

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: P893326

Luminaire Tested: 4MB-2SL-RFLW-UNV-L935

Issue Date: 11/11/2024

**Test Information**

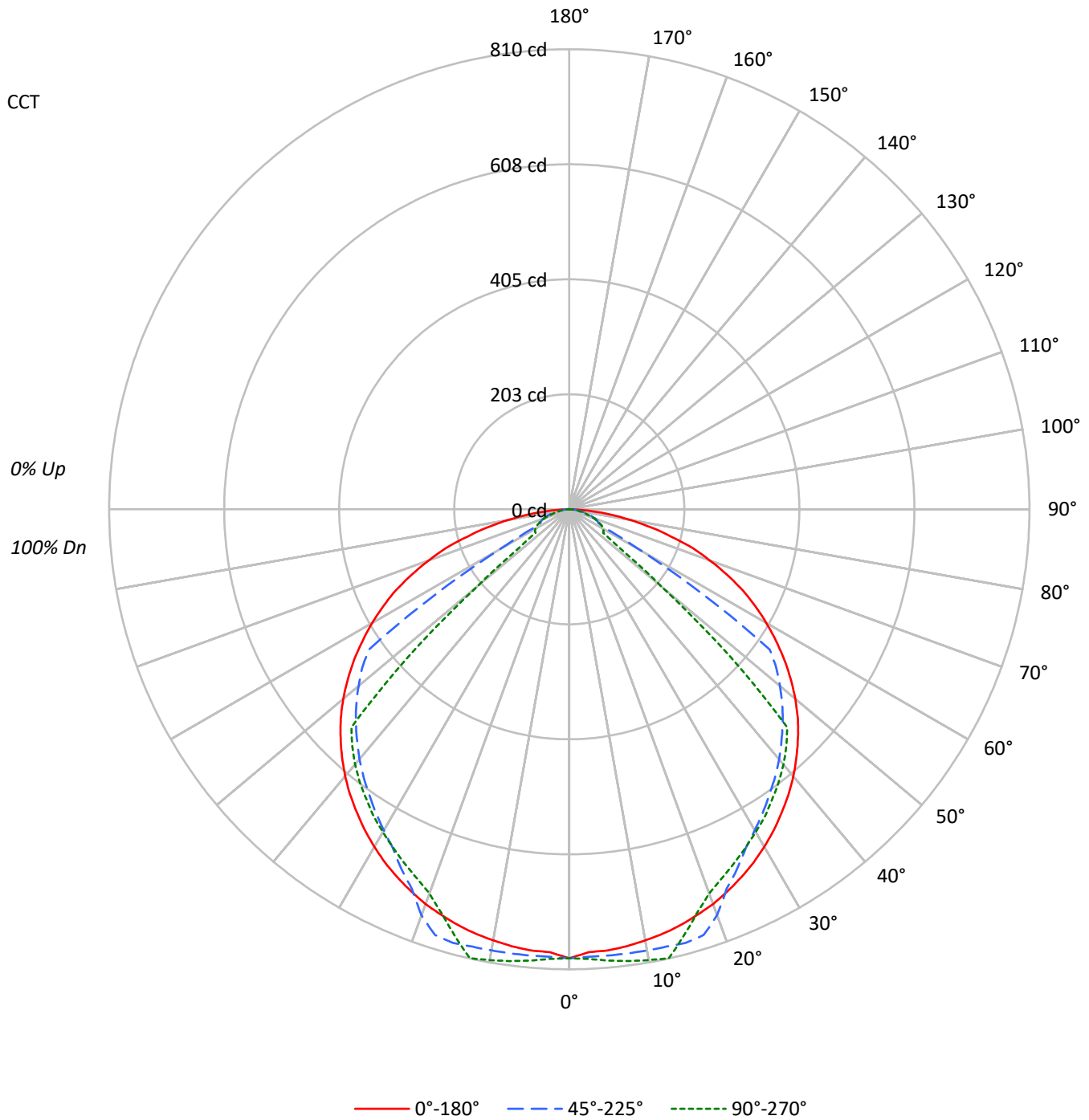
Test Method: LM-79-2019  
Report Number: P893326  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G2-2408-210-3)  
Test Lab: INNOVATION CENTER  
Issue Date: 11/11/2024  
Manufacturer: COOPER LIGHTING SOLUTIONS  
Product Line: METALUX  
Catalog Number: 4MB-2SL-RFLW-UNV-L935  
Description: 2000 Lumen 4FT MICROBAY LINEAR BAY with REFLECTOR WITH WHITE FINISH, 90CRI, 3500K  
Light Source: -  
Ballast/Driver: -

