

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: P893815

Luminaire Tested: 4MB-7HL-AOL-UNV-L940

Issue Date: 11/11/2024

Test Information

Test Method: LM-79-2019
Report Number: P893815
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-7HL-AOL-UNV-L940
Description: 7000 Lumen 4FT MICROBAY LINEAR BAY with AISLE OPTICS WITH CLEAR LENS NO UPLIGHT, 9
4000K CCT
Light Source: -
Ballast/Driver: -

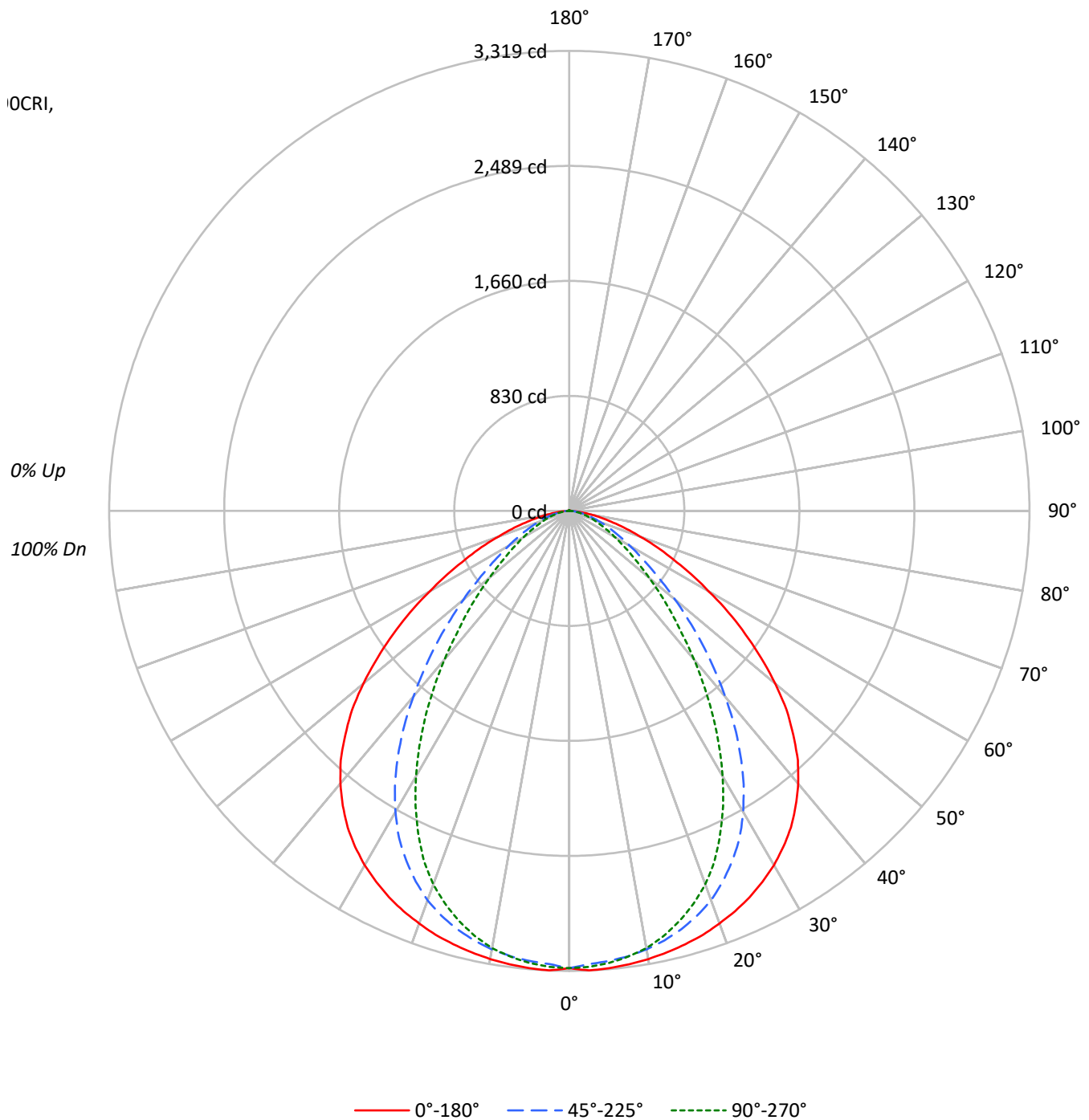
Summary

Lumens per Lamp: N/A
Luminaire Lumens: 6521.0 lumens
Efficiency: N/A
Efficacy: 125.9 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): 51.8
Input Voltage (V): 120
Input Current (A_{in}): NR
Voltage Rise (V): NR
Power Factor: 0.99
Total Harmonic Distortion (THDi): 4
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°	33598	33598	33598
5°	33859	33331	33479
10°	33954	33216	33128
15°	34121	32935	32314
20°	34321	32401	31075
25°	34564	31286	28934
30°	34711	29489	26012
35°	34656	26760	22458
40°	34146	23251	18624
45°	32904	19508	14996
50°	30724	15823	11907
55°	27523	12635	9535
60°	23672	10310	7793
65°	19874	8574	6446
70°	16222	7206	5530
75°	12867	6099	4710
80°	10011	5214	4064
85°	7724	4662	3517

