

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: P893361

Luminaire Tested: 4MB-3SL-AOL-UNV-L830

Issue Date: 11/11/2024

Test Information

Test Method: LM-79-2019
Report Number: P893361
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-2404-077-14)
Test Lab: INNOVATION CENTER
Issue Date: 11/11/2024
Manufacturer: COOPER LIGHTING SOLUTIONS
Product Line: METALUX
Catalog Number: 4MB-3SL-AOL-UNV-L830
Description: 3000 Lumen 4FT MICROBAY LINEAR BAY with AISLE OPTICS WITH CLEAR LENS NO UPLIGHT, 8
3000K CCT
Light Source: -
Ballast/Driver: -

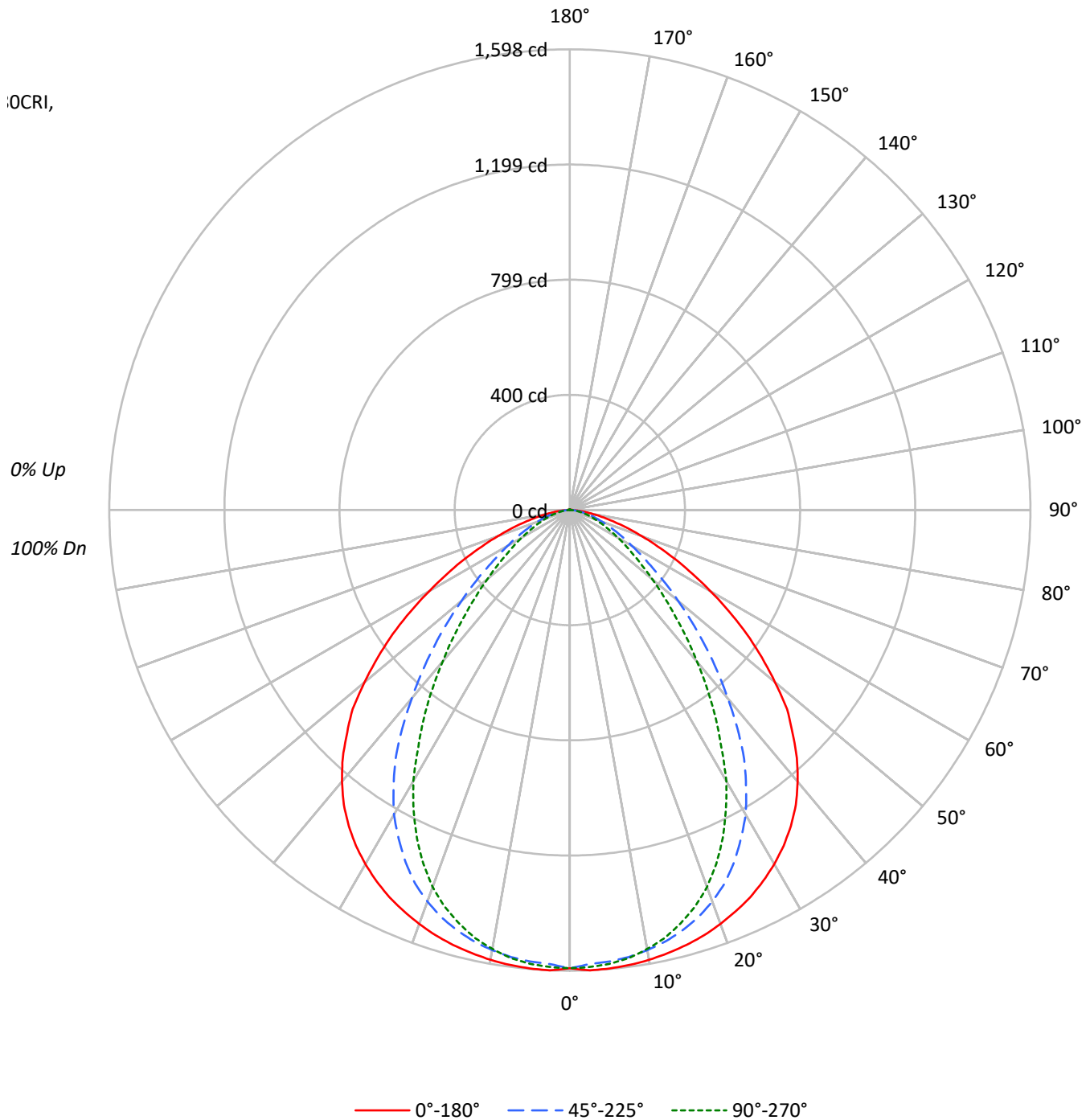
Summary

Lumens per Lamp: N/A
Luminaire Lumens: 3175.0 lumens
Efficiency: N/A
Efficacy: 150.5 lumens/watt
Spacing Criteria (0/90/45): 1.32 / 1.06 / 1.16
Luminous Opening: Rectangular (W 0.27' x L: 3.98' x H: 0')
CIE Type: Direct

Input Watts (W): 21.1
Input Voltage (V): 120
Input Current (Ain): 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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CATALOG NUMBER: 4MB-3SL-AOL-UNV-L830

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	103	100	108	104	101	98	100	98	95	96	94	92	93	91	89	89	89	89	87
