

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: P893353

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

Issue Date: 11/11/2024

Test Information

Test Method: LM-79-2019
Report Number: P893353
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-L830
Description: 3000 Lumen 4FT MICROBAY LINEAR BAY with AISLE OPTICS WITH CLEAR LENS, 80CRI, 3000K (C)
Light Source: -
Ballast/Driver: -

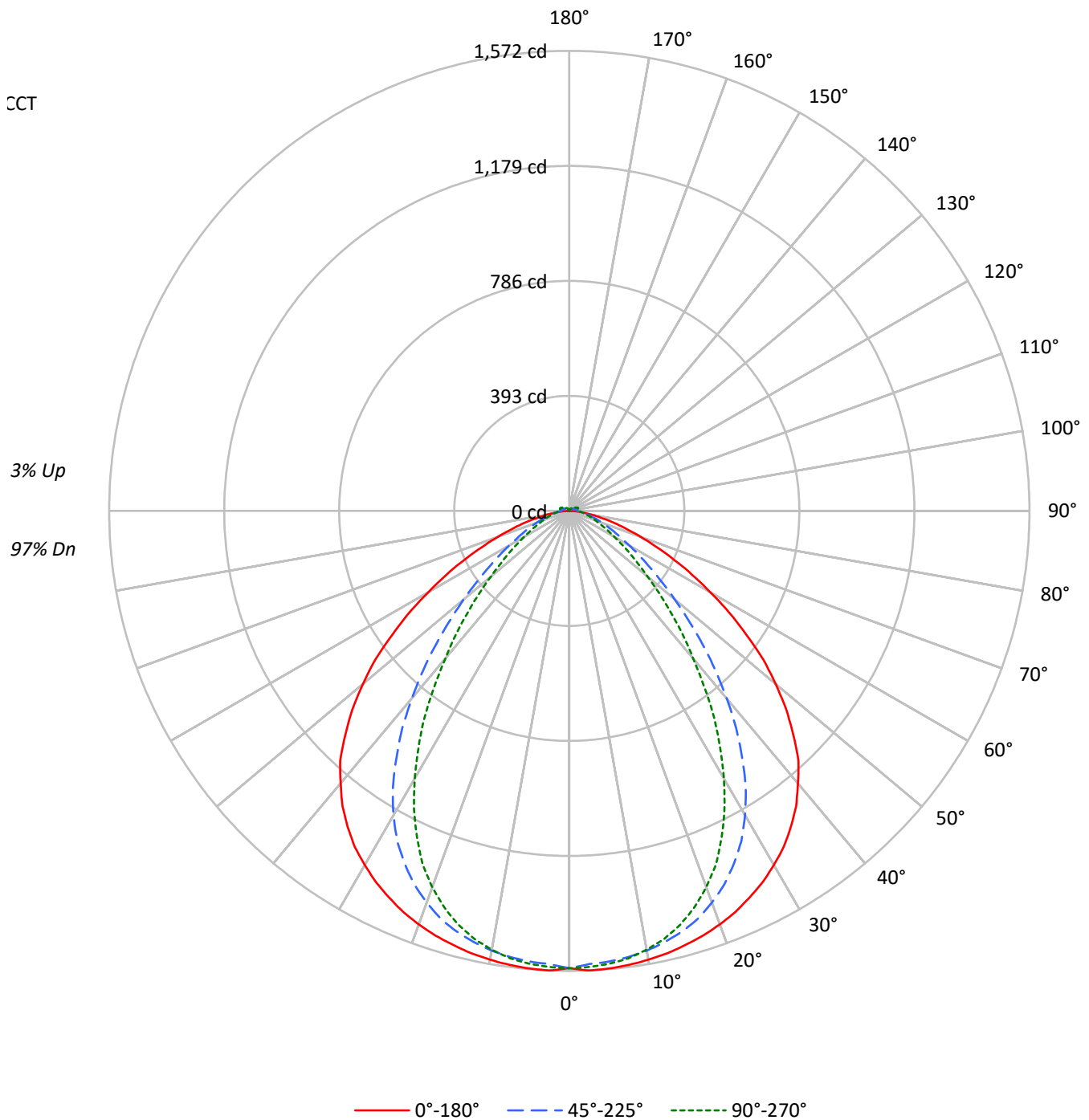
Summary

Lumens per Lamp: N/A
Luminaire Lumens: 3206.0 lumens
Efficiency: N/A
Efficacy: 151.9 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	97				97
1	110	106	102	99	107	103	100	97	99	96	93	94	92	90	90	89	87	85				85
2	101	94	88	84	99	92	87	82	88	84	80	85	81	78	82	79	76	74				74
3	94	85	77	72	91	83	76	71	80	74	69	77	72	68	74	70	66	64				64
4	87	76	68	62	84	75	67	62	72	66	61	69	64	60	67	62	59	57				57
5	80	69	61	55	78	68	60	55	65	59	54	63	58	53	61	56	52	50				50
6	75	63	55	49	73	62	54	49	60	53	48	58	52	47	56	51	47	45				45
7	70	57	50	44	68	57	49	44	55	48	43	53	47	43	52	46	42	40				40
8	65	53	45	40	64	52	45	40	51	44	39	49	43	39	48	42	38	37				37
9	61	49	41	36	60	48	41	36	47	40	36	46	40	35	45	39	35	33				33
10	58	45	38	33	56	45	38	33	44	37	33	43	37	32	42	36	32	31				31