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
 Vertical Angle: 45°
 Luminance: 32904 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	312.1	4.8
10°-20°	885.9	13.6
20°-30°	1289.0	19.8
30°-40°	1385.8	21.3
40°-50°	1157.3	17.7
50°-60°	777.4	11.9
60°-70°	441.6	6.8
70°-80°	201.2	3.1
80°-90°	51.4	0.8
90°-100°	5.7	0.1
100°-110°	4.2	0.1
110°-120°	2.4	0.0
120°-130°	1.7	0.0
130°-140°	1.5	0.0
140°-150°	1.4	0.0
150°-160°	1.2	0.0
160°-170°	0.9	0.0
170°-180°	0.3	0.0
0°-30°	2487.0	38.1
0°-40°	3872.8	59.4
0°-60°	5807.5	89.1
0°-90°	6501.6	99.7
90°-120°	12.3	0.2
90°-150°	17.0	0.3
90°-180°	19.0	0.3
0°-180°	6521.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	3299	3299	3299	3299	3299	
5°	3312	3303	3260	3286	3275	315
15°	3236	3210	3124	3099	3065	915
25°	3076	2987	2784	2640	2575	1418
35°	2788	2564	2152	1895	1806	1739
45°	2285	1884	1354	1108	1041	1756
55°	1550	1114	712	570	537	1385
65°	825	567	356	285	268	829
75°	327	236	155	126	120	360
85°	66	54	40	32	30	75
90°	8	7	5	5	4	8
95°	10	7	5	3	3	8
105°	8	6	3	2	1	8
115°	4	3	2	1	1	4
125°	3	2	2	1	1	2
135°	2	2	2	2	2	2
145°	2	2	3	3	2	1
155°	2	3	3	3	3	1
165°	3	3	3	4	4	1
175°	3	3	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°	3299.0	3299.0	3299.0	3299.0	3299.0
2.5°	3318.6	3309.4	3272.1	3300.9	3293.1
5°	3312.0	3302.9	3260.4	3286.5	3274.8
7.5°	3299.6	3290.5	3240.8	3259.7	3244.0
10°	3283.3	3270.2	3212.0	3217.2	3203.5
12.5°	3261.7	3242.1	3173.4	3164.2	3142.6
15°	3236.2	3210.0	3123.7	3098.8	3064.8
17.5°	3206.7	3168.8	3063.5	3011.2	2973.9
20°	3166.8	3118.4	2989.6	2906.5	2867.3
22.5°	3125.6	3059.6	2894.1	2784.2	2737.1
25°	3075.9	2987.0	2784.2	2639.7	2574.9
27.5°	3016.4	2905.2	2660.6	2478.8	2401.6
30°	2951.7	2809.1	2507.6	2298.3	2212.0
32.5°	2873.8	2695.9	2340.1	2100.8	2011.2
35°	2787.5	2563.8	2152.4	1894.7	1806.4
37.5°	2682.9	2410.8	1957.5	1684.1	1599.1
40°	2568.4	2253.2	1748.9	1474.9	1400.9
42.5°	2439.6	2071.3	1546.1	1282.6	1202.8
45°	2284.6	1884.3	1354.5	1107.9	1041.2
47.5°	2126.3	1677.6	1163.5	939.9	892.1
50°	1939.2	1483.4	998.7	800.5	751.5
52.5°	1745.0	1292.4	845.0	679.5	635.7
55°	1550.1	1114.5	711.6	570.3	537.0
57.5°	1360.4	951.0	598.4	482.0	453.2
60°	1162.2	807.1	506.2	406.2	382.6
62.5°	992.2	682.2	425.1	342.1	322.4
65°	824.7	567.0	355.8	285.2	267.5
67.5°	684.1	468.3	295.0	236.8	221.7
70°	544.8	381.3	242.0	195.6	185.7
72.5°	434.3	304.1	196.2	158.9	149.1
75°	327.0	236.1	155.0	126.2	119.7
77.5°	245.9	179.2	119.7	98.1	90.9
80°	170.7	128.2	88.9	72.6	69.3
82.5°	109.2	88.3	61.5	51.7	47.7
85°	66.1	53.6	39.9	32.0	30.1
87.5°	31.4	26.2	20.3	15.7	14.4
90°	8.5	7.2	5.2	4.6	3.9
92.5°	9.8	7.2	4.6	3.3	2.6
95°	10.5	7.2	4.6	2.6	2.6
97.5°	10.5	7.8	3.9	2.6	2.0
100°	9.8	7.2	3.9	2.6	2.0
102.5°	8.5	6.5	3.3	2.0	2.0
105°	7.8	5.9	3.3	2.0	1.3
107.5°	6.5	5.2	2.6	2.0	1.3
110°	5.9	4.6	2.6	2.0	1.3



