

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: P892695

Luminaire Tested: 2MB-4HL-A-UNV-L840

Issue Date: 11/11/2024

Test Information

Test Method: LM-79-2019
Report Number: P892695
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-L840
Description: 4000 Lumen 2FT MICROBAY LINEAR BAY with AISLE OPTIC, 80CRI, 4000K CCT
Light Source: -
Ballast/Driver: -

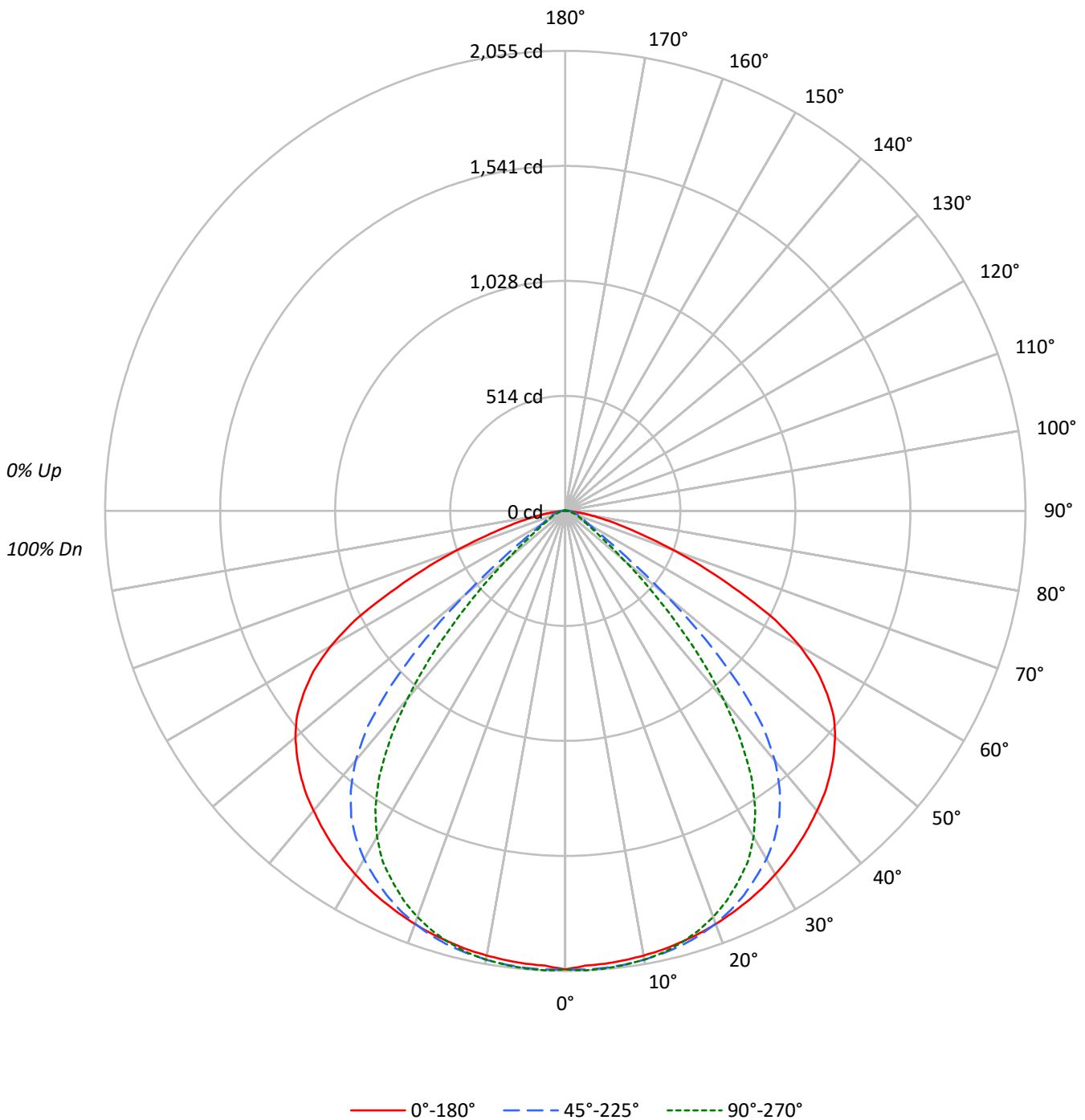
Summary

Lumens per Lamp: N/A
Luminaire Lumens: 4355.9 lumens
Efficiency: N/A
Efficacy: 157.8 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 (A_{in}): 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				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°	41940	41940	41940
5°	41734	42117	42166
10°	41932	42317	42335
15°	42287	42597	42357
20°	42799	42764	42078
25°	43481	42733	41271
30°	44338	42484	39751
35°	45420	41663	36186
40°	46732	38932	29318
45°	48404	31761	19848
50°	50106	18718	10790
55°	50986	8339	5858
60°	49586	5099	4169
65°	41746	4269	3566
70°	31114	4113	3245
75°	21037	4288	2753
80°	14292	3903	3148
85°	8740	5686	5498

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
 Vertical Angle: 55°
 Luminance: 50986 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	194.9	4.5
10°-20°	566.0	13.0
20°-30°	868.5	19.9
30°-40°	1023.1	23.5
40°-50°	872.5	20.0
50°-60°	476.7	10.9
60°-70°	211.3	4.9
70°-80°	92.7	2.1
80°-90°	33.1	0.8
90°-100°	10.2	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°	1629.4	37.4
0°-40°	2652.5	60.9
0°-60°	4001.7	91.9
0°-90°	4338.9	99.6
90°-120°	13.5	0.3
90°-150°	15.6	0.4
90°-180°	17.0	0.4
0°-180°	4355.9	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	2048	2048	2048	2048	2048	
5°	2030	2042	2049	2054	2051	193
15°	1995	2006	2009	2004	1998	564
25°	1924	1924	1891	1853	1827	889
35°	1817	1783	1667	1515	1448	1139
45°	1672	1534	1097	764	685	1290
55°	1428	875	234	171	164	1268
65°	862	186	88	78	74	856
75°	266	94	54	41	35	300
85°	37	34	24	23	23	49
