

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: P893911

Luminaire Tested: 4MB-8HL-AOL-UNV-L940

Issue Date: 11/11/2024

**Test Information**

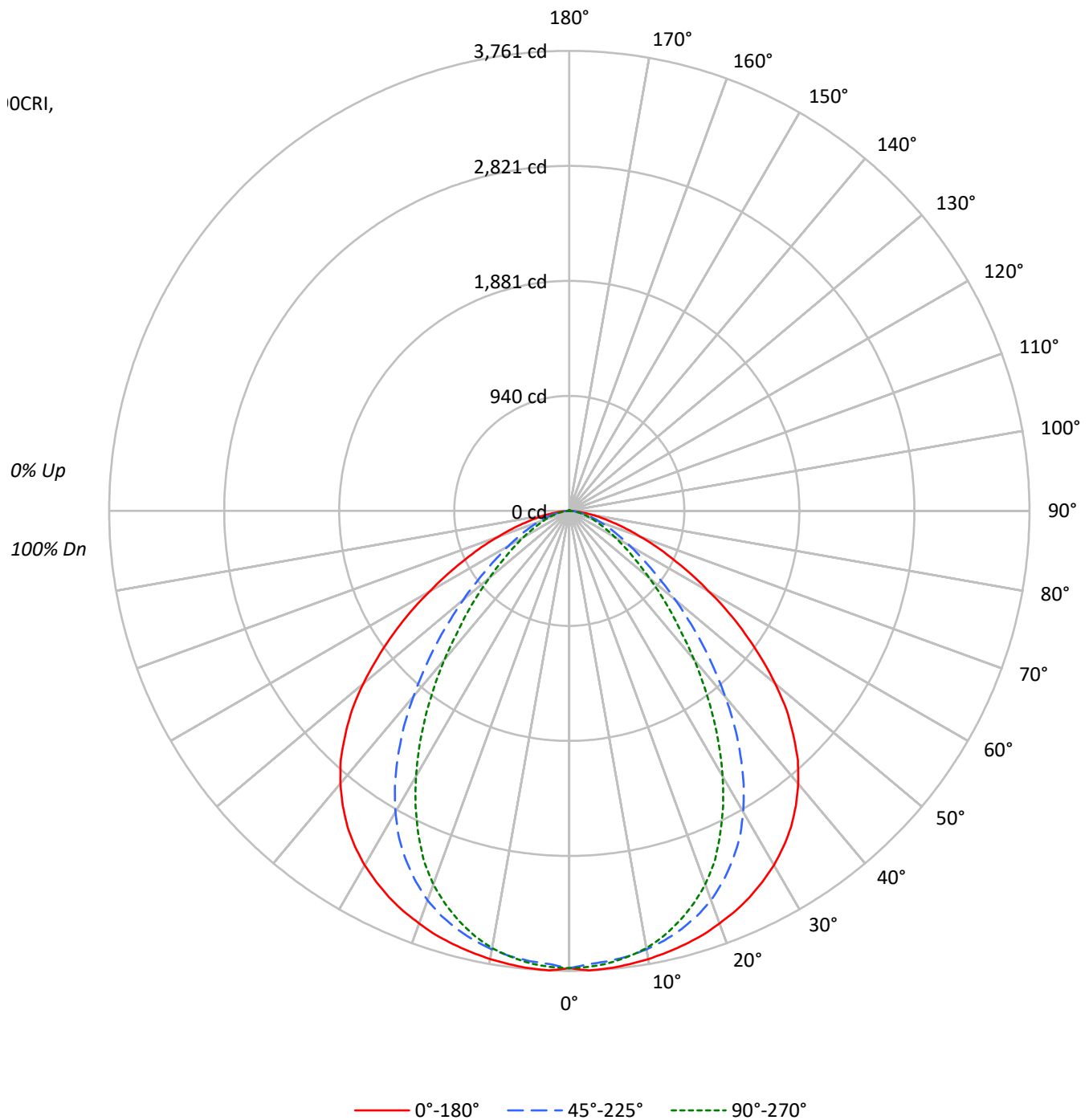
Test Method: LM-79-2019  
Report Number: P893911  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-2404-077-19)  
Test Lab: INNOVATION CENTER  
Issue Date: 11/11/2024  
Manufacturer: COOPER LIGHTING SOLUTIONS  
Product Line: METALUX  
Catalog Number: 4MB-8HL-AOL-UNV-L940  
Description: 8000 Lumen 4FT 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: 7390.0 lumens  
Efficiency: N/A  
Efficacy: 127.6 lumens/watt  
Spacing Criteria (0/90/45): 1.32 / 1.05 / 1.16  
Luminous Opening: Rectangular (W 0.27' x L: 3.98' x H: 0')  
CIE Type: Direct  
  
