50°-60°	526.3	11.5
60°-70°	301.3	6.6
70°-80°	149.8	3.3
80°-90°	61.3	1.3
90°-100°	35.6	0.8
100°-110°	31.4	0.7
110°-120°	23.0	0.5
120°-130°	14.8	0.3
130°-140°	8.8	0.2
140°-150°	5.0	0.1
150°-160°	2.5	0.1
160°-170°	1.1	0.0
170°-180°	0.2	0.0
0°-30°	1695.5	36.9
0°-40°	2641.0	57.6
0°-60°	3954.2	86.2
0°-90°	4466.6	97.3
90°-120°	90.0	2.0
90°-150°	118.6	2.6
90°-180°	122.0	2.7
0°-180°	4589.0	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	2237	2237	2237	2237	2237	
5°	2247	2240	2213	2231	2224	214
15°	2197	2182	2130	2114	2095	621
25°	2086	2037	1904	1808	1763	962
35°	1888	1752	1474	1292	1235	1179
45°	1549	1288	920	745	701	1191
55°	1056	762	480	379	360	946
65°	566	384	242	196	185	566
75°	228	166	119	106	102	244
85°	44	50	56	58	59	52
90°	6	21	38	45	46	6
95°	10	21	37	45	46	8
105°	6	17	33	44	46	7
115°	3	10	26	36	39	3
125°	2	6	18	26	29	2
135°	1	5	12	18	20	1
145°	1	4	8	12	14	1
155°	1	3	5	7	9	1
165°	2	3	4	5	6	1
175°	2	2	3	3	3	0
180°	2	2	2	2	2	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	2237.0	2237.0	2237.0	2237.0	2237.0
2.5°	2250.1	2244.2	2218.7	2239.0	2233.1
5°	2246.8	2239.6	2212.9	2231.1	2224.0
7.5°	2239.6	2231.8	2201.1	2215.5	2207.7
10°	2229.2	2219.4	2184.2	2191.3	2178.9
12.5°	2216.1	2203.7	2160.0	2158.1	2144.4
15°	2197.2	2182.2	2130.0	2114.3	2095.4
17.5°	2177.6	2155.4	2091.5	2059.5	2033.4
20°	2152.2	2122.8	2038.6	1991.0	1958.4
22.5°	2122.8	2083.0	1979.3	1906.2	1872.2
25°	2086.3	2036.7	1903.6	1807.6	1762.6
27.5°	2047.1	1981.2	1821.3	1695.4	1643.8
30°	2000.1	1918.6	1718.9	1567.5	1512.0
32.5°	1950.5	1839.0	1606.6	1433.1	1372.4
35°	1888.5	1751.5	1473.5	1292.1	1235.3
37.5°	1821.3	1647.1	1341.7	1147.9	1083.9
40°	1739.8	1536.8	1196.8	1005.0	941.7
42.5°	1658.8	1416.7	1057.8	875.8	820.9
45°	1549.2	1287.5	920.1	744.6	700.9
47.5°	1438.9	1149.2	788.3	638.2	595.1
50°	1316.2	1013.4	672.8	535.8	499.9
52.5°	1196.8	886.8	567.7	452.9	422.2
55°	1056.5	762.2	479.6	379.1	359.6
57.5°	929.9	646.7	404.6	321.1	302.8
60°	796.1	548.2	338.7	271.5	254.5
62.5°	678.7	460.7	285.2	230.4	218.6
65°	565.8	383.7	241.5	195.8	185.3
67.5°	462.0	320.4	203.6	167.1	158.6
70°	370.7	259.7	171.6	142.3	136.4
72.5°	291.7	208.8	142.9	122.7	117.5
75°	227.7	165.8	119.4	105.7	102.5
77.5°	164.4	129.2	99.8	90.7	88.7
80°	116.2	97.9	82.2	78.3	77.0
82.5°	77.0	71.1	67.9	67.9	67.2
85°	44.4	49.6	55.5	58.1	58.7
87.5°	22.8	33.3	44.4	49.6	50.2
90°	6.5	20.9	37.8	45.0	46.3
92.5°	9.8	20.9	37.2	45.0	46.3
95°	9.8	20.9	37.2	45.0	46.3
97.5°	9.1	20.2	37.2	45.0	46.3
100°	8.5	18.9	36.5	45.0	46.3
102.5°	7.2	18.3	35.2	44.4	46.3
105°	6.5	17.0	33.3	43.7	45.7
107.5°	5.9	14.4	31.3	41.8	44.4
110°	4.6	12.4	30.0	39.8	43.1



