

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: P892699

Luminaire Tested: 2MB-4HL-A-UNV-L940

Issue Date: 11/11/2024

Test Information

Test Method: LM-79-2019
Report Number: P892699
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-L940
Description: 4000 Lumen 2FT MICROBAY LINEAR BAY with AISLE OPTIC, 90CRI, 4000K CCT
Light Source: -
Ballast/Driver: -

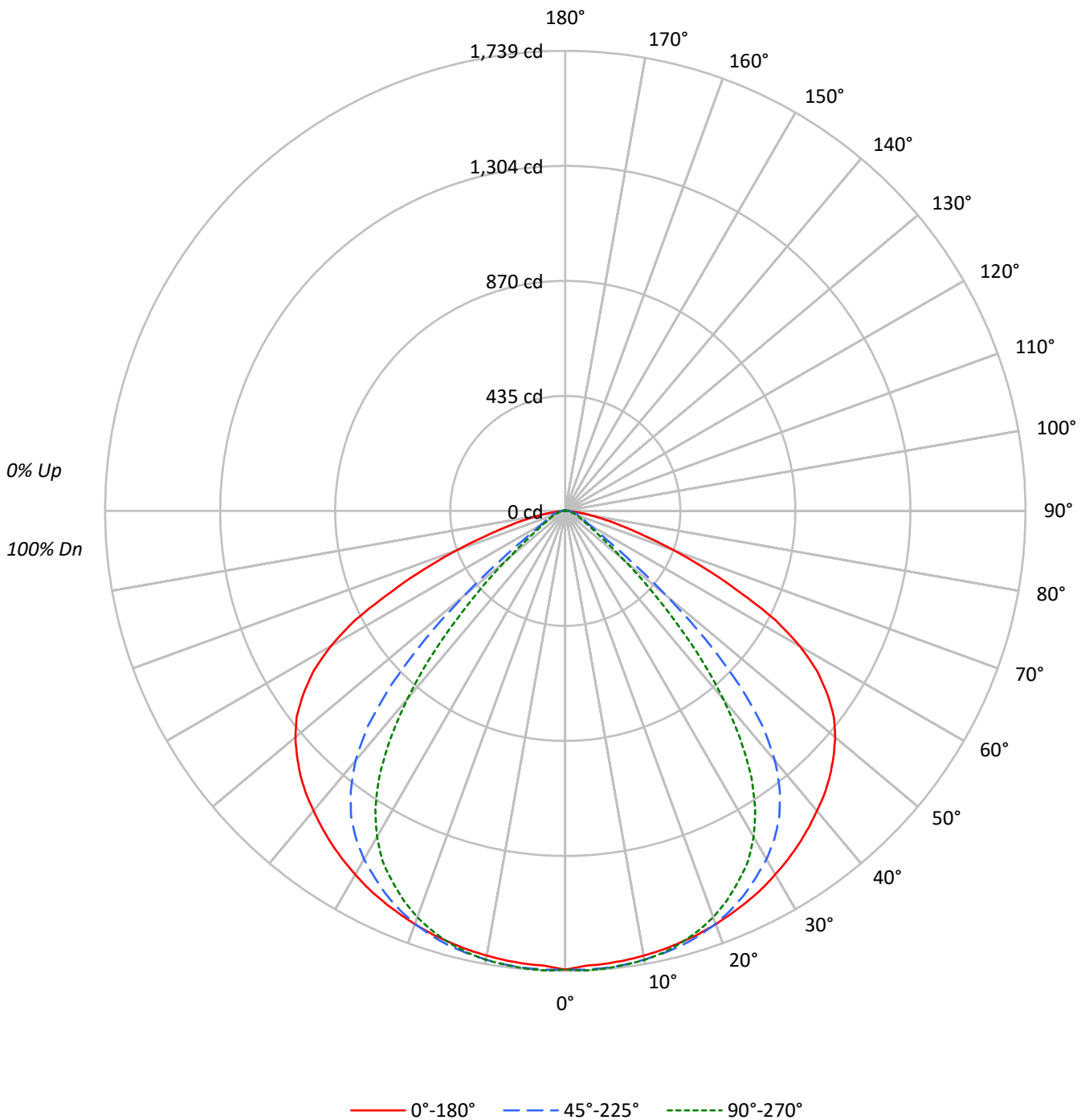
Summary

Lumens per Lamp: N/A
Luminaire Lumens: 3687.1 lumens
Efficiency: N/A
Efficacy: 133.6 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				
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°	35498	35498	35498
5°	35325	35648	35691
10°	35491	35819	35834
15°	35794	36055	35851
20°	36227	36196	35615
25°	36802	36170	34934
30°	37528	35958	33646
35°	38446	35264	30629
40°	39555	32953	24816
45°	40970	26885	16802
50°	42410	15845	9133
55°	43157	7058	4959
60°	41969	4316	3530
65°	35336	3614	3019
70°	26336	3484	2742
75°	17809	3623	2326
80°	12099	3302	2665
85°	7401	4816	4652

