

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: P893473

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

Issue Date: 11/11/2024

Test Information

Test Method: LM-79-2019
Report Number: P893473
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-4SL-AOL-UNV-L830
Description: 4000 Lumen 4FT MICROBAY LINEAR BAY with AISLE OPTICS WITH CLEAR LENS NO UPLIGHT, 8
3000K CCT
Light Source: -
Ballast/Driver: -

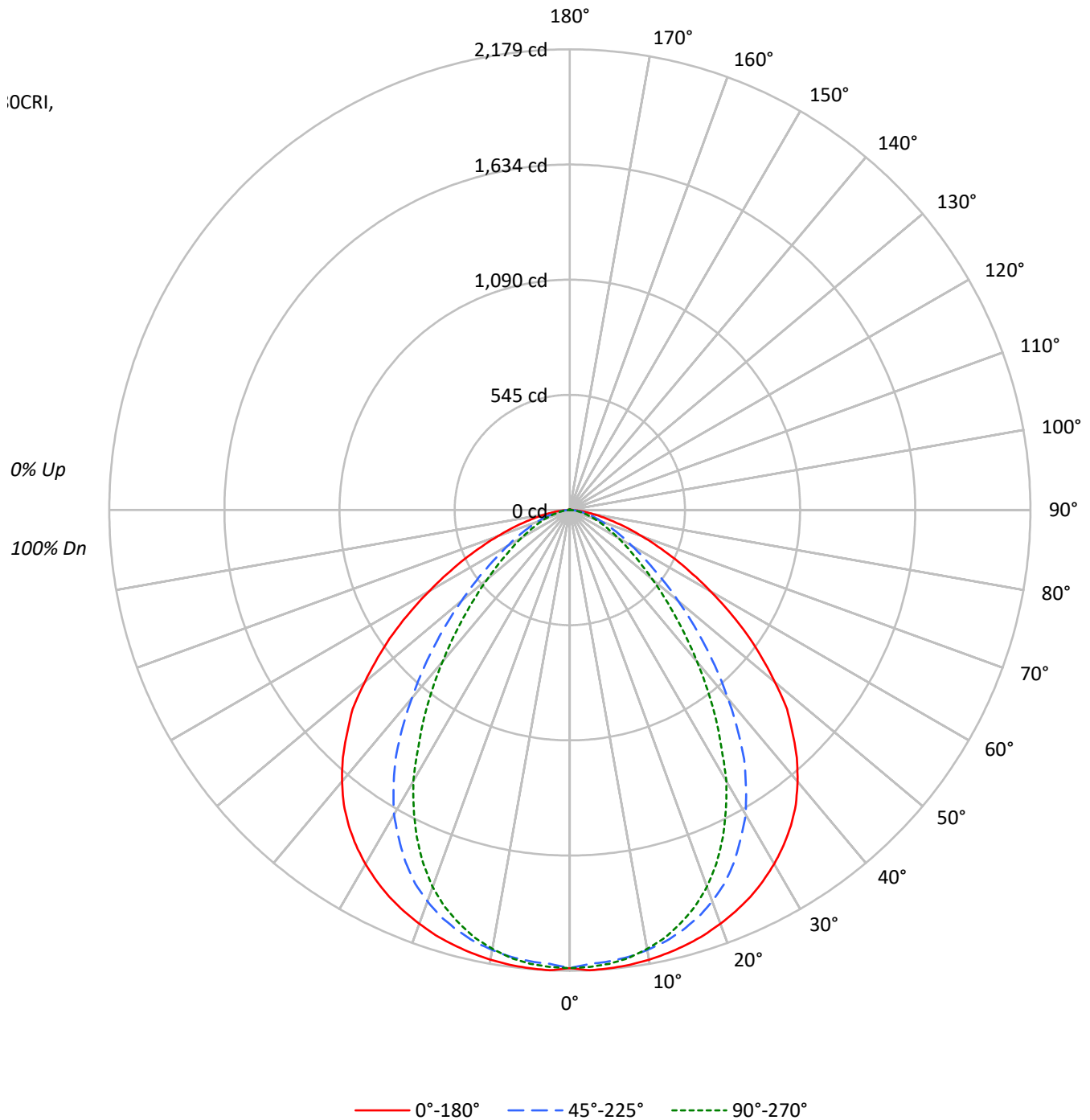
Summary

Lumens per Lamp: N/A
Luminaire Lumens: 4327.9 lumens
Efficiency: N/A
Efficacy: 145.2 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): 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

