

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: P893317

Luminaire Tested: 4MB-2SL-LVRF-UNV-L930

Issue Date: 11/11/2024

**Test Information**

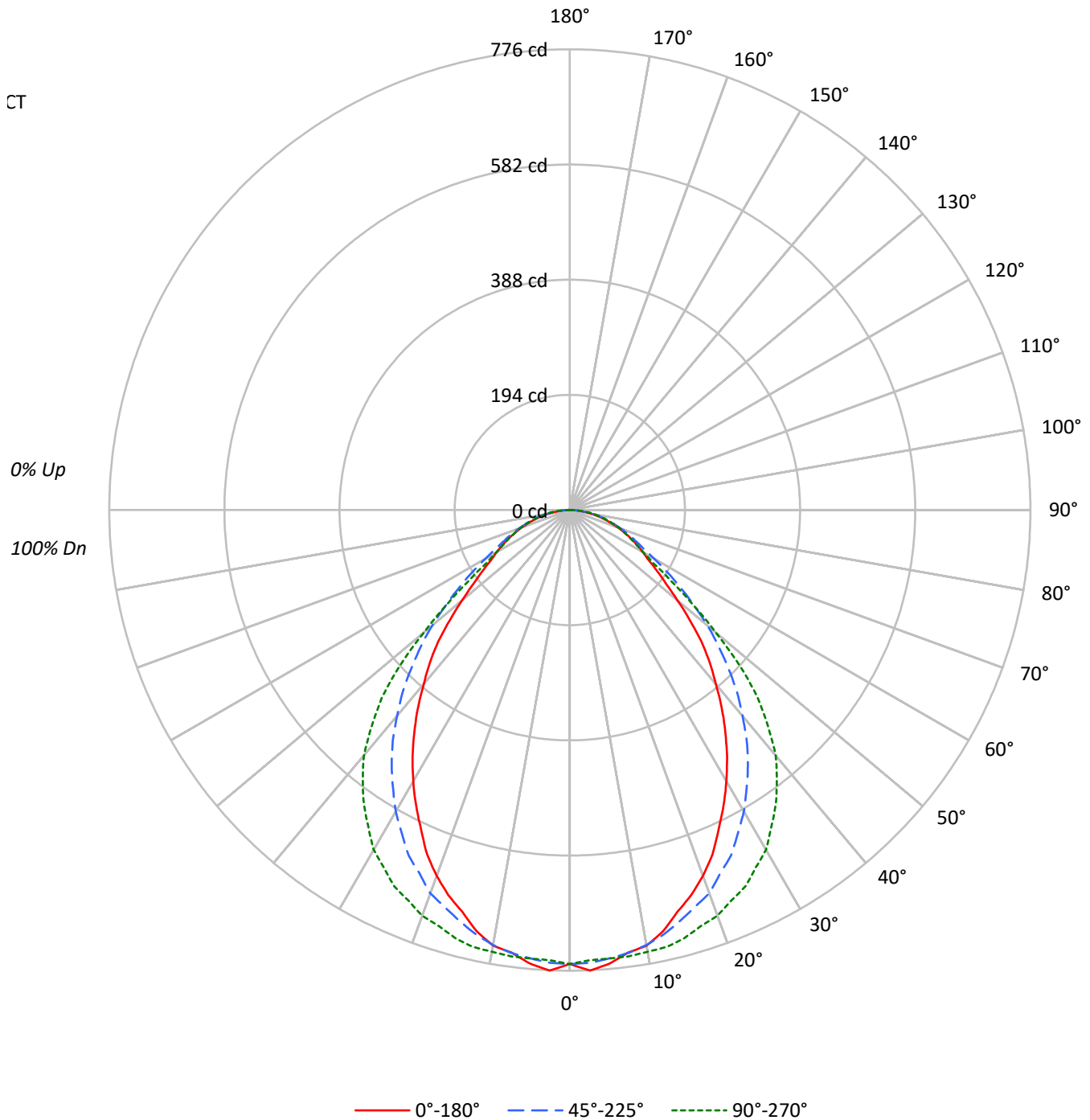
Test Method: LM-79-2019  
Report Number: P893317  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-2407-175-7)  
Test Lab: INNOVATION CENTER  
Issue Date: 11/11/2024  
Manufacturer: COOPER LIGHTING SOLUTIONS  
Product Line: METALUX  
Catalog Number: 4MB-2SL-LVRF-UNV-L930  
Description: 2000 Lumen 4FT MICROBAY LINEAR BAY with LOUVER WITH FROSTED INLAY, 90CRI, 3000K C  
Light Source: -  
Ballast/Driver: -

