

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: P894024

Luminaire Tested: 4MB-9HL-FLT-UNV-L950

Issue Date: 11/11/2024

**Test Information**

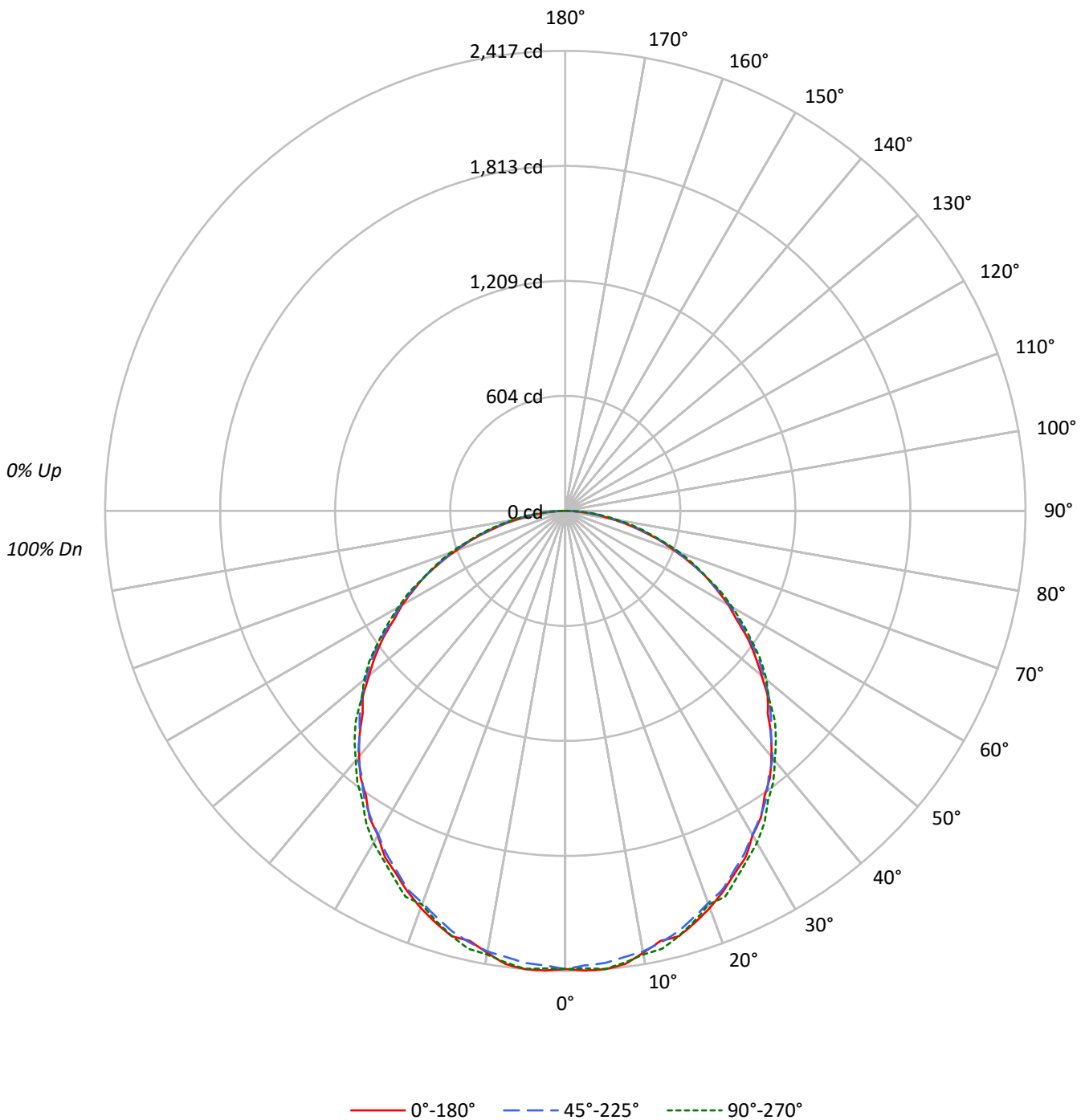
Test Method: LM-79-2019  
Report Number: P894024  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-2403-334-4)  
Test Lab: INNOVATION CENTER  
Issue Date: 11/11/2024  
Manufacturer: COOPER LIGHTING SOLUTIONS  
Product Line: METALUX  
Catalog Number: 4MB-9HL-FLT-UNV-L950  
Description: 9000 Lumen 4FT MICROBAY LINEAR BAY with FLAT FROSTED LENS, 90CRI, 5000K CCT  
Light Source: -  
Ballast/Driver: -

