

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: P894033

Luminaire Tested: 4MB-9HL-LVR-UNV-L830

Issue Date: 11/11/2024

**Test Information**

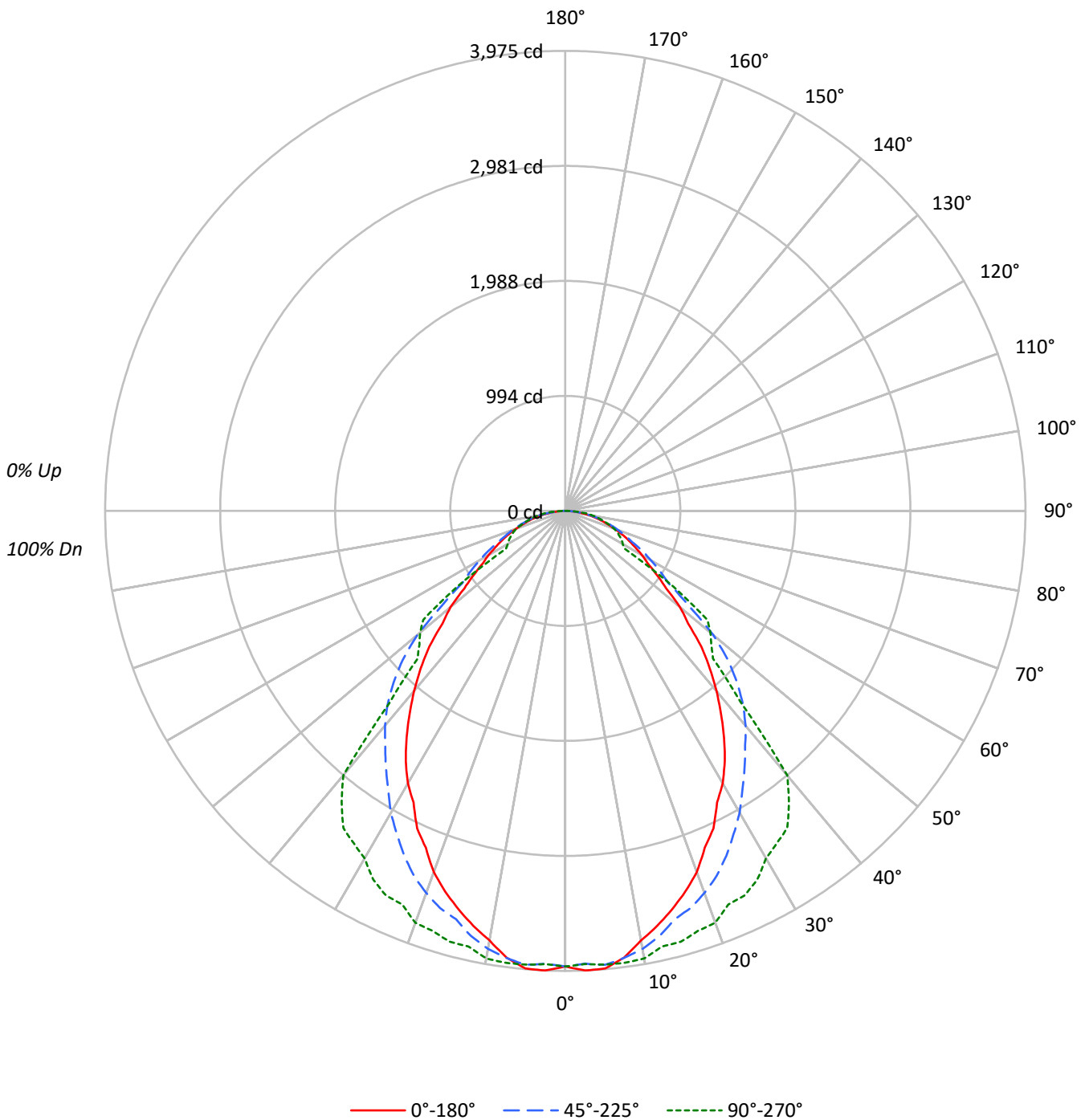
Test Method: LM-79-2019  
Report Number: P894033  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-2407-175-6)  
Test Lab: INNOVATION CENTER  
Issue Date: 11/11/2024  
Manufacturer: COOPER LIGHTING SOLUTIONS  
Product Line: METALUX  
Catalog Number: 4MB-9HL-LVR-UNV-L830  
Description: 9000 Lumen 4FT MICROBAY LINEAR BAY with LOUVER, 80CRI, 3000K CCT  
Light Source: -  
Ballast/Driver: -

**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 8240.0 lumens  
Efficiency: N/A  
Efficacy: 128.0 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 (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	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°	28008	28008	28008
5°	28347	28124	28107
10°	27229	27764	28374
15°	26255	26901	28391
20°	25149	26602	28677
25°	23761	25821	28780
30°	22330	24742	28485
35°	20766	23467	29040
40°	18867	22495	27693
45°	16716	21113	18159
50°	14307	18453	18120
55°	11989	13466	14097
60°	10907	12158	8159
65°	10219	10763	8719
70°	9403	10198	9332
75°	8835	9567	9503
80°	8244	9047	10186
85°	7078	7551	10858