**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 1928.0 lumens  
Efficiency: N/A  
Efficacy: 139.7 lumens/watt  
Spacing Criteria (0/90/45): 1.29 / 1.24 / 1.38  
Luminous Opening: Rectangular (W 0.21' x L: 3.98' x H: 0')  
CIE Type: Direct  
  
Input Watts (W): 13.8  
Input Voltage (V): 120  
Input Current (A<sub>in</sub>): 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	101	98	100	97	94	96	94	92	92	91	89	89	89	89	87
2	101	94	88	83	99	92	87	82	89	84	80	86	82	78	83	79	77	77	77	77	75
3	93	84	76	70	91	82	75	70	79	73	69	77	72	67	74	70	66	66	66	66	64
4	86	75	67	61	84	74	66	60	71	65	59	69	63	59	67	62	58	58	58	58	56
5	79	67	59	53	77	66	58	53	64	57	52	62	56	51	61	55	51	51	51	51	49
6	73	61	53	47	72	60	52	46	58	51	46	57	50	46	55	50	45	45	45	45	43
7	68	55	47	41	67	55	47	41	53	46	41	52	45	41	50	45	40	40	40	40	38
8	64	51	43	37	62	50	42	37	49	42	37	48	41	37	46	41	36	36	36	36	35
9	60	47	39	33	58	46	39	33	45	38	33	44	38	33	43	37	33	33	33	33	31
10	56	43	35	30	55	43	35	30	42	35	30	41	34	30	40	34	30	30	30	30	28

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

	0°	45°	90°
0°	10265	10265	10265
5°	10162	10280	10398
10°	10161	10399	10626
15°	10189	10627	10456
20°	10221	10510	9947
25°	10248	10013	9846
30°	10289	9787	9840
35°	10332	9728	9873
40°	10403	9742	9942
45°	10454	9755	9955
50°	10492	9779	4303
55°	10466	9748	1641
60°	10406	3719	1789
65°	10333	1727	1837
70°	9981	1860	1720
75°	9322	1776	1500
80°	8203	1563	1286
85°	6481	1356	1088

