

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: P893549

Luminaire Tested: 4MB-4SL-RFLW-UNV-L930

Issue Date: 11/11/2024

**Test Information**

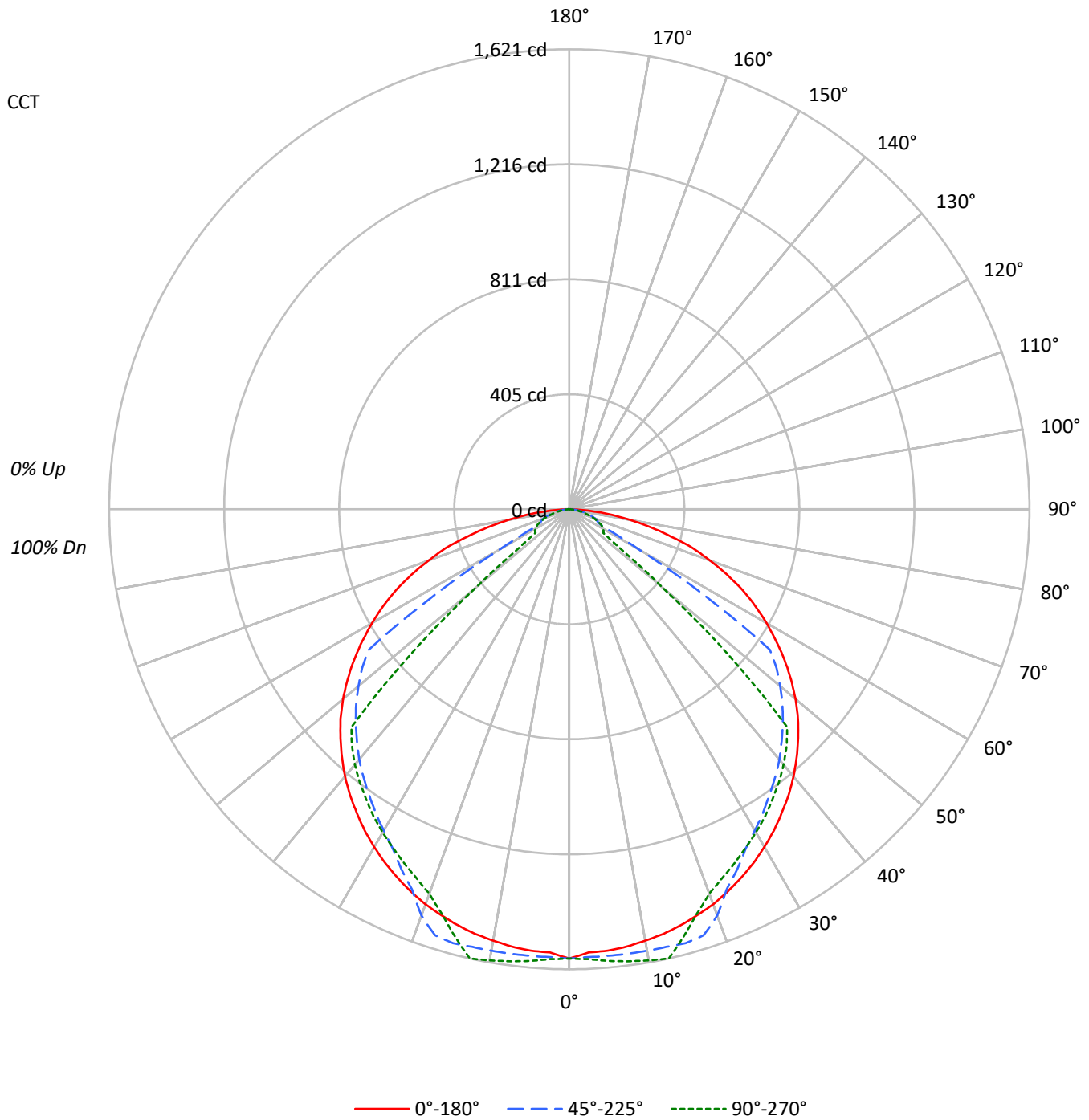
Test Method: LM-79-2019  
Report Number: P893549  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G2-2408-210-3)  
Test Lab: INNOVATION CENTER  
Issue Date: 11/11/2024  
Manufacturer: COOPER LIGHTING SOLUTIONS  
Product Line: METALUX  
Catalog Number: 4MB-4SL-RFLW-UNV-L930  
Description: 4000 Lumen 4FT MICROBAY LINEAR BAY with REFLECTOR WITH WHITE FINISH, 90CRI, 3000K  
Light Source: -  
Ballast/Driver: -

