

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: P893469

Luminaire Tested: 4MB-4SL-ACL-UNV-L930

Issue Date: 11/11/2024

Test Information

Test Method: LM-79-2019
Report Number: P893469
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-2404-077-15)
Test Lab: INNOVATION CENTER
Issue Date: 11/11/2024
Manufacturer: COOPER LIGHTING SOLUTIONS
Product Line: METALUX
Catalog Number: 4MB-4SL-ACL-UNV-L930
Description: 4000 Lumen 4FT MICROBAY LINEAR BAY with AISLE OPTICS WITH CLEAR LENS, 90CRI, 3000K (C)
Light Source: -
Ballast/Driver: -

Summary

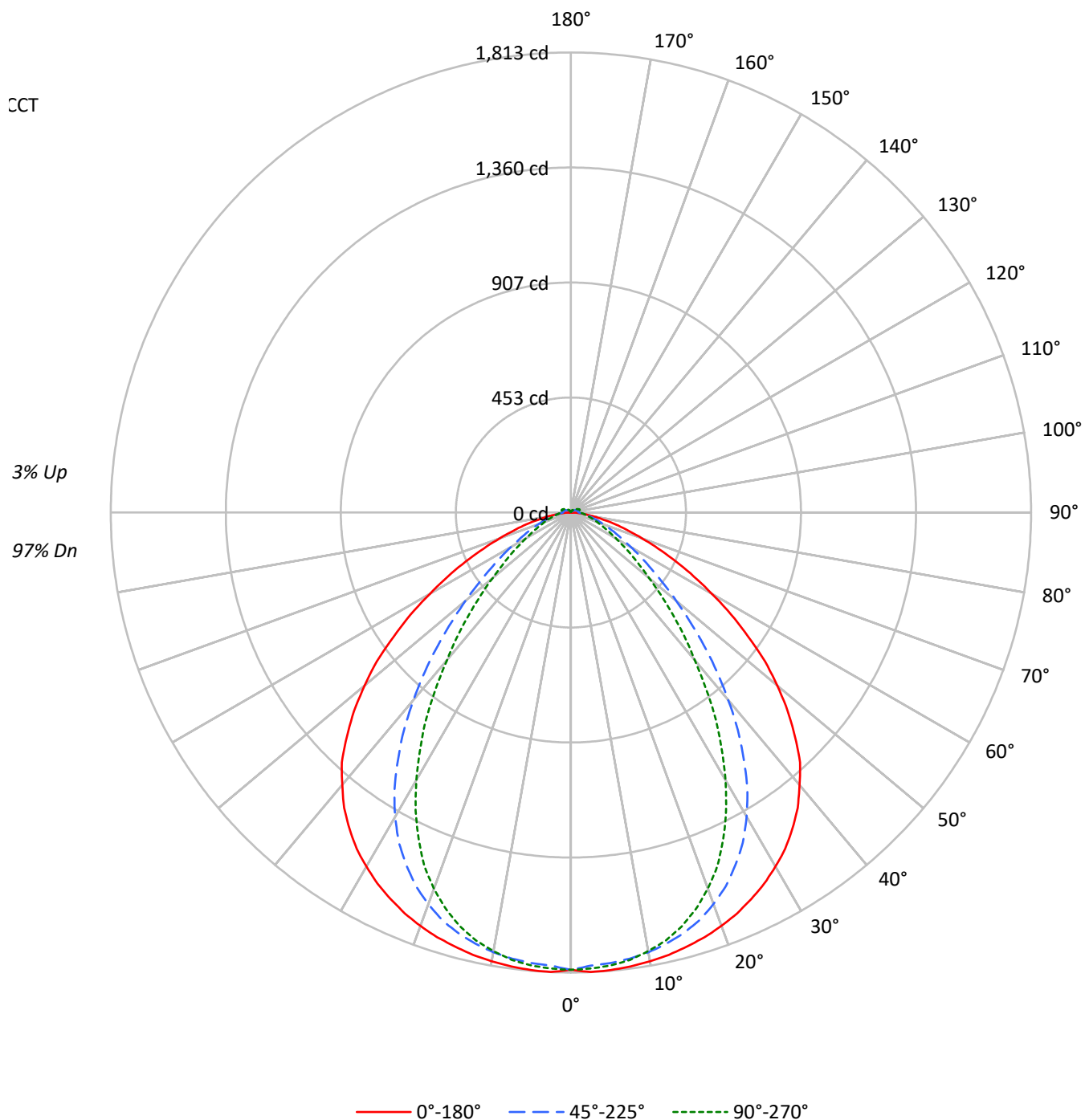
Lumens per Lamp: N/A
Luminaire Lumens: 3697.0 lumens
Efficiency: N/A
Efficacy: 124.1 lumens/watt
Spacing Criteria (0/90/45): 1.32 / 1.06 / 1.16
Luminous Opening: Rectangular w/ Sides (W: 0.27' x L: 3.98' x H: 0.08')
CIE Type: Direct