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
 Vertical Angle: 55°
 Luminance: 43157 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	165.0	4.5
10°-20°	479.1	13.0
20°-30°	735.1	19.9
30°-40°	866.0	23.5
40°-50°	738.5	20.0
50°-60°	403.5	10.9
60°-70°	178.8	4.9
70°-80°	78.5	2.1
80°-90°	28.0	0.8
90°-100°	8.6	0.2
100°-110°	2.2	0.1
110°-120°	0.6	0.0
120°-130°	0.6	0.0
130°-140°	0.5	0.0
140°-150°	0.6	0.0
150°-160°	0.6	0.0
160°-170°	0.5	0.0
170°-180°	0.2	0.0
0°-30°	1379.1	37.4
0°-40°	2245.1	60.9
0°-60°	3387.1	91.9
0°-90°	3672.5	99.6
90°-120°	11.5	0.3
90°-150°	13.3	0.4
90°-180°	15.0	0.4
0°-180°	3687.1	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1734	1734	1734	1734	1734	
5°	1719	1728	1734	1738	1736	164
15°	1688	1698	1701	1696	1691	478
25°	1629	1629	1601	1568	1546	752
35°	1538	1509	1411	1282	1225	964
45°	1415	1298	928	646	580	1092
55°	1209	741	198	145	139	1073
65°	729	157	75	66	62	725
75°	225	79	46	35	29	254
85°	32	29	20	20	20	41
90°	3	12	16	16	13	3
95°	3	5	11	9	9	2
105°	1	1	1	3	4	0
115°	1	1	1	1	1	0
125°	1	1	1	1	1	1
135°	1	1	1	1	1	1
145°	1	1	1	1	1	0
155°	1	1	1	1	1	0
165°	1	1	2	2	2	0
175°	1	1	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°	1733.6	1733.6	1733.6	1733.6	1733.6
2.5°	1721.3	1730.2	1735.7	1739.8	1739.1
5°	1718.6	1728.1	1734.3	1738.4	1736.4
7.5°	1713.8	1724.0	1730.2	1734.3	1730.9
10°	1706.9	1717.2	1722.7	1725.4	1723.4
12.5°	1699.4	1709.0	1713.1	1714.5	1710.4
15°	1688.5	1698.0	1700.8	1696.0	1691.2
17.5°	1676.8	1685.0	1683.7	1674.8	1665.9
20°	1662.5	1669.3	1661.1	1644.0	1634.4
22.5°	1646.0	1650.8	1633.7	1608.4	1594.7
25°	1628.9	1628.9	1600.9	1568.1	1546.2
27.5°	1609.8	1605.0	1561.2	1517.4	1494.8
30°	1587.2	1576.3	1520.8	1458.6	1423.0
32.5°	1563.9	1546.2	1470.9	1382.0	1336.1
35°	1538.0	1509.2	1410.7	1282.1	1225.3
37.5°	1509.9	1469.5	1332.0	1155.5	1085.7
40°	1479.8	1421.0	1232.8	1005.7	928.4
42.5°	1450.4	1365.5	1104.2	833.3	762.1
45°	1414.8	1298.5	928.4	646.5	580.2
47.5°	1375.1	1215.7	717.0	465.9	425.5
50°	1331.3	1102.8	497.4	320.9	286.7
52.5°	1279.3	949.6	313.3	213.5	197.0
55°	1208.9	740.9	197.7	145.0	138.9
57.5°	1128.8	517.9	134.8	110.1	106.0
60°	1024.8	331.8	105.4	90.3	86.2
62.5°	896.2	220.3	87.6	76.6	72.5
65°	729.3	157.4	74.6	66.4	62.3
67.5°	578.1	125.9	65.7	58.2	52.7
70°	439.9	105.4	58.2	51.3	45.8
72.5°	313.3	91.7	52.0	43.8	38.3
75°	225.1	79.4	45.8	34.9	29.4
77.5°	155.3	69.1	38.3	26.7	25.3
80°	102.6	60.2	28.0	23.9	22.6
82.5°	62.3	48.6	23.9	20.5	21.9
85°	31.5	28.7	20.5	19.8	19.8
87.5°	12.3	17.1	17.1	19.2	19.2
90°	2.7	11.6	15.7	15.7	13.0
92.5°	2.7	8.9	14.4	10.9	9.6
95°	2.7	4.8	10.9	8.9	8.9
97.5°	2.1	2.1	7.5	7.5	7.5
100°	0.7	1.4	4.8	6.8	6.8
102.5°	0.7	0.7	2.7	4.8	5.5
105°	0.7	0.7	1.4	3.4	4.1
107.5°	0.0	0.0	0.7	2.1	2.7
110°	0.0	0.0	0.7	1.4	1.4



