

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: P893805

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

Issue Date: 11/11/2024

Test Information

Test Method: LM-79-2019
Report Number: P893805
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-2404-077-20)
Test Lab: INNOVATION CENTER
Issue Date: 11/11/2024
Manufacturer: COOPER LIGHTING SOLUTIONS
Product Line: METALUX
Catalog Number: 4MB-7HL-ACL-UNV-L930
Description: 7000 Lumen 4FT MICROBAY LINEAR BAY with AISLE OPTICS WITH CLEAR LENS, 90CRI, 3000K (C)
Light Source: -
Ballast/Driver: -

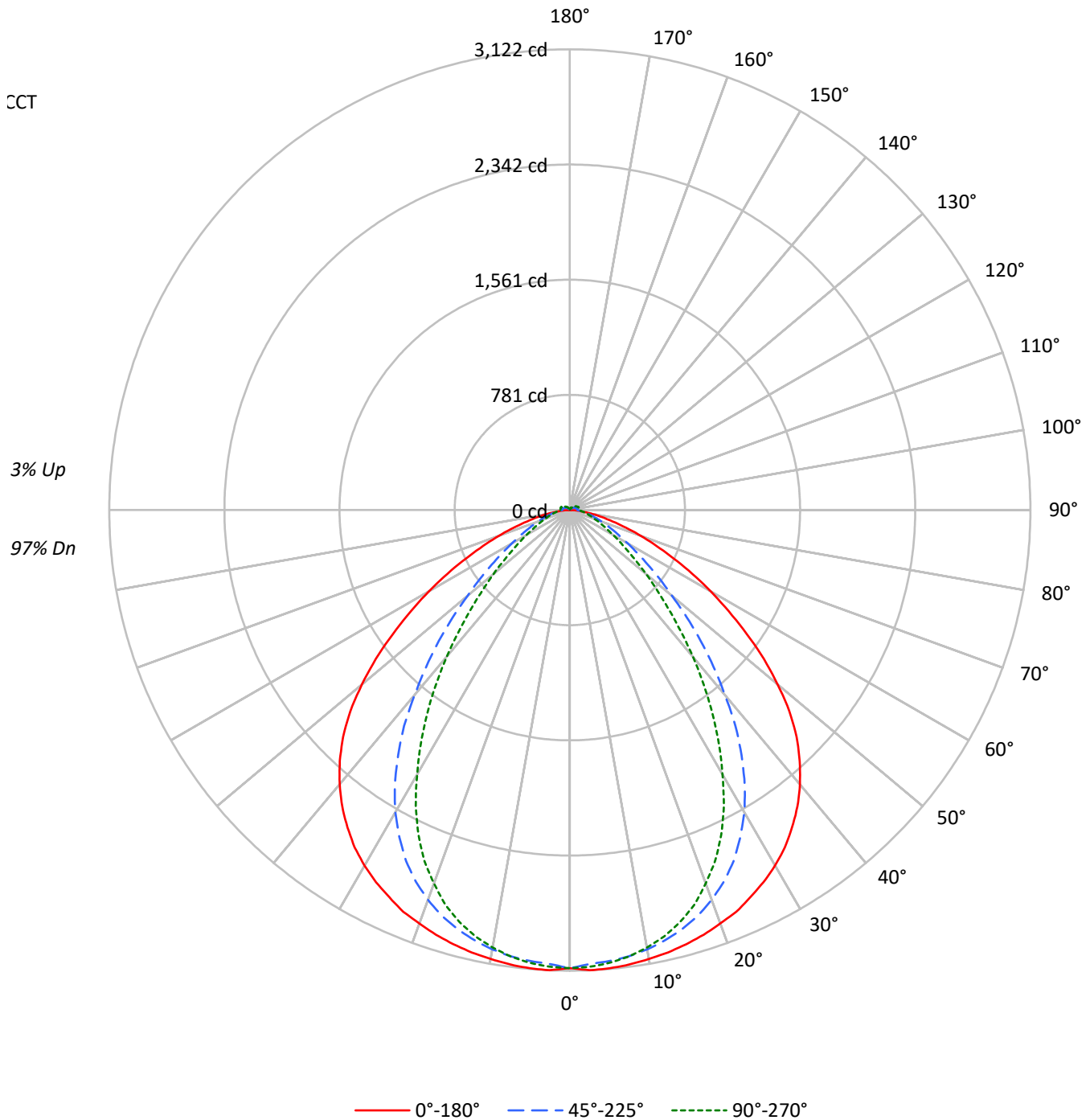
Summary

Lumens per Lamp: N/A
Luminaire Lumens: 6297.0 lumens
Efficiency: N/A
Efficacy: 121.6 lumens/watt
Spacing Criteria (0/90/45): 1.32 / 1.05 / 1.15
Luminous Opening: Rectangular w/ Sides (W: 0.27' x L: 3.98' x H: 0.08')
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

TEST NUMBER: P893805
CATALOG NUMBER: 4MB-7HL-ACL-UNV-L930

Luminous Intensity Polar Plot





TEST NUMBER: P893805
 CATALOG NUMBER: 4MB-7HL-ACL-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	118	118	118	118	115	115	115	115	110	110	110	104	104	104	100	100	100	97				97
1	110	106	102	99	107	103	100	97	99	96	94	94	92	90	90	89	87	85				85
2	101	94	89	84	99	92	87	83	88	84	80	85	81	78	82	79	76	74				74
3	94	85	78	72	91	83	76	71	80	74	70	77	72	68	74	70	67	65				65
4	87	76	69	63	84	75	68	62	72	66	61	70	64	60	67	63	59	57				57
5	81	69	61	55	78	68	60	55	66	59	54	63	58	53	61	56	52	50				50
6	75	63	55	49	73	62	54	49	60	53	48	58	52	48	56	51	47	45				45
7	70	58	50	44	68	57	49	44	55	48	43	53	47	43	52	47	42	41				41
8	65	53	45	40	64	52	45	40	51	44	39	49	43	39	48	43	39	37				37
9	61	49	41	36	60	48	41	36	47	40	36	46	40	36	45	39	35	34				34
