

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: P894054

Luminaire Tested: 4MB-9HL-LVRF-UNV-L935

Issue Date: 11/11/2024

**Test Information**

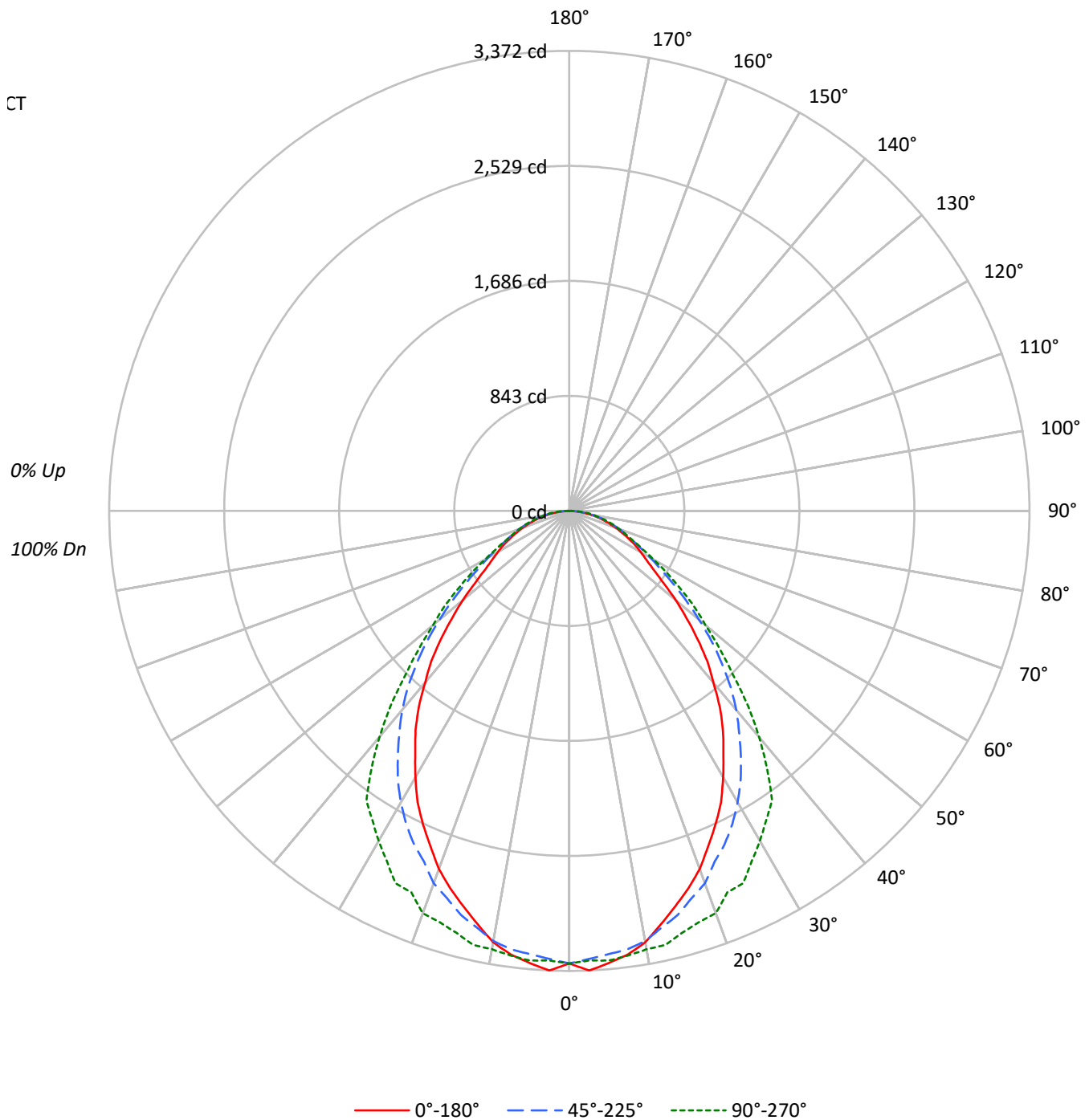
Test Method: LM-79-2019  
Report Number: P894054  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-2407-175-5)  
Test Lab: INNOVATION CENTER  
Issue Date: 11/11/2024  
Manufacturer: COOPER LIGHTING SOLUTIONS  
Product Line: METALUX  
Catalog Number: 4MB-9HL-LVRF-UNV-L935  
Description: 9000 Lumen 4FT MICROBAY LINEAR BAY with LOUVER WITH FROSTED INLAY, 90CRI, 3500K C  
Light Source: -  
Ballast/Driver: -

