

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: P893315

Luminaire Tested: 4MB-2SL-LVRF-UNV-L840

Issue Date: 11/11/2024

**Test Information**

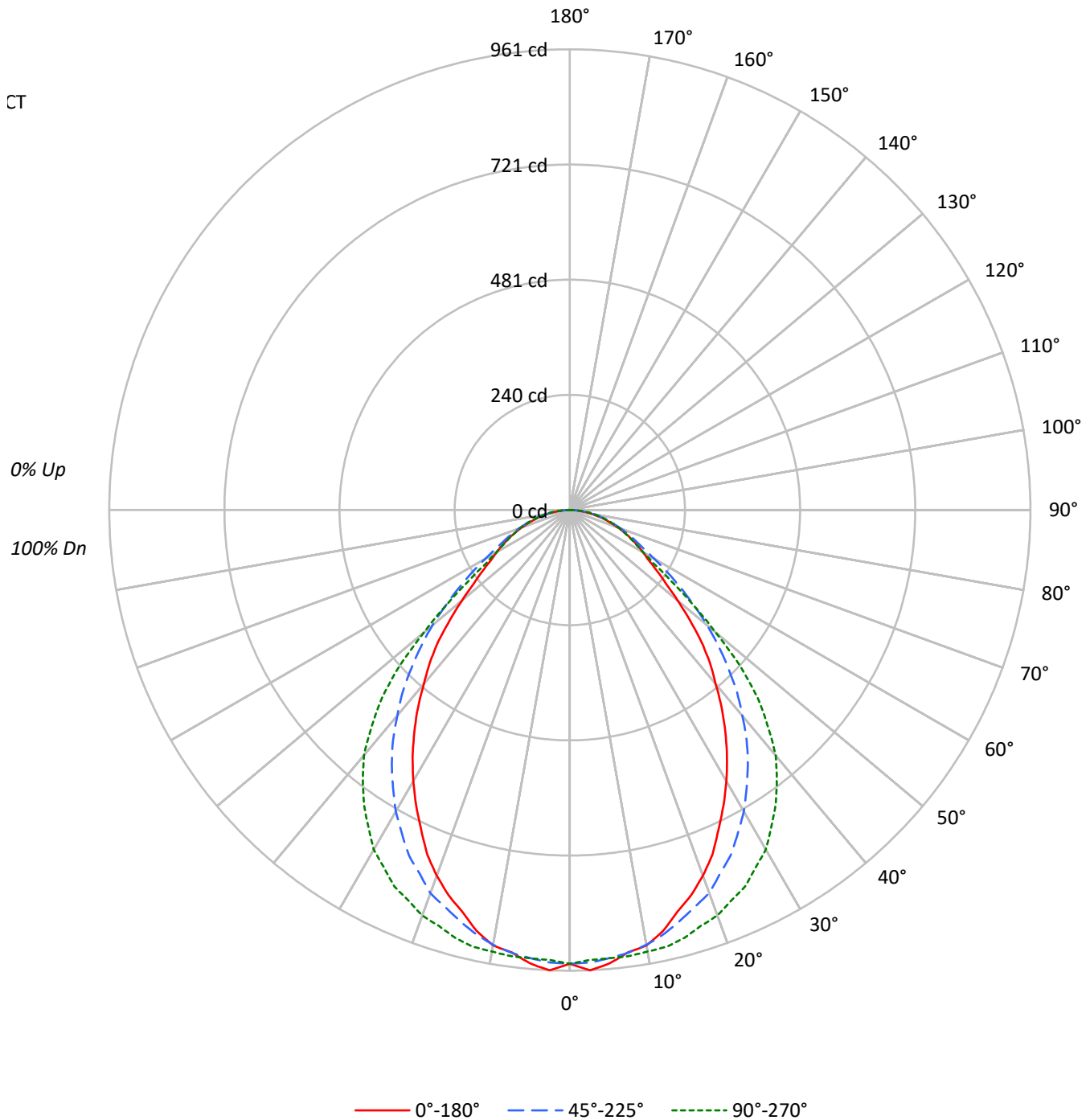
Test Method: LM-79-2019  
Report Number: P893315  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-2407-175-7)  
Test Lab: INNOVATION CENTER  
Issue Date: 11/11/2024  
Manufacturer: COOPER LIGHTING SOLUTIONS  
Product Line: METALUX  
Catalog Number: 4MB-2SL-LVRF-UNV-L840  
Description: 2000 Lumen 4FT MICROBAY LINEAR BAY with LOUVER WITH FROSTED INLAY, 80CRI, 4000K C  
Light Source: -  
Ballast/Driver: -

**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 1967.0 lumens  
Efficiency: N/A  
Efficacy: 142.5 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

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

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

	0°	45°	90°
0°	6734	6734	6734
5°	6781	6704	6704
10°	6663	6653	6756
15°	6388	6537	6805
20°	6145	6440	6816
25°	5765	6240	6800
30°	5366	5964	6720
35°	4912	5626	6507
40°	4398	5202	6208
45°	3902	4709	5581
50°	3247	4145	4402
55°	2766	3492	3199
60°	2507	2886	2529
65°	2362	2527	2354
70°	2222	2344	2292
75°	2070	2232	2191
80°	1897	2057	2118
85°	1649	1804	2367