**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 1589.0 lumens  
Efficiency: N/A  
Efficacy: 115.1 lumens/watt  
Spacing Criteria (0/90/45): 1.06 / 1.27 / 1.23  
Luminous Opening: Rectangular (W 0.38' x L: 3.98' x H: 0')  
CIE Type: Direct  
  
Input Watts (W): 13.8  
Input Voltage (V): 120  
Input Current (Ain): NR  
Voltage Rise (V): NR  
Power Factor: 0.996  
Total Harmonic Distortion (THDi): 5.92  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 24 FT

TEST NUMBER: P893317  
CATALOG NUMBER: 4MB-2SL-LVRF-UNV-L930

### Luminous Intensity Polar Plot





TEST NUMBER: P893317  
 CATALOG NUMBER: 4MB-2SL-LVRF-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	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	102	102	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	89	89	89	89	89	89	89	89	87																	
	2	102	94	88	83	99	92	87	82	89	84	80	86	82	79	83	80	77	77	77	77	77	77	77	77	77	77	77	75																	
	3	94	84	77	71	91	83	76	70	80	74	69	77	72	68	75	71	67	75	71	67	67	67	67	67	67	67	67	65																	
	4	87	76	68	62	84	74	67	61	72	66	60	70	64	60	68	63	59	70	64	60	60	60	60	60	60	60	60	57																	
	5	80	68	60	54	78	67	60	54	65	59	53	63	58	53	62	56	52	63	58	53	53	53	53	53	53	53	53	50																	
	6	75	62	54	48	73	61	54	48	60	53	48	58	52	47	56	51	47	58	52	47	47	47	47	47	47	47	47	45																	
	7	69	57	49	43	68	56	48	43	55	48	43	53	47	42	52	46	42	53	47	42	42	42	42	42	42	42	42	40																	
	8	65	52	44	39	63	52	44	39	50	44	39	49	43	38	48	42	38	49	43	38	38	38	38	38	38	38	38	36																	
	9	61	48	41	35	60	48	40	35	47	40	35	46	39	35	45	39	35	46	39	35	35	35	35	35	35	35	35	33																	
	10	57	45	37	32	56	44	37	32	43	37	32	42	36	32	42	36	32	42	36	32	32	32	32	32	32	32	32	30																	

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

	0°	45°	90°
0°	5440	5440	5440
5°	5477	5415	5415
10°	5383	5374	5458
15°	5160	5280	5497
20°	4964	5202	5506
25°	4657	5041	5493
30°	4335	4818	5429
35°	3968	4544	5256
40°	3553	4203	5015
45°	3152	3804	4509
50°	2623	3349	3555
55°	2234	2821	2584
60°	2025	2331	2042
65°	1907	2042	1901
70°	1795	1893	1854
75°	1671	1803	1770
80°	1532	1664	1709
85°	1331	1461	1918

**MAXIMUM LUMINANCE 45°-90°:**

Horizontal Angle: 90°  
 Vertical Angle: 45°  
 Luminance: 4509 cd/sqm



TEST NUMBER: P893317  
 CATALOG NUMBER: 4MB-2SL-LVRF-UNV-L930

**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	72.4	4.6
10°-20°	203.7	12.8
20°-30°	295.8	18.6
30°-40°	329.4	20.7
40°-50°	291.0	18.3
50°-60°	190.9	12.0
60°-70°	116.9	7.4
70°-80°	68.0	4.3
80°-90°	20.8	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°	571.9	36.0
0°-40°	901.2	56.7
0°-60°	1383.2	87.0
0°-90°	1589.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1589.0	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	765	765	765	765	765	
5°	767	767	758	766	758	72
15°	700	708	717	745	746	198
25°	593	608	642	683	700	273
35°	457	482	523	578	605	285
45°	313	332	378	429	448	240
55°	180	193	227	225	208	163
65°	113	115	121	118	113	113
75°	61	62	66	67	64	65
85°	16	17	18	20	24	18
90°	0	0	0	0	0	



