

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: P892696

Luminaire Tested: 2MB-4HL-A-UNV-L850

Issue Date: 11/11/2024

Test Information

Test Method: LM-79-2019
Report Number: P892696
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-2404-077-8)
Test Lab: INNOVATION CENTER
Issue Date: 11/11/2024
Manufacturer: COOPER LIGHTING SOLUTIONS
Product Line: METALUX
Catalog Number: 2MB-4HL-A-UNV-L850
Description: 4000 Lumen 2FT MICROBAY LINEAR BAY with AISLE OPTIC, 80CRI, 5000K CCT
Light Source: -
Ballast/Driver: -

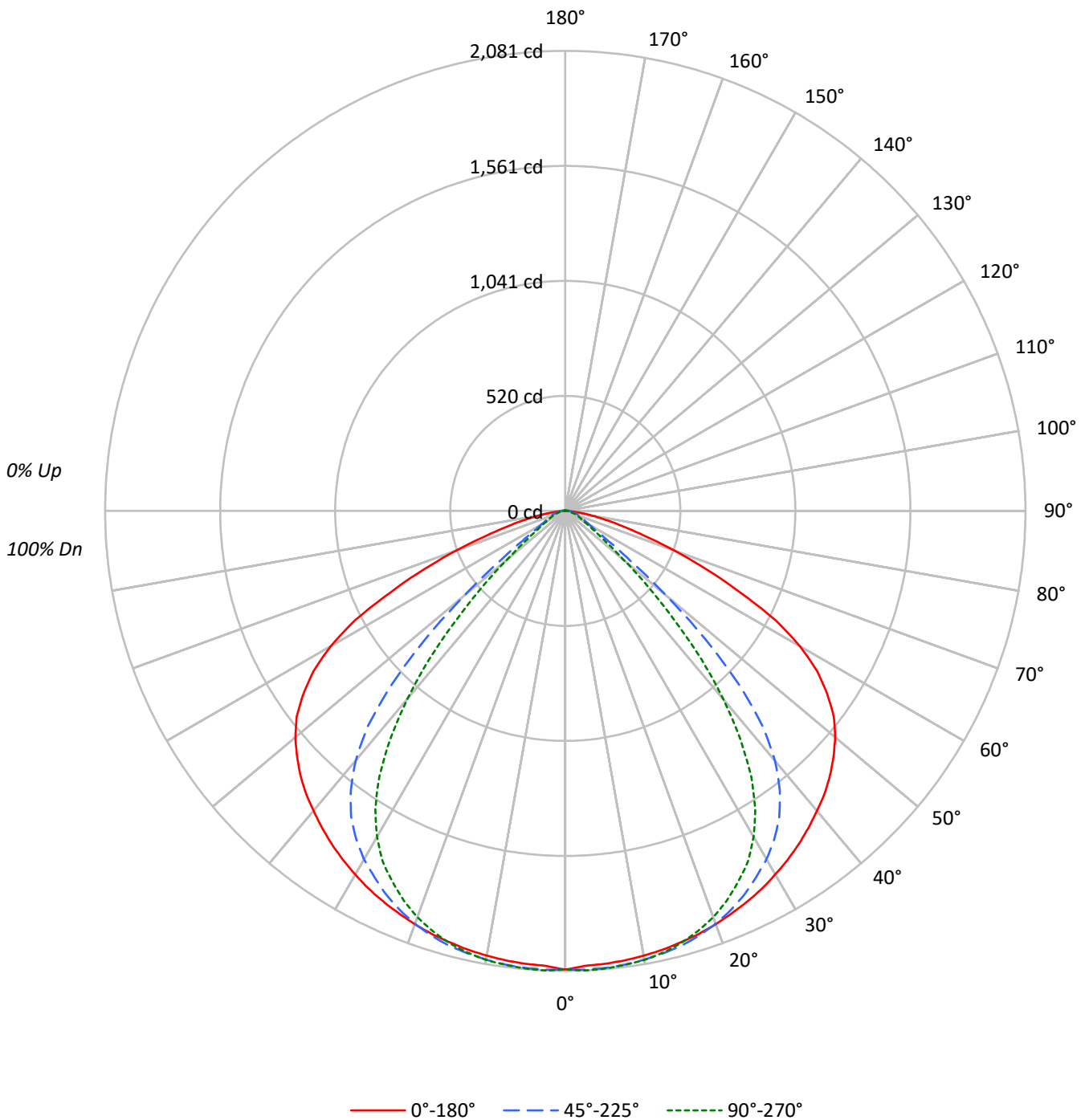
Summary

Lumens per Lamp: N/A
Luminaire Lumens: 4411.9 lumens
Efficiency: N/A
Efficacy: 159.9 lumens/watt
Spacing Criteria (0/90/45): 1.37 / 1.21 / 1.29
Luminous Opening: Rectangular (W 0.27' 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	111	107	104	101	108	105	102	99	101	98	96	97	95	93	93	92	90	90	90	90	88
2	103	96	90	86	100	94	89	85	91	86	83	88	84	81	85	82	79	79	79	79	77
3	95	86	80	74	93	85	78	73	82	77	72	79	75	71	77	73	70	70	70	70	68
4	88	78	70	65	86	77	70	64	74	68	63	72	67	62	70	65	62	62	62	62	60
5	82	71	63	57	80	70	62	57	68	61	56	66	60	55	64	59	55	55	55	55	53
6	76	64	56	51	74	63	56	50	62	55	50	60	54	50	58	53	49	49	49	49	47
7	71	59	51	45	69	58	51	45	57	50	45	55	49	45	54	48	44	44	44	44	43
8	66	54	46	41	65	53	46	41	52	45	41	51	45	40	50	44	40	40	40	40	38
9	62	50	42	37	61	49	42	37	48	42	37	47	41	37	46	41	37	37	37	37	35
10	58	46	39	34	57	46	39	34	45	38	34	44	38	34	43	37	33	33	33	33	32

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	42478	42478	42478
5°	42271	42657	42709
10°	42471	42861	42878
15°	42832	43144	42900
20°	43350	43313	42618
25°	44041	43282	41802
30°	44907	43030	40261
35°	46005	42198	36651
40°	47334	39432	29695
45°	49026	32170	20103
50°	50749	18961	10927
55°	51643	8447	5933
60°	50225	5164	4226
65°	42284	4322	3610
70°	31515	4167	3287
75°	21306	4343	2785
80°	14481	3962	3184
85°	8857	5780	5568

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
 Vertical Angle: 55°
 Luminance: 51643 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	197.4	4.5
10°-20°	573.3	13.0
20°-30°	879.7	19.9
30°-40°	1036.3	23.5
40°-50°	883.7	20.0
50°-60°	482.8	10.9
60°-70°	214.0	4.9
70°-80°	93.9	2.1
80°-90°	33.6	0.8
90°-100°	10.3	0.2
100°-110°	2.6	0.1
110°-120°	0.7	0.0
120°-130°	0.7	0.0
130°-140°	0.6	0.0
140°-150°	0.7	0.0
150°-160°	0.7	0.0