Input Watts (W): 57.9  
Input Voltage (V): 120  
Input Current (Ain): NR  
Voltage Rise (V): NR  
Power Factor: 0.999  
Total Harmonic Distortion (THDi): 4.23  
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	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	90	85	100	93	88	84	90	86	82	87	83	80	84	81	78	78	78	78	76
3	95	85	78	73	92	84	77	72	81	75	71	78	74	70	76	72	68	68	68	68	67
4	87	77	69	63	85	76	69	63	73	67	62	71	66	61	69	64	61	61	61	61	59
5	81	70	62	56	79	69	61	56	67	60	55	65	59	54	63	58	54	54	54	54	52
6	76	64	56	50	74	63	55	50	61	54	49	59	53	49	58	52	48	48	48	48	46
7	70	58	50	45	69	57	50	45	56	49	44	55	48	44	53	48	44	44	44	44	42
8	66	54	46	40	64	53	45	40	52	45	40	50	44	40	49	44	40	40	40	40	38
9	62	49	42	37	61	49	42	37	48	41	37	47	41	36	46	40	36	36	36	36	34
10	58	46	39	34	57	45	38	34	44	38	33	44	38	33	43	37	33	33	33	33	32

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

	0°	45°	90°
0°	38075	38075	38075
5°	38371	37773	37940
10°	38478	37642	37543
15°	38667	37323	36620
20°	38896	36719	35216
25°	39170	35456	32791
30°	39336	33418	29478
35°	39275	30327	25452
40°	38696	26350	21106
45°	37288	22108	16995
50°	34818	17932	13493
55°	31190	14318	10804
60°	26827	11685	8832
65°	22522	9716	7304
70°	18384	8165	6268
75°	14583	6914	5336
80°	11348	5912	4610
85°	8752	5282	3985

