

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: P893355

Luminaire Tested: 4MB-3SL-ACL-UNV-L840

Issue Date: 11/11/2024

Test Information

Test Method: LM-79-2019
Report Number: P893355
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-3SL-ACL-UNV-L840
Description: 3000 Lumen 4FT MICROBAY LINEAR BAY with AISLE OPTICS WITH CLEAR LENS, 80CRI, 4000K (C)
Light Source: -
Ballast/Driver: -

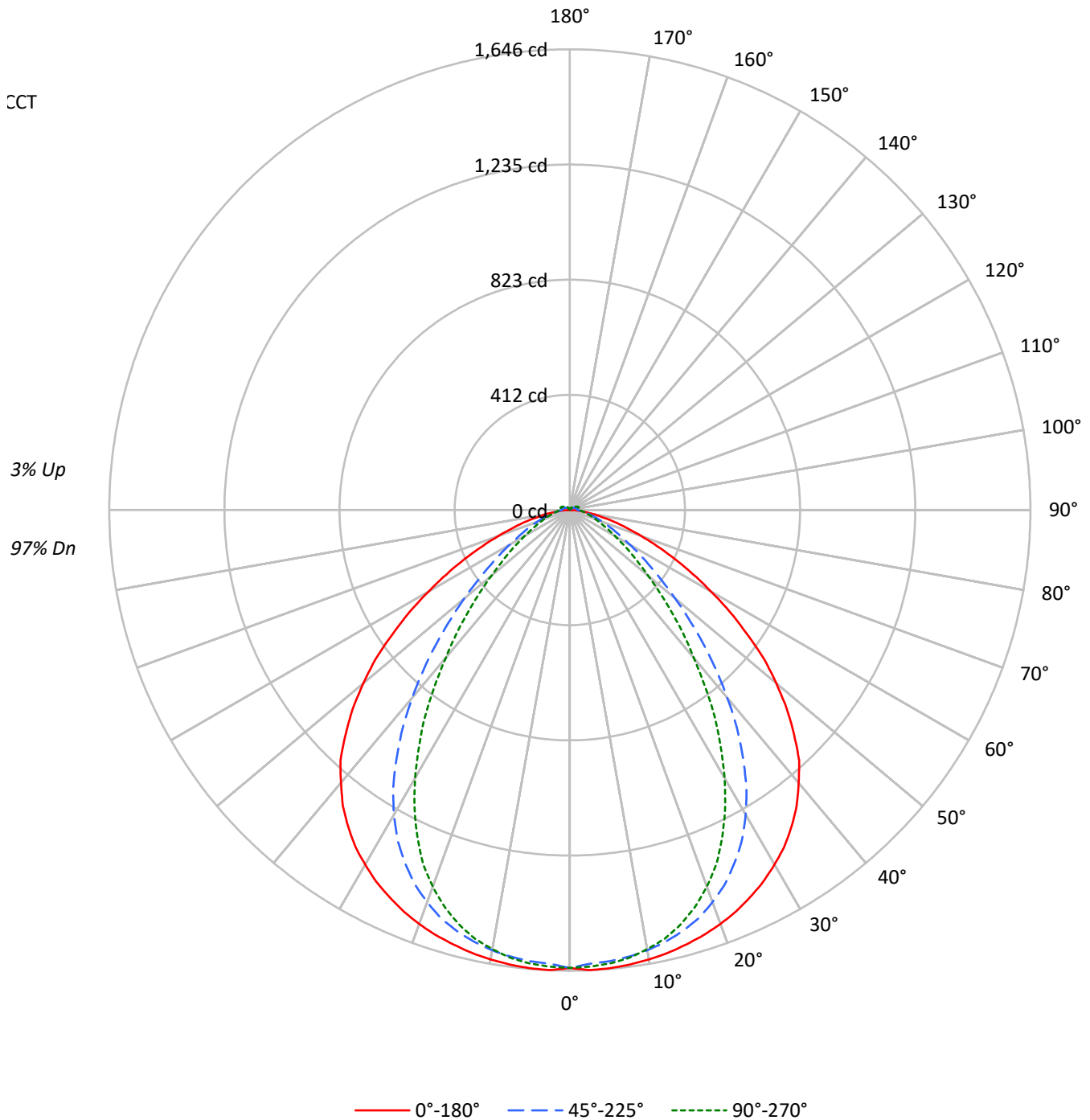
Summary

Lumens per Lamp: N/A
Luminaire Lumens: 3356.0 lumens
Efficiency: N/A
Efficacy: 159.1 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): 21.1
Input Voltage (V): 120
Input Current (A_{in}): NR
Voltage Rise (V): NR
Power Factor: 0.99
Total Harmonic Distortion (THDi): 5.2
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	118	118	118	118	115	115	115	115	110	110	110	104	104	104	100	100	100	100	100	100	97
1	110	106	102	99	107	103	100	97	99	96	93	94	92	90	90	89	87	87	87	87	85
2	101	94	88	84	99	92	87	82	88	84	80	85	81	78	82	79	76	76	76	76	74
3	94	85	77	72	91	83	76	71	80	74	69	77	72	68	74	70	66	66	66	66	64
4	87	76	68	62	84	75	67	62	72	66	61	69	64	60	67	62	59	59	59	59	57
5	80	69	61	55	78	68	60	55	65	59	54	63	58	53	61	56	52	52	52	52	50
6	75	63	55	49	73	62	54	49	60	53	48	58	52	47	56	51	47	47	47	47	45
7	70	57	50	44	68	57	49	44	55	48	43	53	47	43	52	46	42	42	42	42	40
8	65	53	45	40	64	52	45	40	51	44	39	49	43	39	48	42	38	38	38	38	37
9	61	49	41	36	60	48	41	36	47	40	36	46	40	35	45	39	35	35	35	35	33
10	58	45	38	33	56	45	38	33	44	37	33	43	37	32	42	36	32	32	32	32	31

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	16661	16661	16661
5°	16767	16209	16183
10°	16796	15857	15615
15°	16848	15445	14904
20°	16929	14877	13932
25°	16979	14089	12637
30°	16996	13006	11010
35°	16923	11494	9209
40°	16623	9709	7249
45°	15984	7838	5620
50°	14880	6081	4217
55°	13320	4656	3225
60°	11444	3579	2456
65°	9543	2823	1952
70°	7633	2265	1595
75°	6080	1824	1358
80°	4451	1505	1188
85°	3064	1281	1096

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
 Vertical Angle: 45°
 Luminance: 15984 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	155.0	4.6
10°-20°	441.4	13.2
20°-30°	643.6	19.2
30°-40°	691.5	20.6
40°-50°	575.5	17.1
50°-60°	384.9	11.5
60°-70°	220.3	6.6
70°-80°	109.5	3.3
80°-90°	44.8	1.3
90°-100°	26.0	0.8
100°-110°	23.0	0.7
110°-120°	16.8	0.5
120°-130°	10.8	0.3
130°-140°	6.4	0.2
140°-150°	3.6	0.1