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	15916	15916	15916
5°	16018	15484	15459
10°	16046	15148	14918
15°	16094	14755	14238
20°	16173	14212	13309
25°	16220	13459	12072
30°	16236	12425	10518
35°	16167	10980	8798
40°	15879	9275	6924
45°	15268	7487	5368
50°	14215	5809	4027
55°	12725	4447	3081
60°	10932	3419	2347
65°	9117	2697	1866
70°	7293	2164	1524
75°	5807	1743	1298
80°	4257	1438	1136
85°	2923	1224	1045

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
 Vertical Angle: 45°
 Luminance: 15268 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	148.0	4.6
10°-20°	421.7	13.2
20°-30°	614.8	19.2
30°-40°	660.5	20.6
40°-50°	549.7	17.1
50°-60°	367.7	11.5
60°-70°	210.5	6.6
70°-80°	104.7	3.3
80°-90°	42.8	1.3
90°-100°	24.9	0.8
100°-110°	21.9	0.7
110°-120°	16.1	0.5
120°-130°	10.3	0.3
130°-140°	6.2	0.2
140°-150°	3.5	0.1
150°-160°	1.7	0.1
160°-170°	0.7	0.0
170°-180°	0.2	0.0
0°-30°	1184.6	36.9
0°-40°	1845.1	57.6
0°-60°	2762.5	86.2
0°-90°	3120.5	97.3
90°-120°	62.9	2.0
90°-150°	82.9	2.6
90°-180°	86.0	2.7
0°-180°	3206.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1563	1563	1563	1563	1563	
5°	1570	1565	1546	1559	1554	149
15°	1535	1524	1488	1477	1464	434
25°	1458	1423	1330	1263	1231	672
35°	1319	1224	1029	903	863	824
45°	1082	900	643	520	490	832
55°	738	532	335	265	251	661
65°	395	268	169	137	130	395
75°	159	116	83	74	72	171
85°	31	35	39	41	41	36
90°	5	15	26	32	32	4
95°	7	15	26	32	32	5
105°	5	12	23	30	32	5
115°	2	7	18	25	27	2
125°	1	5	12	18	20	1
135°	1	4	8	12	14	1
145°	1	3	6	8	10	1
155°	1	2	4	5	6	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°	1562.8	1562.8	1562.8	1562.8	1562.8
2.5°	1572.0	1567.9	1550.1	1564.2	1560.1
5°	1569.7	1564.7	1546.0	1558.7	1553.7
7.5°	1564.7	1559.2	1537.8	1547.8	1542.3
10°	1557.4	1550.5	1525.9	1530.9	1522.3
12.5°	1548.3	1539.6	1509.0	1507.7	1498.1
15°	1535.0	1524.5	1488.1	1477.1	1463.9
17.5°	1521.4	1505.9	1461.2	1438.8	1420.6
20°	1503.6	1483.1	1424.2	1391.0	1368.2
22.5°	1483.1	1455.2	1382.8	1331.7	1308.0
25°	1457.5	1422.9	1329.9	1262.9	1231.4
27.5°	1430.2	1384.1	1272.4	1184.4	1148.4
30°	1397.3	1340.4	1200.9	1095.1	1056.3
32.5°	1362.7	1284.7	1122.4	1001.2	958.8
35°	1319.4	1223.7	1029.4	902.7	863.0
37.5°	1272.4	1150.7	937.3	801.9	757.3
40°	1215.4	1073.7	836.1	702.1	657.9
42.5°	1158.9	989.8	739.0	611.8	573.5
45°	1082.3	899.5	642.8	520.2	489.6
47.5°	1005.3	802.8	550.7	445.9	415.8
50°	919.6	708.0	470.0	374.3	349.2
52.5°	836.1	619.6	396.6	316.4	295.0
55°	738.1	532.5	335.1	264.9	251.2
57.5°	649.7	451.8	282.7	224.3	211.5
60°	556.2	383.0	236.6	189.7	177.8
62.5°	474.1	321.9	199.2	160.9	152.7
65°	395.3	268.1	168.7	136.8	129.5
67.5°	322.8	223.8	142.2	116.7	110.8
70°	259.0	181.5	119.9	99.4	95.3
72.5°	203.8	145.9	99.8	85.7	82.1
75°	159.1	115.8	83.4	73.9	71.6
77.5°	114.9	90.3	69.8	63.4	62.0
80°	81.2	68.4	57.4	54.7	53.8
82.5°	53.8	49.7	47.4	47.4	47.0
85°	31.0	34.6	38.8	40.6	41.0
87.5°	16.0	23.3	31.0	34.6	35.1
90°	4.6	14.6	26.4	31.5	32.4
92.5°	6.8	14.6	26.0	31.5	32.4
95°	6.8	14.6	26.0	31.5	32.4
97.5°	6.4	14.1	26.0	31.5	32.4
100°	5.9	13.2	25.5	31.5	32.4
102.5°	5.0	12.8	24.6	31.0	32.4
105°	4.6	11.9	23.3	30.5	31.9
107.5°	4.1	10.0	21.9	29.2	31.0
110°	3.2	8.7	21.0	27.8	30.1