**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 6726.0 lumens  
Efficiency: N/A  
Efficacy: 104.4 lumens/watt  
Spacing Criteria (0/90/45): 1.05 / 1.25 / 1.21  
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 (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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### 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	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	87	76	68	62	84	74	67	61	72	66	61	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	57	52	52	52	52	50
6	75	62	54	48	73	61	54	48	60	53	48	58	52	47	57	51	47	47	47	47	45
7	70	57	49	43	68	56	49	43	55	48	43	53	47	42	52	46	42	42	42	42	40
8	65	52	44	39	64	52	44	39	50	44	39	49	43	39	48	43	38	38	38	38	37
9	61	48	41	36	60	48	40	35	47	40	35	46	40	35	45	39	35	35	35	35	33
10	57	45	37	33	56	44	37	32	43	37	32	43	36	32	42	36	32	32	32	32	30

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

	0°	45°	90°
0°	23602	23602	23602
5°	23756	23296	23628
10°	23199	23128	23572
15°	22105	22594	23573
20°	21145	21993	23765
25°	19907	21153	23644
30°	18519	20271	22951
35°	17055	19028	22508
40°	15254	17685	20098
45°	13372	15906	17043
50°	11285	13743	14424
55°	9362	11502	12302
60°	8608	9779	10146
65°	8064	8598	8665
70°	7510	8148	8086
75°	7007	7607	7879
80°	6543	7072	7560
85°	5502	5992	8335