150°-160°	1.8	0.1
160°-170°	0.8	0.0
170°-180°	0.2	0.0
0°-30°	1240.0	36.9
0°-40°	1931.4	57.6
0°-60°	2891.8	86.2
0°-90°	3266.5	97.3
90°-120°	65.8	2.0
90°-150°	86.7	2.6
90°-180°	89.0	2.7
0°-180°	3356.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1636	1636	1636	1636	1636	
5°	1643	1638	1618	1632	1626	156
15°	1607	1596	1558	1546	1532	454
25°	1526	1490	1392	1322	1289	704
35°	1381	1281	1078	945	903	863
45°	1133	942	673	544	513	871
55°	773	557	351	277	263	692
65°	414	281	177	143	136	414
75°	167	121	87	77	75	179
85°	32	36	41	42	43	38
90°	5	15	28	33	34	5
95°	7	15	27	33	34	6
105°	5	12	24	32	33	5
115°	2	7	19	26	29	2
125°	1	5	13	19	21	1
135°	1	4	9	13	14	1
145°	1	3	6	9	10	1
155°	1	2	4	5	7	0
165°	1	2	3	3	4	0
175°	1	1	2	2	2	0
180°	1	1	1	1	1	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1636.0	1636.0	1636.0	1636.0	1636.0
2.5°	1645.5	1641.2	1622.6	1637.4	1633.1
5°	1643.1	1637.9	1618.3	1631.7	1626.4
7.5°	1637.9	1632.1	1609.7	1620.2	1614.5
10°	1630.2	1623.1	1597.3	1602.6	1593.5
12.5°	1620.7	1611.6	1579.7	1578.2	1568.2
15°	1606.9	1595.9	1557.7	1546.2	1532.4
17.5°	1592.5	1576.3	1529.5	1506.2	1487.1
20°	1573.9	1552.4	1490.9	1456.0	1432.2
22.5°	1552.4	1523.3	1447.5	1394.0	1369.2
25°	1525.7	1489.5	1392.1	1321.9	1289.0
27.5°	1497.1	1448.9	1332.0	1239.9	1202.2
30°	1462.7	1403.1	1257.0	1146.3	1105.8
32.5°	1426.5	1344.9	1175.0	1048.0	1003.6
35°	1381.1	1280.9	1077.6	944.9	903.4
37.5°	1332.0	1204.5	981.2	839.5	792.7
40°	1272.3	1123.9	875.3	734.9	688.7
42.5°	1213.1	1036.1	773.6	640.5	600.4
45°	1133.0	941.6	672.9	544.5	512.6
47.5°	1052.3	840.4	576.5	466.7	435.2
50°	962.6	741.1	492.0	391.8	365.6
52.5°	875.3	648.6	415.2	331.2	308.8
55°	772.6	557.4	350.8	277.3	263.0
57.5°	680.1	472.9	295.9	234.8	221.4
60°	582.2	400.9	247.7	198.5	186.1
62.5°	496.3	336.9	208.6	168.5	159.9
65°	413.8	280.6	176.6	143.2	135.5
67.5°	337.9	234.3	148.9	122.2	116.0
70°	271.1	189.9	125.5	104.0	99.7
72.5°	213.3	152.7	104.5	89.7	85.9
75°	166.6	121.2	87.3	77.3	74.9
77.5°	120.3	94.5	73.0	66.3	64.9
80°	84.9	71.6	60.1	57.3	56.3
82.5°	56.3	52.0	49.6	49.6	49.2
85°	32.5	36.3	40.6	42.5	43.0
87.5°	16.7	24.3	32.5	36.3	36.7
90°	4.8	15.3	27.7	32.9	33.9
92.5°	7.2	15.3	27.2	32.9	33.9
95°	7.2	15.3	27.2	32.9	33.9
97.5°	6.7	14.8	27.2	32.9	33.9
100°	6.2	13.8	26.7	32.9	33.9
102.5°	5.2	13.4	25.8	32.5	33.9
105°	4.8	12.4	24.3	32.0	33.4
107.5°	4.3	10.5	22.9	30.5	32.5
110°	3.3	9.1	22.0	29.1	31.5



