

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: P894064

Luminaire Tested: 4MB-9HL-RFLW-UNV-L950

Issue Date: 11/11/2024

**Test Information**

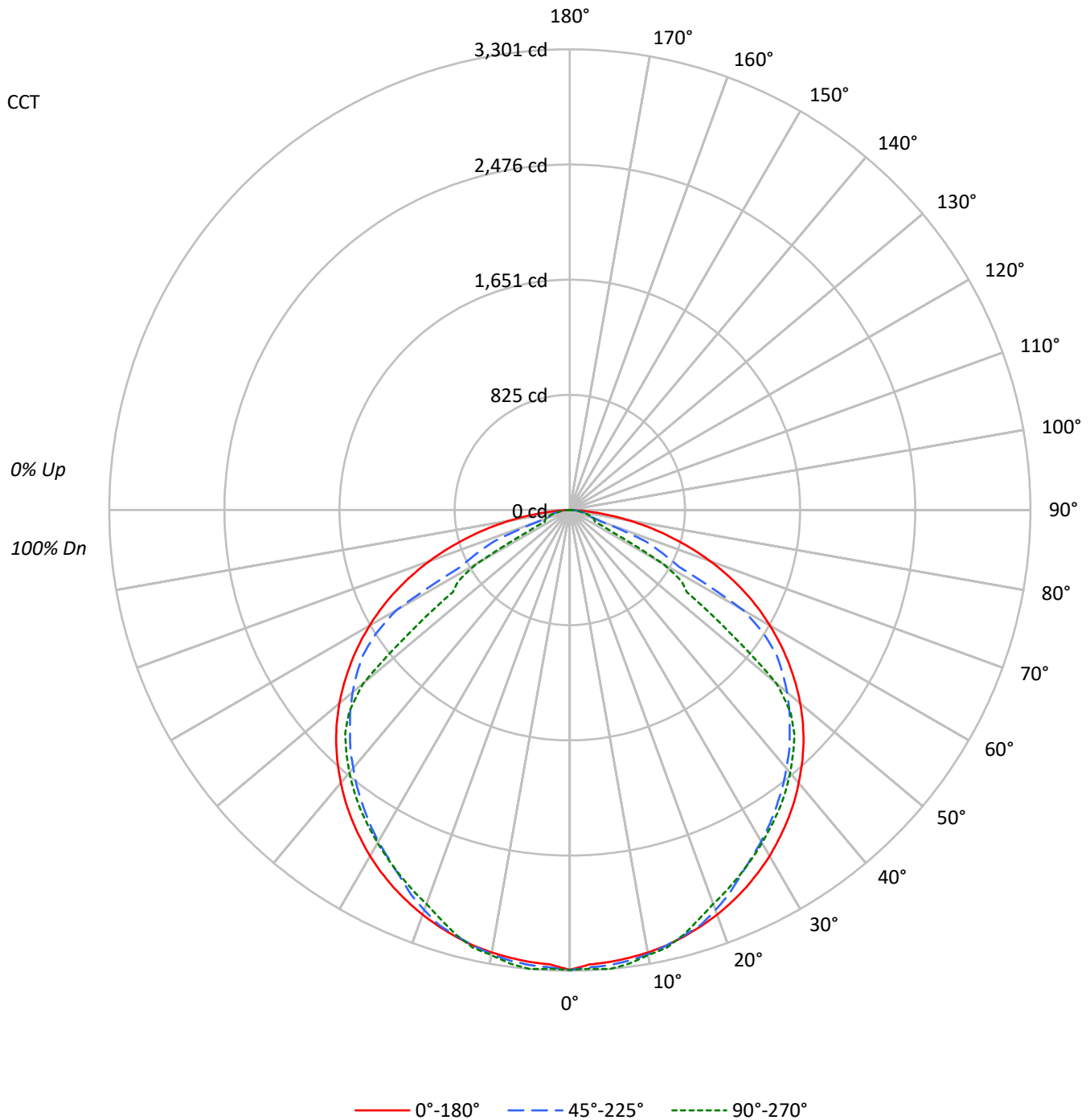
Test Method: LM-79-2019  
Report Number: P894064  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G2-2408-210-7)  
Test Lab: INNOVATION CENTER  
Issue Date: 11/11/2024  
Manufacturer: COOPER LIGHTING SOLUTIONS  
Product Line: METALUX  
Catalog Number: 4MB-9HL-RFLW-UNV-L950  
Description: 9000 Lumen 4FT MICROBAY LINEAR BAY with REFLECTOR WITH WHITE FINISH, 90CRI, 5000K  
Light Source: -  
Ballast/Driver: -

