

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: P892807

Luminaire Tested: 2MB-5HL-AOL-UNV-L840

Issue Date: 11/11/2024

Test Information

Test Method: LM-79-2019
Report Number: P892807
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-2404-077-6)
Test Lab: INNOVATION CENTER
Issue Date: 11/11/2024
Manufacturer: COOPER LIGHTING SOLUTIONS
Product Line: METALUX
Catalog Number: 2MB-5HL-AOL-UNV-L840
Description: 5000 Lumen 2FT MICROBAY LINEAR BAY with AISLE OPTICS WITH CLEAR LENS NO UPLIGHT, 8
4000K CCT
Light Source: -
Ballast/Driver: -

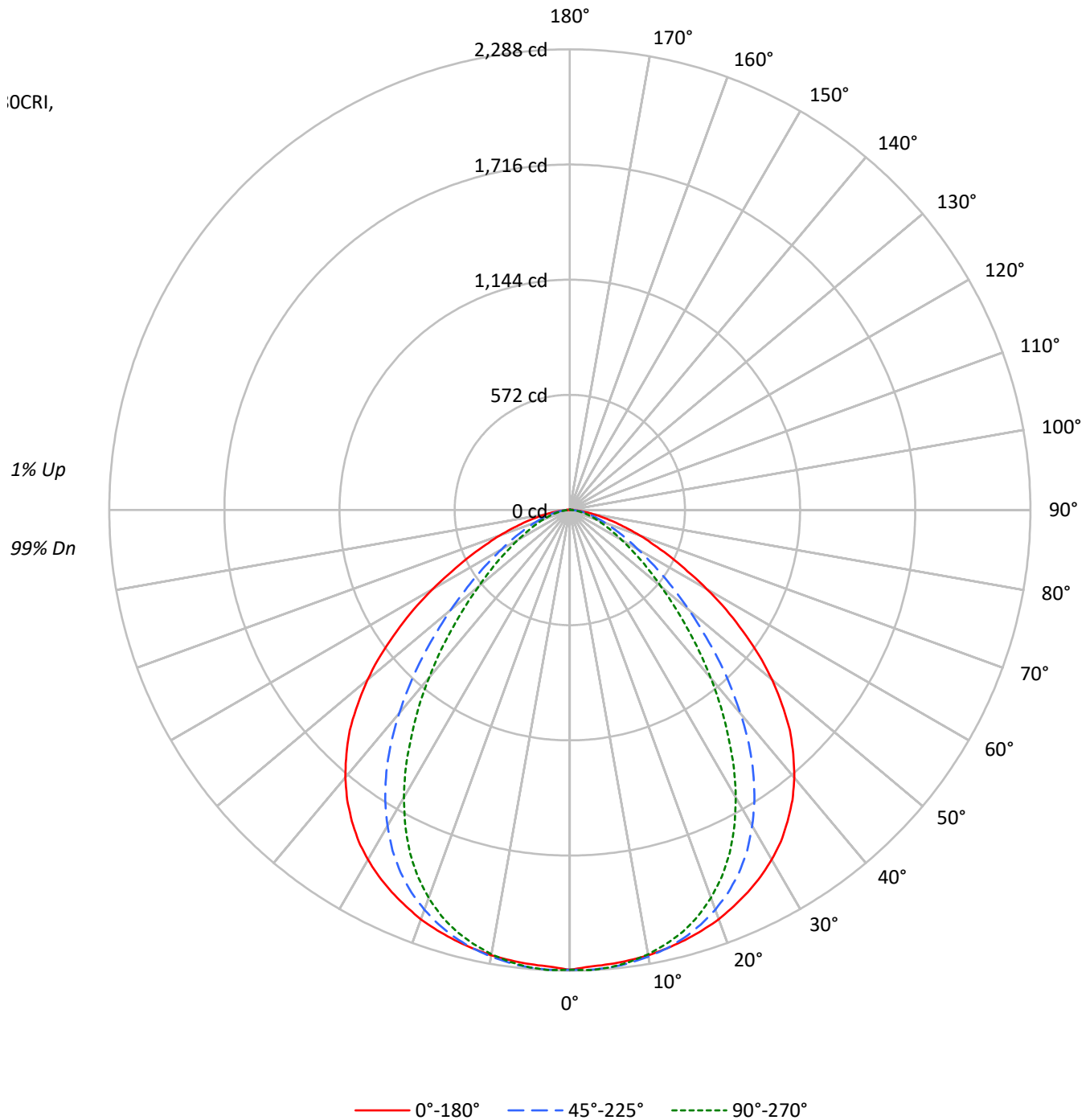
Summary

Lumens per Lamp: N/A
Luminaire Lumens: 4732.1 lumens
Efficiency: N/A
Efficacy: 140.4 lumens/watt
Spacing Criteria (0/90/45): 1.3 / 1.1 / 1.2
Luminous Opening: Rectangular (W 0.27' x L: 1.98' x H: 0')
CIE Type: Direct

Input Watts (W): 33.7
Input Voltage (V): 120
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: 0.99
Total Harmonic Distortion (THDi): 4.5
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 24 FT

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CATALOG NUMBER: 2MB-5HL-AOL-UNV-L840

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	101	101	101	99				99
1	110	106	103	100	108	104	101	98	100	97	95	96	94	92	92	91	89	87				87
