

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: P892765

Luminaire Tested: 2MB-4HL-RFLW-UNV-L830

Issue Date: 11/11/2024

**Test Information**

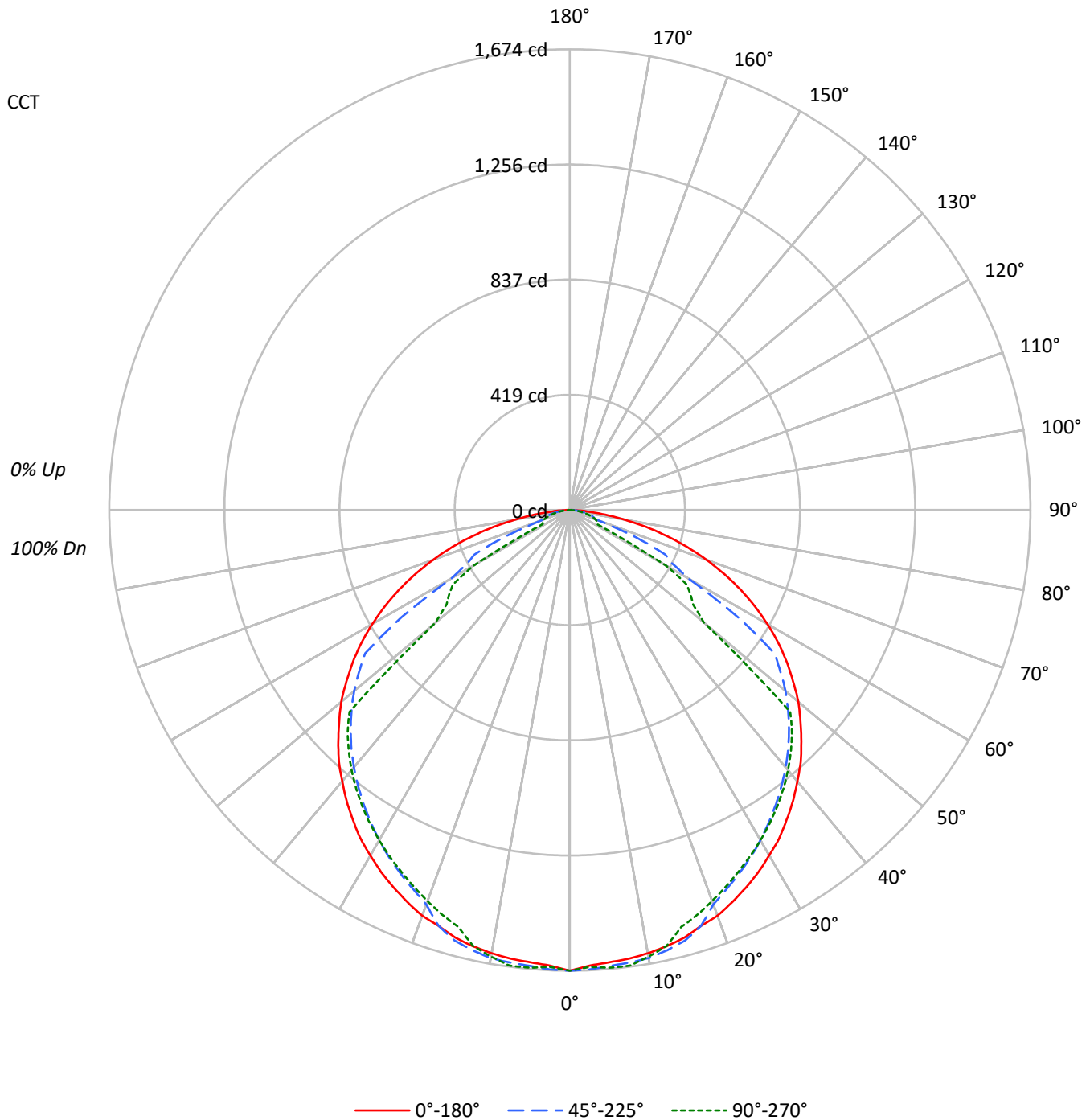
Test Method: LM-79-2019  
Report Number: P892765  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G2-2408-210-5)  
Test Lab: INNOVATION CENTER  
Issue Date: 11/11/2024  
Manufacturer: COOPER LIGHTING SOLUTIONS  
Product Line: METALUX  
Catalog Number: 2MB-4HL-RFLW-UNV-L830  
Description: 4000 Lumen 2FT MICROBAY LINEAR BAY with REFLECTOR WITH WHITE FINISH, 80CRI, 3000K  
Light Source: -  
Ballast/Driver: -

