

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: P893540

Luminaire Tested: 4MB-4SL-LVRF-UNV-L850

Issue Date: 11/11/2024

**Test Information**

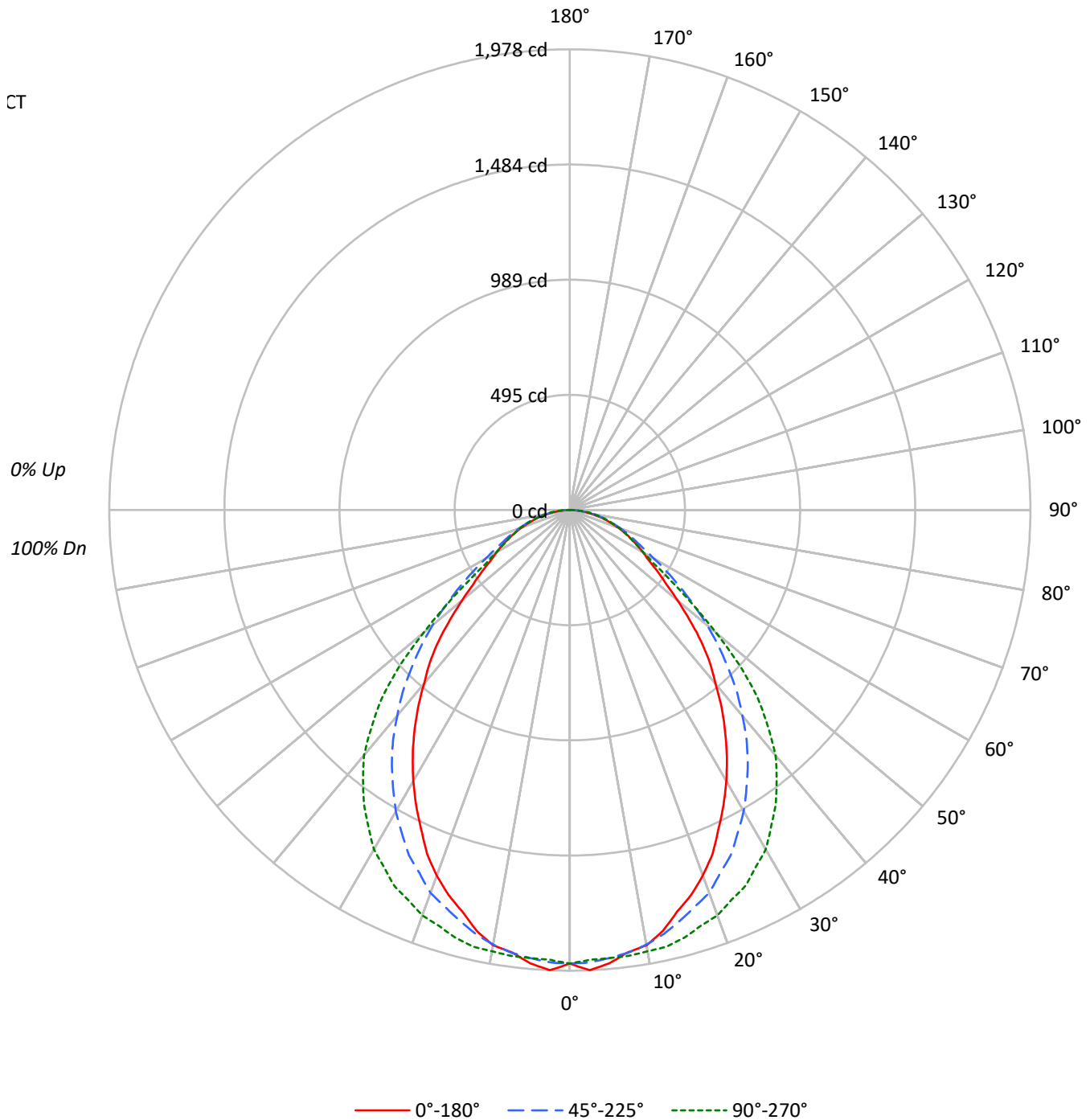
Test Method: LM-79-2019  
Report Number: P893540  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-2407-175-7)  
Test Lab: INNOVATION CENTER  
Issue Date: 11/11/2024  
Manufacturer: COOPER LIGHTING SOLUTIONS  
Product Line: METALUX  
Catalog Number: 4MB-4SL-LVRF-UNV-L850  
Description: 4000 Lumen 4FT MICROBAY LINEAR BAY with LOUVER WITH FROSTED INLAY, 80CRI, 5000K C  
Light Source: -  
Ballast/Driver: -

**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 4047.0 lumens  
Efficiency: N/A  
Efficacy: 135.8 lumens/watt  
Spacing Criteria (0/90/45): 1.06 / 1.27 / 1.23  
Luminous Opening: Rectangular (W 0.38' x L: 3.98' x H: 0')  
CIE Type: Direct  
  
Input Watts (W): 29.8  
Input Voltage (V): 120  
Input Current (Ain): 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				
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	79	83	80	77	77	77	77	75
3	94	84	77	71	91	83	76	70	80	74	69	77	72	68	75	71	67	67	67	67	65
4	87	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	58	53	62	56	52	52	52	52	50
6	75	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	44	39	49	43	38	48	42	38	38	38	38	36
9	61	48	41	35	60	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°	13854	13854	13854
5°	13951	13792	13792
10°	13710	13688	13900
15°	13142	13448	14001
20°	12643	13249	14023
25°	11861	12838	13991
30°	11039	12271	13826
35°	10106	11575	13387
40°	9047	10703	12772
45°	8029	9690	11483
50°	6680	8530	9057
55°	5690	7185	6582
60°	5158	5937	5201
65°	4859	5199	4842
70°	4570	4824	4718
75°	4258	4594	4508
80°	3901	4233	4355
85°	3388	3723	4874

