

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: P893814

Luminaire Tested: 4MB-7HL-AOL-UNV-L935

Issue Date: 11/11/2024

Test Information

Test Method: LM-79-2019
Report Number: P893814
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-L935
Description: 7000 Lumen 4FT MICROBAY LINEAR BAY with AISLE OPTICS WITH CLEAR LENS NO UPLIGHT, 9
3500K CCT
Light Source: -
Ballast/Driver: -

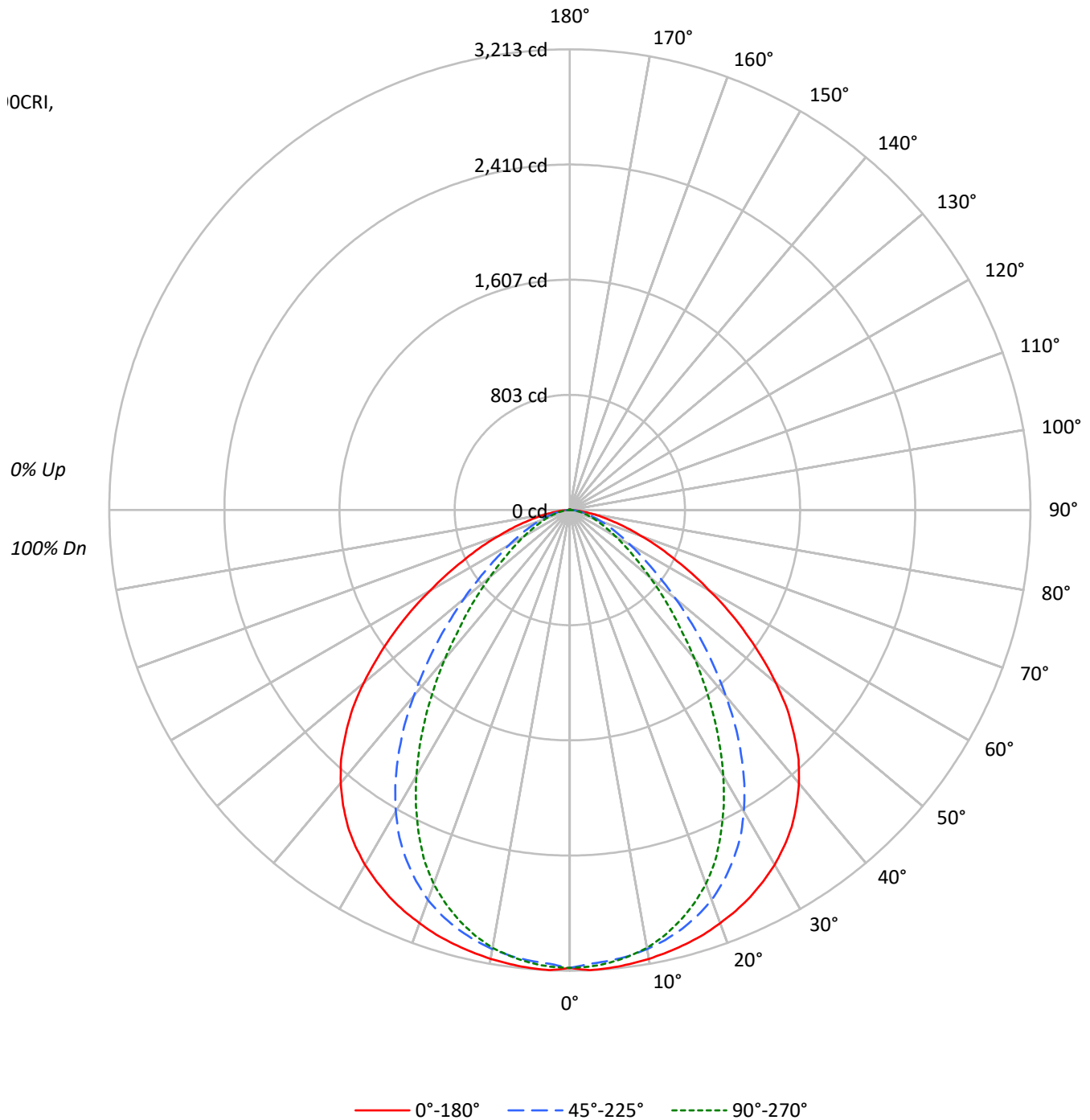
Summary

Lumens per Lamp: N/A
Luminaire Lumens: 6313.0 lumens
Efficiency: N/A
Efficacy: 121.9 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				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°	32525	32525	32525
5°	32779	32268	32410
10°	32870	32156	32072
15°	33033	31883	31284
20°	33227	31367	30084
25°	33462	30288	28012
30°	33603	28548	25182
35°	33551	25907	21742
40°	33057	22509	18031
45°	31854	18886	14518
50°	29745	15319	11526
55°	26644	12232	9229
60°	22919	9983	7544
65°	19240	8299	6241
70°	15704	6977	5354
75°	12458	5906	4561
80°	9695	5050	3935
85°	7478	4510	3400