Input Watts (W): 29.8
Input Voltage (V): 120
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: 0.99
Total Harmonic Distortion (THDi): 5.5
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	118	118	118	118	115	115	115	115	110	110	110	104	104	104	100	100	100	97		
1	110	106	102	99	107	103	100	97	99	96	93	94	92	90	90	89	87	85		
2	101	94	88	84	99	92	87	82	88	84	80	85	81	78	82	79	76	74		
3	94	85	77	72	91	83	76	71	80	74	69	77	72	68	74	70	66	64		
4	87	76	68	62	84	75	67	62	72	66	61	69	64	60	67	62	59	57		
5	80	69	61	55	78	68	60	55	65	59	54	63	58	53	61	56	52	50		
6	75	63	55	49	73	62	54	49	60	53	48	58	52	47	56	51	47	45		
7	70	57	50	44	68	57	49	44	55	48	43	53	47	43	52	46	42	40		
8	65	53	45	40	64	52	45	40	51	44	39	49	43	39	48	42	38	37		
9	61	49	41	36	60	48	41	36	47	40	36	46	40	35	45	39	35	33		
10	58	45	38	33	56	45	38	33	44	37	33	43	37	32	42	36	32	31		

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	18354	18354	18354
5°	18471	17855	17828
10°	18504	17468	17202
15°	18559	17014	16419
20°	18649	16389	15347
25°	18705	15520	13921
30°	18723	14328	12129
35°	18643	12662	10145
40°	18312	10696	7984
45°	17607	8634	6190
50°	16392	6699	4644
55°	14675	5128	3553
60°	12607	3943	2706
65°	10512	3110	2151
70°	8408	2496	1758
75°	6697	2010	1496
80°	4907	1658	1309
85°	3366	1410	1206

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°

Vertical Angle: 45°

Luminance: 17607 cd/sqm

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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	170.7	4.6
10°-20°	486.3	13.2
20°-30°	709.0	19.2
30°-40°	761.7	20.6
40°-50°	634.0	17.1
50°-60°	424.0	11.5
60°-70°	242.7	6.6
70°-80°	120.7	3.3
80°-90°	49.4	1.3
90°-100°	28.7	0.8
100°-110°	25.3	0.7
110°-120°	18.6	0.5
120°-130°	11.9	0.3
130°-140°	7.1	0.2
140°-150°	4.0	0.1
150°-160°	2.0	0.1
160°-170°	0.9	0.0
170°-180°	0.2	0.0
0°-30°	1366.0	36.9
0°-40°	2127.7	57.6
0°-60°	3185.6	86.2
0°-90°	3598.4	97.3
90°-120°	72.5	2.0
90°-150°	95.5	2.6
90°-180°	99.0	2.7
0°-180°	3697.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1802	1802	1802	1802	1802	
5°	1810	1804	1783	1798	1792	172
15°	1770	1758	1716	1703	1688	500
25°	1681	1641	1534	1456	1420	775
35°	1522	1411	1187	1041	995	950
45°	1248	1037	741	600	565	960
55°	851	614	386	305	290	762
65°	456	309	194	158	149	456
75°	184	134	96	85	82	197
85°	36	40	45	47	47	42
90°	5	17	30	36	37	5
95°	8	17	30	36	37	6
105°	5	14	27	35	37	6
115°	3	8	21	29	32	3
125°	2	5	14	21	23	1
135°	1	4	10	14	16	1
145°	1	3	6	10	11	1
155°	1	3	4	6	7	1
165°	2	2	3	4	5	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°	1802.2	1802.2	1802.2	1802.2	1802.2
2.5°	1812.7	1808.0	1787.5	1803.8	1799.0
5°	1810.1	1804.3	1782.7	1797.5	1791.7
7.5°	1804.3	1798.0	1773.3	1784.8	1778.5
10°	1795.9	1788.0	1759.6	1765.4	1755.4
12.5°	1785.4	1775.4	1740.2	1738.6	1727.5
15°	1770.1	1758.0	1716.0	1703.4	1688.1
17.5°	1754.4	1736.5	1685.0	1659.2	1638.2
20°	1733.8	1710.2	1642.4	1604.0	1577.7
22.5°	1710.2	1678.1	1594.5	1535.6	1508.3
25°	1680.8	1640.8	1533.5	1456.3	1420.0
27.5°	1649.2	1596.1	1467.3	1365.8	1324.3
30°	1611.4	1545.6	1384.8	1262.8	1218.1
32.5°	1571.4	1481.5	1294.3	1154.5	1105.6
35°	1521.5	1411.1	1187.1	1040.9	995.2
37.5°	1467.3	1326.9	1080.9	924.8	873.2
40°	1401.6	1238.1	964.2	809.6	758.6
42.5°	1336.4	1141.4	852.2	705.5	661.4
45°	1248.1	1037.3	741.3	599.9	564.6
47.5°	1159.2	925.8	635.1	514.2	479.5
50°	1060.4	816.5	542.0	431.6	402.7
52.5°	964.2	714.5	457.4	364.9	340.1
55°	851.2	614.0	386.4	305.4	289.7
57.5°	749.2	521.0	326.0	258.7	243.9
60°	641.4	441.6	272.9	218.7	205.0
62.5°	546.8	371.2	229.7	185.6	176.1
65°	455.8	309.1	194.5	157.7	149.3
67.5°	372.2	258.1	164.0	134.6	127.8
70°	298.6	209.2	138.3	114.6	109.9
72.5°	235.0	168.2	115.1	98.8	94.6
75°	183.5	133.5	96.2	85.2	82.5
77.5°	132.5	104.1	80.4	73.1	71.5
80°	93.6	78.9	66.2	63.1	62.0
82.5°	62.0	57.3	54.7	54.7	54.1
85°	35.7	40.0	44.7	46.8	47.3
87.5°	18.4	26.8	35.7	40.0	40.5
90°	5.3	16.8	30.5	36.3	37.3
92.5°	7.9	16.8	30.0	36.3	37.3
95°	7.9	16.8	30.0	36.3	37.3
97.5°	7.4	16.3	30.0	36.3	37.3
100°	6.8	15.2	29.4	36.3	37.3
102.5°	5.8	14.7	28.4	35.7	37.3
105°	5.3	13.7	26.8	35.2	36.8
107.5°	4.7	11.6	25.2	33.6	35.7
110°	3.7	10.0	24.2	32.1	34.7