2	102	95	89	85	100	93	88	84	90	85	82	87	83	80	84	81	78	78	78	78	76
3	94	85	78	73	92	84	77	72	81	75	71	78	73	70	76	72	68	68	68	68	66
4	87	77	69	63	85	76	68	63	73	67	62	71	66	61	69	64	60	60	60	60	58
5	81	70	62	56	79	69	61	55	66	60	55	65	59	54	63	58	54	54	54	54	52
6	75	63	55	50	74	63	55	49	61	54	49	59	53	49	58	52	48	48	48	48	46
7	70	58	50	45	69	57	50	44	56	49	44	54	48	44	53	48	43	43	43	43	42
8	66	53	46	40	64	53	45	40	51	45	40	50	44	40	49	44	39	39	39	39	38
9	62	49	42	37	60	49	42	37	48	41	36	47	41	36	46	40	36	36	36	36	34
10	58	46	38	34	57	45	38	33	44	38	33	43	37	33	43	37	33	33	33	33	31

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	16187	16187	16187
5°	16318	16072	16156
10°	16385	16031	15989
15°	16470	15916	15652
20°	16559	15660	15081
25°	16651	15150	14105
30°	16680	14354	12771
35°	16626	13111	10985
40°	16348	11347	9128
45°	15741	9535	7387
50°	14730	7765	5916
55°	13310	6241	4744
60°	11478	5080	3929
65°	9714	4229	3229
70°	7930	3597	2742
75°	6351	3034	2333
80°	4944	2592	2006
85°	3833	2290	1811

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
 Vertical Angle: 45°
 Luminance: 15741 cd/sqm



