

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: P893205

Luminaire Tested: 4MB-10HL-LVRF-UNV-L930

Issue Date: 11/11/2024

**Test Information**

Test Method: LM-79-2019  
Report Number: P893205  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-2407-175-5)  
Test Lab: INNOVATION CENTER  
Issue Date: 11/11/2024  
Manufacturer: COOPER LIGHTING SOLUTIONS  
Product Line: METALUX  
Catalog Number: 4MB-10HL-LVRF-UNV-L930  
Description: 10000 Lumen 4FT MICROBAY LINEAR BAY with LOUVER WITH FROSTED INLAY, 90CRI, 3000K (C  
Light Source: -  
Ballast/Driver: -

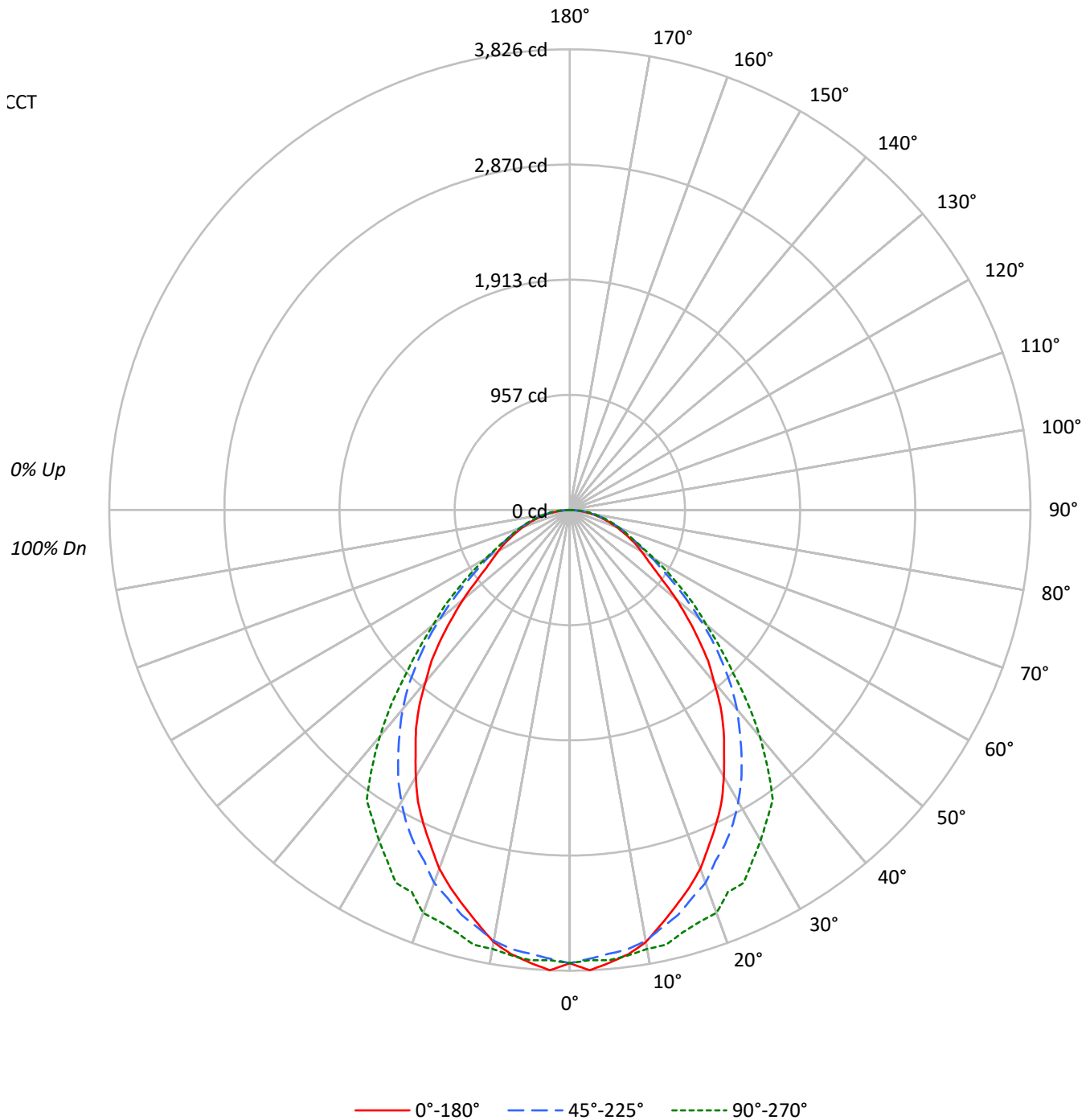
**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 7631.0 lumens  
Efficiency: N/A  
Efficacy: 101.1 lumens/watt  
Spacing Criteria (0/90/45): 1.05 / 1.25 / 1.21  
Luminous Opening: Rectangular (W 0.38' x L: 3.98' x H: 0')  
CIE Type: Direct