90°	3	14	19	19	15	3
95°	3	6	13	10	10	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°	2048.2	2048.2	2048.2	2048.2	2048.2
2.5°	2033.6	2044.1	2050.6	2055.5	2054.6
5°	2030.4	2041.7	2049.0	2053.8	2051.4
7.5°	2024.7	2036.9	2044.1	2049.0	2044.9
10°	2016.7	2028.8	2035.2	2038.5	2036.1
12.5°	2007.8	2019.1	2023.9	2025.5	2020.7
15°	1994.8	2006.1	2009.4	2003.7	1998.1
17.5°	1981.1	1990.8	1989.2	1978.7	1968.2
20°	1964.1	1972.2	1962.5	1942.3	1931.0
22.5°	1944.7	1950.4	1930.2	1900.3	1884.1
25°	1924.5	1924.5	1891.4	1852.6	1826.7
27.5°	1901.9	1896.2	1844.5	1792.8	1766.1
30°	1875.2	1862.3	1796.8	1723.2	1681.2
32.5°	1847.7	1826.7	1737.8	1632.7	1578.6
35°	1817.0	1783.1	1666.7	1514.7	1447.6
37.5°	1783.9	1736.2	1573.7	1365.2	1282.7
40°	1748.3	1678.8	1456.5	1188.2	1096.8
42.5°	1713.5	1613.3	1304.6	984.5	900.4
45°	1671.5	1534.1	1096.8	763.8	685.4
47.5°	1624.6	1436.3	847.1	550.4	502.7
50°	1572.9	1302.9	587.6	379.1	338.7
52.5°	1511.5	1121.9	370.2	252.2	232.8
55°	1428.2	875.4	233.6	171.4	164.1
57.5°	1333.7	611.9	159.2	130.1	125.3
60°	1210.8	392.0	124.5	106.7	101.8
62.5°	1058.8	260.3	103.5	90.5	85.7
65°	861.6	185.9	88.1	78.4	73.6
67.5°	683.0	148.7	77.6	68.7	62.2
70°	519.7	124.5	68.7	60.6	54.2
72.5°	370.2	108.3	61.4	51.7	45.3
75°	265.9	93.8	54.2	41.2	34.8
77.5°	183.5	81.6	45.3	31.5	29.9
80°	121.2	71.1	33.1	28.3	26.7
82.5°	73.6	57.4	28.3	24.2	25.9
85°	37.2	33.9	24.2	23.4	23.4
87.5°	14.5	20.2	20.2	22.6	22.6
90°	3.2	13.7	18.6	18.6	15.4
92.5°	3.2	10.5	17.0	12.9	11.3
95°	3.2	5.7	12.9	10.5	10.5
97.5°	2.4	2.4	8.9	8.9	8.9
100°	0.8	1.6	5.7	8.1	8.1
102.5°	0.8	0.8	3.2	5.7	6.5
105°	0.8	0.8	1.6	4.0	4.8
107.5°	0.0	0.0	0.8	2.4	3.2
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	2.4	1.6
160°	1.6	1.6	1.6	2.4	1.6
162.5°	1.6	1.6	2.4	2.4	2.4
165°	1.6	1.6	2.4	2.4	2.4
167.5°	1.6	1.6	2.4	2.4	2.4
170°	1.6	1.6	2.4	2.4	2.4
172.5°	1.6	1.6	2.4	2.4	2.4
175°	1.6	1.6	2.4	2.4	2.4
177.5°	1.6	1.6	2.4	3.2	2.4
180°	2.4	2.4	2.4	2.4	2.4