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CANDELA DISTRIBUTION (continued):

	0°	22.5°	45°	67.5°	90°
112.5°	3.2	8.9	22.6	30.5	33.1
115°	2.6	7.9	21.0	28.9	31.5
117.5°	2.1	7.4	18.9	26.8	29.4
120°	1.6	6.8	17.3	25.2	27.3
122.5°	1.6	6.3	15.2	23.1	25.2
125°	1.6	5.3	14.2	21.0	23.1
127.5°	1.1	4.7	12.6	18.9	21.0
130°	1.1	4.7	11.6	17.3	18.9
132.5°	1.1	4.2	10.5	15.8	17.3
135°	1.1	4.2	9.5	14.2	15.8
137.5°	1.1	3.7	8.4	13.1	14.7
140°	1.1	3.7	7.9	11.6	13.1
142.5°	1.1	3.2	6.8	11.0	12.1
145°	1.1	3.2	6.3	9.5	11.0
147.5°	1.1	3.2	5.8	8.9	10.0
150°	1.1	2.6	5.3	7.4	8.9
152.5°	1.1	2.6	4.7	6.8	8.4
155°	1.1	2.6	4.2	5.8	7.4
157.5°	1.1	2.6	4.2	5.3	6.3
160°	1.6	2.1	3.7	4.7	5.8
162.5°	1.6	2.1	3.2	4.2	5.3
165°	1.6	2.1	3.2	3.7	4.7
167.5°	1.6	2.1	2.6	3.2	3.7
170°	1.6	1.6	2.6	2.6	2.6
172.5°	1.6	1.6	2.1	2.6	2.1
175°	1.6	1.6	2.1	2.1	2.1
177.5°	1.6	1.6	2.1	2.1	2.1
180°	1.6	1.6	1.6	1.6	1.6

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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	18.84	20.24	19.25	20.61	20.99	14.14	15.53	14.55	15.90	16.29
	3H	19.94	21.18	20.36	21.57	22.00	15.28	16.52	15.70	16.91	17.34
	4H	20.24	21.41	20.69	21.81	22.26	15.78	16.94	16.23	17.35	17.80
	6H	20.39	21.46	20.85	21.89	22.34	16.28	17.35	16.74	17.78	18.24
	8H	20.41	21.43	20.88	21.87	22.34	16.54	17.56	17.01	18.00	18.47
	12H	20.40	21.38	20.88	21.81	22.31	16.83	17.81	17.31	18.25	18.74
4H	2H	18.83	19.99	19.27	20.40	20.84	14.64	15.80	15.08	16.21	16.65
	3H	20.06	21.02	20.52	21.48	21.95	15.95	16.91	16.41	17.37	17.83
	4H	20.45	21.31	20.93	21.78	22.28	16.54	17.41	17.02	17.88	18.38
	6H	20.68	21.43	21.18	21.92	22.45	17.17	17.92	17.67	18.41	18.93
	8H	20.72	21.42	21.23	21.92	22.45	17.49	18.19	18.00	18.68	19.21
	12H	20.73	21.36	21.26	21.89	22.42	17.86	18.49	18.39	19.01	19.55
8H	4H	20.43	21.14	20.94	21.63	22.16	16.78	17.49	17.29	17.98	18.51
	6H	20.71	21.29	21.25	21.83	22.37	17.51	18.09	18.05	18.63	19.17
	8H	20.78	21.31	21.34	21.86	22.41	17.91	18.43	18.47	18.99	19.54
	12H	20.83	21.29	21.39	21.83	22.46	18.40	18.87	18.96	19.41	20.03
12H	4H	20.41	21.04	20.94	21.57	22.10	16.80	17.42	17.33	17.95	18.49
	6H	20.69	21.21	21.25	21.77	22.32	17.54	18.07	18.10	18.62	19.18
	8H	20.80	21.26	21.35	21.80	22.43	18.01	18.47	18.56	19.01	19.63