2	102	95	89	84	99	93	88	83	89	85	81	86	83	79	83	80	77	75				75
3	94	85	78	72	92	83	77	72	80	75	70	78	73	69	75	71	68	66				66
4	87	76	69	63	85	75	68	62	73	66	61	70	65	61	68	64	60	58				58
5	81	69	61	55	79	68	61	55	66	59	54	64	58	54	62	57	53	51				51
6	75	63	55	49	73	62	54	49	60	53	48	59	53	48	57	52	48	46				46
7	70	58	50	44	68	57	49	44	55	48	43	54	48	43	53	47	43	41				41
8	65	53	45	40	64	52	45	40	51	44	39	50	44	39	49	43	39	37				37
9	61	49	41	36	60	48	41	36	47	40	36	46	40	36	45	40	35	34				34
10	58	45	38	33	56	45	38	33	44	37	33	43	37	33	42	36	32	31				31

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	46744	46744	46744
5°	46540	46885	46865
10°	46691	46827	46575
15°	46873	46616	45963
20°	47146	46028	44669
25°	47304	44904	42462
30°	47411	42829	38973
35°	47165	39713	34286
40°	46377	35244	29114
45°	44763	30032	23691
50°	41792	24605	18849
55°	37456	19924	15201
60°	32205	16066	12212
65°	26818	13271	10155
70°	22259	11321	8645
75°	17912	9731	7516
80°	14174	8679	6592
85°	12475	8528	6578

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
 Vertical Angle: 45°
 Luminance: 44763 cd/sqm



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CATALOG NUMBER: 2MB-5HL-AOL-UNV-L840

