

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: P893813

Luminaire Tested: 4MB-7HL-AOL-UNV-L930

Issue Date: 11/11/2024

Test Information

Test Method: LM-79-2019
Report Number: P893813
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-L930
Description: 7000 Lumen 4FT MICROBAY LINEAR BAY with AISLE OPTICS WITH CLEAR LENS NO UPLIGHT, 9
3000K CCT
Light Source: -
Ballast/Driver: -

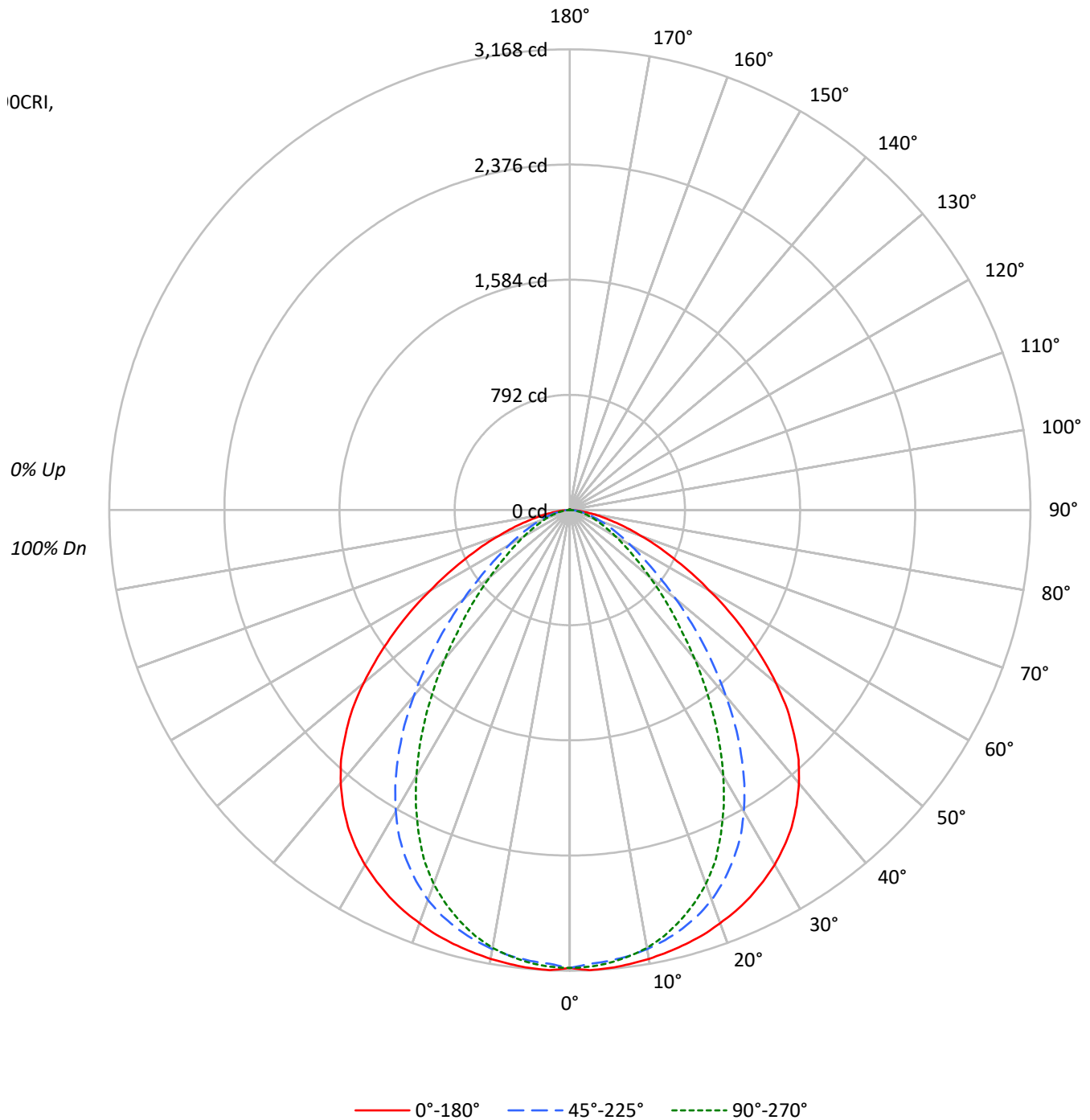
Summary

Lumens per Lamp: N/A
Luminaire Lumens: 6225.0 lumens
Efficiency: N/A
Efficacy: 120.2 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 (Ain): 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

