

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: P893466

Luminaire Tested: 4MB-4SL-ACL-UNV-L835

Issue Date: 11/11/2024

Test Information

Test Method: LM-79-2019
Report Number: P893466
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-L835
Description: 4000 Lumen 4FT MICROBAY LINEAR BAY with AISLE OPTICS WITH CLEAR LENS, 80CRI, 3500K (C)
Light Source: -
Ballast/Driver: -

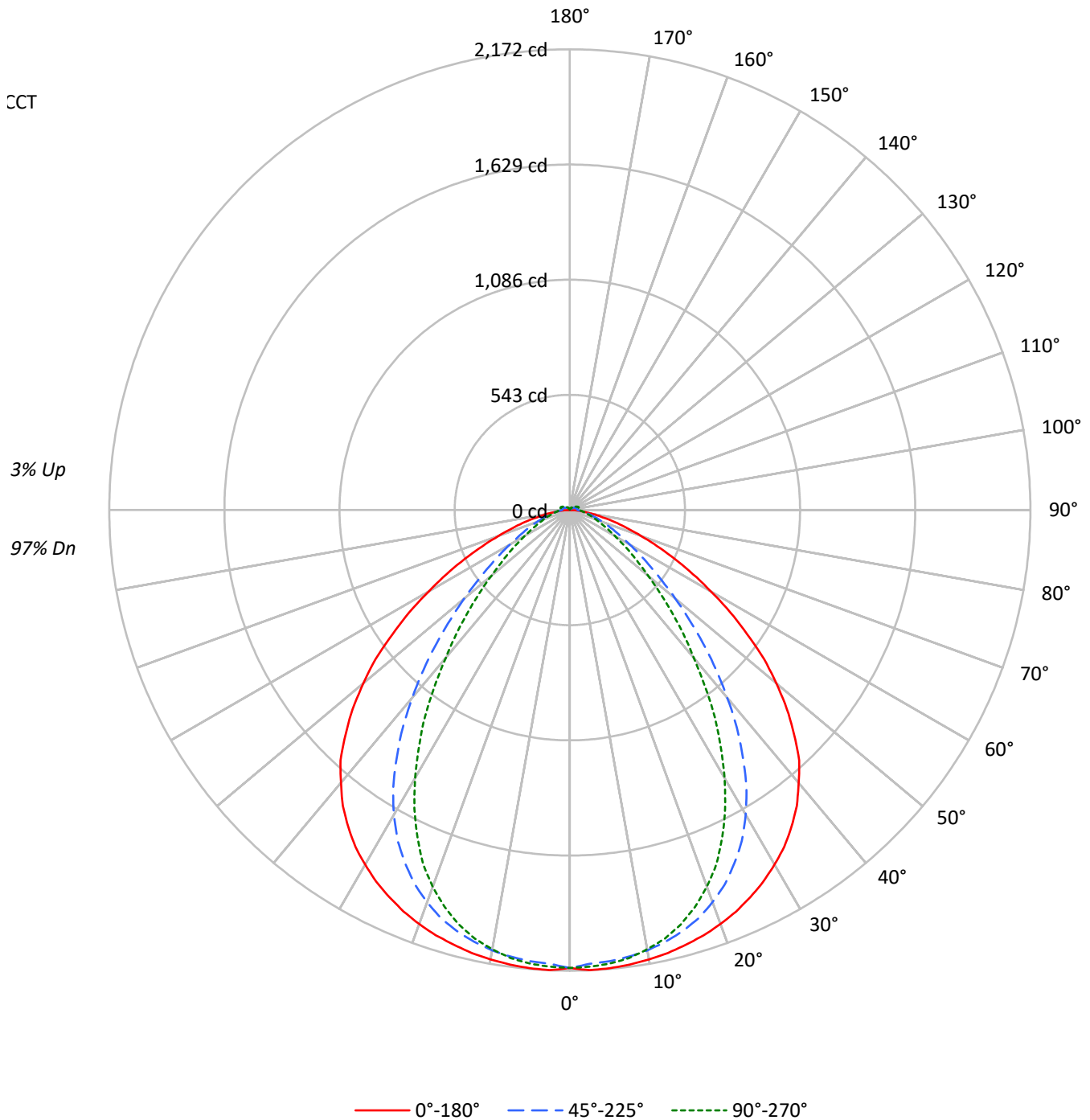
Summary

Lumens per Lamp: N/A
Luminaire Lumens: 4429.0 lumens
Efficiency: N/A
Efficacy: 148.6 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 (A_{in}): 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				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°	21988	21988	21988
5°	22128	21391	21357
10°	22168	20927	20608
15°	22234	20382	19670
20°	22341	19634	18386
25°	22407	18594	16677
30°	22430	17164	14530
35°	22334	15168	12154
40°	21938	12813	9565
45°	21093	10343	7416
50°	19636	8025	5564
55°	17580	6144	4255
60°	15103	4723	3242
65°	12594	3725	2578
70°	10072	2989	2105
75°	8022	2410	1793
80°	5877	1989	1568
85°	4036	1688	1445

