

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: P894039

Luminaire Tested: 4MB-9HL-LVR-UNV-L940

Issue Date: 11/11/2024

**Test Information**

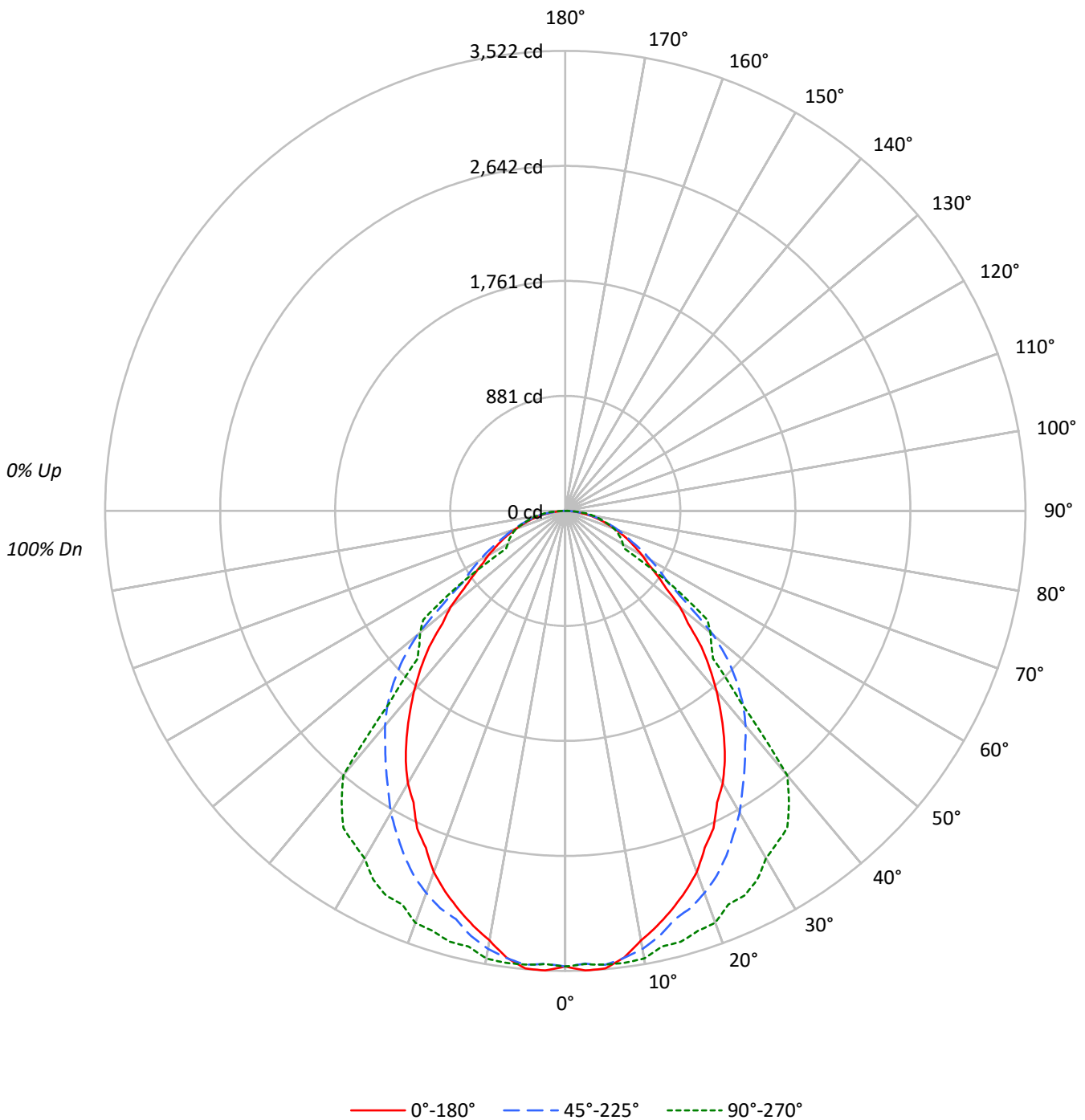
Test Method: LM-79-2019  
Report Number: P894039  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-2407-175-6)  
Test Lab: INNOVATION CENTER  
Issue Date: 11/11/2024  
Manufacturer: COOPER LIGHTING SOLUTIONS  
Product Line: METALUX  
Catalog Number: 4MB-9HL-LVR-UNV-L940  
Description: 9000 Lumen 4FT MICROBAY LINEAR BAY with LOUVER, 90CRI, 4000K CCT  
Light Source: -  
Ballast/Driver: -

**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 7301.0 lumens  
Efficiency: N/A  
Efficacy: 113.4 lumens/watt  
Spacing Criteria (0/90/45): 1.05 / 1.32 / 1.26  
Luminous Opening: Rectangular (W 0.38' x L: 3.98' x H: 0')  
CIE Type: Direct  
  
Input Watts (W): 64.4  
Input Voltage (V): 120  
Input Current (Ain): 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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### 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	101	94	88	83	99	92	87	82	89	84	80	86	82	78	83	80	77	77	77	77	75
3	94	84	77	71	91	83	76	70	80	74	69	77	72	68	75	70	67	67	67	67	65
4	86	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	57	53	62	56	52	52	52	52	50
6	74	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	43	39	49	43	38	48	42	38	38	38	38	36
9	61	48	41	35	59	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°	24816	24816	24816
5°	25116	24918	24904
10°	24126	24600	25140
15°	23263	23836	25156
20°	22283	23570	25409
25°	21054	22879	25500
30°	19786	21923	25239
35°	18400	20793	25731
40°	16716	19932	24537
45°	14811	18708	16089
50°	12676	16350	16056
55°	10623	11932	12490
60°	9664	10772	7230
65°	9054	9537	7726
70°	8332	9035	8267
75°	7829	8475	8420
80°	7302	8019	9022
85°	6270	6686	9617

