

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: P893799

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

Issue Date: 11/11/2024

Test Information

Test Method: LM-79-2019
Report Number: P893799
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-2404-077-21)
Test Lab: INNOVATION CENTER
Issue Date: 11/11/2024
Manufacturer: COOPER LIGHTING SOLUTIONS
Product Line: METALUX
Catalog Number: 4MB-7HL-A-UNV-L940
Description: 7000 Lumen 4FT MICROBAY LINEAR BAY with AISLE OPTIC, 90CRI, 4000K CCT
Light Source: -
Ballast/Driver: -

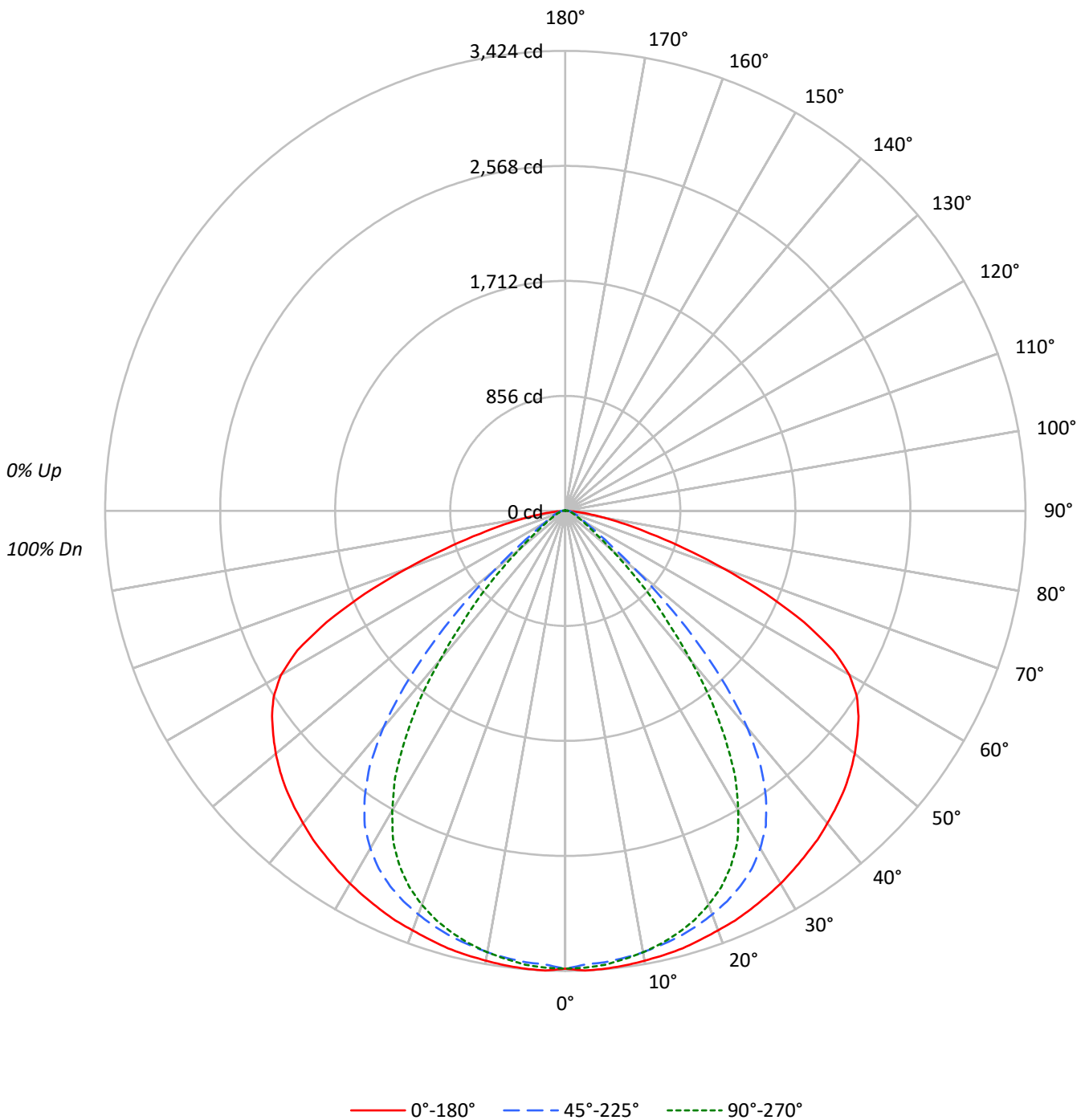
Summary

Lumens per Lamp: N/A
Luminaire Lumens: 6899.0 lumens
Efficiency: N/A
Efficacy: 133.2 lumens/watt
Spacing Criteria (0/90/45): 1.41 / 1.14 / 1.22
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	104	101	108	105	102	99	101	98	96	97	95	93	93	91	90	90	90	90	88
2	103	96	90	86	100	94	89	85	91	86	83	88	84	81	85	82	79	79	79	79	77
3	95	86	80	74	93	85	79	74	82	77	72	79	75	71	77	73	70	70	70	70	68
4	88	78	71	65	86	77	70	64	74	68	64	72	67	63	70	66	62	62	62	62	60
5	82	71	63	57	80	70	63	57	68	61	56	66	60	56	64	59	55	55	55	55	53
6	76	65	57	51	75	64	56	51	62	55	50	60	55	50	59	54	50	50	50	50	48
7	71	59	51	46	70	58	51	46	57	50	45	56	50	45	54	49	45	45	45	45	43
8	67	55	47	42	65	54	47	41	53	46	41	51	45	41	50	45	41	41	41	41	39
9	63	50	43	38	61	50	43	38	49	42	38	48	42	37	47	41	37	37	37	37	35
10	59	47	39	35	58	46	39	35	45	39	34	44	38	34	43	38	34	34	34	34	32

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	34698	34698	34698
5°	34968	34467	34666
10°	35152	34493	34500
15°	35541	34577	34278
20°	36010	34642	33811
25°	36743	34629	32769
30°	37672	34113	30272
35°	38827	32357	25839
40°	40345	28024	19325
45°	42270	20165	12866
50°	44540	11051	7050
55°	47296	5431	4059
60°	49744	3581	2807
65°	47213	2933	2219
70°	37164	2665	2052
75°	25773	2636	1952
80°	16961	2645	2416
85°	9710	4066	4137

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
 Vertical Angle: 60°
 Luminance: 49744 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	323.1	4.7
10°-20°	932.6	13.5
20°-30°	1420.7	20.6
30°-40°	1613.5	23.4
40°-50°	1295.6	18.8
50°-60°	695.0	10.1
60°-70°	367.6	5.3
70°-80°	166.6	2.4
80°-90°	53.1	0.8
90°-100°	16.4	0.2
100°-110°	5.9	0.1
110°-120°	1.8	0.0
120°-130°	1.3	0.0
130°-140°	1.4	0.0
140°-150°	1.5	0.0
150°-160°	1.4	0.0
160°-170°	1.0	0.0