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CANDELA DISTRIBUTION (continued):

	0°	22.5°	45°	67.5°	90°
112.5°	4.6	3.9	2.6	2.0	1.3
115°	3.9	3.3	2.0	1.3	1.3
117.5°	3.3	2.6	2.0	1.3	1.3
120°	3.3	2.6	2.0	1.3	1.3
122.5°	2.6	2.6	2.0	1.3	1.3
125°	2.6	2.0	2.0	1.3	1.3
127.5°	2.0	2.0	2.0	1.3	1.3
130°	2.0	2.0	2.0	2.0	1.3
132.5°	2.0	2.0	2.0	2.0	1.3
135°	2.0	2.0	2.0	2.0	2.0
137.5°	2.0	2.0	2.0	2.0	2.0
140°	2.0	2.0	2.0	2.0	2.0
142.5°	2.0	2.0	2.6	2.0	2.0
145°	2.0	2.0	2.6	2.6	2.0
147.5°	2.0	2.0	2.6	2.6	2.6
150°	2.0	2.0	2.6	2.6	2.6
152.5°	2.0	2.6	2.6	2.6	2.6
155°	2.0	2.6	2.6	2.6	2.6
157.5°	2.6	2.6	2.6	3.3	3.3
160°	2.6	2.6	3.3	3.3	3.3
162.5°	2.6	2.6	3.3	3.3	3.3
165°	2.6	2.6	3.3	3.9	3.9
167.5°	2.6	3.3	3.3	3.9	3.9
170°	2.6	3.3	3.3	3.9	3.9
172.5°	2.6	3.3	3.9	3.9	3.9
175°	2.6	3.3	3.9	3.9	3.9
177.5°	3.3	3.3	3.9	3.9	3.9
180°	3.9	3.9	3.9	3.9	3.9



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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	22.51	23.95	22.88	24.27	24.59	17.19	18.62	17.56	18.94	19.27
	3H	23.83	25.11	24.21	25.44	25.81	18.20	19.48	18.58	19.81	20.18
	4H	24.24	25.44	24.65	25.80	26.18	18.54	19.74	18.95	20.09	20.48
	6H	24.51	25.61	24.92	25.98	26.38	18.77	19.87	19.19	20.25	20.65
	8H	24.57	25.61	25.00	26.01	26.42	18.84	19.88	19.27	20.28	20.69
	12H	24.60	25.60	25.04	25.99	26.43	18.88	19.88	19.31	20.27	20.70
4H	2H	22.51	23.70	22.91	24.06	24.44	17.83	19.03	18.24	19.39	19.77
	3H	23.98	24.96	24.39	25.37	25.78	19.03	20.01	19.44	20.42	20.83
	4H	24.49	25.37	24.93	25.79	26.24	19.45	20.33	19.89	20.75	21.20
	6H	24.86	25.62	25.32	26.07	26.54	19.76	20.52	20.23	20.97	21.44
	8H	24.96	25.67	25.43	26.12	26.60	19.85	20.57	20.32	21.02	21.49
	12H	25.02	25.66	25.51	26.14	26.62	19.92	20.55	20.41	21.04	21.52
8H	4H	24.47	25.18	24.94	25.63	26.11	19.79	20.50	20.26	20.95	21.43
	6H	24.89	25.47	25.39	25.97	26.46	20.18	20.77	20.69	21.27	21.75
	8H	25.03	25.55	25.55	26.07	26.57	20.32	20.85	20.85	21.37	21.86
	12H	25.14	25.61	25.66	26.11	26.68	20.44	20.91	20.96	21.41	21.98
12H	4H	24.44	25.07	24.93	25.56	26.04	19.83	20.47	20.32	20.95	21.43
	6H	24.85	25.38	25.37	25.90	26.39	20.25	20.78	20.77	21.29	21.79
	8H	25.03	25.49	25.54	25.99	26.57	20.44	20.90	20.96	21.40	21.98