**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 6669.0 lumens  
Efficiency: N/A  
Efficacy: 103.6 lumens/watt  
Spacing Criteria (0/90/45): 1.22 / 1.24 / 1.34  
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				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	109	104	99	96	106	102	98	94	97	94	91	93	91	88	90	88	86	86	86	86	84
2	99	90	84	78	96	89	82	77	85	80	75	82	77	73	79	75	72	72	72	72	70
3	90	79	71	65	88	78	70	64	75	68	63	72	67	62	69	65	61	61	61	61	59
4	82	70	62	55	80	69	61	54	67	59	54	64	58	53	62	57	52	52	52	52	50
5	76	63	54	47	74	62	53	47	60	52	46	58	51	46	56	50	45	45	45	45	43
6	70	57	48	41	68	56	47	41	54	46	41	52	45	40	51	45	40	40	40	40	38
7	65	51	43	36	63	51	42	36	49	41	36	48	41	36	46	40	35	35	35	35	33
8	60	47	38	33	59	46	38	32	45	37	32	44	37	32	42	36	32	32	32	32	30
9	57	43	35	29	55	42	35	29	41	34	29	40	34	29	39	33	29	29	29	29	27
10	53	40	32	27	52	39	32	26	38	31	26	37	31	26	36	30	26	26	26	26	24

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

	0°	45°	90°
0°	17125	17125	17125
5°	17265	17034	17250
10°	17029	16983	17096
15°	17032	16856	17017
20°	16807	16602	16665
25°	16503	16414	16707
30°	16169	16144	16546
35°	15858	15993	16129
40°	15644	15740	15895
45°	15137	15368	15651
50°	14892	15110	15260
55°	14522	14702	14857
60°	14069	14277	14411
65°	13654	13706	13706
70°	12696	13000	13322
75°	11689	12148	12404
80°	10309	11202	11587
85°	9249	10351	11119