160°-170°	0.6	0.0
170°-180°	0.2	0.0
0°-30°	1650.3	37.4
0°-40°	2686.6	60.9
0°-60°	4053.2	91.9
0°-90°	4394.7	99.6
90°-120°	13.7	0.3
90°-150°	15.7	0.4
90°-180°	17.0	0.4
0°-180°	4411.9	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	2074	2074	2074	2074	2074	
5°	2056	2068	2075	2080	2078	196
15°	2020	2032	2035	2030	2024	572
25°	1949	1949	1916	1876	1850	900
35°	1840	1806	1688	1534	1466	1153
45°	1693	1554	1111	774	694	1306
55°	1447	887	237	174	166	1284
65°	873	188	89	79	74	867
75°	269	95	55	42	35	304
85°	38	34	25	24	24	49
90°	3	14	19	19	16	3
95°	3	6	13	11	11	2
105°	1	1	2	4	5	1
115°	1	1	1	1	1	0
125°	1	1	1	1	1	1
135°	1	1	1	1	1	1
145°	1	1	2	2	2	1
155°	1	2	2	2	2	0
165°	2	2	2	2	2	0
175°	2	2	2	2	2	0
180°	2	2	2	2	2	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	2074.5	2074.5	2074.5	2074.5	2074.5
2.5°	2059.8	2070.4	2077.0	2081.9	2081.1
5°	2056.5	2068.0	2075.3	2080.2	2077.8
7.5°	2050.8	2063.0	2070.4	2075.3	2071.2
10°	2042.6	2054.9	2061.4	2064.7	2062.2
12.5°	2033.6	2045.0	2049.9	2051.6	2046.7
15°	2020.5	2031.9	2035.2	2029.5	2023.7
17.5°	2006.6	2016.4	2014.7	2004.1	1993.5
20°	1989.4	1997.6	1987.7	1967.3	1955.8
22.5°	1969.7	1975.4	1955.0	1924.7	1908.3
25°	1949.3	1949.3	1915.7	1876.4	1850.2
27.5°	1926.3	1920.6	1868.2	1815.8	1788.8
30°	1899.3	1886.2	1819.9	1745.4	1702.8
32.5°	1871.5	1850.2	1760.1	1653.7	1598.9
35°	1840.4	1806.0	1688.1	1534.2	1466.2
37.5°	1806.8	1758.5	1593.9	1382.7	1299.2
40°	1770.8	1700.4	1475.2	1203.4	1110.9
42.5°	1735.6	1634.1	1321.3	997.1	912.0
45°	1693.0	1553.8	1110.9	773.6	694.2
47.5°	1645.5	1454.8	858.0	557.5	509.2
50°	1593.1	1319.7	595.2	384.0	343.0
52.5°	1530.9	1136.3	375.0	255.4	235.8
55°	1446.6	886.6	236.6	173.6	166.2
57.5°	1350.8	619.7	161.3	131.8	126.9
60°	1226.4	397.1	126.1	108.1	103.2
62.5°	1072.5	263.6	104.8	91.7	86.8
65°	872.7	188.3	89.2	79.4	74.5
67.5°	691.8	150.6	78.6	69.6	63.0
70°	526.4	126.1	69.6	61.4	54.9
72.5°	375.0	109.7	62.2	52.4	45.8
75°	269.3	95.0	54.9	41.8	35.2
77.5°	185.8	82.7	45.8	31.9	30.3
80°	122.8	72.0	33.6	28.7	27.0
82.5°	74.5	58.1	28.7	24.6	26.2
85°	37.7	34.4	24.6	23.7	23.7
87.5°	14.7	20.5	20.5	22.9	22.9
90°	3.3	13.9	18.8	18.8	15.6
92.5°	3.3	10.6	17.2	13.1	11.5
95°	3.3	5.7	13.1	10.6	10.6
97.5°	2.5	2.5	9.0	9.0	9.0
100°	0.8	1.6	5.7	8.2	8.2
102.5°	0.8	0.8	3.3	5.7	6.5
105°	0.8	0.8	1.6	4.1	4.9
107.5°	0.0	0.0	0.8	2.5	3.3
110°	0.0	0.0	0.8	1.6	1.6