TEST NUMBER: P893473
CATALOG NUMBER: 4MB-4SL-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	67	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°	22065	22065	22065
5°	22244	21908	22023
10°	22335	21852	21795
15°	22450	21696	21337
20°	22572	21346	20558
25°	22698	20651	19227
30°	22737	19566	17409
35°	22663	17873	14975
40°	22284	15468	12444
45°	21457	12997	10070
50°	20079	10585	8065
55°	18143	8508	6467
60°	15647	6925	5355
65°	13239	5767	4403
70°	10809	4904	3737
75°	8657	4132	3179
80°	6745	3537	2733
85°	5223	3120	2466

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
 Vertical Angle: 45°
 Luminance: 21457 cd/sqm



TEST NUMBER: P893473
 CATALOG NUMBER: 4MB-4SL-AOL-UNV-L830

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	205.2	4.7
10°-20°	583.8	13.5
20°-30°	851.0	19.7
30°-40°	917.3	21.2
40°-50°	769.0	17.8
50°-60°	520.6	12.0
60°-70°	296.9	6.9
70°-80°	135.8	3.1
80°-90°	35.6	0.8
90°-100°	4.4	0.1
100°-110°	3.0	0.1
110°-120°	1.6	0.0
120°-130°	0.9	0.0
130°-140°	0.9	0.0
140°-150°	0.8	0.0
150°-160°	0.7	0.0
160°-170°	0.5	0.0
170°-180°	0.2	0.0
0°-30°	1640.0	37.9
0°-40°	2557.3	59.1
0°-60°	3846.9	88.9
0°-90°	4315.1	99.7
90°-120°	9.0	0.2
90°-150°	11.5	0.3
90°-180°	13.0	0.3
0°-180°	4327.9	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	2167	2167	2167	2167	2167	
5°	2176	2169	2143	2160	2154	207
15°	2129	2111	2058	2044	2024	602
25°	2020	1966	1838	1753	1711	931
35°	1823	1686	1438	1262	1204	1138
45°	1490	1243	902	744	699	1147
55°	1022	748	479	388	364	910
65°	549	382	239	194	183	548
75°	220	162	105	86	81	240
85°	45	38	27	22	21	52
90°	6	6	4	3	2	6
95°	9	6	3	2	2	7
105°	6	4	2	1	1	7
115°	3	2	1	1	1	3
125°	1	1	1	1	1	1
135°	1	1	1	1	1	1
145°	1	1	1	1	1	1
155°	1	1	1	2	2	1
165°	1	2	2	2	2	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°	2166.6	2166.6	2166.6	2166.6	2166.6
2.5°	2179.0	2173.4	2148.6	2169.1	2162.9
5°	2175.9	2169.1	2143.0	2160.4	2154.2
7.5°	2169.7	2161.0	2131.8	2144.8	2136.8
10°	2159.8	2149.2	2113.1	2120.6	2107.6
12.5°	2146.1	2133.0	2090.2	2088.3	2072.8
15°	2129.3	2110.7	2057.8	2044.2	2023.7
17.5°	2108.8	2085.2	2019.3	1992.0	1967.1
20°	2082.7	2052.2	1969.6	1926.1	1896.9
22.5°	2052.9	2011.8	1911.8	1842.2	1810.5
25°	2019.9	1966.5	1837.8	1753.3	1711.0
27.5°	1978.9	1911.8	1752.0	1642.7	1599.2
30°	1933.5	1848.4	1663.8	1524.0	1480.4
32.5°	1881.9	1775.7	1551.3	1395.9	1335.0
35°	1822.9	1685.5	1437.6	1261.7	1204.5
37.5°	1756.4	1591.7	1301.5	1126.2	1068.4
40°	1676.2	1480.4	1163.5	990.1	936.0
42.5°	1589.8	1367.3	1031.1	860.8	814.2
45°	1489.8	1243.0	902.4	744.0	699.2
47.5°	1393.4	1117.5	781.9	637.1	600.4
50°	1267.3	983.9	668.1	539.5	509.0
52.5°	1144.2	860.2	571.2	461.2	432.6
55°	1021.8	747.7	479.2	388.4	364.2
57.5°	892.5	637.7	403.4	328.8	312.6
60°	768.2	542.6	340.0	276.0	262.9
62.5°	654.5	454.9	287.8	233.1	220.6
65°	549.4	382.2	239.3	193.9	182.7
67.5°	450.0	314.5	199.5	161.6	153.5
70°	363.0	254.8	164.7	133.0	125.5
72.5°	287.8	203.9	131.8	108.8	100.7
75°	220.0	161.6	105.0	85.8	80.8
77.5°	164.1	121.8	80.8	65.9	62.2
80°	115.0	88.3	60.3	49.7	46.6
82.5°	78.3	60.9	42.3	34.8	32.9
85°	44.7	37.9	26.7	22.4	21.1
87.5°	23.0	19.9	14.3	10.6	9.3
90°	6.2	6.2	3.7	3.1	2.5
92.5°	9.9	5.6	3.7	2.5	1.9
95°	9.3	5.6	3.1	1.9	1.9
97.5°	8.7	5.6	2.5	1.9	1.2
100°	8.1	5.0	2.5	1.2	1.2
102.5°	7.5	5.0	2.5	1.2	1.2
105°	6.2	4.4	1.9	1.2	0.6
107.5°	5.6	3.7	1.9	1.2	0.6
110°	4.4	3.1	1.9	1.2	0.6