**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 8589.0 lumens  
Efficiency: N/A  
Efficacy: 133.4 lumens/watt  
Spacing Criteria (0/90/45): 1.29 / 1.25 / 1.38  
Luminous Opening: Rectangular (W 0.21' x L: 3.98' x H: 0')  
CIE Type: Direct  
  
Input Watts (W): 64.4  
Input Voltage (V): 120  
Input Current (A<sub>in</sub>): NR  
Voltage Rise (V): NR  
Power Factor: 0.996  
Total Harmonic Distortion (THDi): 8.94  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 24 FT

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CATALOG NUMBER: 4MB-9HL-RFLW-UNV-L950

### 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	0
RCR																		
0	119	119	119	119	116	116	116	116	111	111	111	106	106	106	102	102	102	100
1	110	106	102	98	107	103	100	97	99	96	94	95	93	91	92	90	88	86
2	101	93	87	82	98	91	85	81	88	83	79	85	81	77	82	78	75	73
3	92	82	75	69	90	81	74	68	78	72	67	75	70	66	73	68	65	62
4	85	73	65	59	82	72	64	58	70	63	57	67	61	57	65	60	56	54
5	78	66	57	51	76	65	56	50	62	55	50	61	54	49	59	53	49	47
6	72	59	51	44	70	58	50	44	56	49	44	55	48	43	53	48	43	41
7	67	54	45	39	65	53	45	39	51	44	39	50	43	39	49	43	38	36
8	62	49	41	35	61	48	40	35	47	40	35	46	39	35	45	39	34	32
9	58	45	37	32	57	44	37	31	43	36	31	42	36	31	41	35	31	29
10	54	42	34	29	53	41	34	29	40	33	28	39	33	28	38	32	28	26

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

	0°	45°	90°
0°	42781	42781	42781
5°	42389	42666	43024
10°	42450	42611	42692
15°	42544	42448	42351
20°	42651	42159	41513
25°	42767	41413	41326
30°	42929	41133	41301
35°	43084	40975	41475
40°	43265	40926	41648
45°	43498	40905	41820
50°	43564	41061	39071
55°	43374	40935	23169
60°	43004	37309	20093
65°	42300	22555	6084
70°	40627	8941	6978
75°	37643	7335	7129
80°	32573	7747	6678
85°	23138	7256	6347