**MAXIMUM LUMINANCE 45°-90°:**

Horizontal Angle: 90°  
 Vertical Angle: 45°  
 Luminance: 17043 cd/sqm



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	313.1	4.7
10°-20°	873.4	13.0
20°-30°	1257.8	18.7
30°-40°	1388.6	20.6
40°-50°	1191.6	17.7
50°-60°	811.7	12.1
60°-70°	510.6	7.6
70°-80°	290.7	4.3
80°-90°	88.4	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°	2444.3	36.3
0°-40°	3833.0	57.0
0°-60°	5836.2	86.8
0°-90°	6726.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	6726.0	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	3317	3317	3317	3317	3317	
5°	3326	3313	3262	3330	3308	314
15°	3001	3033	3067	3206	3200	845
25°	2536	2586	2694	2912	3012	1165
35°	1964	2040	2191	2430	2591	1221
45°	1329	1417	1581	1676	1694	1024
55°	755	801	927	972	992	693
65°	479	487	511	536	515	476
75°	255	257	277	289	287	272
85°	67	69	73	87	102	78
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	3317.2	3317.2	3317.2	3317.2	3317.2
2.5°	3371.8	3337.1	3287.5	3335.1	3298.4
5°	3326.2	3313.3	3261.7	3330.1	3308.3
7.5°	3279.6	3251.8	3242.9	3316.3	3287.5
10°	3211.1	3195.3	3201.2	3295.4	3262.7
12.5°	3103.0	3113.9	3127.8	3247.8	3257.7
15°	3000.9	3032.6	3067.3	3206.2	3200.2
17.5°	2900.7	2944.4	2977.1	3155.6	3160.6
20°	2792.6	2817.4	2904.7	3077.3	3138.7
22.5°	2658.8	2707.3	2782.7	2997.9	3025.7
25°	2535.8	2586.4	2694.5	2911.6	3011.8
27.5°	2406.9	2453.5	2587.3	2809.5	2894.8
30°	2254.1	2316.6	2467.4	2693.5	2793.6
32.5°	2101.4	2192.7	2337.4	2569.5	2685.5
35°	1963.6	2039.9	2190.7	2429.7	2591.3
37.5°	1810.8	1891.2	2043.9	2276.9	2380.1
40°	1642.3	1728.5	1904.1	2092.5	2163.9
42.5°	1497.5	1571.8	1748.4	1881.3	1937.8
45°	1328.9	1417.1	1580.8	1676.0	1693.8
47.5°	1166.2	1267.4	1414.2	1458.8	1493.5
50°	1019.5	1098.8	1241.6	1269.4	1303.1
52.5°	869.7	954.0	1079.0	1106.7	1156.3
55°	754.7	801.3	927.2	971.9	991.7
57.5°	670.4	700.1	789.4	845.9	851.9
60°	604.9	619.8	687.2	729.9	713.0
62.5°	544.4	556.3	590.1	622.8	601.0
65°	479.0	486.9	510.7	535.5	514.7
67.5°	417.5	426.4	448.2	466.1	448.2
70°	361.0	367.9	391.7	399.7	388.7
72.5°	308.4	311.4	331.2	345.1	338.2
75°	254.9	256.9	276.7	288.6	286.6
77.5°	206.3	209.2	226.1	237.0	231.1
80°	159.7	161.6	172.6	188.4	184.5
82.5°	112.1	116.0	123.0	136.9	147.8
85°	67.4	69.4	73.4	87.3	102.1
87.5°	25.8	27.8	29.8	36.7	48.6
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	18.44	19.92	18.80	20.23	20.55	19.80	21.28	20.16	21.59	21.91
	3H	20.02	21.34	20.40	21.67	22.03	21.08	22.41	21.46	22.74	23.10
	4H	20.62	21.86	21.02	22.21	22.59	21.64	22.88	22.04	23.23	23.61
	6H	21.09	22.24	21.51	22.61	23.00	22.09	23.24	22.50	23.60	24.00
	8H	21.25	22.34	21.68	22.73	23.13	22.28	23.37	22.70	23.76	24.16
	12H	21.35	22.39	21.78	22.77	23.20	22.43	23.48	22.86	23.86	24.29
4H	2H	19.05	20.29	19.45	20.64	21.02	20.17	21.41	20.57	21.76	22.14
	3H	20.86	21.88	21.27	22.29	22.69	21.72	22.75	22.13	23.15	23.55
	4H	21.58	22.51	22.01	22.92	23.36	22.43	23.35	22.86	23.77	24.21
	6H	22.18	22.98	22.63	23.42	23.89	23.03	23.84	23.49	24.28	24.74
	8H	22.38	23.13	22.84	23.58	24.04	23.28	24.03	23.75	24.48	24.95
	12H	22.52	23.19	23.00	23.67	24.14	23.50	24.17	23.98	24.65	25.12
8H	4H	21.91	22.66	22.37	23.10	23.57	22.66	23.41	23.12	23.86	24.32
	6H	22.63	23.25	23.13	23.74	24.22	23.40	24.03	23.90	24.52	25.00
	8H	22.91	23.47	23.42	23.98	24.47	23.74	24.29	24.25	24.81	25.29
	12H	23.12	23.61	23.63	24.11	24.67	24.04	24.54	24.55	25.03	25.59
12H	4H	21.94	22.62	22.43	23.09	23.57	22.67	23.34	23.16	23.82	24.30
	6H	22.70	23.26	23.21	23.77	24.26	23.44	24.00	23.96	24.51	25.00
	8H	23.03	23.53	23.54	24.02	24.59	23.83	24.33	24.34	24.82	25.38