170°-180°	0.4	0.0
0°-30°	2676.4	38.8
0°-40°	4289.9	62.2
0°-60°	6280.4	91.0
0°-90°	6867.7	99.5
90°-120°	24.1	0.3
90°-150°	28.4	0.4
90°-180°	31.0	0.4
0°-180°	6899.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	3407	3407	3407	3407	3407	
5°	3420	3413	3372	3400	3391	326
15°	3371	3350	3280	3270	3251	953
25°	3270	3218	3082	2974	2916	1511
35°	3123	2990	2603	2225	2078	1960
45°	2935	2483	1400	974	893	2267
55°	2664	994	306	239	229	2375
65°	1959	231	122	98	92	1895
75°	655	132	67	53	50	741
85°	83	50	35	35	35	113
90°	3	22	25	29	28	5
95°	3	9	20	17	17	3
105°	2	1	4	9	11	2
115°	1	1	1	3	3	1
125°	1	1	1	2	1	1
135°	2	1	2	2	2	1
145°	2	2	3	3	3	1
155°	3	3	3	4	3	1
165°	3	3	4	4	4	1
175°	3	3	4	5	4	0
180°	4	4	4	4	4	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	3407.0	3407.0	3407.0	3407.0	3407.0
2.5°	3424.4	3417.9	3379.3	3411.5	3403.1
5°	3420.5	3413.4	3371.5	3399.9	3390.9
7.5°	3412.1	3403.1	3356.1	3379.3	3365.1
10°	3399.2	3390.2	3335.5	3351.6	3336.1
12.5°	3386.4	3370.9	3308.4	3313.6	3298.8
15°	3370.9	3349.7	3279.5	3270.4	3251.1
17.5°	3347.1	3323.2	3241.5	3220.2	3193.2
20°	3322.6	3290.4	3196.4	3153.2	3119.7
22.5°	3300.1	3255.6	3144.8	3075.9	3030.9
25°	3269.8	3217.6	3081.7	2974.2	2916.2
27.5°	3236.9	3173.2	3003.8	2842.8	2773.9
30°	3203.5	3119.7	2900.8	2677.9	2574.2
32.5°	3164.2	3061.1	2777.1	2478.3	2355.9
35°	3123.0	2990.3	2602.6	2225.2	2078.3
37.5°	3083.7	2908.5	2387.5	1918.0	1787.9
40°	3034.7	2813.2	2107.9	1588.2	1453.6
42.5°	2986.4	2666.3	1773.0	1272.0	1143.2
45°	2934.9	2483.4	1400.1	973.8	893.3
47.5°	2876.3	2232.9	1024.7	709.1	639.5
50°	2811.2	1872.2	697.5	483.0	445.0
52.5°	2739.7	1450.4	453.4	333.0	311.1
55°	2663.7	993.8	305.9	238.9	228.6
57.5°	2572.3	622.8	226.7	179.7	173.9
60°	2442.2	403.8	175.8	144.9	137.8
62.5°	2246.4	289.2	147.5	118.5	112.7
65°	1959.2	231.2	121.7	98.5	92.1
67.5°	1615.3	197.7	104.3	84.4	79.9
70°	1248.1	173.9	89.5	73.4	68.9
72.5°	931.3	152.0	77.3	63.8	58.0
75°	655.0	132.0	67.0	52.8	49.6
77.5°	460.5	114.0	55.4	45.1	44.4
80°	289.2	94.7	45.1	41.9	41.2
82.5°	175.8	74.7	39.3	38.6	38.0
85°	83.1	49.6	34.8	34.8	35.4
87.5°	27.0	32.8	29.6	30.9	30.9
90°	3.2	22.5	25.1	29.0	27.7
92.5°	3.2	16.1	23.2	23.2	18.7
95°	3.2	9.0	20.0	17.4	16.7
97.5°	3.2	4.5	14.8	16.7	16.1
100°	3.2	2.6	10.9	14.8	16.1
102.5°	2.6	1.9	7.1	12.2	13.5
105°	1.9	1.3	3.9	9.0	10.9
107.5°	1.3	1.3	2.6	6.4	7.7
110°	1.3	0.6	1.9	4.5	5.2



