

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: P893160

Luminaire Tested: 4MB-10HL-AOL-UNV-L950

Issue Date: 11/11/2024

Test Information

Test Method: LM-79-2019
Report Number: P893160
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-10HL-AOL-UNV-L950
Description: 10000 Lumen 4FT MICROBAY LINEAR BAY with AISLE OPTICS WITH CLEAR LENS NO UPLIGHT, 5000K CCT
Light Source: -
Ballast/Driver: -

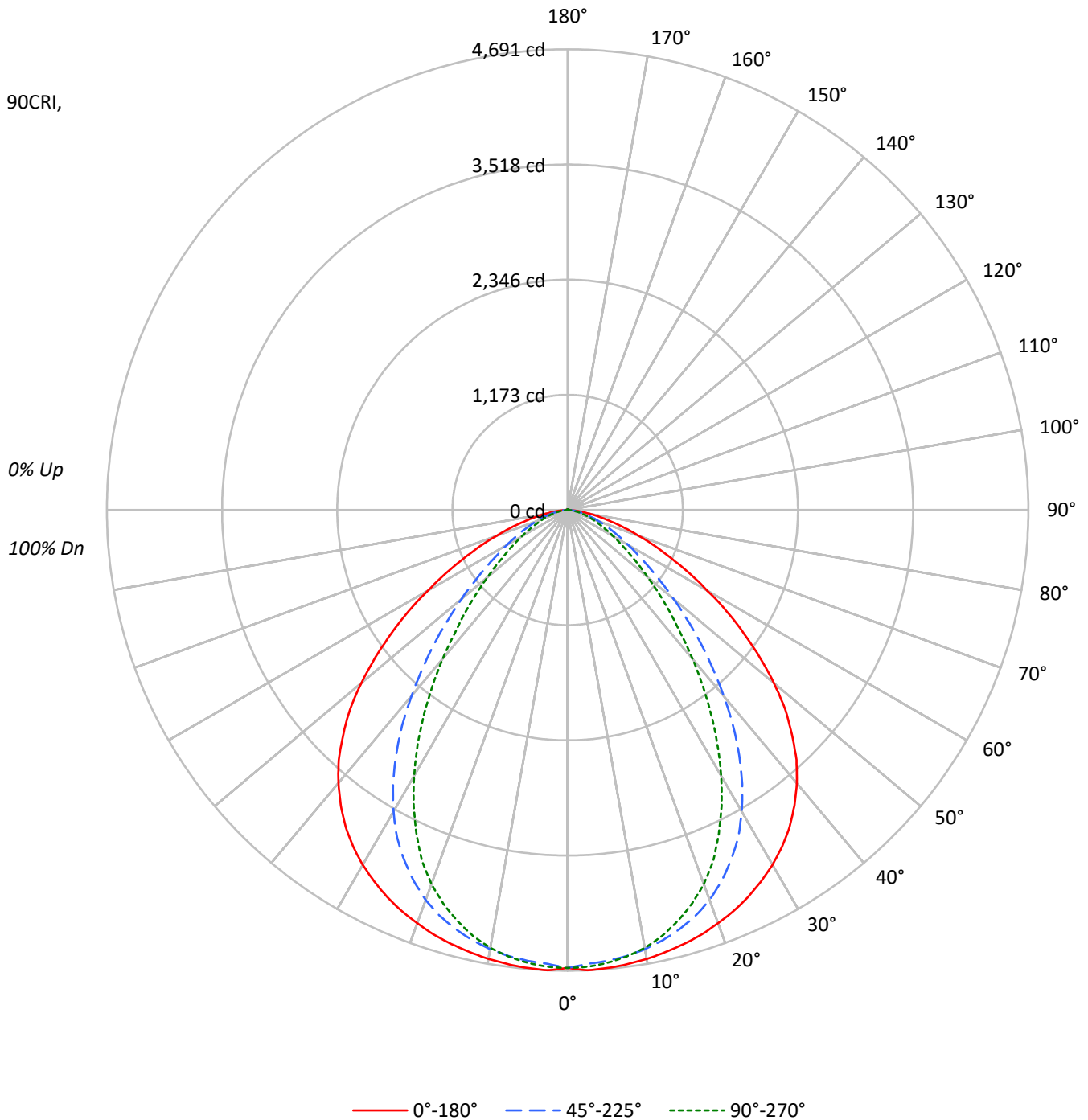
Summary

Lumens per Lamp: N/A
Luminaire Lumens: 9218.0 lumens
Efficiency: N/A
Efficacy: 122.1 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): 75.5
Input Voltage (V): 120
Input Current (A_{in}): NR
Voltage Rise (V): NR
Power Factor: 0.997
Total Harmonic Distortion (THDi): 7.45
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°	47493	47493	47493
5°	47864	47116	47325
10°	47996	46954	46830
15°	48232	46556	45679
20°	48517	45802	43928
25°	48860	44227	40902
30°	49066	41685	36770
35°	48990	37829	31748
40°	48268	32867	26329
45°	46512	27577	21199
50°	43433	22368	16831
55°	38906	17860	13477
60°	33463	14576	11017
65°	28093	12119	9111
70°	22931	10187	7819
75°	18191	8621	6658
80°	14152	7372	5748
85°	10914	6590	4966