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CANDELA DISTRIBUTION (continued):

	0°	22.5°	45°	67.5°	90°
112.5°	0.0	0.0	0.8	0.8	0.8
115°	0.8	0.8	0.8	0.8	0.8
117.5°	0.8	0.8	0.8	0.8	0.8
120°	0.8	0.8	0.8	0.8	0.8
122.5°	0.8	0.8	0.8	0.8	0.8
125°	0.8	0.8	0.8	0.8	0.8
127.5°	0.8	0.8	0.8	0.8	0.8
130°	0.8	0.8	0.8	0.8	0.8
132.5°	0.8	0.8	0.8	0.8	0.8
135°	0.8	0.8	0.8	0.8	0.8
137.5°	0.8	0.8	0.8	0.8	0.8
140°	0.8	0.8	0.8	0.8	0.8
142.5°	0.8	0.8	0.8	1.6	0.8
145°	0.8	0.8	1.6	1.6	1.6
147.5°	0.8	0.8	1.6	1.6	1.6
150°	0.8	0.8	1.6	1.6	1.6
152.5°	0.8	1.6	1.6	1.6	1.6
155°	0.8	1.6	1.6	1.6	1.6
157.5°	0.8	1.6	1.6	2.5	1.6
160°	1.6	1.6	1.6	2.5	1.6
162.5°	1.6	1.6	2.5	2.5	2.5
165°	1.6	1.6	2.5	2.5	2.5
167.5°	1.6	1.6	2.5	2.5	2.5
170°	1.6	1.6	2.5	2.5	2.5
172.5°	1.6	1.6	2.5	2.5	2.5
175°	1.6	1.6	2.5	2.5	2.5
177.5°	1.6	1.6	2.5	3.3	2.5
180°	2.5	2.5	2.5	2.5	2.5



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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	24.11	25.51	24.48	25.84	26.16	12.01	13.42	12.39	13.74	14.06
	3H	25.41	26.65	25.79	26.99	27.36	13.18	14.42	13.57	14.76	15.14
	4H	25.80	26.96	26.21	27.32	27.71	13.61	14.77	14.02	15.13	15.52
	6H	26.03	27.10	26.46	27.48	27.88	13.99	15.06	14.41	15.43	15.84
	8H	26.09	27.10	26.52	27.50	27.91	14.24	15.25	14.67	15.65	16.06
	12H	26.10	27.07	26.54	27.46	27.90	14.57	15.54	15.01	15.93	16.37
4H	2H	23.93	25.09	24.34	25.45	25.84	12.53	13.69	12.94	14.05	14.44
	3H	25.26	26.21	25.68	26.62	27.04	13.99	14.94	14.41	15.35	15.76
	4H	25.69	26.54	26.13	26.97	27.42	14.55	15.40	14.99	15.82	16.27
	6H	26.02	26.75	26.49	27.20	27.68	15.05	15.79	15.52	16.24	16.71
	8H	26.11	26.80	26.58	27.25	27.73	15.37	16.06	15.84	16.51	16.99
	12H	26.16	26.77	26.65	27.26	27.74	15.81	16.42	16.30	16.91	17.39
8H	4H	25.59	26.28	26.07	26.73	27.21	15.13	15.81	15.60	16.26	16.74
	6H	25.94	26.51	26.45	27.01	27.50	15.75	16.32	16.26	16.82	17.31
	8H	26.07	26.58	26.60	27.10	27.60	16.16	16.67	16.69	17.19	17.69
	12H	26.17	26.62	26.69	27.12	27.70	16.75	17.20	17.27	17.70	18.28
12H	4H	25.55	26.16	26.04	26.65	27.13	15.33	15.94	15.82	16.43	16.91
	6H	25.89	26.40	26.41	26.92	27.42	16.00	16.51	16.52	17.03	17.53
	8H	26.05	26.50	26.57	27.00	27.58	16.48	16.93	17.00	17.43	18.01