TEST NUMBER: P893813
CATALOG NUMBER: 4MB-7HL-AOL-UNV-L930

Luminous Intensity Polar Plot





TEST NUMBER: P893813

CATALOG NUMBER: 4MB-7HL-AOL-UNV-L930

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°	32072	32072	32072
5°	32322	31818	31958
10°	32412	31709	31625
15°	32572	31440	30847
20°	32764	30930	29664
25°	32995	29867	27622
30°	33135	28150	24831
35°	33083	25545	21440
40°	32596	22195	17780
45°	31411	18623	14316
50°	29330	15105	11366
55°	26273	12061	9102
60°	22599	9842	7439
65°	18972	8184	6155
70°	15487	6878	5279
75°	12285	5824	4498
80°	9560	4979	3883
85°	7373	4452	3354

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
 Vertical Angle: 45°
 Luminance: 31411 cd/sqm



TEST NUMBER: P893813

CATALOG NUMBER: 4MB-7HL-AOL-UNV-L930

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	297.9	4.8
10°-20°	845.7	13.6
20°-30°	1230.5	19.8
30°-40°	1322.9	21.3
40°-50°	1104.8	17.7
50°-60°	742.1	11.9
60°-70°	421.6	6.8
70°-80°	192.1	3.1
80°-90°	49.0	0.8
90°-100°	5.5	0.1
100°-110°	4.0	0.1
110°-120°	2.3	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°	2374.1	38.1
0°-40°	3697.0	59.4
0°-60°	5543.9	89.1
0°-90°	6206.5	99.7
90°-120°	11.8	0.2
90°-150°	16.2	0.3
90°-180°	19.0	0.3
0°-180°	6225.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	3149	3149	3149	3149	3149	
5°	3162	3153	3112	3137	3126	301
15°	3089	3064	2982	2958	2926	873
25°	2936	2851	2658	2520	2458	1353
35°	2661	2447	2055	1809	1724	1660
45°	2181	1799	1293	1058	994	1676
55°	1480	1064	679	544	513	1322
65°	787	541	340	272	255	791
75°	312	225	148	120	114	343
85°	63	51	38	31	29	72
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	



TEST NUMBER: P893813

CATALOG NUMBER: 4MB-7HL-AOL-UNV-L930

CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	3149.2	3149.2	3149.2	3149.2	3149.2
2.5°	3167.9	3159.2	3123.6	3151.1	3143.6
5°	3161.7	3153.0	3112.4	3137.4	3126.1
7.5°	3149.8	3141.1	3093.6	3111.8	3096.8
10°	3134.2	3121.7	3066.2	3071.2	3058.1
12.5°	3113.6	3094.9	3029.3	3020.6	3000.0
15°	3089.3	3064.3	2981.9	2958.2	2925.7
17.5°	3061.2	3025.0	2924.5	2874.5	2838.9
20°	3023.1	2976.9	2853.9	2774.6	2737.1
22.5°	2983.8	2920.7	2762.7	2657.9	2612.9
25°	2936.3	2851.4	2657.9	2519.9	2458.1
27.5°	2879.5	2773.4	2539.9	2366.3	2292.6
30°	2817.7	2681.6	2393.8	2194.0	2111.5
32.5°	2743.4	2573.6	2233.9	2005.4	1919.9
35°	2661.0	2447.4	2054.7	1808.7	1724.5
37.5°	2561.1	2301.4	1868.7	1607.7	1526.5
40°	2451.8	2150.9	1669.5	1407.9	1337.4
42.5°	2328.8	1977.3	1476.0	1224.3	1148.2
45°	2180.9	1798.7	1293.0	1057.6	994.0
47.5°	2029.8	1601.5	1110.7	897.2	851.6
50°	1851.2	1416.0	953.4	764.2	717.4
52.5°	1665.8	1233.7	806.7	648.7	606.9
55°	1479.7	1063.9	679.3	544.4	512.6
57.5°	1298.6	907.8	571.3	460.1	432.7
60°	1109.5	770.4	483.2	387.7	365.2
62.5°	947.1	651.2	405.8	326.5	307.8
65°	787.3	541.3	339.6	272.2	255.4
67.5°	653.1	447.0	281.6	226.0	211.7
70°	520.1	364.0	231.0	186.7	177.3
72.5°	414.6	290.3	187.3	151.7	142.4
75°	312.2	225.4	148.0	120.5	114.3
77.5°	234.8	171.1	114.3	93.7	86.8
80°	163.0	122.4	84.9	69.3	66.2
82.5°	104.3	84.3	58.7	49.3	45.6
85°	63.1	51.2	38.1	30.6	28.7
87.5°	30.0	25.0	19.4	15.0	13.7
90°	8.1	6.9	5.0	4.4	3.7
92.5°	9.4	6.9	4.4	3.1	2.5
95°	10.0	6.9	4.4	2.5	2.5
97.5°	10.0	7.5	3.7	2.5	1.9
100°	9.4	6.9	3.7	2.5	1.9
102.5°	8.1	6.2	3.1	1.9	1.9
105°	7.5	5.6	3.1	1.9	1.2
107.5°	6.2	5.0	2.5	1.9	1.2
110°	5.6	4.4	2.5	1.9	1.2