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CANDELA DISTRIBUTION (continued):

	0°	22.5°	45°	67.5°	90°
112.5°	2.7	7.8	19.6	26.4	28.7
115°	2.3	6.8	18.2	25.1	27.4
117.5°	1.8	6.4	16.4	23.3	25.5
120°	1.4	5.9	15.0	21.9	23.7
122.5°	1.4	5.5	13.2	20.1	21.9
125°	1.4	4.6	12.3	18.2	20.1
127.5°	0.9	4.1	10.9	16.4	18.2
130°	0.9	4.1	10.0	15.0	16.4
132.5°	0.9	3.6	9.1	13.7	15.0
135°	0.9	3.6	8.2	12.3	13.7
137.5°	0.9	3.2	7.3	11.4	12.8
140°	0.9	3.2	6.8	10.0	11.4
142.5°	0.9	2.7	5.9	9.6	10.5
145°	0.9	2.7	5.5	8.2	9.6
147.5°	0.9	2.7	5.0	7.8	8.7
150°	0.9	2.3	4.6	6.4	7.8
152.5°	0.9	2.3	4.1	5.9	7.3
155°	0.9	2.3	3.6	5.0	6.4
157.5°	0.9	2.3	3.6	4.6	5.5
160°	1.4	1.8	3.2	4.1	5.0
162.5°	1.4	1.8	2.7	3.6	4.6
165°	1.4	1.8	2.7	3.2	4.1
167.5°	1.4	1.8	2.3	2.7	3.2
170°	1.4	1.4	2.3	2.3	2.3
172.5°	1.4	1.4	1.8	2.3	1.8
175°	1.4	1.4	1.8	1.8	1.8
177.5°	1.4	1.4	1.8	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	18.35	19.74	18.76	20.11	20.50	13.64	15.04	14.05	15.41	15.79
	3H	19.44	20.69	19.87	21.07	21.50	14.78	16.03	15.21	16.41	16.84
	4H	19.75	20.91	20.20	21.32	21.76	15.29	16.45	15.73	16.85	17.30
	6H	19.90	20.97	20.35	21.39	21.85	15.79	16.86	16.24	17.28	17.74
	8H	19.91	20.93	20.39	21.38	21.85	16.05	17.07	16.52	17.51	17.98
	12H	19.91	20.88	20.38	21.32	21.81	16.34	17.32	16.82	17.75	18.25
4H	2H	18.33	19.49	18.78	19.90	20.35	14.14	15.30	14.59	15.71	16.16
	3H	19.57	20.53	20.03	20.98	21.45	15.46	16.42	15.91	16.87	17.34
	4H	19.95	20.82	20.43	21.29	21.79	16.05	16.91	16.53	17.38	17.89
	6H	20.18	20.93	20.69	21.43	21.95	16.67	17.42	17.17	17.92	18.44
	8H	20.23	20.93	20.73	21.42	21.95	16.99	17.69	17.50	18.19	18.72
	12H	20.24	20.86	20.77	21.39	21.93	17.37	17.99	17.89	18.52	19.05
8H	4H	19.94	20.64	20.45	21.14	21.67	16.29	16.99	16.80	17.49	18.02
	6H	20.22	20.80	20.76	21.34	21.88	17.01	17.59	17.56	18.13	18.67
	8H	20.29	20.81	20.85	21.37	21.92	17.42	17.94	17.98	18.50	19.05
	12H	20.34	20.80	20.89	21.34	21.96	17.91	18.37	18.46	18.91	19.54
12H	4H	19.92	20.54	20.45	21.07	21.61	16.30	16.93	16.83	17.46	17.99
	6H	20.20	20.72	20.76	21.28	21.83	17.05	17.57	17.61	18.13	18.68
	8H	20.30	20.76	20.86	21.30	21.93	17.51	17.97	18.07	18.51	19.14