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
 Vertical Angle: 45°
 Luminance: 21093 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	204.5	4.6
10°-20°	582.6	13.2
20°-30°	849.3	19.2
30°-40°	912.5	20.6
40°-50°	759.5	17.1
50°-60°	507.9	11.5
60°-70°	290.8	6.6
70°-80°	144.6	3.3
80°-90°	59.2	1.3
90°-100°	34.3	0.8
100°-110°	30.3	0.7
110°-120°	22.2	0.5
120°-130°	14.3	0.3
130°-140°	8.5	0.2
140°-150°	4.8	0.1
150°-160°	2.4	0.1
160°-170°	1.0	0.0
170°-180°	0.2	0.0
0°-30°	1636.4	36.9
0°-40°	2548.9	57.6
0°-60°	3816.3	86.2
0°-90°	4310.9	97.3
90°-120°	86.9	2.0
90°-150°	114.5	2.6
90°-180°	118.0	2.7
0°-180°	4429.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	2159	2159	2159	2159	2159	
5°	2168	2162	2136	2153	2146	206
15°	2121	2106	2056	2041	2022	600
25°	2014	1966	1837	1745	1701	929
35°	1823	1690	1422	1247	1192	1138
45°	1495	1243	888	719	676	1149
55°	1020	736	463	366	347	913
65°	546	370	233	189	179	546
75°	220	160	115	102	99	236
85°	43	48	54	56	57	50
90°	6	20	36	44	45	6
95°	9	20	36	44	45	7
105°	6	16	32	42	44	7
115°	3	9	25	35	38	3
125°	2	6	17	25	28	2
135°	1	5	11	17	19	1
145°	1	4	8	11	13	1
155°	1	3	5	7	9	1
165°	2	2	4	4	6	1
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°	2159.0	2159.0	2159.0	2159.0	2159.0
2.5°	2171.6	2166.0	2141.4	2160.9	2155.2
5°	2168.5	2161.5	2135.7	2153.4	2146.4
7.5°	2161.5	2154.0	2124.4	2138.2	2130.7
10°	2151.5	2142.0	2108.0	2114.9	2103.0
12.5°	2138.9	2126.9	2084.7	2082.8	2069.6
15°	2120.6	2106.1	2055.7	2040.6	2022.4
17.5°	2101.7	2080.3	2018.6	1987.7	1962.5
20°	2077.1	2048.8	1967.6	1921.6	1890.1
22.5°	2048.8	2010.4	1910.2	1839.7	1807.0
25°	2013.5	1965.7	1837.2	1744.6	1701.1
27.5°	1975.7	1912.1	1757.8	1636.3	1586.5
30°	1930.4	1851.7	1658.9	1512.8	1459.3
32.5°	1882.5	1774.8	1550.6	1383.1	1324.5
35°	1822.7	1690.4	1422.1	1247.0	1192.3
37.5°	1757.8	1589.7	1294.9	1107.9	1046.1
40°	1679.1	1483.2	1155.1	969.9	908.8
42.5°	1601.0	1367.3	1020.9	845.2	792.3
45°	1495.2	1242.6	888.0	718.6	676.4
47.5°	1388.8	1109.1	760.8	616.0	574.4
50°	1270.3	978.1	649.3	517.1	482.4
52.5°	1155.1	855.9	547.9	437.1	407.5
55°	1019.7	735.6	462.9	365.9	347.0
57.5°	897.5	624.2	390.5	309.9	292.2
60°	768.4	529.0	326.9	262.0	245.6
62.5°	655.0	444.7	275.2	222.3	211.0
65°	546.1	370.3	233.0	188.9	178.9
67.5°	445.9	309.2	196.5	161.2	153.0
70°	357.7	250.7	165.6	137.3	131.6
72.5°	281.5	201.5	137.9	118.4	113.4
75°	219.8	160.0	115.3	102.0	98.9
77.5°	158.7	124.7	96.4	87.5	85.7
80°	112.1	94.5	79.4	75.6	74.3
82.5°	74.3	68.7	65.5	65.5	64.9
85°	42.8	47.9	53.5	56.1	56.7
87.5°	22.0	32.1	42.8	47.9	48.5
90°	6.3	20.2	36.5	43.5	44.7
92.5°	9.4	20.2	35.9	43.5	44.7
95°	9.4	20.2	35.9	43.5	44.7
97.5°	8.8	19.5	35.9	43.5	44.7
100°	8.2	18.3	35.3	43.5	44.7
102.5°	6.9	17.6	34.0	42.8	44.7
105°	6.3	16.4	32.1	42.2	44.1
107.5°	5.7	13.9	30.2	40.3	42.8
110°	4.4	12.0	29.0	38.4	41.6