**MAXIMUM LUMINANCE 45°-90°:**

Horizontal Angle: 90°  
 Vertical Angle: 45°  
 Luminance: 15651 cd/sqm



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	227.8	3.4
10°-20°	649.3	9.7
20°-30°	973.8	14.6
30°-40°	1156.6	17.3
40°-50°	1184.2	17.8
50°-60°	1061.0	15.9
60°-70°	806.0	12.1
70°-80°	469.4	7.0
80°-90°	141.0	2.1
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°	1850.9	27.8
0°-40°	3007.5	45.1
0°-60°	5252.6	78.8
0°-90°	6669.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	6669.0	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	2407	2407	2407	2407	2407	
5°	2417	2408	2385	2400	2415	229
15°	2312	2328	2288	2298	2310	649
25°	2102	2121	2091	2118	2128	970
35°	1826	1866	1841	1849	1857	1148
45°	1504	1542	1527	1540	1555	1170
55°	1171	1188	1185	1199	1198	1043
65°	811	811	814	824	814	796
75°	425	432	442	455	451	453
85°	113	115	127	135	136	127
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	2406.9	2406.9	2406.9	2406.9	2406.9
2.5°	2417.3	2405.8	2390.2	2395.4	2405.8
5°	2417.3	2407.9	2385.0	2399.6	2415.2
7.5°	2401.7	2414.1	2364.2	2364.2	2393.4
10°	2357.0	2380.9	2350.7	2347.6	2366.3
12.5°	2314.3	2358.0	2322.7	2333.1	2355.9
15°	2312.3	2327.9	2288.3	2297.7	2310.2
17.5°	2267.6	2283.1	2240.5	2258.2	2258.2
20°	2219.7	2222.8	2192.7	2231.2	2201.0
22.5°	2164.6	2196.9	2155.3	2167.7	2193.7
25°	2102.2	2121.0	2090.8	2117.8	2128.2
27.5°	2051.3	2074.2	2032.6	2064.8	2067.9
30°	1968.1	1993.1	1965.0	1985.8	2013.9
32.5°	1912.0	1920.3	1905.7	1936.9	1945.2
35°	1825.7	1866.2	1841.3	1848.6	1856.9
37.5°	1765.4	1777.9	1756.0	1781.0	1794.5
40°	1684.3	1703.0	1694.7	1698.8	1711.3
42.5°	1600.1	1619.8	1598.0	1628.1	1637.5
45°	1504.4	1541.9	1527.3	1539.8	1555.4
47.5°	1442.0	1454.5	1450.4	1457.6	1447.2
50°	1345.4	1357.8	1365.1	1374.5	1378.6
52.5°	1259.1	1268.4	1281.9	1287.1	1296.5
55°	1170.7	1188.4	1185.2	1198.8	1197.7
57.5°	1067.8	1093.7	1085.4	1105.2	1105.2
60°	988.7	992.9	1003.3	1012.7	1012.7
62.5°	897.2	902.4	907.6	916.0	922.2
65°	811.0	811.0	814.1	824.5	814.1
67.5°	711.1	707.0	717.4	729.9	728.8
70°	610.3	615.5	624.9	640.4	640.4
72.5°	524.0	524.0	534.4	542.7	541.7
75°	425.2	432.5	441.9	455.4	451.2
77.5°	336.9	342.1	357.7	370.1	371.2
80°	251.6	256.8	273.4	285.9	282.8
82.5°	175.7	183.0	198.6	207.9	206.9
85°	113.3	115.4	126.8	135.2	136.2
87.5°	52.0	56.1	64.5	67.6	67.6
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	21.40	23.04	21.76	23.35	23.66	21.50	23.14	21.87	23.46	23.77
	3H	23.18	24.66	23.55	24.99	25.35	23.34	24.82	23.72	25.15	25.51
	4H	23.84	25.24	24.24	25.59	25.96	24.04	25.44	24.44	25.78	26.16
	6H	24.32	25.61	24.73	25.98	26.37	24.59	25.88	25.00	26.25	26.64
	8H	24.47	25.70	24.89	26.09	26.49	24.78	26.02	25.20	26.40	26.80
	12H	24.57	25.76	25.00	26.14	26.57	24.92	26.11	25.35	26.49	26.92
4H	2H	22.04	23.44	22.44	23.79	24.16	22.13	23.52	22.52	23.87	24.25
	3H	24.05	25.22	24.45	25.62	26.02	24.19	25.36	24.60	25.76	26.16
	4H	24.84	25.90	25.27	26.31	26.75	25.03	26.09	25.46	26.50	26.94
	6H	25.44	26.37	25.89	26.81	27.26	25.72	26.65	26.17	27.09	27.54
	8H	25.63	26.50	26.09	26.95	27.41	25.96	26.83	26.42	27.27	27.74
	12H	25.79	26.57	26.26	27.04	27.51	26.16	26.94	26.64	27.42	27.89
8H	4H	25.17	26.04	25.63	26.48	26.95	25.34	26.21	25.80	26.65	27.12
	6H	25.90	26.62	26.39	27.11	27.58	26.16	26.89	26.66	27.38	27.85
	8H	26.17	26.82	26.68	27.32	27.81	26.50	27.15	27.00	27.65	28.14
	12H	26.40	26.97	26.90	27.46	28.02	26.79	27.36	27.29	27.85	28.41
12H	4H	25.22	26.00	25.70	26.47	26.94	25.37	26.16	25.85	26.63	27.10
	6H	25.97	26.62	26.48	27.13	27.61	26.22	26.87	26.73	27.38	27.87
	8H	26.30	26.88	26.81	27.37	27.93	26.62	27.19	27.12	27.68	28.24