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CANDELA DISTRIBUTION (continued):

	0°	22.5°	45°	67.5°	90°
112.5°	0.0	0.0	0.7	0.7	0.7
115°	0.7	0.7	0.7	0.7	0.7
117.5°	0.7	0.7	0.7	0.7	0.7
120°	0.7	0.7	0.7	0.7	0.7
122.5°	0.7	0.7	0.7	0.7	0.7
125°	0.7	0.7	0.7	0.7	0.7
127.5°	0.7	0.7	0.7	0.7	0.7
130°	0.7	0.7	0.7	0.7	0.7
132.5°	0.7	0.7	0.7	0.7	0.7
135°	0.7	0.7	0.7	0.7	0.7
137.5°	0.7	0.7	0.7	0.7	0.7
140°	0.7	0.7	0.7	0.7	0.7
142.5°	0.7	0.7	0.7	1.4	0.7
145°	0.7	0.7	1.4	1.4	1.4
147.5°	0.7	0.7	1.4	1.4	1.4
150°	0.7	0.7	1.4	1.4	1.4
152.5°	0.7	1.4	1.4	1.4	1.4
155°	0.7	1.4	1.4	1.4	1.4
157.5°	0.7	1.4	1.4	2.1	1.4
160°	1.4	1.4	1.4	2.1	1.4
162.5°	1.4	1.4	2.1	2.1	2.1
165°	1.4	1.4	2.1	2.1	2.1
167.5°	1.4	1.4	2.1	2.1	2.1
170°	1.4	1.4	2.1	2.1	2.1
172.5°	1.4	1.4	2.1	2.1	2.1
175°	1.4	1.4	2.1	2.1	2.1
177.5°	1.4	1.4	2.1	2.7	2.1
180°	2.1	2.1	2.1	2.1	2.1



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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	23.49	24.89	23.86	25.21	25.54	11.39	12.79	11.76	13.11	13.44
	3H	24.78	26.03	25.17	26.36	26.74	12.55	13.80	12.94	14.14	14.51
	4H	25.18	26.34	25.59	26.70	27.09	12.98	14.14	13.39	14.50	14.89
	6H	25.41	26.48	25.83	26.86	27.26	13.36	14.43	13.78	14.81	15.21
	8H	25.46	26.48	25.90	26.87	27.29	13.61	14.62	14.05	15.02	15.44
	12H	25.48	26.45	25.92	26.84	27.28	13.95	14.92	14.39	15.31	15.75
4H	2H	23.30	24.46	23.71	24.82	25.21	11.91	13.07	12.32	13.43	13.82
	3H	24.64	25.59	25.06	26.00	26.41	13.37	14.31	13.78	14.72	15.14
	4H	25.07	25.92	25.51	26.34	26.79	13.92	14.77	14.36	15.20	15.65
	6H	25.39	26.13	25.86	26.58	27.05	14.43	15.16	14.90	15.62	16.09
	8H	25.49	26.17	25.96	26.63	27.10	14.75	15.43	15.22	15.89	16.36
	12H	25.53	26.14	26.03	26.63	27.11	15.19	15.79	15.68	16.28	16.77
8H	4H	24.97	25.65	25.44	26.11	26.59	14.50	15.19	14.97	15.64	16.12
	6H	25.32	25.88	25.82	26.38	26.87	15.13	15.69	15.64	16.20	16.68
	8H	25.45	25.96	25.97	26.48	26.98	15.53	16.04	16.06	16.56	17.06
	12H	25.54	26.00	26.06	26.50	27.07	16.12	16.58	16.64	17.08	17.65
12H	4H	24.93	25.54	25.42	26.03	26.51	14.70	15.31	15.19	15.80	16.28
	6H	25.27	25.78	25.79	26.30	26.80	15.37	15.88	15.89	16.40	16.90
	8H	25.43	25.88	25.95	26.38	26.96	15.85	16.30	16.37	16.80	17.38