TEST NUMBER: P893361
 CATALOG NUMBER: 4MB-3SL-AOL-UNV-L830

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	150.5	4.7
10°-20°	428.3	13.5
20°-30°	624.3	19.7
30°-40°	672.9	21.2
40°-50°	564.1	17.8
50°-60°	381.9	12.0
60°-70°	217.8	6.9
70°-80°	99.6	3.1
80°-90°	26.1	0.8
90°-100°	3.2	0.1
100°-110°	2.2	0.1
110°-120°	1.2	0.0
120°-130°	0.7	0.0
130°-140°	0.7	0.0
140°-150°	0.6	0.0
150°-160°	0.5	0.0
160°-170°	0.4	0.0
170°-180°	0.1	0.0
0°-30°	1203.1	37.9
0°-40°	1876.0	59.1
0°-60°	2822.0	88.9
0°-90°	3165.5	99.7
90°-120°	6.6	0.2
90°-150°	8.5	0.3
90°-180°	10.0	0.3
0°-180°	3175.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1589	1589	1589	1589	1589	
5°	1596	1591	1572	1585	1580	152
15°	1562	1548	1510	1500	1484	441
25°	1482	1443	1348	1286	1255	683
35°	1337	1236	1055	926	884	835
45°	1093	912	662	546	513	841
55°	750	548	352	285	267	668
65°	403	280	176	142	134	402
75°	161	118	77	63	59	176
85°	33	28	20	16	16	38
90°	5	5	3	2	2	5
95°	7	4	2	1	1	5
105°	5	3	1	1	0	5
115°	2	2	1	0	0	2
125°	1	1	1	0	0	1
135°	0	1	1	1	0	1
145°	1	1	1	1	1	1
155°	1	1	1	1	1	0
165°	1	1	1	1	1	0
175°	1	1	1	2	2	0
180°	1	1	1	1	1	



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CATALOG NUMBER: 4MB-3SL-AOL-UNV-L830

CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1589.4	1589.4	1589.4	1589.4	1589.4
2.5°	1598.5	1594.4	1576.2	1591.2	1586.7
5°	1596.2	1591.2	1572.1	1584.8	1580.3
7.5°	1591.7	1585.3	1563.9	1573.4	1567.5
10°	1584.4	1576.6	1550.2	1555.7	1546.1
12.5°	1574.4	1564.8	1533.3	1532.0	1520.6
15°	1562.1	1548.4	1509.6	1499.6	1484.5
17.5°	1547.0	1529.7	1481.3	1461.3	1443.0
20°	1527.9	1505.5	1444.9	1413.0	1391.5
22.5°	1506.0	1475.9	1402.5	1351.4	1328.2
25°	1481.8	1442.6	1348.2	1286.2	1255.2
27.5°	1451.7	1402.5	1285.3	1205.0	1173.1
30°	1418.4	1356.0	1220.6	1118.0	1086.0
32.5°	1380.6	1302.6	1138.0	1024.0	979.4
35°	1337.3	1236.5	1054.6	925.6	883.6
37.5°	1288.5	1167.7	954.7	826.2	783.8
40°	1229.7	1086.0	853.5	726.3	686.6
42.5°	1166.3	1003.1	756.4	631.5	597.3
45°	1092.9	911.9	662.0	545.8	512.9
47.5°	1022.2	819.8	573.6	467.3	440.4
50°	929.7	721.8	490.1	395.8	373.4
52.5°	839.4	631.0	419.0	338.3	317.3
55°	749.6	548.5	351.5	285.0	267.2
57.5°	654.7	467.8	295.9	241.2	229.3
60°	563.5	398.0	249.4	202.4	192.9
62.5°	480.1	333.7	211.1	171.0	161.9
65°	403.1	280.4	175.5	142.3	134.0
67.5°	330.1	230.7	146.4	118.5	112.6
70°	266.3	186.9	120.8	97.6	92.1
72.5°	211.1	149.5	96.7	79.8	73.9
75°	161.4	118.5	77.1	62.9	59.3
77.5°	120.4	89.4	59.3	48.3	45.6
80°	84.3	64.7	44.2	36.5	34.2
82.5°	57.4	44.7	31.0	25.5	24.2
85°	32.8	27.8	19.6	16.4	15.5
87.5°	16.9	14.6	10.5	7.8	6.8
90°	4.6	4.6	2.7	2.3	1.8
92.5°	7.3	4.1	2.7	1.8	1.4
95°	6.8	4.1	2.3	1.4	1.4
97.5°	6.4	4.1	1.8	1.4	0.9
100°	5.9	3.6	1.8	0.9	0.9
102.5°	5.5	3.6	1.8	0.9	0.9
105°	4.6	3.2	1.4	0.9	0.5
107.5°	4.1	2.7	1.4	0.9	0.5
110°	3.2	2.3	1.4	0.9	0.5