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
 Vertical Angle: 45°
 Luminance: 31854 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	302.1	4.8
10°-20°	857.6	13.6
20°-30°	1247.9	19.8
30°-40°	1341.6	21.3
40°-50°	1120.4	17.7
50°-60°	752.6	11.9
60°-70°	427.5	6.8
70°-80°	194.8	3.1
80°-90°	49.7	0.8
90°-100°	5.6	0.1
100°-110°	4.0	0.1
110°-120°	2.4	0.0
120°-130°	1.6	0.0
130°-140°	1.4	0.0
140°-150°	1.3	0.0
150°-160°	1.2	0.0
160°-170°	0.9	0.0
170°-180°	0.3	0.0
0°-30°	2407.6	38.1
0°-40°	3749.2	59.4
0°-60°	5622.2	89.1
0°-90°	6294.3	99.7
90°-120°	11.9	0.2
90°-150°	16.4	0.3
90°-180°	19.0	0.3
0°-180°	6313.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	3194	3194	3194	3194	3194	
5°	3206	3198	3156	3182	3170	305
15°	3133	3108	3024	3000	2967	885
25°	2978	2892	2695	2556	2493	1373
35°	2699	2482	2084	1834	1749	1684
45°	2212	1824	1311	1073	1008	1700
55°	1501	1079	689	552	520	1341
65°	798	549	344	276	259	802
75°	317	229	150	122	116	348
85°	64	52	39	31	29	73
90°	8	7	5	4	4	8
95°	10	7	4	2	2	8
105°	8	6	3	2	1	8
115°	4	3	2	1	1	4
125°	2	2	2	1	1	2
135°	2	2	2	2	2	1
145°	2	2	2	2	2	1
155°	2	2	2	2	2	1
165°	2	2	3	4	4	1
175°	2	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°	3193.7	3193.7	3193.7	3193.7	3193.7
2.5°	3212.7	3203.9	3167.8	3195.6	3188.0
5°	3206.4	3197.5	3156.4	3181.7	3170.3
7.5°	3194.4	3185.5	3137.4	3155.7	3140.5
10°	3178.5	3165.9	3109.5	3114.6	3101.3
12.5°	3157.6	3138.6	3072.2	3063.3	3042.4
15°	3133.0	3107.6	3024.0	3000.0	2967.1
17.5°	3104.5	3067.7	2965.8	2915.1	2879.0
20°	3065.8	3019.0	2894.2	2813.8	2775.8
22.5°	3025.9	2962.0	2801.8	2695.4	2649.8
25°	2977.8	2891.7	2695.4	2555.5	2492.8
27.5°	2920.2	2812.6	2575.8	2399.7	2325.0
30°	2857.5	2719.5	2427.6	2225.0	2141.4
32.5°	2782.2	2609.9	2265.5	2033.8	1947.0
35°	2698.6	2482.0	2083.8	1834.3	1748.8
37.5°	2597.3	2333.9	1895.1	1630.4	1548.1
40°	2486.5	2181.3	1693.1	1427.8	1356.3
42.5°	2361.7	2005.3	1496.8	1241.7	1164.4
45°	2211.7	1824.2	1311.3	1072.6	1008.0
47.5°	2058.5	1624.1	1126.4	909.9	863.7
50°	1877.4	1436.0	966.9	775.0	727.5
52.5°	1689.3	1251.2	818.1	657.9	615.4
55°	1500.6	1078.9	688.9	552.1	519.8
57.5°	1317.0	920.6	579.4	466.7	438.8
60°	1125.2	781.3	490.1	393.2	370.4
62.5°	960.5	660.4	411.6	331.2	312.2
65°	798.4	549.0	344.4	276.1	259.0
67.5°	662.3	453.4	285.6	229.2	214.6
70°	527.4	369.1	234.3	189.3	179.8
72.5°	420.4	294.4	190.0	153.9	144.4
75°	316.6	228.6	150.1	122.2	115.9
77.5°	238.1	173.5	115.9	95.0	88.0
80°	165.3	124.1	86.1	70.3	67.1
82.5°	105.7	85.5	59.5	50.0	46.2
85°	64.0	51.9	38.6	31.0	29.1
87.5°	30.4	25.3	19.6	15.2	13.9
90°	8.2	7.0	5.1	4.4	3.8
92.5°	9.5	7.0	4.4	3.2	2.5
95°	10.1	7.0	4.4	2.5	2.5
97.5°	10.1	7.6	3.8	2.5	1.9
100°	9.5	7.0	3.8	2.5	1.9
102.5°	8.2	6.3	3.2	1.9	1.9
105°	7.6	5.7	3.2	1.9	1.3
107.5°	6.3	5.1	2.5	1.9	1.3
110°	5.7	4.4	2.5	1.9	1.3