**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 4261.0 lumens  
Efficiency: N/A  
Efficacy: 154.4 lumens/watt  
Spacing Criteria (0/90/45): 1.29 / 1.24 / 1.38  
Luminous Opening: Rectangular (W 0.21' x L: 1.98' x H: 0')  
CIE Type: Direct  
  
Input Watts (W): 27.6  
Input Voltage (V): 120  
Input Current (Ain): NR  
Voltage Rise (V): NR  
Power Factor: 6.5  
Total Harmonic Distortion (THDi): 0.99  
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	98	107	103	100	97	99	96	94	95	93	91	92	90	88	88	88	88	86
2	101	93	87	82	98	91	86	81	88	83	79	85	81	77	82	78	75	75	75	75	73
3	92	83	75	69	90	81	74	68	78	72	67	75	70	66	73	69	65	65	65	65	63
4	85	74	65	59	83	72	65	59	70	63	58	68	62	57	65	60	56	56	56	56	54
5	78	66	57	51	76	65	57	51	63	56	50	61	55	50	59	54	49	49	49	49	47
6	72	60	51	45	70	59	51	45	57	50	44	55	49	44	54	48	43	43	43	43	42
7	67	54	46	40	65	53	45	40	52	45	39	50	44	39	49	43	39	39	39	39	37
8	63	49	41	35	61	49	41	35	47	40	35	46	40	35	45	39	35	35	35	35	33
9	58	45	37	32	57	45	37	32	44	37	32	43	36	32	42	36	31	31	31	31	30
10	55	42	34	29	54	41	34	29	40	34	29	39	33	29	39	33	29	29	29	29	27

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

	0°	45°	90°
0°	43707	43707	43707
5°	43227	43575	43748
10°	43350	43827	43676
15°	43479	43760	42376
20°	43584	42373	42003
25°	43605	41966	41773
30°	43689	41771	41771
35°	43798	41622	41892
40°	43859	41593	42046
45°	43941	41593	42154
50°	44057	41551	25824
55°	43802	41298	24361
60°	43308	25769	21059
65°	42268	23630	6684
70°	40350	7534	7534
75°	36758	8423	7465
80°	30100	8555	6856
85°	21328	8537	6261