**MAXIMUM LUMINANCE 45°-90°:**

Horizontal Angle: 0°  
 Vertical Angle: 45°  
 Luminance: 37288 cd/sqm



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	353.6	4.8
10°-20°	1003.9	13.6
20°-30°	1460.8	19.8
30°-40°	1570.5	21.3
40°-50°	1311.6	17.7
50°-60°	881.0	11.9
60°-70°	500.5	6.8
70°-80°	228.0	3.1
80°-90°	58.2	0.8
90°-100°	6.5	0.1
100°-110°	4.7	0.1
110°-120°	2.8	0.0
120°-130°	1.9	0.0
130°-140°	1.7	0.0
140°-150°	1.6	0.0
150°-160°	1.4	0.0
160°-170°	1.0	0.0
170°-180°	0.4	0.0
0°-30°	2818.4	38.1
0°-40°	4388.9	59.4
0°-60°	6581.4	89.1
0°-90°	7368.1	99.7
90°-120°	14.0	0.2
90°-150°	19.1	0.3
90°-180°	22.0	0.3
0°-180°	7390.0	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	3739	3739	3739	3739	3739	
5°	3753	3743	3695	3724	3711	357
15°	3667	3638	3540	3512	3473	1037
25°	3486	3385	3155	2992	2918	1607
35°	3159	2906	2439	2147	2047	1971
45°	2589	2135	1535	1256	1180	1990
55°	1757	1263	806	646	608	1570
65°	935	643	403	323	303	939
75°	371	268	176	143	136	407
85°	75	61	45	36	34	85
90°	10	8	6	5	4	9
95°	12	8	5	3	3	10
105°	9	7	4	2	2	9
115°	4	4	2	2	2	5
125°	3	2	2	2	2	3
135°	2	2	2	2	2	2
145°	2	2	3	3	2	1
155°	2	3	3	3	3	1
165°	3	3	4	4	4	1
175°	3	4	4	4	4	0
180°	4	4	4	4	4	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	3738.6	3738.6	3738.6	3738.6	3738.6
2.5°	3760.8	3750.4	3708.2	3740.8	3731.9
5°	3753.4	3743.0	3694.9	3724.5	3711.2
7.5°	3739.3	3729.0	3672.6	3694.1	3676.3
10°	3720.8	3706.0	3640.0	3645.9	3630.4
12.5°	3696.3	3674.1	3596.3	3585.9	3561.4
15°	3667.4	3637.8	3539.9	3511.8	3473.2
17.5°	3634.1	3591.1	3471.8	3412.5	3370.2
20°	3588.9	3534.0	3388.0	3293.9	3249.4
22.5°	3542.2	3467.3	3279.8	3155.3	3101.9
25°	3485.8	3385.0	3155.3	2991.5	2918.1
27.5°	3418.4	3292.4	3015.2	2809.1	2721.7
30°	3345.0	3183.4	2841.7	2604.6	2506.7
32.5°	3256.8	3055.2	2652.0	2380.7	2279.2
35°	3159.0	2905.5	2439.3	2147.2	2047.2
37.5°	3040.4	2732.0	2218.4	1908.6	1812.2
40°	2910.7	2553.4	1982.0	1671.4	1587.6
42.5°	2764.7	2347.4	1752.2	1453.5	1363.1
45°	2589.0	2135.4	1535.0	1255.6	1180.0
47.5°	2409.6	1901.2	1318.6	1065.1	1011.0
50°	2197.6	1681.0	1131.8	907.2	851.6
52.5°	1977.5	1464.6	957.6	770.1	720.4
55°	1756.6	1263.0	806.4	646.3	608.5
57.5°	1541.7	1077.7	678.2	546.3	513.6
60°	1317.1	914.6	573.7	460.3	433.6
62.5°	1124.4	773.1	481.8	387.6	365.4
65°	934.6	642.6	403.2	323.2	303.1
67.5°	775.3	530.7	334.3	268.3	251.3
70°	617.4	432.1	274.2	221.6	210.5
72.5°	492.2	344.7	222.4	180.1	169.0
75°	370.6	267.6	175.7	143.1	135.6
77.5°	278.7	203.1	135.6	111.2	103.0
80°	193.5	145.3	100.8	82.3	78.6
82.5°	123.8	100.1	69.7	58.6	54.1
85°	74.9	60.8	45.2	36.3	34.1
87.5°	35.6	29.6	23.0	17.8	16.3
90°	9.6	8.2	5.9	5.2	4.4
92.5°	11.1	8.2	5.2	3.7	3.0
95°	11.9	8.2	5.2	3.0	3.0
97.5°	11.9	8.9	4.4	3.0	2.2
100°	11.1	8.2	4.4	3.0	2.2
102.5°	9.6	7.4	3.7	2.2	2.2
105°	8.9	6.7	3.7	2.2	1.5
107.5°	7.4	5.9	3.0	2.2	1.5
110°	6.7	5.2	3.0	2.2	1.5