**MAXIMUM LUMINANCE 45°-90°:**

Horizontal Angle: 0°  
 Vertical Angle: 50°  
 Luminance: 10492 cd/sqm



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	75.5	3.9
10°-20°	219.2	11.4
20°-30°	327.1	17.0
30°-40°	396.4	20.6
40°-50°	405.9	21.1
50°-60°	269.9	14.0
60°-70°	153.9	8.0
70°-80°	64.6	3.4
80°-90°	15.4	0.8
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°	621.8	32.2
0°-40°	1018.2	52.8
0°-60°	1694.1	87.9
0°-90°	1928.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1928.0	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	790	790	790	790	790	
5°	780	795	789	790	798	74
15°	758	779	790	788	778	214
25°	715	750	699	684	687	330
35°	652	664	614	616	623	408
45°	569	535	531	538	542	439
55°	462	423	431	94	72	413
65°	336	301	56	60	60	331
75°	186	39	35	31	30	197
85°	44	11	9	7	7	52
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	790.5	790.5	790.5	790.5	790.5
2.5°	780.5	796.8	788.7	789.6	792.3
5°	779.6	795.0	788.7	790.5	797.7
7.5°	776.0	792.3	788.7	794.1	802.3
10°	770.6	789.6	788.7	797.7	805.9
12.5°	765.1	784.1	788.7	802.3	809.5
15°	757.9	778.7	790.5	787.8	777.8
17.5°	748.8	773.3	786.0	747.0	746.1
20°	739.7	766.0	760.6	723.4	719.8
22.5°	727.9	758.8	723.4	698.0	702.6
25°	715.3	749.7	698.9	683.5	687.2
27.5°	701.7	740.6	672.6	667.2	671.7
30°	686.2	727.9	652.7	650.9	656.3
32.5°	669.9	703.5	633.7	634.6	640.9
35°	651.8	663.6	613.7	616.4	622.8
37.5°	633.7	626.4	594.7	599.2	605.6
40°	613.7	597.4	574.7	579.3	586.5
42.5°	592.0	566.6	553.0	559.3	565.7
45°	569.3	534.9	531.2	537.6	542.1
47.5°	545.7	507.7	508.6	513.1	384.4
50°	519.4	480.5	484.1	335.4	213.0
52.5°	491.3	452.4	459.6	186.7	107.9
55°	462.3	423.3	430.6	94.3	72.5
57.5°	431.5	394.3	281.0	68.0	71.6
60°	400.7	363.5	143.2	67.1	68.9
62.5°	369.0	332.7	68.0	64.4	65.3
65°	336.3	301.0	56.2	59.8	59.8
67.5°	300.1	267.4	53.5	53.5	52.6
70°	262.9	222.1	49.0	46.2	45.3
72.5°	228.4	85.2	42.6	38.1	37.2
75°	185.8	39.0	35.4	30.8	29.9
77.5°	147.8	32.6	28.1	24.5	23.6
80°	109.7	25.4	20.9	18.1	17.2
82.5°	76.1	17.2	14.5	11.8	11.8
85°	43.5	10.9	9.1	7.3	7.3
87.5°	17.2	5.4	4.5	2.7	2.7
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	21.02	22.54	21.38	22.85	23.17	8.78	10.30	9.15	10.62	10.93
	3H	23.04	24.39	23.41	24.72	25.08	11.10	12.46	11.47	12.78	13.15
	4H	23.50	24.77	23.90	25.12	25.50	11.81	13.08	12.21	13.43	13.81
	6H	23.91	25.08	24.32	25.45	25.84	12.29	13.47	12.71	13.83	14.23
	8H	24.05	25.17	24.48	25.56	25.96	12.43	13.55	12.86	13.94	14.34
	12H	24.15	25.22	24.58	25.60	26.03	12.52	13.59	12.95	13.97	14.40
4H	2H	20.86	22.13	21.26	22.48	22.86	9.58	10.85	9.98	11.20	11.58
	3H	23.06	24.11	23.47	24.51	24.91	12.09	13.14	12.50	13.54	13.94
	4H	23.51	24.45	23.94	24.86	25.30	12.91	13.85	13.34	14.27	14.71
	6H	23.97	24.79	24.43	25.23	25.69	13.50	14.32	13.96	14.76	15.22
	8H	24.17	24.93	24.63	25.37	25.84	13.67	14.43	14.14	14.88	15.35
	12H	24.32	25.00	24.80	25.48	25.95	13.79	14.47	14.27	14.95	15.42
8H	4H	23.43	24.19	23.89	24.63	25.10	13.75	14.51	14.21	14.96	15.42
	6H	23.89	24.52	24.38	25.01	25.48	14.37	15.00	14.87	15.49	15.97
	8H	24.09	24.65	24.60	25.16	25.65	14.57	15.14	15.09	15.65	16.14
	12H	24.27	24.77	24.78	25.26	25.83	14.73	15.23	15.24	15.73	16.29
12H	4H	23.40	24.08	23.88	24.55	25.03	13.82	14.50	14.30	14.98	15.45
	6H	23.84	24.41	24.35	24.92	25.40	14.47	15.03	14.98	15.54	16.03
	8H	24.06	24.56	24.57	25.06	25.62	14.72	15.22	15.23	15.71	16.28