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CANDELA DISTRIBUTION (continued):

	0°	22.5°	45°	67.5°	90°
112.5°	1.3	0.6	1.9	3.2	3.2
115°	1.3	1.3	1.3	2.6	2.6
117.5°	1.3	1.3	1.3	1.9	1.9
120°	1.3	1.3	1.3	1.9	1.3
122.5°	1.3	1.3	1.3	1.9	1.3
125°	1.3	1.3	1.3	1.9	1.3
127.5°	1.3	1.3	1.9	1.9	1.3
130°	1.3	1.3	1.9	1.9	1.3
132.5°	1.3	1.3	1.9	1.9	1.9
135°	1.9	1.3	1.9	1.9	1.9
137.5°	1.9	1.9	1.9	2.6	1.9
140°	1.9	1.9	2.6	2.6	1.9
142.5°	1.9	1.9	2.6	2.6	2.6
145°	1.9	1.9	2.6	2.6	2.6
147.5°	1.9	1.9	2.6	3.2	2.6
150°	1.9	2.6	3.2	3.2	2.6
152.5°	1.9	2.6	3.2	3.2	3.2
155°	2.6	2.6	3.2	3.9	3.2
157.5°	2.6	2.6	3.2	3.9	3.2
160°	2.6	2.6	3.9	3.9	3.9
162.5°	2.6	3.2	3.9	4.5	3.9
165°	2.6	3.2	3.9	4.5	3.9
167.5°	2.6	3.2	3.9	4.5	4.5
170°	2.6	3.2	4.5	4.5	4.5
172.5°	3.2	3.2	4.5	5.2	4.5
175°	3.2	3.2	4.5	5.2	4.5
177.5°	3.2	3.2	4.5	5.2	4.5
180°	4.5	4.5	4.5	4.5	4.5



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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	21.99	23.38	22.36	23.70	24.03	10.20	11.59	10.57	11.91	12.24
	3H	24.89	26.12	25.27	26.46	26.83	11.16	12.39	11.55	12.73	13.11
	4H	25.67	26.82	26.08	27.18	27.57	11.58	12.73	11.99	13.09	13.48
	6H	26.11	27.17	26.53	27.54	27.95	12.06	13.12	12.48	13.49	13.90
	8H	26.21	27.21	26.64	27.61	28.03	12.37	13.37	12.80	13.77	14.19
	12H	26.24	27.21	26.68	27.60	28.04	12.77	13.73	13.21	14.12	14.56
4H	2H	21.80	22.95	22.21	23.31	23.70	10.72	11.87	11.13	12.23	12.62
	3H	24.72	25.66	25.14	26.07	26.49	11.93	12.87	12.35	13.28	13.70
	4H	25.51	26.36	25.95	26.78	27.24	12.46	13.31	12.91	13.74	14.19
	6H	26.04	26.77	26.51	27.22	27.70	13.10	13.83	13.57	14.28	14.76
	8H	26.18	26.87	26.66	27.32	27.80	13.50	14.18	13.98	14.64	15.12
	12H	26.26	26.87	26.76	27.36	27.84	14.03	14.64	14.52	15.13	15.61
8H	4H	25.40	26.08	25.87	26.54	27.02	13.03	13.71	13.50	14.16	14.64
	6H	25.93	26.49	26.44	26.99	27.48	13.80	14.36	14.31	14.86	15.35
	8H	26.10	26.60	26.62	27.12	27.62	14.32	14.83	14.85	15.35	15.85
	12H	26.21	26.66	26.74	27.16	27.74	15.02	15.47	15.54	15.97	16.55
12H	4H	25.36	25.96	25.85	26.45	26.94	13.27	13.88	13.77	14.37	14.85
	6H	25.88	26.38	26.40	26.90	27.40	14.07	14.58	14.60	15.10	15.60
	8H	26.07	26.51	26.59	27.02	27.60	14.67	15.12	15.19	15.62	16.20