10	58	45	38	33	56	45	38	33	44	37	33	43	37	33	42	36	32	31				31

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	31615	31615	31615
5°	31805	30736	30652
10°	31830	30011	29503
15°	31938	29151	28111
20°	32073	28055	26195
25°	32218	26571	23798
30°	32334	24471	20615
35°	32185	21636	17185
40°	31708	18146	13661
45°	30661	14618	10331
50°	28434	11174	7792
55°	25241	8560	5804
60°	21661	6586	4492
65°	17869	5161	3553
70°	14433	4135	2906
75°	10982	3379	2478
80°	8215	2768	2187
85°	5591	2344	1988

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
 Vertical Angle: 45°
 Luminance: 30661 cd/sqm



TEST NUMBER: P893805
 CATALOG NUMBER: 4MB-7HL-ACL-UNV-L930

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	293.6	4.7
10°-20°	833.8	13.2
20°-30°	1213.7	19.3
30°-40°	1302.5	20.7
40°-50°	1077.8	17.1
50°-60°	714.3	11.3
60°-70°	407.0	6.5
70°-80°	201.8	3.2
80°-90°	81.6	1.3
90°-100°	48.0	0.8
100°-110°	42.7	0.7
110°-120°	32.2	0.5
120°-130°	21.4	0.3
130°-140°	13.1	0.2
140°-150°	7.5	0.1
150°-160°	3.8	0.1
160°-170°	1.6	0.0
170°-180°	0.4	0.0
0°-30°	2341.2	37.2
0°-40°	3643.8	57.9
0°-60°	5435.9	86.3
0°-90°	6126.3	97.3
90°-120°	122.8	1.9
90°-150°	164.8	2.6
90°-180°	171.0	2.7
0°-180°	6297.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	3104	3104	3104	3104	3104	
5°	3117	3109	3069	3092	3081	297
15°	3046	3022	2940	2913	2890	861
25°	2895	2820	2625	2482	2428	1336
35°	2627	2418	2028	1763	1686	1641
45°	2173	1765	1255	1011	942	1665
55°	1464	1035	645	510	473	1310
65°	775	520	323	260	247	778
75°	301	224	162	141	137	332
85°	59	64	74	79	78	68
90°	8	26	51	62	64	7
95°	9	28	51	62	64	8
105°	8	21	46	59	62	8
115°	4	14	36	51	55	4
125°	2	9	26	38	42	2
135°	2	8	18	26	29	2
145°	2	6	12	18	21	2
155°	2	5	8	11	14	1
165°	3	4	6	7	9	1
175°	3	4	4	4	4	0
180°	4	4	4	4	4	