**MAXIMUM LUMINANCE 45°-90°:**

Horizontal Angle: 90°  
 Vertical Angle: 45°  
 Luminance: 11483 cd/sqm



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	184.4	4.6
10°-20°	518.8	12.8
20°-30°	753.3	18.6
30°-40°	838.9	20.7
40°-50°	741.1	18.3
50°-60°	486.3	12.0
60°-70°	297.8	7.4
70°-80°	173.3	4.3
80°-90°	53.1	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°	1456.5	36.0
0°-40°	2295.4	56.7
0°-60°	3522.8	87.0
0°-90°	4047.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	4047.0	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	1947	1947	1947	1947	1947	
5°	1953	1954	1931	1950	1931	184
15°	1784	1804	1826	1898	1901	503
25°	1511	1547	1635	1740	1782	695
35°	1164	1226	1333	1473	1541	726
45°	798	846	963	1093	1141	610
55°	459	491	579	574	531	416
65°	289	294	309	300	288	287
75°	155	157	167	170	164	164
85°	42	44	46	52	60	47
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	1947.2	1947.2	1947.2	1947.2	1947.2
2.5°	1977.6	1953.3	1944.2	1953.3	1933.1
5°	1953.3	1954.3	1931.0	1950.3	1931.0
7.5°	1914.8	1928.0	1916.9	1946.2	1931.0
10°	1897.6	1898.6	1894.6	1925.0	1923.9
12.5°	1850.0	1853.1	1864.2	1909.8	1919.9
15°	1784.2	1804.5	1825.7	1897.6	1900.7
17.5°	1732.6	1756.9	1785.2	1862.2	1871.3
20°	1669.8	1679.9	1749.8	1817.6	1852.0
22.5°	1599.9	1619.1	1687.0	1778.1	1812.6
25°	1510.8	1547.3	1635.3	1739.6	1782.2
27.5°	1428.8	1471.3	1562.4	1678.9	1728.5
30°	1343.7	1392.3	1493.6	1608.0	1682.9
32.5°	1255.6	1316.4	1412.6	1544.2	1610.0
35°	1163.5	1226.3	1332.6	1473.3	1541.2
37.5°	1071.3	1132.1	1247.5	1398.4	1459.2
40°	974.1	1033.9	1152.3	1305.2	1375.1
42.5°	890.1	941.7	1063.2	1193.9	1258.7
45°	797.9	846.5	963.0	1092.6	1141.2
47.5°	696.7	753.4	866.8	973.1	992.3
50°	603.5	662.2	770.6	832.4	818.2
52.5°	521.5	571.1	670.3	696.7	663.3
55°	458.7	491.1	579.2	574.1	530.6
57.5°	401.0	421.2	496.2	467.8	426.3
60°	362.5	371.6	417.2	390.9	365.5
62.5°	326.1	330.1	354.4	340.2	321.0
65°	288.6	293.7	308.8	299.7	287.6
67.5°	254.2	256.2	270.4	268.3	253.2
70°	219.7	222.8	231.9	235.9	226.8
72.5°	186.3	189.4	198.5	202.5	194.4
75°	154.9	157.0	167.1	170.1	164.0
77.5°	124.5	128.6	134.7	139.7	132.7
80°	95.2	97.2	103.3	109.4	106.3
82.5°	66.8	69.9	73.9	82.0	84.0
85°	41.5	43.5	45.6	51.6	59.7
87.5°	16.2	17.2	20.3	22.3	29.4
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	16.66	18.14	17.03	18.46	18.77	17.31	18.80	17.68	19.11	19.42
	3H	18.26	19.59	18.64	19.92	20.28	18.75	20.08	19.13	20.40	20.77
	4H	18.88	20.12	19.28	20.47	20.85	19.35	20.60	19.76	20.95	21.33
	6H	19.35	20.50	19.76	20.86	21.26	19.84	20.99	20.25	21.36	21.75
	8H	19.50	20.59	19.93	20.98	21.39	20.04	21.13	20.47	21.52	21.92
	12H	19.60	20.65	20.03	21.03	21.46	20.21	21.25	20.64	21.63	22.06
4H	2H	17.28	18.53	17.68	18.88	19.25	17.81	19.05	18.21	19.40	19.78
	3H	19.10	20.13	19.52	20.53	20.94	19.50	20.53	19.92	20.93	21.34
	4H	19.84	20.77	20.28	21.19	21.62	20.26	21.18	20.69	21.60	22.04
	6H	20.44	21.25	20.90	21.69	22.15	20.89	21.70	21.35	22.14	22.60
	8H	20.64	21.39	21.10	21.83	22.30	21.15	21.90	21.61	22.35	22.81
	12H	20.78	21.45	21.26	21.93	22.40	21.37	22.04	21.86	22.52	22.99
8H	4H	20.16	20.91	20.63	21.36	21.83	20.53	21.28	20.99	21.73	22.19
	6H	20.89	21.51	21.38	22.00	22.48	21.30	21.93	21.80	22.42	22.90
	8H	21.16	21.72	21.67	22.23	22.72	21.65	22.21	22.16	22.72	23.21
	12H	21.38	21.87	21.89	22.37	22.93	21.97	22.46	22.48	22.95	23.52
12H	4H	20.20	20.87	20.68	21.35	21.82	20.55	21.22	21.03	21.70	22.17
	6H	20.95	21.51	21.46	22.02	22.51	21.35	21.91	21.86	22.42	22.91
	8H	21.28	21.78	21.79	22.27	22.84	21.75	22.25	22.26	22.74	23.31