TEST NUMBER: P893911

CATALOG NUMBER: 4MB-8HL-AOL-UNV-L940

**CANDELA DISTRIBUTION (continued):**

	0°	22.5°	45°	67.5°	90°
112.5°	5.2	4.4	3.0	2.2	1.5
115°	4.4	3.7	2.2	1.5	1.5
117.5°	3.7	3.0	2.2	1.5	1.5
120°	3.7	3.0	2.2	1.5	1.5
122.5°	3.0	3.0	2.2	1.5	1.5
125°	3.0	2.2	2.2	1.5	1.5
127.5°	2.2	2.2	2.2	1.5	1.5
130°	2.2	2.2	2.2	2.2	1.5
132.5°	2.2	2.2	2.2	2.2	1.5
135°	2.2	2.2	2.2	2.2	2.2
137.5°	2.2	2.2	2.2	2.2	2.2
140°	2.2	2.2	2.2	2.2	2.2
142.5°	2.2	2.2	3.0	2.2	2.2
145°	2.2	2.2	3.0	3.0	2.2
147.5°	2.2	2.2	3.0	3.0	3.0
150°	2.2	2.2	3.0	3.0	3.0
152.5°	2.2	3.0	3.0	3.0	3.0
155°	2.2	3.0	3.0	3.0	3.0
157.5°	3.0	3.0	3.0	3.7	3.7
160°	3.0	3.0	3.7	3.7	3.7
162.5°	3.0	3.0	3.7	3.7	3.7
165°	3.0	3.0	3.7	4.4	4.4
167.5°	3.0	3.7	3.7	4.4	4.4
170°	3.0	3.7	3.7	4.4	4.4
172.5°	3.0	3.7	4.4	4.4	4.4
175°	3.0	3.7	4.4	4.4	4.4
177.5°	3.7	3.7	4.4	4.4	4.4
180°	4.4	4.4	4.4	4.4	4.4



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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	22.95	24.38	23.32	24.70	25.02	17.62	19.06	17.99	19.38	19.70
	3H	24.26	25.54	24.65	25.88	26.25	18.63	19.91	19.02	20.25	20.62
	4H	24.68	25.87	25.09	26.23	26.62	18.98	20.17	19.38	20.53	20.92
	6H	24.94	26.04	25.36	26.42	26.82	19.20	20.31	19.62	20.68	21.08
	8H	25.00	26.05	25.44	26.45	26.86	19.27	20.32	19.71	20.71	21.12
	12H	25.04	26.04	25.47	26.42	26.86	19.31	20.31	19.75	20.70	21.14
4H	2H	22.94	24.13	23.35	24.49	24.88	18.27	19.46	18.68	19.82	20.21
	3H	24.41	25.40	24.83	25.80	26.21	19.46	20.45	19.88	20.85	21.26
	4H	24.92	25.80	25.36	26.23	26.68	19.88	20.76	20.32	21.19	21.64
	6H	25.29	26.06	25.76	26.51	26.98	20.20	20.96	20.66	21.41	21.88
	8H	25.39	26.10	25.86	26.56	27.03	20.29	21.00	20.76	21.45	21.93
	12H	25.46	26.09	25.95	26.58	27.06	20.36	20.99	20.84	21.48	21.96
8H	4H	24.90	25.61	25.37	26.07	26.54	20.22	20.94	20.69	21.39	21.86
	6H	25.32	25.91	25.83	26.41	26.89	20.62	21.20	21.12	21.70	22.19
	8H	25.46	25.99	25.98	26.51	27.00	20.76	21.29	21.28	21.80	22.30
	12H	25.58	26.05	26.10	26.54	27.12	20.88	21.34	21.39	21.84	22.42
12H	4H	24.87	25.51	25.36	25.99	26.47	20.27	20.90	20.76	21.39	21.87
	6H	25.29	25.81	25.81	26.33	26.83	20.68	21.21	21.21	21.73	22.23
	8H	25.46	25.93	25.98	26.43	27.00	20.87	21.34	21.39	21.84	22.41