

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: P892697

Luminaire Tested: 2MB-4HL-A-UNV-L930

Issue Date: 11/11/2024

Test Information

Test Method: LM-79-2019
Report Number: P892697
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-L930
Description: 4000 Lumen 2FT MICROBAY LINEAR BAY with AISLE OPTIC, 90CRI, 3000K CCT
Light Source: -
Ballast/Driver: -

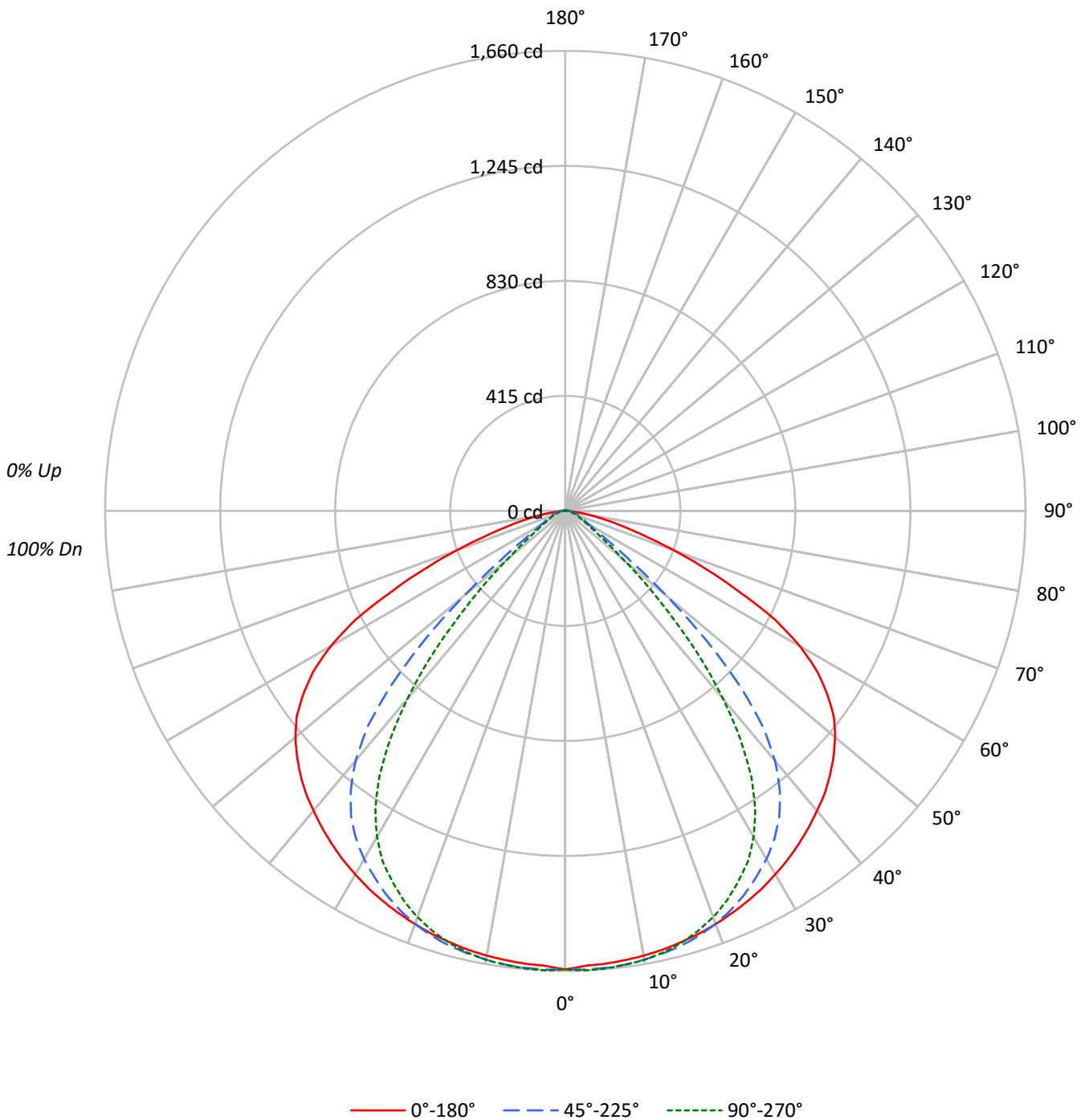
Summary

Lumens per Lamp: N/A
Luminaire Lumens: 3519.2 lumens
Efficiency: N/A
Efficacy: 127.5 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
RCR																				
0	119	119	119	119	116	116	116	116	111	111	111	106	106	106	102	102	102	102	100	
1	111	107	104	101	108	105	102	99	101	98	96	97	95	93	93	92	90	90	88	
2	103	96	90	86	100	94	89	85	91	86	83	88	84	81	85	82	79	79	77	
3	95	86	80	74	93	85	78	73	82	77	72	79	75	71	77	73	70	70	68	
4	88	78	70	65	86	77	70	64	74	68	63	72	67	62	70	65	62	62	60	
5	82	71	63	57	80	70	62	57	68	61	56	66	60	55	64	59	55	55	53	
6	76	64	56	51	74	63	56	50	62	55	50	60	54	50	58	53	49	49	47	
7	71	59	51	45	69	58	51	45	57	50	45	55	49	45	54	48	44	44	43	
8	66	54	46	41	65	53	46	41	52	45	41	51	45	40	50	44	40	40	38	
9	62	50	42	37	61	49	42	37	48	42	37	47	41	37	46	41	37	37	35	
10	58	46	39	34	57	46	39	34	45	38	34	44	38	34	43	37	33	33	32	

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	33880	33880	33880
5°	33716	34024	34063
10°	33875	34187	34199
15°	34162	34412	34217
20°	34575	34547	33991
25°	35126	34520	33341
30°	35819	34320	32114
35°	36693	33656	29234
40°	37754	31451	23686
45°	39102	25660	16034
50°	40479	15122	8716
55°	41190	6737	4734
60°	40056	4120	3370
65°	33727	3450	2878
70°	25139	3323	2616
75°	16994	3457	2223
80°	11544	3160	2535
85°	7048	4605	4440

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
 Vertical Angle: 55°
 Luminance: 41190 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	157.4	4.5
10°-20°	457.2	13.0
20°-30°	701.6	19.9
30°-40°	826.5	23.5
40°-50°	704.9	20.0
50°-60°	385.1	10.9
60°-70°	170.7	4.9
70°-80°	74.9	2.1
80°-90°	26.8	0.8
90°-100°	8.2	0.2
100°-110°	2.1	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°	1316.3	37.4