TEST NUMBER: P893361

CATALOG NUMBER: 4MB-3SL-AOL-UNV-L830

CANDELA DISTRIBUTION (continued):

	0°	22.5°	45°	67.5°	90°
112.5°	2.7	2.3	0.9	0.9	0.5
115°	2.3	1.8	0.9	0.5	0.5
117.5°	1.8	1.4	0.9	0.5	0.5
120°	1.4	1.4	0.9	0.5	0.5
122.5°	1.4	0.9	0.9	0.5	0.5
125°	0.9	0.9	0.9	0.5	0.5
127.5°	0.9	0.9	0.9	0.5	0.5
130°	0.9	0.9	0.9	0.5	0.5
132.5°	0.9	0.9	0.9	0.9	0.5
135°	0.5	0.9	0.9	0.9	0.5
137.5°	0.9	0.9	0.9	0.9	0.9
140°	0.9	0.9	0.9	0.9	0.9
142.5°	0.9	0.9	0.9	0.9	0.9
145°	0.9	0.9	0.9	0.9	0.9
147.5°	0.9	0.9	0.9	0.9	0.9
150°	0.9	0.9	0.9	0.9	0.9
152.5°	0.9	0.9	0.9	0.9	0.9
155°	0.9	0.9	0.9	1.4	1.4
157.5°	0.9	0.9	1.4	1.4	1.4
160°	0.9	0.9	1.4	1.4	1.4
162.5°	0.9	0.9	1.4	1.4	1.4
165°	0.9	1.4	1.4	1.4	1.4
167.5°	0.9	1.4	1.4	1.4	1.8
170°	0.9	1.4	1.4	1.8	1.8
172.5°	0.9	1.4	1.4	1.8	1.8
175°	1.4	1.4	1.4	1.8	1.8
177.5°	1.4	1.4	1.4	1.8	1.8
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	20.04	21.48	20.41	21.80	22.12	14.89	16.32	15.26	16.64	16.97
	3H	21.35	22.63	21.73	22.97	23.34	15.90	17.18	16.28	17.51	17.89
	4H	21.77	22.97	22.18	23.33	23.72	16.23	17.43	16.64	17.79	18.18
	6H	22.04	23.15	22.46	23.52	23.92	16.46	17.56	16.88	17.94	18.34
	8H	22.11	23.16	22.55	23.56	23.97	16.53	17.57	16.96	17.97	18.38
	12H	22.15	23.15	22.59	23.54	23.98	16.57	17.57	17.00	17.96	18.40
4H	2H	20.04	21.24	20.45	21.59	21.98	15.51	16.71	15.91	17.06	17.45
	3H	21.51	22.49	21.92	22.90	23.31	16.71	17.69	17.12	18.10	18.51
	4H	22.03	22.92	22.47	23.34	23.79	17.12	18.01	17.56	18.43	18.88
	6H	22.41	23.17	22.87	23.62	24.09	17.43	18.20	17.90	18.65	19.12
	8H	22.52	23.24	22.99	23.69	24.16	17.53	18.24	18.00	18.69	19.17
	12H	22.60	23.23	23.08	23.72	24.20	17.60	18.23	18.09	18.72	19.20
8H	4H	22.01	22.73	22.48	23.18	23.66	17.46	18.17	17.93	18.62	19.10
	6H	22.44	23.03	22.95	23.53	24.02	17.85	18.44	18.35	18.94	19.42
	8H	22.60	23.13	23.12	23.65	24.14	17.99	18.52	18.51	19.04	19.53
	12H	22.73	23.20	23.25	23.70	24.27	18.11	18.58	18.63	19.08	19.65
12H	4H	21.98	22.62	22.47	23.11	23.59	17.50	18.14	17.99	18.62	19.10
	6H	22.41	22.94	22.93	23.46	23.96	17.92	18.45	18.44	18.96	19.46
	8H	22.60	23.07	23.12	23.57	24.14	18.11	18.57	18.62	19.07	19.65