TEST NUMBER: P893473

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

CANDELA DISTRIBUTION (continued):

	0°	22.5°	45°	67.5°	90°
112.5°	3.7	3.1	1.2	1.2	0.6
115°	3.1	2.5	1.2	0.6	0.6
117.5°	2.5	1.9	1.2	0.6	0.6
120°	1.9	1.9	1.2	0.6	0.6
122.5°	1.9	1.2	1.2	0.6	0.6
125°	1.2	1.2	1.2	0.6	0.6
127.5°	1.2	1.2	1.2	0.6	0.6
130°	1.2	1.2	1.2	0.6	0.6
132.5°	1.2	1.2	1.2	1.2	0.6
135°	0.6	1.2	1.2	1.2	0.6
137.5°	1.2	1.2	1.2	1.2	1.2
140°	1.2	1.2	1.2	1.2	1.2
142.5°	1.2	1.2	1.2	1.2	1.2
145°	1.2	1.2	1.2	1.2	1.2
147.5°	1.2	1.2	1.2	1.2	1.2
150°	1.2	1.2	1.2	1.2	1.2
152.5°	1.2	1.2	1.2	1.2	1.2
155°	1.2	1.2	1.2	1.9	1.9
157.5°	1.2	1.2	1.9	1.9	1.9
160°	1.2	1.2	1.9	1.9	1.9
162.5°	1.2	1.2	1.9	1.9	1.9
165°	1.2	1.9	1.9	1.9	1.9
167.5°	1.2	1.9	1.9	1.9	2.5
170°	1.2	1.9	1.9	2.5	2.5
172.5°	1.2	1.9	1.9	2.5	2.5
175°	1.9	1.9	1.9	2.5	2.5
177.5°	1.9	1.9	1.9	2.5	2.5
180°	1.9	1.9	1.9	1.9	1.9



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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	21.12	22.56	21.49	22.88	23.20	15.96	17.40	16.33	17.72	18.04
	3H	22.43	23.71	22.81	24.04	24.42	16.97	18.26	17.36	18.59	18.96
	4H	22.85	24.05	23.26	24.41	24.79	17.31	18.51	17.71	18.86	19.25
	6H	23.12	24.22	23.54	24.60	25.00	17.53	18.64	17.95	19.01	19.41
	8H	23.19	24.24	23.62	24.64	25.05	17.60	18.65	18.03	19.05	19.46
	12H	23.23	24.23	23.66	24.62	25.06	17.64	18.65	18.08	19.04	19.47
4H	2H	21.12	22.32	21.52	22.67	23.06	16.59	17.78	16.99	18.14	18.53
	3H	22.58	23.57	23.00	23.98	24.39	17.78	18.77	18.20	19.18	19.59
	4H	23.11	23.99	23.55	24.42	24.86	18.20	19.08	18.64	19.51	19.95
	6H	23.49	24.25	23.95	24.70	25.17	18.51	19.28	18.97	19.73	20.20
	8H	23.60	24.31	24.07	24.76	25.24	18.60	19.32	19.07	19.77	20.25
	12H	23.67	24.31	24.16	24.80	25.28	18.67	19.31	19.16	19.80	20.28
8H	4H	23.09	23.81	23.56	24.26	24.73	18.53	19.25	19.00	19.70	20.18
	6H	23.52	24.11	24.03	24.61	25.10	18.93	19.51	19.43	20.01	20.50
	8H	23.68	24.21	24.20	24.72	25.22	19.07	19.60	19.59	20.11	20.61
	12H	23.81	24.28	24.32	24.77	25.35	19.19	19.66	19.71	20.16	20.73
12H	4H	23.06	23.70	23.55	24.18	24.66	18.58	19.22	19.07	19.70	20.18
	6H	23.49	24.02	24.01	24.54	25.03	18.99	19.52	19.51	20.04	20.54
	8H	23.68	24.15	24.19	24.65	25.22	19.18	19.65	19.70	20.15	20.72