**MAXIMUM LUMINANCE 45°-90°:**

Horizontal Angle: 45°  
 Vertical Angle: 45°  
 Luminance: 21113 cd/sqm



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	374.1	4.5
10°-20°	1046.6	12.7
20°-30°	1525.4	18.5
30°-40°	1745.0	21.2
40°-50°	1492.8	18.1
50°-60°	984.4	11.9
60°-70°	595.1	7.2
70°-80°	364.1	4.4
80°-90°	112.5	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°	2946.1	35.8
0°-40°	4691.1	56.9
0°-60°	7168.3	87.0
0°-90°	8240.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	8240.0	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	3936	3936	3936	3936	3936	
5°	3969	3965	3938	3930	3935	372
15°	3564	3606	3652	3886	3854	1002
25°	3027	3073	3289	3570	3666	1385
35°	2391	2511	2702	3126	3343	1489
45°	1661	1790	2098	1961	1805	1272
55°	966	1021	1086	1287	1136	879
65°	607	622	639	571	518	600
75°	321	330	348	364	346	339
85°	87	86	92	110	133	98
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	3936.5	3936.5	3936.5	3936.5	3936.5
2.5°	3974.7	3963.1	3915.7	3960.8	3920.3
5°	3968.9	3965.4	3937.7	3929.6	3935.4
7.5°	3892.6	3900.7	3896.1	3982.8	3938.8
10°	3768.9	3785.1	3842.9	3964.3	3927.3
12.5°	3671.8	3684.5	3761.9	3942.3	3855.6
15°	3564.3	3605.9	3652.1	3885.6	3854.4
17.5°	3448.6	3487.9	3597.8	3809.3	3805.9
20°	3321.5	3394.3	3513.4	3709.9	3787.4
22.5°	3149.2	3247.5	3415.1	3664.8	3679.9
25°	3026.7	3072.9	3289.1	3570.0	3666.0
27.5°	2840.5	2928.4	3149.2	3433.6	3592.0
30°	2718.0	2790.8	3011.6	3353.8	3467.1
32.5°	2564.2	2650.9	2848.6	3267.1	3403.6
35°	2390.8	2511.0	2701.8	3126.1	3343.4
37.5°	2208.1	2327.2	2552.7	3009.3	3173.5
40°	2031.3	2133.0	2422.0	2869.4	2981.6
42.5°	1849.8	1959.6	2272.9	2593.1	2242.8
45°	1661.3	1789.6	2098.3	1960.7	1804.7
47.5°	1438.2	1595.4	1905.2	1575.8	1709.9
50°	1292.5	1378.1	1667.1	1485.6	1637.0
52.5°	1099.4	1215.1	1338.8	1387.3	1546.9
55°	966.5	1020.8	1085.6	1286.7	1136.4
57.5°	844.0	892.5	967.7	907.5	605.8
60°	766.5	788.5	854.4	648.6	573.4
62.5°	678.6	700.6	749.2	605.8	550.3
65°	607.0	622.0	639.3	571.1	517.9
67.5°	530.6	538.7	557.2	527.2	486.7
70°	452.0	463.6	490.2	482.1	448.6
72.5°	382.7	393.1	416.2	427.8	396.5
75°	321.4	329.5	348.0	364.2	345.7
77.5°	255.5	263.6	287.9	305.2	297.1
80°	201.2	202.3	220.8	238.2	248.6
82.5°	141.0	143.4	157.2	175.7	196.5
85°	86.7	85.6	92.5	109.8	133.0
87.5°	33.5	32.4	38.2	46.2	68.2
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	19.40	20.88	19.77	21.20	21.51	19.08	20.56	19.45	20.87	21.19
	3H	20.96	22.29	21.34	22.62	22.98	20.70	22.02	21.08	22.35	22.71
	4H	21.56	22.80	21.96	23.15	23.53	21.45	22.69	21.85	23.04	23.42
	6H	22.02	23.17	22.43	23.53	23.93	22.12	23.26	22.53	23.63	24.02
	8H	22.17	23.26	22.60	23.65	24.06	22.39	23.48	22.82	23.87	24.28
	12H	22.27	23.32	22.70	23.70	24.13	22.61	23.66	23.04	24.04	24.47
4H	2H	20.00	21.24	20.40	21.59	21.97	19.74	20.98	20.14	21.33	21.71
	3H	21.79	22.81	22.20	23.21	23.62	21.63	22.66	22.04	23.06	23.46
	4H	22.51	23.44	22.95	23.85	24.29	22.52	23.45	22.96	23.86	24.30
	6H	23.10	23.90	23.55	24.34	24.81	23.33	24.13	23.79	24.58	25.04
	8H	23.29	24.05	23.76	24.49	24.96	23.66	24.41	24.12	24.86	25.32
	12H	23.43	24.10	23.91	24.58	25.06	23.93	24.60	24.41	25.08	25.55
8H	4H	22.83	23.59	23.30	24.03	24.50	22.84	23.60	23.31	24.04	24.51
	6H	23.55	24.17	24.04	24.66	25.14	23.79	24.42	24.29	24.91	25.39
	8H	23.81	24.38	24.33	24.89	25.37	24.21	24.77	24.73	25.28	25.77
	12H	24.02	24.52	24.53	25.01	25.58	24.58	25.08	25.09	25.57	26.13
12H	4H	22.87	23.55	23.36	24.03	24.50	22.87	23.54	23.35	24.02	24.49
	6H	23.61	24.18	24.13	24.69	25.18	23.85	24.41	24.36	24.92	25.41
	8H	23.94	24.44	24.45	24.93	25.50	24.32	24.82	24.83	25.31	25.88