Input Watts (W): 75.5  
Input Voltage (V): 120  
Input Current (A<sub>in</sub>): NR  
Voltage Rise (V): NR  
Power Factor: 0.997  
Total Harmonic Distortion (THDi): 7.45  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 24 FT

TEST NUMBER: P893205  
CATALOG NUMBER: 4MB-10HL-LVRF-UNV-L930

### Luminous Intensity Polar Plot





TEST NUMBER: P893205

CATALOG NUMBER: 4MB-10HL-LVRF-UNV-L930

**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
RCR																				
0	119	119	119	119	116	116	116	116	111	111	111	106	106	106	102	102	102	102	102	100
1	110	106	102	99	108	104	100	97	100	97	94	96	93	91	92	90	89	89	89	87
2	102	94	88	83	99	92	87	82	89	84	80	86	82	78	83	80	77	77	77	75
3	94	84	77	71	91	83	76	70	80	74	69	77	72	68	75	70	67	67	67	65
4	87	76	68	62	84	74	67	61	72	66	61	70	64	60	68	63	59	59	59	57
5	80	68	60	54	78	67	60	54	65	59	53	63	58	53	62	57	52	52	52	50
6	75	62	54	48	73	61	54	48	60	53	48	58	52	47	57	51	47	47	47	45
7	70	57	49	43	68	56	49	43	55	48	43	53	47	42	52	46	42	42	42	40
8	65	52	44	39	64	52	44	39	50	44	39	49	43	39	48	43	38	38	38	37
9	61	48	41	36	60	48	40	35	47	40	35	46	40	35	45	39	35	35	35	33
10	57	45	37	33	56	44	37	32	43	37	32	43	36	32	42	36	32	32	32	30

**AVERAGE LUMINANCE (cd/sqm):**

	0°	45°	90°
0°	26778	26778	26778
5°	26952	26430	26808
10°	26321	26240	26744
15°	25079	25634	26744
20°	23990	24952	26963
25°	22586	23999	26825
30°	21011	22998	26040
35°	19350	21588	25536
40°	17305	20065	22803
45°	15171	18046	19336
50°	12802	15593	16364
55°	10621	13050	13956
60°	9766	11095	11512
65°	9148	9754	9830
70°	8521	9245	9176
75°	7950	8629	8940
80°	7420	8023	8576
85°	6245	6800	9462

**MAXIMUM LUMINANCE 45°-90°:**

Horizontal Angle: 90°  
 Vertical Angle: 45°  
 Luminance: 19336 cd/sqm



TEST NUMBER: P893205  
 CATALOG NUMBER: 4MB-10HL-LVRF-UNV-L930

**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	355.2	4.7
10°-20°	990.9	13.0
20°-30°	1427.1	18.7
30°-40°	1575.5	20.6
40°-50°	1351.9	17.7
50°-60°	920.9	12.1
60°-70°	579.4	7.6
70°-80°	329.8	4.3
80°-90°	100.3	1.3
90°-100°	0.0	0.0
100°-110°	0.0	0.0
110°-120°	0.0	0.0
120°-130°	0.0	0.0
130°-140°	0.0	0.0
140°-150°	0.0	0.0
150°-160°	0.0	0.0
160°-170°	0.0	0.0
170°-180°	0.0	0.0
0°-30°	2773.2	36.3
0°-40°	4348.7	57.0
0°-60°	6621.5	86.8
0°-90°	7631.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	7631.0	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	3764	3764	3764	3764	3764	
5°	3774	3759	3701	3778	3754	356
15°	3405	3441	3480	3638	3631	959
25°	2877	2934	3057	3303	3417	1321
35°	2228	2314	2485	2757	2940	1386
45°	1508	1608	1794	1902	1922	1162
55°	856	909	1052	1103	1125	787
65°	543	552	579	608	584	540
75°	289	291	314	327	325	308
85°	76	79	83	99	116	88
90°	0	0	0	0	0	