**MAXIMUM LUMINANCE 45°-90°:**

Horizontal Angle: 0°  
 Vertical Angle: 50°  
 Luminance: 44057 cd/sqm



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	158.4	3.7
10°-20°	452.1	10.6
20°-30°	681.5	16.0
30°-40°	828.1	19.4
40°-50°	872.3	20.5
50°-60°	685.0	16.1
60°-70°	385.5	9.0
70°-80°	160.5	3.8
80°-90°	37.5	0.9
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°	1292.0	30.3
0°-40°	2120.1	49.8
0°-60°	3677.5	86.3
0°-90°	4261.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	4261.0	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	1674	1674	1674	1674	1674	
5°	1649	1668	1663	1662	1669	157
15°	1609	1628	1619	1571	1568	454
25°	1514	1525	1457	1448	1450	698
35°	1374	1328	1306	1310	1314	860
45°	1190	1124	1126	1140	1142	918
55°	962	893	907	532	535	859
65°	684	629	382	103	108	675
75°	364	218	84	77	74	385
85°	71	31	28	24	21	90
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	1674.1	1674.1	1674.1	1674.1	1674.1
2.5°	1657.0	1680.7	1671.2	1661.7	1661.7
5°	1649.4	1668.4	1662.7	1661.7	1669.3
7.5°	1644.7	1660.8	1658.9	1660.8	1670.3
10°	1635.2	1653.2	1653.2	1646.6	1647.5
12.5°	1623.8	1641.8	1638.0	1626.6	1622.8
15°	1608.6	1627.6	1619.0	1570.6	1567.8
17.5°	1584.9	1607.6	1584.9	1539.3	1542.2
20°	1568.7	1585.8	1525.1	1509.9	1511.8
22.5°	1542.2	1557.3	1490.0	1479.5	1481.4
25°	1513.7	1525.1	1456.8	1448.2	1450.1
27.5°	1484.3	1487.1	1422.6	1416.9	1418.8
30°	1449.2	1436.8	1385.6	1381.8	1385.6
32.5°	1415.9	1387.5	1345.7	1346.7	1351.4
35°	1374.2	1327.7	1305.9	1309.7	1314.4
37.5°	1332.4	1276.4	1264.1	1271.7	1275.5
40°	1286.9	1227.1	1220.4	1228.0	1233.7
42.5°	1242.3	1176.8	1174.9	1186.3	1189.1
45°	1190.1	1123.6	1126.5	1139.8	1141.7
47.5°	1136.9	1069.6	1076.2	1088.5	1086.6
50°	1084.7	1012.6	1023.0	1005.0	635.8
52.5°	1023.0	953.8	965.2	598.8	564.7
55°	962.3	893.0	907.3	531.5	535.2
57.5°	898.7	829.4	725.1	500.1	503.9
60°	829.4	764.9	493.5	467.9	403.3
62.5°	758.3	697.5	418.5	262.9	111.0
65°	684.2	629.2	382.5	103.4	108.2
67.5°	606.4	559.9	261.9	100.6	105.3
70°	528.6	434.7	98.7	96.8	98.7
72.5°	447.9	339.8	92.1	88.3	87.3
75°	364.4	218.3	83.5	76.9	74.0
77.5°	284.7	126.2	71.2	63.6	59.8
80°	200.2	64.5	56.9	48.4	45.6
82.5°	130.0	47.5	41.8	36.1	34.2
85°	71.2	31.3	28.5	23.7	20.9
87.5°	31.3	19.0	16.1	12.3	9.5
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	25.79	27.35	26.15	27.66	27.98	22.17	23.73	22.54	24.05	24.36
	3H	27.70	29.10	28.08	29.43	29.79	22.31	23.71	22.69	24.04	24.40
	4H	28.30	29.61	28.70	29.96	30.34	22.43	23.74	22.83	24.09	24.46
	6H	28.67	29.88	29.08	30.25	30.64	22.53	23.74	22.94	24.10	24.50
	8H	28.77	29.92	29.20	30.31	30.71	22.56	23.71	22.99	24.10	24.50
	12H	28.83	29.93	29.26	30.32	30.74	22.58	23.68	23.01	24.06	24.49
4H	2H	25.93	27.24	26.33	27.59	27.97	22.85	24.16	23.25	24.51	24.89
	3H	27.95	29.03	28.36	29.43	29.83	23.05	24.14	23.46	24.53	24.94
	4H	28.61	29.58	29.04	30.00	30.43	23.21	24.18	23.64	24.60	25.03
	6H	29.03	29.87	29.49	30.32	30.77	23.37	24.21	23.83	24.66	25.12
	8H	29.16	29.94	29.62	30.39	30.86	23.42	24.21	23.88	24.65	25.12
	12H	29.25	29.95	29.73	30.43	30.90	23.46	24.17	23.95	24.65	25.12
8H	4H	28.55	29.34	29.01	29.78	30.25	23.43	24.22	23.90	24.67	25.13
	6H	28.97	29.63	29.47	30.12	30.59	23.64	24.30	24.14	24.79	25.26
	8H	29.11	29.70	29.63	30.21	30.70	23.73	24.32	24.24	24.82	25.31
	12H	29.24	29.76	29.75	30.25	30.81	23.81	24.33	24.32	24.82	25.39
12H	4H	28.52	29.23	29.01	29.71	30.18	23.45	24.15	23.93	24.63	25.10
	6H	28.93	29.52	29.45	30.03	30.52	23.66	24.25	24.18	24.76	25.25
	8H	29.10	29.62	29.61	30.11	30.68	23.79	24.31	24.30	24.81	25.37