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	216.5	4.6
10°-20°	618.8	13.1
20°-30°	912.5	19.3
30°-40°	1002.1	21.2
40°-50°	852.9	18.0
50°-60°	578.7	12.2
60°-70°	326.1	6.9
70°-80°	152.0	3.2
80°-90°	44.4	0.9
90°-100°	10.6	0.2
100°-110°	6.8	0.1
110°-120°	4.2	0.1
120°-130°	2.3	0.0
130°-140°	1.4	0.0
140°-150°	1.1	0.0
150°-160°	0.9	0.0
160°-170°	0.6	0.0
170°-180°	0.2	0.0
0°-30°	1747.8	36.9
0°-40°	2749.9	58.1
0°-60°	4181.5	88.4
0°-90°	4704.0	99.4
90°-120°	21.6	0.5
90°-150°	26.4	0.6
90°-180°	28.0	0.6
0°-180°	4732.1	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	2283	2283	2283	2283	2283	
5°	2264	2275	2281	2283	2280	216
15°	2211	2214	2199	2180	2168	625
25°	2094	2068	1988	1913	1879	965
35°	1887	1791	1589	1434	1372	1178
45°	1546	1347	1037	866	818	1185
55°	1049	823	558	451	426	938
65°	554	417	274	223	210	554
75°	226	177	123	101	95	245
85°	53	47	36	30	28	57
90°	9	11	10	8	8	9
95°	16	12	9	8	8	12
105°	5	9	6	5	5	5
115°	3	6	4	4	4	3
125°	2	3	3	3	3	2
135°	1	2	2	2	2	1
145°	1	2	2	2	2	1
155°	1	2	2	2	2	1
165°	2	2	2	3	3	1
175°	2	2	3	3	3	0
180°	3	3	3	3	3	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	2282.8	2282.8	2282.8	2282.8	2282.8
2.5°	2269.8	2279.1	2285.6	2289.4	2287.5
5°	2264.2	2275.4	2281.0	2282.8	2280.0
7.5°	2255.8	2267.0	2269.8	2268.9	2264.2
10°	2245.6	2254.0	2252.1	2247.4	2240.0
12.5°	2229.7	2236.2	2229.7	2217.6	2208.3
15°	2211.1	2213.9	2199.0	2180.3	2168.2
17.5°	2188.7	2186.9	2159.8	2132.8	2116.0
20°	2163.6	2153.3	2112.3	2071.3	2049.9
22.5°	2129.1	2113.3	2056.4	1997.7	1971.6
25°	2093.7	2067.6	1987.5	1912.9	1879.4
27.5°	2052.7	2010.8	1907.3	1812.3	1770.4
30°	2005.2	1949.3	1811.4	1698.6	1648.3
32.5°	1952.1	1875.7	1707.0	1571.0	1516.9
35°	1886.8	1790.9	1588.7	1434.0	1371.6
37.5°	1816.0	1694.0	1460.1	1284.9	1232.7
40°	1735.0	1585.9	1318.5	1140.5	1089.2
42.5°	1642.7	1469.4	1177.8	997.0	951.3
45°	1545.8	1347.3	1037.1	865.6	818.1
47.5°	1429.3	1212.2	897.3	740.8	698.8
50°	1311.9	1077.1	772.4	629.9	591.7
52.5°	1185.2	948.5	656.9	534.8	503.2
55°	1049.2	822.8	558.1	451.0	425.8
57.5°	920.6	704.4	469.6	377.4	354.1
60°	786.4	594.5	392.3	317.7	298.2
62.5°	659.7	498.5	331.7	264.6	248.8
65°	553.5	417.4	273.9	222.7	209.6
67.5°	451.0	346.6	228.3	185.4	174.2
70°	371.8	280.5	189.1	152.8	144.4
72.5°	289.8	227.4	152.8	124.9	117.4
75°	226.4	177.0	123.0	100.6	95.0
77.5°	167.7	137.0	96.9	79.2	75.5
80°	120.2	101.6	73.6	60.6	55.9
82.5°	83.9	70.8	53.1	43.8	41.0
85°	53.1	46.6	36.3	29.8	28.0
87.5°	28.0	26.1	21.4	17.7	16.8
90°	9.3	11.2	10.2	8.4	8.4
92.5°	15.8	12.1	9.3	8.4	7.5
95°	15.8	12.1	9.3	7.5	7.5
97.5°	14.9	11.2	8.4	7.5	6.5
100°	7.5	11.2	7.5	6.5	5.6
102.5°	4.7	10.2	7.5	5.6	5.6
105°	4.7	9.3	6.5	4.7	4.7
107.5°	3.7	8.4	5.6	4.7	4.7
110°	3.7	7.5	5.6	4.7	3.7



TEST NUMBER: P892807

CATALOG NUMBER: 2MB-5HL-AOL-UNV-L840

CANDELA DISTRIBUTION (continued):