0°-40°	2142.8	60.9
0°-60°	3232.8	91.9
0°-90°	3505.2	99.6
90°-120°	11.0	0.3
90°-150°	12.8	0.4
90°-180°	14.0	0.4
0°-180°	3519.2	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1655	1655	1655	1655	1655	
5°	1640	1649	1655	1659	1657	156
15°	1612	1621	1623	1619	1614	456
25°	1555	1555	1528	1497	1476	718
35°	1468	1440	1346	1224	1170	920
45°	1350	1239	886	617	554	1042
55°	1154	707	189	138	133	1024
65°	696	150	71	63	59	692
75°	215	76	44	33	28	242
85°	30	27	20	19	19	39
90°	3	11	15	15	12	3
95°	3	5	10	8	8	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°	1654.6	1654.6	1654.6	1654.6	1654.6
2.5°	1642.9	1651.4	1656.6	1660.5	1659.8
5°	1640.3	1649.4	1655.3	1659.2	1657.2
7.5°	1635.7	1645.5	1651.4	1655.3	1652.0
10°	1629.2	1639.0	1644.2	1646.8	1644.8
12.5°	1622.0	1631.1	1635.0	1636.3	1632.4
15°	1611.5	1620.7	1623.3	1618.7	1614.1
17.5°	1600.4	1608.3	1607.0	1598.5	1590.0
20°	1586.7	1593.2	1585.4	1569.1	1559.9
22.5°	1571.0	1575.6	1559.3	1535.1	1522.1
25°	1554.7	1554.7	1527.9	1496.6	1475.7
27.5°	1536.4	1531.9	1490.1	1448.3	1426.7
30°	1514.9	1504.4	1451.5	1392.1	1358.2
32.5°	1492.7	1475.7	1403.9	1319.0	1275.2
35°	1467.9	1440.4	1346.4	1223.7	1169.5
37.5°	1441.1	1402.6	1271.3	1102.9	1036.3
40°	1412.4	1356.2	1176.6	959.9	886.1
42.5°	1384.3	1303.3	1053.9	795.3	727.4
45°	1350.3	1239.3	886.1	617.1	553.7
47.5°	1312.5	1160.3	684.3	444.7	406.1
50°	1270.7	1052.6	474.7	306.2	273.6
52.5°	1221.1	906.3	299.1	203.7	188.1
55°	1153.8	707.2	188.7	138.4	132.6
57.5°	1077.4	494.3	128.6	105.1	101.2
60°	978.1	316.7	100.6	86.2	82.3
62.5°	855.4	210.3	83.6	73.1	69.2
65°	696.1	150.2	71.2	63.3	59.4
67.5°	551.8	120.1	62.7	55.5	50.3
70°	419.9	100.6	55.5	49.0	43.7
72.5°	299.1	87.5	49.6	41.8	36.6
75°	214.8	75.7	43.7	33.3	28.1
77.5°	148.2	65.9	36.6	25.5	24.2
80°	97.9	57.5	26.8	22.9	21.5
82.5°	59.4	46.4	22.9	19.6	20.9
85°	30.0	27.4	19.6	18.9	18.9
87.5°	11.8	16.3	16.3	18.3	18.3
90°	2.6	11.1	15.0	15.0	12.4
92.5°	2.6	8.5	13.7	10.4	9.1
95°	2.6	4.6	10.4	8.5	8.5
97.5°	2.0	2.0	7.2	7.2	7.2
100°	0.7	1.3	4.6	6.5	6.5
102.5°	0.7	0.7	2.6	4.6	5.2
105°	0.7	0.7	1.3	3.3	3.9
107.5°	0.0	0.0	0.7	2.0	2.6
110°	0.0	0.0	0.7	1.3	1.3