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
 Vertical Angle: 45°
 Luminance: 46512 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	441.1	4.8
10°-20°	1252.2	13.6
20°-30°	1822.2	19.8
30°-40°	1958.9	21.3
40°-50°	1636.0	17.7
50°-60°	1098.9	11.9
60°-70°	624.3	6.8
70°-80°	284.4	3.1
80°-90°	72.6	0.8
90°-100°	8.1	0.1
100°-110°	5.9	0.1
110°-120°	3.4	0.0
120°-130°	2.4	0.0
130°-140°	2.1	0.0
140°-150°	2.0	0.0
150°-160°	1.7	0.0
160°-170°	1.3	0.0
170°-180°	0.5	0.0
0°-30°	3515.6	38.1
0°-40°	5474.5	59.4
0°-60°	8209.4	89.1
0°-90°	9190.6	99.7
90°-120°	17.4	0.2
90°-150°	23.9	0.3
90°-180°	27.0	0.3
0°-180°	9218.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	4663	4663	4663	4663	4663	
5°	4682	4669	4609	4646	4629	445
15°	4575	4538	4416	4380	4332	1293
25°	4348	4222	3936	3731	3640	2004
35°	3940	3624	3043	2678	2554	2459
45°	3229	2664	1915	1566	1472	2482
55°	2191	1575	1006	806	759	1958
65°	1166	802	503	403	378	1171
75°	462	334	219	178	169	508
85°	93	76	56	45	42	106
90°	12	10	7	6	6	11
95°	15	10	6	4	4	12
105°	11	8	5	3	2	12
115°	6	5	3	2	2	6
125°	4	3	3	2	2	3
135°	3	3	3	3	3	2
145°	3	3	4	4	3	2
155°	3	4	4	4	4	1
165°	4	4	5	6	6	1
175°	4	5	6	6	6	0
180°	6	6	6	6	6	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	4663.4	4663.4	4663.4	4663.4	4663.4
2.5°	4691.1	4678.2	4625.5	4666.1	4655.0
5°	4681.9	4668.9	4608.8	4645.8	4629.2
7.5°	4664.3	4651.4	4581.1	4607.9	4585.7
10°	4641.2	4622.7	4540.4	4547.8	4528.4
12.5°	4610.7	4582.9	4485.9	4472.9	4442.4
15°	4574.6	4537.6	4415.6	4380.5	4332.4
17.5°	4533.0	4479.4	4330.5	4256.6	4203.9
20°	4476.6	4408.2	4226.1	4108.6	4053.2
22.5°	4418.4	4325.0	4091.1	3935.8	3869.2
25°	4348.1	4222.4	3935.8	3731.4	3639.9
27.5°	4264.0	4106.8	3761.0	3504.0	3394.9
30°	4172.4	3970.9	3544.7	3248.8	3126.8
32.5°	4062.4	3810.9	3308.0	2969.6	2843.0
35°	3940.4	3624.2	3042.7	2678.4	2553.6
37.5°	3792.5	3407.8	2767.1	2380.7	2260.5
40°	3630.7	3185.0	2472.2	2084.8	1980.4
42.5°	3448.5	2928.0	2185.6	1813.0	1700.2
45°	3229.4	2663.6	1914.7	1566.2	1471.9
47.5°	3005.7	2371.4	1644.8	1328.6	1261.1
50°	2741.3	2096.9	1411.8	1131.6	1062.3
52.5°	2466.7	1826.9	1194.5	960.6	898.7
55°	2191.2	1575.4	1005.9	806.2	759.0
57.5°	1923.0	1344.3	846.0	681.4	640.7
60°	1642.9	1140.9	715.6	574.1	540.9
62.5°	1402.5	964.3	600.9	483.5	455.8
65°	1165.8	801.6	502.9	403.1	378.1
67.5°	967.1	662.0	417.0	334.7	313.4
70°	770.1	539.0	342.1	276.4	262.6
72.5°	613.9	429.9	277.4	224.7	210.8
75°	462.3	333.8	219.1	178.4	169.2
77.5°	347.6	253.3	169.2	138.7	128.5
80°	241.3	181.2	125.7	102.6	98.0
82.5°	154.4	124.8	86.9	73.0	67.5
85°	93.4	75.8	56.4	45.3	42.5
87.5°	44.4	37.0	28.7	22.2	20.3
90°	12.0	10.2	7.4	6.5	5.5
92.5°	13.9	10.2	6.5	4.6	3.7
95°	14.8	10.2	6.5	3.7	3.7
97.5°	14.8	11.1	5.5	3.7	2.8
100°	13.9	10.2	5.5	3.7	2.8
102.5°	12.0	9.2	4.6	2.8	2.8
105°	11.1	8.3	4.6	2.8	1.8
107.5°	9.2	7.4	3.7	2.8	1.8
110°	8.3	6.5	3.7	2.8	1.8