**MAXIMUM LUMINANCE 45°-90°:**

Horizontal Angle: 90°  
 Vertical Angle: 45°  
 Luminance: 5581 cd/sqm



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	89.6	4.6
10°-20°	252.1	12.8
20°-30°	366.2	18.6
30°-40°	407.7	20.7
40°-50°	360.2	18.3
50°-60°	236.4	12.0
60°-70°	144.7	7.4
70°-80°	84.2	4.3
80°-90°	25.8	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°	707.9	36.0
0°-40°	1115.6	56.7
0°-60°	1712.2	87.0
0°-90°	1967.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1967.0	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	946	946	946	946	946	
5°	949	950	939	948	939	90
15°	867	877	887	922	924	245
25°	734	752	795	846	866	338
35°	566	596	648	716	749	353
45°	388	411	468	531	555	297
55°	223	239	282	279	258	202
65°	140	143	150	146	140	139
75°	75	76	81	83	80	80
85°	20	21	22	25	29	23
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	946.4	946.4	946.4	946.4	946.4
2.5°	961.2	949.4	945.0	949.4	939.5
5°	949.4	949.9	938.6	947.9	938.6
7.5°	930.7	937.1	931.7	945.9	938.6
10°	922.3	922.8	920.8	935.6	935.1
12.5°	899.2	900.7	906.1	928.2	933.1
15°	867.2	877.0	887.4	922.3	923.8
17.5°	842.1	853.9	867.7	905.1	909.5
20°	811.6	816.5	850.5	883.4	900.2
22.5°	777.6	787.0	819.9	864.2	881.0
25°	734.3	752.0	794.8	845.5	866.2
27.5°	694.4	715.1	759.4	816.0	840.1
30°	653.1	676.7	725.9	781.6	818.0
32.5°	610.3	639.8	686.6	750.5	782.5
35°	565.5	596.0	647.7	716.1	749.1
37.5°	520.7	550.2	606.3	679.7	709.2
40°	473.5	502.5	560.1	634.4	668.4
42.5°	432.6	457.7	516.8	580.3	611.8
45°	387.8	411.4	468.0	531.0	554.7
47.5°	338.6	366.2	421.3	473.0	482.3
50°	293.3	321.9	374.5	404.6	397.7
52.5°	253.5	277.6	325.8	338.6	322.4
55°	223.0	238.7	281.5	279.1	257.9
57.5°	194.9	204.7	241.2	227.4	207.2
60°	176.2	180.6	202.8	190.0	177.7
62.5°	158.5	160.4	172.3	165.4	156.0
65°	140.3	142.7	150.1	145.7	139.8
67.5°	123.5	124.5	131.4	130.4	123.0
70°	106.8	108.3	112.7	114.7	110.2
72.5°	90.6	92.0	96.5	98.4	94.5
75°	75.3	76.3	81.2	82.7	79.7
77.5°	60.5	62.5	65.5	67.9	64.5
80°	46.3	47.2	50.2	53.2	51.7
82.5°	32.5	34.0	35.9	39.9	40.8
85°	20.2	21.2	22.1	25.1	29.0
87.5°	7.9	8.4	9.8	10.8	14.3
90°	0.0	0.0	0.0	0.0	0.0



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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	14.15	15.64	14.52	15.95	16.26	14.81	16.29	15.17	16.60	16.92
	3H	15.76	17.08	16.13	17.41	17.77	16.24	17.57	16.62	17.90	18.26
	4H	16.37	17.62	16.77	17.96	18.34	16.85	18.09	17.25	18.44	18.82
	6H	16.84	17.99	17.26	18.36	18.75	17.34	18.48	17.75	18.85	19.24
	8H	17.00	18.09	17.42	18.48	18.88	17.53	18.62	17.96	19.01	19.42
	12H	17.10	18.14	17.53	18.52	18.95	17.70	18.74	18.13	19.13	19.56
4H	2H	14.78	16.02	15.18	16.37	16.75	15.30	16.54	15.70	16.89	17.27
	3H	16.60	17.63	17.01	18.03	18.43	17.00	18.03	17.41	18.43	18.83
	4H	17.34	18.26	17.77	18.68	19.12	17.75	18.68	18.18	19.09	19.53
	6H	17.93	18.74	18.39	19.18	19.64	18.39	19.19	18.85	19.64	20.10
	8H	18.13	18.88	18.60	19.33	19.80	18.64	19.40	19.11	19.84	20.31
	12H	18.27	18.95	18.76	19.42	19.90	18.87	19.54	19.35	20.02	20.49
8H	4H	17.65	18.41	18.12	18.85	19.32	18.02	18.77	18.49	19.22	19.69
	6H	18.38	19.00	18.88	19.49	19.97	18.80	19.42	19.29	19.91	20.39
	8H	18.65	19.21	19.17	19.72	20.21	19.14	19.70	19.66	20.21	20.70
	12H	18.87	19.37	19.38	19.86	20.43	19.46	19.96	19.97	20.45	21.01
12H	4H	17.69	18.36	18.17	18.84	19.31	18.04	18.71	18.52	19.19	19.66
	6H	18.44	19.00	18.96	19.51	20.00	18.84	19.40	19.36	19.91	20.40
	8H	18.78	19.27	19.29	19.77	20.33	19.25	19.75	19.76	20.24	20.80