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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	1.3	0.7
145°	0.7	0.7	1.3	1.3	1.3
147.5°	0.7	0.7	1.3	1.3	1.3
150°	0.7	0.7	1.3	1.3	1.3
152.5°	0.7	1.3	1.3	1.3	1.3
155°	0.7	1.3	1.3	1.3	1.3
157.5°	0.7	1.3	1.3	2.0	1.3
160°	1.3	1.3	1.3	2.0	1.3
162.5°	1.3	1.3	2.0	2.0	2.0
165°	1.3	1.3	2.0	2.0	2.0
167.5°	1.3	1.3	2.0	2.0	2.0
170°	1.3	1.3	2.0	2.0	2.0
172.5°	1.3	1.3	2.0	2.0	2.0
175°	1.3	1.3	2.0	2.0	2.0
177.5°	1.3	1.3	2.0	2.6	2.0
180°	2.0	2.0	2.0	2.0	2.0



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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	23.33	24.73	23.70	25.05	25.38	11.23	12.63	11.60	12.95	13.28
	3H	24.62	25.86	25.01	26.20	26.57	12.39	13.64	12.78	13.97	14.35
	4H	25.02	26.18	25.43	26.54	26.93	12.82	13.98	13.23	14.34	14.73
	6H	25.25	26.32	25.67	26.69	27.10	13.20	14.27	13.62	14.65	15.05
	8H	25.30	26.31	25.74	26.71	27.13	13.45	14.46	13.89	14.86	15.28
	12H	25.31	26.28	25.75	26.67	27.11	13.79	14.75	14.22	15.14	15.58
4H	2H	23.14	24.30	23.55	24.66	25.05	11.75	12.91	12.15	13.26	13.66
	3H	24.48	25.43	24.90	25.84	26.25	13.20	14.15	13.62	14.56	14.98
	4H	24.91	25.75	25.35	26.18	26.63	13.76	14.61	14.20	15.04	15.49
	6H	25.23	25.97	25.70	26.42	26.89	14.27	15.00	14.74	15.45	15.93
	8H	25.32	26.01	25.80	26.46	26.94	14.58	15.27	15.06	15.72	16.20
	12H	25.37	25.98	25.86	26.47	26.95	15.02	15.63	15.52	16.12	16.61
8H	4H	24.81	25.49	25.28	25.95	26.43	14.34	15.02	14.81	15.48	15.96
	6H	25.15	25.72	25.66	26.22	26.71	14.97	15.53	15.48	16.04	16.52
	8H	25.29	25.80	25.81	26.32	26.82	15.37	15.88	15.90	16.40	16.90
	12H	25.38	25.83	25.90	26.33	26.91	15.96	16.42	16.48	16.92	17.50
12H	4H	24.77	25.38	25.26	25.87	26.35	14.54	15.15	15.03	15.64	16.12
	6H	25.10	25.61	25.63	26.13	26.63	15.21	15.72	15.74	16.24	16.74
	8H	25.26	25.72	25.78	26.22	26.80	15.69	16.14	16.21	16.64	17.22