TEST NUMBER: P893805

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

CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	3104.3	3104.3	3104.3	3104.3	3104.3
2.5°	3121.8	3114.9	3079.3	3106.2	3098.1
5°	3116.8	3108.7	3068.7	3091.8	3080.6
7.5°	3106.2	3096.2	3051.2	3066.8	3053.1
10°	3089.3	3076.8	3023.1	3026.3	3010.7
12.5°	3071.2	3051.9	2986.3	2977.6	2958.2
15°	3046.2	3021.9	2940.1	2913.3	2890.2
17.5°	3017.5	2983.8	2882.7	2835.2	2805.2
20°	2981.9	2937.0	2811.5	2739.1	2692.9
22.5°	2947.6	2881.4	2726.6	2622.9	2574.2
25°	2895.1	2819.6	2625.4	2482.4	2427.5
27.5°	2843.3	2741.6	2501.2	2325.7	2262.0
30°	2782.8	2649.2	2365.1	2149.0	2070.4
32.5°	2712.8	2548.0	2207.1	1965.5	1881.8
35°	2626.7	2418.1	2028.5	1763.2	1685.8
37.5°	2534.3	2275.2	1844.4	1570.9	1491.0
40°	2426.9	2123.4	1635.8	1371.1	1298.0
42.5°	2307.6	1949.9	1442.3	1183.2	1110.1
45°	2173.4	1765.1	1255.0	1010.8	942.2
47.5°	2019.2	1575.9	1073.9	855.4	797.9
50°	1839.4	1386.7	904.1	718.0	675.6
52.5°	1658.3	1208.8	767.3	608.7	563.2
55°	1464.1	1035.2	645.0	510.1	473.3
57.5°	1276.2	881.6	538.8	427.7	402.1
60°	1102.0	744.2	455.8	360.9	340.3
62.5°	934.7	627.5	381.5	305.3	287.2
65°	774.8	519.5	322.8	260.4	246.6
67.5°	634.3	433.9	272.2	222.3	211.7
70°	512.6	350.9	229.1	190.4	181.7
72.5°	399.0	281.6	192.3	164.8	157.3
75°	300.9	224.1	161.7	141.1	136.7
77.5°	226.6	174.2	133.6	121.7	118.6
80°	156.7	129.9	110.5	105.5	103.6
82.5°	99.9	93.0	90.5	90.5	90.5
85°	59.3	63.7	74.3	78.7	78.0
87.5°	28.1	41.8	59.9	68.1	69.3
90°	8.1	26.2	50.6	61.8	63.7
92.5°	9.4	26.8	50.6	61.8	63.7
95°	9.4	27.5	51.2	61.8	63.7
97.5°	9.4	26.2	50.6	62.4	64.3
100°	9.4	25.6	49.9	61.8	64.3
102.5°	8.1	23.7	48.1	61.2	63.7
105°	7.5	20.6	46.2	59.3	62.4
107.5°	6.2	18.7	44.3	57.4	61.2
110°	5.6	16.9	41.8	55.6	59.9



TEST NUMBER: P893805

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

CANDELA DISTRIBUTION (continued):