TEST NUMBER: P893205  
 CATALOG NUMBER: 4MB-10HL-LVRF-UNV-L930

**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	3763.6	3763.6	3763.6	3763.6	3763.6
2.5°	3825.5	3786.1	3729.8	3783.8	3742.2
5°	3773.7	3759.1	3700.6	3778.2	3753.5
7.5°	3720.8	3689.3	3679.2	3762.5	3729.8
10°	3643.2	3625.2	3631.9	3738.8	3701.7
12.5°	3520.6	3532.9	3548.7	3684.8	3696.1
15°	3404.7	3440.7	3480.1	3637.6	3630.8
17.5°	3291.0	3340.5	3377.7	3580.2	3585.8
20°	3168.4	3196.5	3295.5	3491.3	3561.1
22.5°	3016.5	3071.6	3157.1	3401.3	3432.8
25°	2877.0	2934.4	3057.0	3303.4	3417.0
27.5°	2730.7	2783.6	2935.5	3187.5	3284.3
30°	2557.4	2628.3	2799.3	3055.9	3169.5
32.5°	2384.2	2487.7	2651.9	2915.2	3046.9
35°	2227.8	2314.4	2485.4	2756.6	2940.0
37.5°	2054.5	2145.6	2318.9	2583.3	2700.3
40°	1863.2	1961.1	2160.3	2374.0	2455.1
42.5°	1699.0	1783.3	1983.6	2134.4	2198.5
45°	1507.7	1607.8	1793.5	1901.5	1921.7
47.5°	1323.2	1437.9	1604.4	1655.1	1694.5
50°	1156.6	1246.7	1408.7	1440.2	1478.4
52.5°	986.7	1082.4	1224.1	1255.7	1311.9
55°	856.2	909.1	1052.0	1102.6	1125.1
57.5°	760.6	794.3	895.6	959.7	966.5
60°	686.3	703.2	779.7	828.1	809.0
62.5°	617.7	631.2	669.5	706.6	681.8
65°	543.4	552.4	579.4	607.6	583.9
67.5°	473.7	483.8	508.6	528.8	508.6
70°	409.6	417.4	444.4	453.4	441.1
72.5°	349.9	353.3	375.8	391.5	383.7
75°	289.2	291.4	313.9	327.4	325.2
77.5°	234.0	237.4	256.5	268.9	262.2
80°	181.1	183.4	195.8	213.8	209.3
82.5°	127.1	131.6	139.5	155.3	167.6
85°	76.5	78.8	83.3	99.0	115.9
87.5°	29.3	31.5	33.8	41.6	55.1
90°	0.0	0.0	0.0	0.0	0.0



TEST NUMBER: P893205  
 CATALOG NUMBER: 4MB-10HL-LVRF-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	18.88	20.36	19.24	20.67	20.98	20.24	21.72	20.60	22.03	22.34
	3H	20.46	21.78	20.83	22.11	22.47	21.52	22.85	21.90	23.18	23.54
	4H	21.06	22.30	21.46	22.65	23.03	22.08	23.32	22.48	23.67	24.05
	6H	21.53	22.68	21.95	23.05	23.44	22.53	23.68	22.94	24.04	24.43
	8H	21.69	22.78	22.12	23.17	23.57	22.72	23.81	23.14	24.20	24.60
	12H	21.79	22.83	22.22	23.21	23.64	22.87	23.91	23.30	24.30	24.73
4H	2H	19.49	20.73	19.89	21.08	21.46	20.60	21.85	21.00	22.20	22.57
	3H	21.29	22.32	21.71	22.72	23.13	22.16	23.19	22.57	23.59	23.99
	4H	22.02	22.94	22.45	23.36	23.80	22.86	23.79	23.30	24.21	24.65
	6H	22.61	23.42	23.07	23.86	24.32	23.47	24.28	23.93	24.72	25.18
	8H	22.82	23.57	23.28	24.01	24.48	23.72	24.47	24.18	24.92	25.38
	12H	22.96	23.63	23.44	24.11	24.58	23.93	24.61	24.42	25.09	25.56
8H	4H	22.34	23.10	22.81	23.54	24.01	23.10	23.85	23.56	24.29	24.76
	6H	23.07	23.69	23.57	24.18	24.66	23.84	24.46	24.34	24.96	25.43
	8H	23.34	23.90	23.86	24.41	24.90	24.17	24.73	24.69	25.24	25.73
	12H	23.56	24.05	24.07	24.54	25.11	24.48	24.98	24.99	25.47	26.03
12H	4H	22.38	23.05	22.87	23.53	24.00	23.11	23.78	23.59	24.26	24.73
	6H	23.14	23.70	23.65	24.21	24.70	23.88	24.44	24.39	24.95	25.44
	8H	23.47	23.97	23.98	24.46	25.03	24.27	24.76	24.78	25.26	25.82