**MAXIMUM LUMINANCE 45°-90°:**

Horizontal Angle: 0°  
 Vertical Angle: 50°  
 Luminance: 43564 cd/sqm



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	312.1	3.6
10°-20°	893.7	10.4
20°-30°	1350.6	15.7
30°-40°	1647.8	19.2
40°-50°	1743.1	20.3
50°-60°	1443.7	16.8
60°-70°	802.6	9.3
70°-80°	325.3	3.8
80°-90°	70.1	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°	2556.3	29.8
0°-40°	4204.2	48.9
0°-60°	7391.0	86.1
0°-90°	8589.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	8589.0	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	3295	3295	3295	3295	3295	
5°	3252	3310	3273	3278	3301	309
15°	3165	3213	3158	3156	3150	894
25°	2985	3006	2890	2872	2884	1377
35°	2718	2684	2585	2595	2616	1701
45°	2369	2247	2228	2255	2277	1826
55°	1916	1786	1808	1241	1023	1712
65°	1377	1262	734	247	198	1358
75°	750	418	146	144	142	792
85°	155	52	49	45	43	195
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	3294.6	3294.6	3294.6	3294.6	3294.6
2.5°	3259.1	3315.9	3280.4	3287.5	3290.6
5°	3252.0	3309.8	3273.3	3278.4	3300.7
7.5°	3236.7	3295.6	3257.1	3260.1	3277.4
10°	3219.5	3273.3	3231.7	3226.6	3237.8
12.5°	3196.1	3244.9	3196.1	3198.2	3212.4
15°	3164.7	3213.4	3157.6	3155.5	3150.4
17.5°	3127.1	3172.8	3118.0	3085.5	3074.3
20°	3086.5	3122.0	3050.9	3001.2	3004.2
22.5°	3037.7	3068.2	2978.9	2933.2	2946.4
25°	2985.0	3006.3	2890.5	2872.3	2884.4
27.5°	2927.1	2943.3	2814.4	2810.3	2820.5
30°	2863.1	2869.2	2743.3	2741.3	2754.5
32.5°	2792.0	2781.9	2667.2	2669.2	2686.5
35°	2717.9	2684.4	2584.9	2595.1	2616.4
37.5°	2639.8	2579.9	2503.7	2516.9	2540.3
40°	2552.4	2471.2	2414.4	2434.7	2457.0
42.5°	2463.1	2357.5	2328.1	2347.4	2368.7
45°	2368.7	2246.8	2227.5	2255.0	2277.3
47.5°	2266.1	2138.2	2135.2	2156.5	2146.3
50°	2156.5	2025.5	2032.6	2004.2	1934.1
52.5°	2038.7	1908.7	1923.0	1800.1	1454.9
55°	1915.9	1785.9	1808.2	1240.7	1023.4
57.5°	1790.0	1660.0	1645.8	949.3	948.3
60°	1655.9	1532.1	1436.6	838.6	773.7
62.5°	1520.9	1399.1	882.3	631.5	355.4
65°	1376.7	1262.0	734.1	246.7	198.0
67.5°	1225.5	1122.9	587.9	185.8	192.9
70°	1070.1	978.7	235.5	179.7	183.8
72.5°	911.7	755.4	156.4	166.5	166.5
75°	750.3	418.3	146.2	144.2	142.1
77.5°	589.9	280.2	127.9	118.8	115.7
80°	435.6	100.5	103.6	92.4	89.3
82.5°	288.3	78.2	74.1	67.0	65.0
85°	155.3	51.8	48.7	44.7	42.6
87.5°	55.8	26.4	26.4	21.3	19.3
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	25.73	27.30	26.09	27.61	27.93	21.72	23.29	22.08	23.60	23.92
	3H	27.73	29.14	28.11	29.47	29.83	21.85	23.26	22.23	23.58	23.95
	4H	28.35	29.67	28.75	30.01	30.39	21.97	23.29	22.37	23.64	24.01
	6H	28.75	29.96	29.16	30.33	30.72	22.08	23.29	22.49	23.66	24.05
	8H	28.87	30.03	29.29	30.41	30.81	22.11	23.27	22.54	23.66	24.06
	12H	28.94	30.05	29.37	30.43	30.86	22.13	23.24	22.56	23.63	24.05
4H	2H	25.86	27.18	26.26	27.52	27.90	22.44	23.76	22.84	24.11	24.49
	3H	28.02	29.11	28.43	29.51	29.91	22.64	23.73	23.05	24.13	24.53
	4H	28.67	29.65	29.10	30.06	30.50	22.80	23.77	23.23	24.19	24.63
	6H	29.12	29.97	29.57	30.41	30.87	22.96	23.81	23.42	24.25	24.71
	8H	29.26	30.05	29.72	30.49	30.96	23.01	23.81	23.48	24.25	24.72
	12H	29.36	30.07	29.84	30.55	31.02	23.06	23.77	23.54	24.25	24.72
8H	4H	28.61	29.40	29.07	29.84	30.31	23.07	23.86	23.53	24.30	24.77
	6H	29.05	29.71	29.55	30.20	30.67	23.27	23.93	23.77	24.42	24.90
	8H	29.20	29.79	29.71	30.30	30.78	23.36	23.95	23.87	24.46	24.94
	12H	29.33	29.85	29.84	30.34	30.91	23.44	23.97	23.95	24.46	25.02
12H	4H	28.58	29.29	29.06	29.77	30.24	23.08	23.79	23.56	24.27	24.74
	6H	29.01	29.60	29.52	30.11	30.60	23.29	23.88	23.80	24.39	24.88
	8H	29.18	29.70	29.69	30.19	30.76	23.42	23.94	23.92	24.43	24.99