TEST NUMBER: P893813

CATALOG NUMBER: 4MB-7HL-AOL-UNV-L930

CANDELA DISTRIBUTION (continued):

	0°	22.5°	45°	67.5°	90°
112.5°	4.4	3.7	2.5	1.9	1.2
115°	3.7	3.1	1.9	1.2	1.2
117.5°	3.1	2.5	1.9	1.2	1.2
120°	3.1	2.5	1.9	1.2	1.2
122.5°	2.5	2.5	1.9	1.2	1.2
125°	2.5	1.9	1.9	1.2	1.2
127.5°	1.9	1.9	1.9	1.2	1.2
130°	1.9	1.9	1.9	1.9	1.2
132.5°	1.9	1.9	1.9	1.9	1.2
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	3.1	3.1
160°	2.5	2.5	3.1	3.1	3.1
162.5°	2.5	2.5	3.1	3.1	3.1
165°	2.5	2.5	3.1	3.7	3.7
167.5°	2.5	3.1	3.1	3.7	3.7
170°	2.5	3.1	3.1	3.7	3.7
172.5°	2.5	3.1	3.7	3.7	3.7
175°	2.5	3.1	3.7	3.7	3.7
177.5°	3.1	3.1	3.7	3.7	3.7
180°	3.7	3.7	3.7	3.7	3.7



TEST NUMBER: P893813
 CATALOG NUMBER: 4MB-7HL-AOL-UNV-L930

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	22.35	23.78	22.72	24.10	24.43	17.03	18.46	17.40	18.78	19.10
	3H	23.67	24.94	24.05	25.28	25.65	18.04	19.32	18.42	19.65	20.02
	4H	24.08	25.28	24.49	25.63	26.02	18.38	19.58	18.79	19.93	20.32
	6H	24.34	25.45	24.76	25.82	26.22	18.61	19.71	19.03	20.08	20.48
	8H	24.41	25.45	24.84	25.85	26.26	18.68	19.72	19.11	20.12	20.53
	12H	24.44	25.44	24.88	25.83	26.27	18.72	19.72	19.15	20.11	20.54
4H	2H	22.34	23.54	22.75	23.89	24.28	17.67	18.87	18.08	19.22	19.61
	3H	23.82	24.80	24.23	25.21	25.62	18.87	19.85	19.28	20.26	20.67
	4H	24.33	25.21	24.77	25.63	26.08	19.29	20.17	19.72	20.59	21.04
	6H	24.70	25.46	25.16	25.91	26.38	19.60	20.36	20.06	20.81	21.28
	8H	24.79	25.51	25.27	25.96	26.44	19.69	20.41	20.16	20.86	21.33
	12H	24.86	25.50	25.35	25.98	26.46	19.76	20.39	20.25	20.88	21.36
8H	4H	24.31	25.02	24.78	25.47	25.95	19.63	20.34	20.10	20.79	21.27
	6H	24.73	25.31	25.23	25.81	26.30	20.02	20.61	20.53	21.11	21.59
	8H	24.87	25.39	25.39	25.91	26.41	20.16	20.69	20.68	21.21	21.70
	12H	24.98	25.45	25.50	25.95	26.52	20.28	20.75	20.80	21.24	21.82
12H	4H	24.28	24.91	24.77	25.40	25.88	19.67	20.31	20.16	20.79	21.27
	6H	24.69	25.22	25.21	25.74	26.23	20.09	20.62	20.61	21.13	21.63
	8H	24.87	25.33	25.38	25.83	26.40	20.28	20.74	20.79	21.24	21.82