**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 3861.0 lumens  
Efficiency: N/A  
Efficacy: 129.6 lumens/watt  
Spacing Criteria (0/90/45): 1.29 / 1.24 / 1.38  
Luminous Opening: Rectangular (W 0.21' x L: 3.98' x H: 0')  
CIE Type: Direct  
  
Input Watts (W): 29.8  
Input Voltage (V): 120  
Input Current (A<sub>in</sub>): NR  
Voltage Rise (V): NR  
Power Factor: 0.99  
Total Harmonic Distortion (THDi): 5.5  
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				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	101	98	100	97	94	96	94	92	92	91	89	89	89	89	87
2	101	94	88	83	99	92	87	82	89	84	80	86	82	78	83	79	77	77	77	77	75
3	93	84	76	70	91	82	75	70	79	73	69	77	72	67	74	70	66	66	66	66	64
4	86	75	67	61	84	74	66	60	71	65	59	69	63	59	67	62	58	58	58	58	56
5	79	67	59	53	77	66	58	53	64	57	52	62	56	51	61	55	51	51	51	51	49
6	73	61	53	47	72	60	52	46	58	51	46	57	50	46	55	50	45	45	45	45	43
7	68	55	47	41	67	55	47	41	53	46	41	52	45	41	50	45	40	40	40	40	38
8	64	51	43	37	62	50	42	37	49	42	37	48	41	37	46	41	36	36	36	36	35
9	60	47	39	33	58	46	39	33	45	38	33	44	38	33	43	37	33	33	33	33	31
10	56	43	35	30	55	43	35	30	42	35	30	41	34	30	40	34	30	30	30	30	28

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

	0°	45°	90°
0°	20555	20555	20555
5°	20351	20587	20824
10°	20346	20825	21280
15°	20403	21280	20939
20°	20471	21047	19918
25°	20523	20054	19716
30°	20606	19598	19708
35°	20691	19482	19770
40°	20833	19510	19910
45°	20936	19535	19936
50°	21013	19583	8618
55°	20961	19521	3287
60°	20838	7448	3584
65°	20693	3460	3681
70°	19989	3721	3447
75°	18673	3552	3005
80°	16429	3126	2580
85°	12977	2712	2160