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**CANDELA DISTRIBUTION (continued):**

	0°	22.5°	45°	67.5°	90°
112.5°	3.9	11.1	28.1	37.8	41.1
115°	3.3	9.8	26.1	35.9	39.2
117.5°	2.6	9.1	23.5	33.3	36.5
120°	2.0	8.5	21.5	31.3	33.9
122.5°	2.0	7.8	18.9	28.7	31.3
125°	2.0	6.5	17.6	26.1	28.7
127.5°	1.3	5.9	15.7	23.5	26.1
130°	1.3	5.9	14.4	21.5	23.5
132.5°	1.3	5.2	13.1	19.6	21.5
135°	1.3	5.2	11.7	17.6	19.6
137.5°	1.3	4.6	10.4	16.3	18.3
140°	1.3	4.6	9.8	14.4	16.3
142.5°	1.3	3.9	8.5	13.7	15.0
145°	1.3	3.9	7.8	11.7	13.7
147.5°	1.3	3.9	7.2	11.1	12.4
150°	1.3	3.3	6.5	9.1	11.1
152.5°	1.3	3.3	5.9	8.5	10.4
155°	1.3	3.3	5.2	7.2	9.1
157.5°	1.3	3.3	5.2	6.5	7.8
160°	2.0	2.6	4.6	5.9	7.2
162.5°	2.0	2.6	3.9	5.2	6.5
165°	2.0	2.6	3.9	4.6	5.9
167.5°	2.0	2.6	3.3	3.9	4.6
170°	2.0	2.0	3.3	3.3	3.3
172.5°	2.0	2.0	2.6	3.3	2.6
175°	2.0	2.0	2.6	2.6	2.6
177.5°	2.0	2.0	2.6	2.6	2.6
180°	2.0	2.0	2.0	2.0	2.0



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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	19.60	20.99	20.01	21.36	21.74	14.89	16.28	15.30	16.65	17.04
	3H	20.69	21.93	21.11	22.32	22.75	16.03	17.27	16.46	17.66	18.09
	4H	21.00	22.16	21.44	22.56	23.01	16.53	17.70	16.98	18.10	18.55
	6H	21.14	22.21	21.60	22.64	23.10	17.03	18.11	17.49	18.53	18.99
	8H	21.16	22.18	21.63	22.62	23.09	17.29	18.31	17.76	18.76	19.22
	12H	21.15	22.13	21.63	22.57	23.06	17.59	18.56	18.06	19.00	19.49
4H	2H	19.58	20.74	20.02	21.15	21.59	15.39	16.55	15.83	16.96	17.40
	3H	20.81	21.77	21.27	22.23	22.70	16.70	17.66	17.16	18.12	18.59
	4H	21.20	22.06	21.68	22.53	23.04	17.30	18.16	17.77	18.63	19.13
	6H	21.43	22.18	21.93	22.68	23.20	17.92	18.67	18.42	19.16	19.69
	8H	21.47	22.17	21.98	22.67	23.20	18.24	18.94	18.75	19.43	19.97
	12H	21.48	22.11	22.01	22.64	23.17	18.61	19.24	19.14	19.77	20.30
8H	4H	21.19	21.89	21.70	22.38	22.91	17.54	18.24	18.05	18.73	19.26
	6H	21.46	22.04	22.01	22.58	23.12	18.26	18.84	18.80	19.38	19.92
	8H	21.54	22.06	22.09	22.61	23.17	18.66	19.19	19.22	19.74	20.29
	12H	21.58	22.04	22.14	22.58	23.21	19.16	19.62	19.71	20.16	20.78
12H	4H	21.16	21.79	21.69	22.32	22.85	17.55	18.18	18.08	18.70	19.24
	6H	21.44	21.96	22.00	22.52	23.07	18.30	18.82	18.86	19.37	19.93
	8H	21.55	22.01	22.10	22.55	23.18	18.76	19.22	19.31	19.76	20.38