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CANDELA DISTRIBUTION (continued):

	0°	22.5°	45°	67.5°	90°
112.5°	2.9	8.1	20.5	27.7	30.1
115°	2.4	7.2	19.1	26.2	28.6
117.5°	1.9	6.7	17.2	24.3	26.7
120°	1.4	6.2	15.7	22.9	24.8
122.5°	1.4	5.7	13.8	21.0	22.9
125°	1.4	4.8	12.9	19.1	21.0
127.5°	1.0	4.3	11.5	17.2	19.1
130°	1.0	4.3	10.5	15.7	17.2
132.5°	1.0	3.8	9.5	14.3	15.7
135°	1.0	3.8	8.6	12.9	14.3
137.5°	1.0	3.3	7.6	11.9	13.4
140°	1.0	3.3	7.2	10.5	11.9
142.5°	1.0	2.9	6.2	10.0	11.0
145°	1.0	2.9	5.7	8.6	10.0
147.5°	1.0	2.9	5.2	8.1	9.1
150°	1.0	2.4	4.8	6.7	8.1
152.5°	1.0	2.4	4.3	6.2	7.6
155°	1.0	2.4	3.8	5.2	6.7
157.5°	1.0	2.4	3.8	4.8	5.7
160°	1.4	1.9	3.3	4.3	5.2
162.5°	1.4	1.9	2.9	3.8	4.8
165°	1.4	1.9	2.9	3.3	4.3
167.5°	1.4	1.9	2.4	2.9	3.3
170°	1.4	1.4	2.4	2.4	2.4
172.5°	1.4	1.4	1.9	2.4	1.9
175°	1.4	1.4	1.9	1.9	1.9
177.5°	1.4	1.4	1.9	1.9	1.9
180°	1.4	1.4	1.4	1.4	1.4



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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	18.51	19.90	18.92	20.27	20.65	13.80	15.19	14.21	15.57	15.95
	3H	19.60	20.84	20.03	21.23	21.66	14.94	16.19	15.37	16.57	17.00
	4H	19.91	21.07	20.35	21.48	21.92	15.44	16.61	15.89	17.01	17.46
	6H	20.05	21.13	20.51	21.55	22.01	15.94	17.02	16.40	17.44	17.90
	8H	20.07	21.09	20.54	21.54	22.00	16.20	17.22	16.68	17.67	18.14
	12H	20.07	21.04	20.54	21.48	21.97	16.50	17.47	16.98	17.91	18.41
4H	2H	18.49	19.65	18.94	20.06	20.50	14.30	15.46	14.75	15.87	16.32
	3H	19.73	20.69	20.18	21.14	21.61	15.61	16.58	16.07	17.03	17.50
	4H	20.11	20.98	20.59	21.44	21.95	16.21	17.07	16.69	17.54	18.04
	6H	20.34	21.09	20.85	21.59	22.11	16.83	17.58	17.33	18.07	18.60
	8H	20.38	21.09	20.89	21.58	22.11	17.15	17.85	17.66	18.35	18.88
	12H	20.40	21.02	20.92	21.55	22.08	17.52	18.15	18.05	18.68	19.21
8H	4H	20.10	20.80	20.61	21.29	21.83	16.45	17.15	16.96	17.64	18.17
	6H	20.38	20.96	20.92	21.50	22.04	17.17	17.75	17.71	18.29	18.83
	8H	20.45	20.97	21.01	21.53	22.08	17.58	18.10	18.14	18.66	19.21
	12H	20.49	20.96	21.05	21.50	22.12	18.07	18.53	18.62	19.07	19.70
12H	4H	20.08	20.70	20.60	21.23	21.76	16.46	17.09	16.99	17.62	18.15
	6H	20.35	20.88	20.91	21.43	21.99	17.21	17.73	17.77	18.29	18.84
	8H	20.46	20.92	21.02	21.46	22.09	17.67	18.13	18.22	18.67	19.30