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CANDELA DISTRIBUTION (continued):

	0°	22.5°	45°	67.5°	90°
112.5°	6.5	5.5	3.7	2.8	1.8
115°	5.5	4.6	2.8	1.8	1.8
117.5°	4.6	3.7	2.8	1.8	1.8
120°	4.6	3.7	2.8	1.8	1.8
122.5°	3.7	3.7	2.8	1.8	1.8
125°	3.7	2.8	2.8	1.8	1.8
127.5°	2.8	2.8	2.8	1.8	1.8
130°	2.8	2.8	2.8	2.8	1.8
132.5°	2.8	2.8	2.8	2.8	1.8
135°	2.8	2.8	2.8	2.8	2.8
137.5°	2.8	2.8	2.8	2.8	2.8
140°	2.8	2.8	2.8	2.8	2.8
142.5°	2.8	2.8	3.7	2.8	2.8
145°	2.8	2.8	3.7	3.7	2.8
147.5°	2.8	2.8	3.7	3.7	3.7
150°	2.8	2.8	3.7	3.7	3.7
152.5°	2.8	3.7	3.7	3.7	3.7
155°	2.8	3.7	3.7	3.7	3.7
157.5°	3.7	3.7	3.7	4.6	4.6
160°	3.7	3.7	4.6	4.6	4.6
162.5°	3.7	3.7	4.6	4.6	4.6
165°	3.7	3.7	4.6	5.5	5.5
167.5°	3.7	4.6	4.6	5.5	5.5
170°	3.7	4.6	4.6	5.5	5.5
172.5°	3.7	4.6	5.5	5.5	5.5
175°	3.7	4.6	5.5	5.5	5.5
177.5°	4.6	4.6	5.5	5.5	5.5
180°	5.5	5.5	5.5	5.5	5.5



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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	23.71	25.15	24.08	25.47	25.79	18.39	19.83	18.76	20.15	20.47
	3H	25.03	26.31	25.41	26.64	27.01	19.40	20.68	19.79	21.02	21.39
	4H	25.45	26.64	25.85	27.00	27.39	19.74	20.94	20.15	21.30	21.68
	6H	25.71	26.81	26.13	27.18	27.58	19.97	21.07	20.39	21.45	21.85
	8H	25.77	26.82	26.20	27.21	27.62	20.04	21.09	20.47	21.48	21.89
	12H	25.80	26.80	26.24	27.19	27.63	20.08	21.08	20.52	21.47	21.91
4H	2H	23.71	24.90	24.11	25.26	25.65	19.04	20.23	19.44	20.59	20.98
	3H	25.18	26.16	25.60	26.57	26.98	20.23	21.21	20.65	21.62	22.03
	4H	25.69	26.57	26.13	27.00	27.44	20.65	21.53	21.09	21.95	22.40
	6H	26.06	26.82	26.52	27.27	27.74	20.96	21.73	21.43	22.18	22.65
	8H	26.16	26.87	26.63	27.32	27.80	21.06	21.77	21.53	22.22	22.70
	12H	26.23	26.86	26.71	27.35	27.83	21.12	21.76	21.61	22.24	22.72
8H	4H	25.67	26.38	26.14	26.83	27.31	20.99	21.70	21.46	22.16	22.63
	6H	26.09	26.68	26.59	27.18	27.66	21.39	21.97	21.89	22.47	22.96
	8H	26.23	26.76	26.75	27.27	27.77	21.53	22.05	22.05	22.57	23.07
	12H	26.35	26.81	26.86	27.31	27.89	21.64	22.11	22.16	22.61	23.18
12H	4H	25.64	26.28	26.13	26.76	27.24	21.04	21.67	21.53	22.16	22.64
	6H	26.05	26.58	26.58	27.10	27.60	21.45	21.98	21.97	22.50	22.99
	8H	26.23	26.70	26.75	27.19	27.77	21.64	22.11	22.16	22.61	23.18