**MAXIMUM LUMINANCE 45°-90°:**

Horizontal Angle: 0°  
 Vertical Angle: 50°  
 Luminance: 21013 cd/sqm



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	151.2	3.9
10°-20°	439.0	11.4
20°-30°	655.0	17.0
30°-40°	793.9	20.6
40°-50°	812.9	21.1
50°-60°	540.6	14.0
60°-70°	308.1	8.0
70°-80°	129.4	3.4
80°-90°	30.9	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°	1245.1	32.2
0°-40°	2039.0	52.8
0°-60°	3392.6	87.9
0°-90°	3861.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	3861.0	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	1583	1583	1583	1583	1583	
5°	1561	1592	1579	1583	1598	148
15°	1518	1559	1583	1578	1558	429
25°	1432	1501	1400	1369	1376	661
35°	1305	1329	1229	1234	1247	818
45°	1140	1071	1064	1076	1086	880
55°	926	848	862	189	145	827
65°	674	603	113	120	120	663
75°	372	78	71	62	60	395
85°	87	22	18	14	14	104
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	1583.0	1583.0	1583.0	1583.0	1583.0
2.5°	1563.1	1595.7	1579.4	1581.2	1586.7
5°	1561.3	1592.1	1579.4	1583.0	1597.6
7.5°	1554.0	1586.7	1579.4	1590.3	1606.6
10°	1543.1	1581.2	1579.4	1597.6	1613.9
12.5°	1532.2	1570.3	1579.4	1606.6	1621.2
15°	1517.7	1559.4	1583.0	1577.6	1557.6
17.5°	1499.5	1548.5	1574.0	1495.9	1494.1
20°	1481.4	1534.0	1523.1	1448.7	1441.4
22.5°	1457.8	1519.5	1448.7	1397.9	1406.9
25°	1432.4	1501.3	1399.7	1368.8	1376.1
27.5°	1405.1	1483.2	1347.0	1336.1	1345.2
30°	1374.3	1457.8	1307.1	1303.5	1314.4
32.5°	1341.6	1408.8	1269.0	1270.8	1283.5
35°	1305.3	1328.9	1229.0	1234.5	1247.2
37.5°	1269.0	1254.4	1190.9	1200.0	1212.7
40°	1229.0	1196.4	1151.0	1160.0	1174.6
42.5°	1185.5	1134.6	1107.4	1120.1	1132.8
45°	1140.1	1071.1	1063.8	1076.5	1085.6
47.5°	1092.9	1016.6	1018.4	1027.5	769.7
50°	1040.2	962.2	969.4	671.7	426.6
52.5°	984.0	905.9	920.4	374.0	216.0
55°	925.9	847.8	862.3	188.8	145.2
57.5°	864.1	789.7	562.8	136.2	143.4
60°	802.4	728.0	286.8	134.3	138.0
62.5°	738.9	666.3	136.2	128.9	130.7
65°	673.5	602.7	112.6	119.8	119.8
67.5°	600.9	535.5	107.1	107.1	105.3
70°	526.5	444.8	98.0	92.6	90.8
72.5°	457.5	170.6	85.3	76.2	74.4
75°	372.2	78.1	70.8	61.7	59.9
77.5°	295.9	65.4	56.3	49.0	47.2
80°	219.7	50.8	41.8	36.3	34.5
82.5°	152.5	34.5	29.0	23.6	23.6
85°	87.1	21.8	18.2	14.5	14.5
87.5°	34.5	10.9	9.1	5.4	5.4
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	23.43	24.95	23.79	25.26	25.58	11.20	12.72	11.56	13.03	13.35
	3H	25.45	26.81	25.83	27.14	27.50	13.51	14.87	13.89	15.20	15.56
	4H	25.91	27.18	26.31	27.53	27.91	14.22	15.49	14.62	15.84	16.22
	6H	26.32	27.49	26.73	27.86	28.25	14.71	15.88	15.12	16.25	16.64
	8H	26.47	27.58	26.89	27.97	28.37	14.84	15.96	15.27	16.35	16.75
	12H	26.57	27.63	27.00	28.02	28.44	14.93	16.00	15.36	16.38	16.81
4H	2H	23.27	24.54	23.67	24.89	25.27	11.99	13.27	12.39	13.62	13.99
	3H	25.47	26.52	25.88	26.92	27.32	14.50	15.55	14.92	15.95	16.35
	4H	25.92	26.86	26.35	27.28	27.72	15.32	16.26	15.76	16.68	17.12
	6H	26.39	27.20	26.85	27.65	28.11	15.92	16.73	16.37	17.17	17.63
	8H	26.58	27.34	27.04	27.78	28.25	16.09	16.85	16.55	17.29	17.76
	12H	26.73	27.41	27.21	27.89	28.36	16.20	16.88	16.69	17.36	17.83
8H	4H	25.84	26.60	26.30	27.05	27.51	16.16	16.92	16.63	17.37	17.84
	6H	26.30	26.93	26.80	27.42	27.90	16.79	17.41	17.28	17.91	18.38
	8H	26.50	27.06	27.01	27.57	28.06	16.99	17.55	17.50	18.06	18.55
	12H	26.68	27.19	27.19	27.68	28.24	17.14	17.64	17.65	18.14	18.70
12H	4H	25.81	26.49	26.29	26.97	27.44	16.23	16.91	16.72	17.39	17.86
	6H	26.25	26.82	26.77	27.33	27.82	16.88	17.44	17.39	17.95	18.44
	8H	26.48	26.98	26.99	27.47	28.03	17.13	17.63	17.64	18.13	18.69