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CANDELA DISTRIBUTION (continued):

	0°	22.5°	45°	67.5°	90°
112.5°	4.4	3.8	2.5	1.9	1.3
115°	3.8	3.2	1.9	1.3	1.3
117.5°	3.2	2.5	1.9	1.3	1.3
120°	3.2	2.5	1.9	1.3	1.3
122.5°	2.5	2.5	1.9	1.3	1.3
125°	2.5	1.9	1.9	1.3	1.3
127.5°	1.9	1.9	1.9	1.3	1.3
130°	1.9	1.9	1.9	1.9	1.3
132.5°	1.9	1.9	1.9	1.9	1.3
135°	1.9	1.9	1.9	1.9	1.9
137.5°	1.9	1.9	1.9	1.9	1.9
140°	1.9	1.9	1.9	1.9	1.9
142.5°	1.9	1.9	2.5	1.9	1.9
145°	1.9	1.9	2.5	2.5	1.9
147.5°	1.9	1.9	2.5	2.5	2.5
150°	1.9	1.9	2.5	2.5	2.5
152.5°	1.9	2.5	2.5	2.5	2.5
155°	1.9	2.5	2.5	2.5	2.5
157.5°	2.5	2.5	2.5	3.2	3.2
160°	2.5	2.5	3.2	3.2	3.2
162.5°	2.5	2.5	3.2	3.2	3.2
165°	2.5	2.5	3.2	3.8	3.8
167.5°	2.5	3.2	3.2	3.8	3.8
170°	2.5	3.2	3.2	3.8	3.8
172.5°	2.5	3.2	3.8	3.8	3.8
175°	2.5	3.2	3.8	3.8	3.8
177.5°	3.2	3.2	3.8	3.8	3.8
180°	3.8	3.8	3.8	3.8	3.8



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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	22.40	23.83	22.77	24.15	24.48	17.08	18.51	17.45	18.83	19.15
	3H	23.71	24.99	24.10	25.33	25.70	18.09	19.37	18.47	19.70	20.07
	4H	24.13	25.33	24.54	25.68	26.07	18.43	19.62	18.84	19.98	20.37
	6H	24.39	25.49	24.81	25.87	26.27	18.66	19.76	19.08	20.13	20.53
	8H	24.46	25.50	24.89	25.90	26.31	18.73	19.77	19.16	20.17	20.58
	12H	24.49	25.49	24.92	25.88	26.31	18.76	19.77	19.20	20.15	20.59
4H	2H	22.39	23.59	22.80	23.94	24.33	17.72	18.92	18.13	19.27	19.66
	3H	23.86	24.85	24.28	25.26	25.67	18.92	19.90	19.33	20.31	20.72
	4H	24.38	25.26	24.81	25.68	26.13	19.33	20.22	19.77	20.64	21.09
	6H	24.74	25.51	25.21	25.96	26.43	19.65	20.41	20.11	20.86	21.33
	8H	24.84	25.56	25.31	26.01	26.48	19.74	20.45	20.21	20.91	21.38
	12H	24.91	25.55	25.40	26.03	26.51	19.81	20.44	20.30	20.93	21.41
8H	4H	24.35	25.07	24.82	25.52	25.99	19.68	20.39	20.15	20.84	21.32
	6H	24.77	25.36	25.28	25.86	26.35	20.07	20.66	20.57	21.16	21.64
	8H	24.91	25.44	25.44	25.96	26.46	20.21	20.74	20.73	21.26	21.75
	12H	25.03	25.50	25.55	26.00	26.57	20.33	20.79	20.85	21.29	21.87
12H	4H	24.33	24.96	24.81	25.45	25.93	19.72	20.36	20.21	20.84	21.32
	6H	24.74	25.27	25.26	25.79	26.28	20.14	20.66	20.66	21.18	21.68
	8H	24.91	25.38	25.43	25.88	26.45	20.33	20.79	20.84	21.29	21.87