**MAXIMUM LUMINANCE 45°-90°:**

Horizontal Angle: 45°  
 Vertical Angle: 45°  
 Luminance: 18708 cd/sqm



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	331.4	4.5
10°-20°	927.4	12.7
20°-30°	1351.5	18.5
30°-40°	1546.2	21.2
40°-50°	1322.7	18.1
50°-60°	872.2	11.9
60°-70°	527.3	7.2
70°-80°	322.6	4.4
80°-90°	99.6	1.4
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°	2610.4	35.8
0°-40°	4156.5	56.9
0°-60°	6351.4	87.0
0°-90°	7301.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	7301.0	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	3488	3488	3488	3488	3488	
5°	3517	3514	3489	3482	3487	330
15°	3158	3195	3236	3443	3415	888
25°	2682	2723	2914	3163	3248	1227
35°	2118	2225	2394	2770	2962	1320
45°	1472	1586	1859	1737	1599	1127
55°	856	904	962	1140	1007	779
65°	538	551	566	506	459	532
75°	285	292	308	323	306	301
85°	77	76	82	97	118	87
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	3487.9	3487.9	3487.9	3487.9	3487.9
2.5°	3521.7	3511.5	3469.5	3509.4	3473.6
5°	3516.6	3513.5	3488.9	3481.8	3486.9
7.5°	3449.0	3456.2	3452.1	3528.9	3490.0
10°	3339.4	3353.7	3405.0	3512.5	3479.7
12.5°	3253.3	3264.6	3333.2	3493.0	3416.2
15°	3158.1	3195.0	3235.9	3442.9	3415.2
17.5°	3055.6	3090.5	3187.8	3375.2	3372.2
20°	2943.0	3007.5	3113.0	3287.2	3355.8
22.5°	2790.3	2877.4	3025.9	3247.2	3260.5
25°	2681.8	2722.7	2914.3	3163.2	3248.2
27.5°	2516.8	2594.7	2790.3	3042.3	3182.7
30°	2408.3	2472.8	2668.4	2971.6	3072.0
32.5°	2272.0	2348.8	2524.0	2894.8	3015.7
35°	2118.4	2224.9	2393.9	2769.9	2962.4
37.5°	1956.5	2062.0	2261.8	2666.4	2811.9
40°	1799.8	1889.9	2146.0	2542.4	2641.8
42.5°	1639.0	1736.3	2013.9	2297.6	1987.2
45°	1472.0	1585.7	1859.2	1737.3	1599.0
47.5°	1274.3	1413.6	1688.1	1396.2	1515.0
50°	1145.2	1221.0	1477.1	1316.3	1450.5
52.5°	974.2	1076.6	1186.2	1229.2	1370.6
55°	856.4	904.5	961.9	1140.1	1006.9
57.5°	747.8	790.8	857.4	804.1	536.8
60°	679.1	698.6	757.0	574.7	508.1
62.5°	601.3	620.8	663.8	536.8	487.6
65°	537.8	551.1	566.5	506.0	458.9
67.5°	470.2	477.3	493.7	467.1	431.3
70°	400.5	410.8	434.3	427.2	397.4
72.5°	339.1	348.3	368.8	379.0	351.4
75°	284.8	291.9	308.3	322.7	306.3
77.5°	226.4	233.6	255.1	270.4	263.3
80°	178.2	179.3	195.7	211.0	220.2
82.5°	125.0	127.0	139.3	155.7	174.1
85°	76.8	75.8	81.9	97.3	117.8
87.5°	29.7	28.7	33.8	41.0	60.4
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	18.98	20.46	19.35	20.78	21.09	18.66	20.14	19.03	20.45	20.77
	3H	20.54	21.87	20.92	22.20	22.56	20.28	21.60	20.66	21.93	22.29
	4H	21.14	22.38	21.54	22.73	23.11	21.03	22.27	21.43	22.62	23.00
	6H	21.60	22.75	22.01	23.11	23.51	21.70	22.84	22.11	23.21	23.60
	8H	21.75	22.84	22.18	23.23	23.64	21.97	23.06	22.40	23.45	23.85
	12H	21.85	22.90	22.28	23.28	23.71	22.19	23.24	22.62	23.62	24.05
4H	2H	19.58	20.82	19.98	21.17	21.55	19.32	20.56	19.72	20.91	21.29
	3H	21.37	22.39	21.78	22.79	23.20	21.21	22.24	21.62	22.64	23.04
	4H	22.09	23.02	22.53	23.43	23.87	22.10	23.03	22.54	23.44	23.88
	6H	22.68	23.48	23.13	23.92	24.38	22.91	23.71	23.37	24.16	24.62
	8H	22.87	23.63	23.34	24.07	24.54	23.24	23.99	23.70	24.44	24.90
	12H	23.01	23.68	23.49	24.16	24.63	23.51	24.18	23.99	24.66	25.13
8H	4H	22.41	23.17	22.88	23.61	24.08	22.42	23.18	22.89	23.62	24.09
	6H	23.12	23.75	23.62	24.24	24.72	23.37	24.00	23.87	24.49	24.97
	8H	23.39	23.96	23.91	24.47	24.95	23.79	24.35	24.31	24.86	25.35
	12H	23.60	24.10	24.11	24.59	25.16	24.16	24.66	24.67	25.15	25.71
12H	4H	22.45	23.13	22.94	23.61	24.08	22.45	23.12	22.93	23.60	24.07
	6H	23.19	23.76	23.71	24.27	24.76	23.43	23.99	23.94	24.50	24.99
	8H	23.52	24.02	24.03	24.51	25.08	23.90	24.40	24.41	24.89	25.46