	0°	22.5°	45°	67.5°	90°
112.5°	3.7	6.5	4.7	3.7	3.7
115°	2.8	5.6	3.7	3.7	3.7
117.5°	2.8	4.7	3.7	3.7	3.7
120°	1.9	3.7	2.8	2.8	2.8
122.5°	1.9	2.8	2.8	2.8	2.8
125°	1.9	2.8	2.8	2.8	2.8
127.5°	1.9	1.9	2.8	2.8	2.8
130°	0.9	1.9	1.9	2.8	2.8
132.5°	0.9	1.9	1.9	1.9	1.9
135°	0.9	1.9	1.9	1.9	1.9
137.5°	0.9	1.9	1.9	1.9	1.9
140°	0.9	1.9	1.9	1.9	1.9
142.5°	0.9	1.9	1.9	1.9	1.9
145°	0.9	1.9	1.9	1.9	1.9
147.5°	0.9	1.9	1.9	1.9	1.9
150°	0.9	1.9	1.9	1.9	1.9
152.5°	0.9	1.9	1.9	1.9	1.9
155°	0.9	1.9	1.9	1.9	1.9
157.5°	1.9	1.9	1.9	1.9	2.8
160°	1.9	1.9	1.9	1.9	2.8
162.5°	1.9	1.9	1.9	2.8	2.8
165°	1.9	1.9	1.9	2.8	2.8
167.5°	1.9	1.9	1.9	2.8	2.8
170°	1.9	1.9	1.9	2.8	2.8
172.5°	1.9	1.9	1.9	2.8	2.8
175°	1.9	1.9	2.8	2.8	2.8
177.5°	1.9	1.9	2.8	2.8	2.8
180°	2.8	2.8	2.8	2.8	2.8



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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	23.79	25.23	24.16	25.56	25.89	19.00	20.44	19.37	20.77	21.10
	3H	25.01	26.30	25.40	26.64	27.02	20.01	21.29	20.40	21.64	22.01
	4H	25.41	26.62	25.83	26.98	27.37	20.36	21.56	20.77	21.92	22.32
	6H	25.67	26.78	26.09	27.16	27.57	20.62	21.73	21.04	22.11	22.51
	8H	25.74	26.80	26.18	27.20	27.62	20.70	21.75	21.14	22.16	22.57
	12H	25.79	26.80	26.23	27.19	27.64	20.76	21.77	21.20	22.16	22.61
4H	2H	23.81	25.01	24.22	25.38	25.77	19.62	20.82	20.03	21.19	21.58
	3H	25.21	26.20	25.63	26.61	27.03	20.82	21.81	21.24	22.23	22.64
	4H	25.71	26.60	26.16	27.03	27.49	21.26	22.15	21.70	22.58	23.03
	6H	26.09	26.86	26.56	27.31	27.79	21.61	22.38	22.08	22.83	23.31
	8H	26.20	26.92	26.68	27.38	27.86	21.72	22.44	22.20	22.90	23.38
	12H	26.29	26.94	26.79	27.43	27.91	21.82	22.46	22.31	22.95	23.44
8H	4H	25.71	26.43	26.19	26.89	27.37	21.60	22.32	22.07	22.77	23.26
	6H	26.15	26.75	26.66	27.25	27.74	22.04	22.63	22.55	23.14	23.63
	8H	26.32	26.85	26.85	27.38	27.88	22.21	22.74	22.74	23.27	23.77
	12H	26.48	26.95	27.00	27.45	28.03	22.37	22.85	22.89	23.35	23.93
12H	4H	25.69	26.33	26.18	26.82	27.31	21.65	22.29	22.14	22.78	23.26
	6H	26.13	26.66	26.65	27.18	27.69	22.12	22.65	22.64	23.17	23.68
	8H	26.33	26.81	26.85	27.31	27.89	22.34	22.81	22.86	23.32	23.90