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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	24.07	25.47	24.44	25.79	26.12	11.97	13.37	12.34	13.69	14.02
	3H	25.36	26.61	25.75	26.94	27.32	13.13	14.38	13.52	14.72	15.09
	4H	25.76	26.92	26.17	27.28	27.67	13.57	14.73	13.97	15.08	15.48
	6H	25.99	27.06	26.41	27.43	27.84	13.94	15.01	14.36	15.39	15.79
	8H	26.04	27.06	26.48	27.45	27.87	14.19	15.21	14.63	15.60	16.02
	12H	26.06	27.02	26.50	27.42	27.86	14.53	15.50	14.97	15.89	16.33
4H	2H	23.88	25.04	24.29	25.40	25.79	12.49	13.65	12.90	14.01	14.40
	3H	25.22	26.17	25.64	26.58	26.99	13.94	14.89	14.36	15.30	15.72
	4H	25.65	26.50	26.09	26.92	27.37	14.50	15.35	14.94	15.78	16.23
	6H	25.97	26.71	26.44	27.16	27.63	15.01	15.74	15.48	16.20	16.67
	8H	26.07	26.75	26.54	27.20	27.68	15.33	16.01	15.80	16.47	16.94
	12H	26.11	26.72	26.60	27.21	27.69	15.77	16.38	16.26	16.86	17.35
8H	4H	25.55	26.23	26.02	26.69	27.17	15.08	15.77	15.55	16.22	16.70
	6H	25.90	26.46	26.40	26.96	27.45	15.71	16.27	16.22	16.78	17.26
	8H	26.03	26.54	26.55	27.06	27.56	16.11	16.62	16.64	17.14	17.64
	12H	26.12	26.58	26.64	27.08	27.65	16.70	17.16	17.22	17.66	18.24
12H	4H	25.51	26.12	26.00	26.61	27.09	15.28	15.89	15.77	16.38	16.86
	6H	25.85	26.36	26.37	26.88	27.38	15.95	16.46	16.48	16.98	17.48
	8H	26.01	26.46	26.52	26.96	27.54	16.43	16.88	16.95	17.38	17.96