TEST NUMBER: P893317

CATALOG NUMBER: 4MB-2SL-LVRF-UNV-L930

**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	764.6	764.6	764.6	764.6	764.6
2.5°	776.5	766.9	763.4	766.9	759.0
5°	766.9	767.3	758.2	765.7	758.2
7.5°	751.8	757.0	752.6	764.2	758.2
10°	745.1	745.5	743.9	755.8	755.4
12.5°	726.4	727.6	732.0	749.8	753.8
15°	700.5	708.5	716.8	745.1	746.3
17.5°	680.3	689.8	700.9	731.2	734.7
20°	655.6	659.6	687.0	713.7	727.2
22.5°	628.2	635.7	662.4	698.2	711.7
25°	593.2	607.5	642.1	683.0	699.7
27.5°	561.0	577.7	613.5	659.2	678.7
30°	527.6	546.7	586.4	631.4	660.8
32.5°	493.0	516.9	554.6	606.3	632.2
35°	456.8	481.5	523.2	578.5	605.1
37.5°	420.6	444.5	489.8	549.1	572.9
40°	382.5	405.9	452.5	512.5	539.9
42.5°	349.5	369.8	417.5	468.8	494.2
45°	313.3	332.4	378.1	429.0	448.1
47.5°	273.5	295.8	340.3	382.1	389.6
50°	237.0	260.0	302.6	326.8	321.2
52.5°	204.8	224.2	263.2	273.5	260.4
55°	180.1	192.8	227.4	225.4	208.3
57.5°	157.4	165.4	194.8	183.7	167.4
60°	142.3	145.9	163.8	153.5	143.5
62.5°	128.0	129.6	139.2	133.6	126.0
65°	113.3	115.3	121.3	117.7	112.9
67.5°	99.8	100.6	106.2	105.4	99.4
70°	86.3	87.5	91.0	92.6	89.1
72.5°	73.2	74.3	77.9	79.5	76.3
75°	60.8	61.6	65.6	66.8	64.4
77.5°	48.9	50.5	52.9	54.9	52.1
80°	37.4	38.2	40.6	42.9	41.7
82.5°	26.2	27.4	29.0	32.2	33.0
85°	16.3	17.1	17.9	20.3	23.5
87.5°	6.4	6.8	8.0	8.7	11.5
90°	0.0	0.0	0.0	0.0	0.0



TEST NUMBER: P893317  
 CATALOG NUMBER: 4MB-2SL-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	13.41	14.89	13.78	15.21	15.52	14.07	15.55	14.43	15.86	16.18
	3H	15.02	16.34	15.39	16.67	17.03	15.50	16.83	15.88	17.16	17.52
	4H	15.63	16.87	16.03	17.22	17.60	16.11	17.35	16.51	17.70	18.08
	6H	16.10	17.25	16.52	17.62	18.01	16.59	17.74	17.01	18.11	18.50
	8H	16.25	17.35	16.68	17.74	18.14	16.79	17.88	17.22	18.27	18.67
	12H	16.35	17.40	16.79	17.78	18.21	16.96	18.00	17.39	18.39	18.81
4H	2H	14.04	15.28	14.44	15.63	16.01	14.56	15.80	14.96	16.15	16.53
	3H	15.86	16.89	16.27	17.29	17.69	16.26	17.29	16.67	17.69	18.09
	4H	16.60	17.52	17.03	17.94	18.38	17.01	17.94	17.44	18.35	18.79
	6H	17.19	18.00	17.65	18.44	18.90	17.65	18.45	18.10	18.89	19.36
	8H	17.39	18.14	17.85	18.59	19.05	17.90	18.65	18.36	19.10	19.57
	12H	17.53	18.20	18.01	18.68	19.15	18.13	18.80	18.61	19.28	19.75
8H	4H	16.91	17.67	17.38	18.11	18.58	17.28	18.03	17.75	18.48	18.95
	6H	17.64	18.26	18.14	18.75	19.23	18.06	18.68	18.55	19.17	19.65
	8H	17.91	18.47	18.43	18.98	19.47	18.40	18.96	18.92	19.47	19.96
	12H	18.13	18.62	18.64	19.12	19.68	18.72	19.22	19.23	19.71	20.27
12H	4H	16.95	17.62	17.43	18.10	18.57	17.30	17.97	17.78	18.45	18.92
	6H	17.70	18.26	18.22	18.77	19.26	18.10	18.66	18.62	19.17	19.66
	8H	18.03	18.53	18.55	19.02	19.59	18.51	19.00	19.02	19.50	20.06