	0°	22.5°	45°	67.5°	90°
112.5°	5.0	15.0	38.7	53.7	57.4
115°	4.4	13.7	35.6	50.6	54.9
117.5°	3.7	12.5	32.5	47.5	52.4
120°	3.1	11.2	30.0	44.3	48.7
122.5°	3.1	10.6	27.5	40.6	45.6
125°	2.5	9.4	25.6	37.5	41.8
127.5°	2.5	8.7	23.1	34.3	38.1
130°	1.9	8.7	21.2	31.8	35.6
132.5°	1.9	8.1	18.7	28.7	32.5
135°	1.9	7.5	17.5	26.2	29.3
137.5°	1.9	7.5	15.6	24.3	27.5
140°	2.5	6.9	13.7	21.9	25.0
142.5°	2.5	6.2	13.1	20.0	22.5
145°	2.5	5.6	11.9	18.1	20.6
147.5°	2.5	5.6	10.6	16.2	18.7
150°	2.5	5.0	10.0	14.4	16.9
152.5°	2.5	5.0	9.4	12.5	15.6
155°	2.5	5.0	8.1	11.2	14.4
157.5°	2.5	4.4	7.5	10.0	12.5
160°	3.1	4.4	6.9	8.7	11.2
162.5°	3.1	4.4	6.2	8.1	10.0
165°	3.1	3.7	5.6	6.9	8.7
167.5°	3.1	3.7	5.6	6.2	7.5
170°	3.1	3.7	5.0	5.0	5.6
172.5°	3.1	3.7	4.4	5.0	3.7
175°	3.1	3.7	4.4	4.4	3.7
177.5°	3.1	3.7	3.7	4.4	3.7
180°	3.7	3.7	3.7	3.7	3.7



TEST NUMBER: P893805
 CATALOG NUMBER: 4MB-7HL-ACL-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	20.66	22.05	21.08	22.42	22.81	15.78	17.17	16.19	17.54	17.93
	3H	21.76	23.00	22.18	23.38	23.81	16.93	18.17	17.35	18.55	18.98
	4H	22.05	23.21	22.50	23.62	24.07	17.43	18.59	17.88	19.00	19.44
	6H	22.20	23.27	22.66	23.69	24.15	17.94	19.01	18.40	19.43	19.89
	8H	22.21	23.23	22.69	23.67	24.14	18.20	19.22	18.68	19.66	20.13
	12H	22.20	23.17	22.68	23.61	24.11	18.50	19.47	18.97	19.91	20.40
4H	2H	20.64	21.80	21.08	22.20	22.65	16.29	17.44	16.73	17.85	18.30
	3H	21.87	22.83	22.33	23.29	23.75	17.61	18.56	18.06	19.02	19.49
	4H	22.25	23.11	22.73	23.57	24.08	18.20	19.06	18.68	19.53	20.04
	6H	22.47	23.22	22.98	23.72	24.24	18.83	19.58	19.33	20.07	20.60
	8H	22.51	23.21	23.02	23.70	24.23	19.15	19.85	19.66	20.35	20.88
	12H	22.52	23.14	23.05	23.67	24.20	19.53	20.15	20.06	20.68	21.22
8H	4H	22.23	22.93	22.74	23.42	23.95	18.45	19.14	18.96	19.64	20.17
	6H	22.50	23.08	23.04	23.62	24.16	19.18	19.75	19.72	20.30	20.84
	8H	22.56	23.08	23.13	23.64	24.19	19.59	20.10	20.15	20.66	21.21
	12H	22.60	23.06	23.16	23.60	24.23	20.08	20.54	20.63	21.08	21.71
12H	4H	22.21	22.83	22.73	23.36	23.89	18.46	19.08	18.99	19.61	20.15
	6H	22.48	23.00	23.04	23.56	24.11	19.21	19.73	19.77	20.29	20.84
	8H	22.58	23.03	23.13	23.58	24.20	19.68	20.14	20.23	20.68	21.30