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CANDELA DISTRIBUTION (continued):

	0°	22.5°	45°	67.5°	90°
112.5°	3.8	10.7	27.1	36.5	39.7
115°	3.1	9.4	25.2	34.6	37.8
117.5°	2.5	8.8	22.7	32.1	35.3
120°	1.9	8.2	20.8	30.2	32.8
122.5°	1.9	7.6	18.3	27.7	30.2
125°	1.9	6.3	17.0	25.2	27.7
127.5°	1.3	5.7	15.1	22.7	25.2
130°	1.3	5.7	13.9	20.8	22.7
132.5°	1.3	5.0	12.6	18.9	20.8
135°	1.3	5.0	11.3	17.0	18.9
137.5°	1.3	4.4	10.1	15.7	17.6
140°	1.3	4.4	9.4	13.9	15.7
142.5°	1.3	3.8	8.2	13.2	14.5
145°	1.3	3.8	7.6	11.3	13.2
147.5°	1.3	3.8	6.9	10.7	12.0
150°	1.3	3.1	6.3	8.8	10.7
152.5°	1.3	3.1	5.7	8.2	10.1
155°	1.3	3.1	5.0	6.9	8.8
157.5°	1.3	3.1	5.0	6.3	7.6
160°	1.9	2.5	4.4	5.7	6.9
162.5°	1.9	2.5	3.8	5.0	6.3
165°	1.9	2.5	3.8	4.4	5.7
167.5°	1.9	2.5	3.1	3.8	4.4
170°	1.9	1.9	3.1	3.1	3.1
172.5°	1.9	1.9	2.5	3.1	2.5
175°	1.9	1.9	2.5	2.5	2.5
177.5°	1.9	1.9	2.5	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	19.47	20.86	19.88	21.24	21.62	14.77	16.16	15.18	16.53	16.91
	3H	20.57	21.81	20.99	22.19	22.62	15.91	17.15	16.33	17.54	17.97
	4H	20.87	22.04	21.32	22.44	22.89	16.41	17.57	16.85	17.98	18.42
	6H	21.02	22.09	21.48	22.51	22.97	16.91	17.98	17.37	18.40	18.86
	8H	21.04	22.06	21.51	22.50	22.97	17.17	18.19	17.64	18.63	19.10
	12H	21.03	22.01	21.51	22.44	22.94	17.46	18.44	17.94	18.88	19.37
4H	2H	19.45	20.62	19.90	21.02	21.47	15.26	16.43	15.71	16.83	17.28
	3H	20.69	21.65	21.15	22.11	22.57	16.58	17.54	17.04	17.99	18.46
	4H	21.08	21.94	21.55	22.41	22.91	17.17	18.04	17.65	18.50	19.01
	6H	21.31	22.06	21.81	22.55	23.08	17.79	18.54	18.30	19.04	19.56
	8H	21.35	22.05	21.86	22.54	23.08	18.11	18.82	18.62	19.31	19.84
	12H	21.36	21.99	21.89	22.51	23.05	18.49	19.11	19.02	19.64	20.18
8H	4H	21.06	21.76	21.57	22.26	22.79	17.41	18.11	17.92	18.61	19.14
	6H	21.34	21.92	21.88	22.46	23.00	18.14	18.72	18.68	19.26	19.80
	8H	21.41	21.93	21.97	22.49	23.04	18.54	19.06	19.10	19.62	20.17
	12H	21.46	21.92	22.01	22.46	23.09	19.03	19.49	19.59	20.03	20.66
12H	4H	21.04	21.67	21.57	22.19	22.73	17.43	18.05	17.95	18.58	19.11
	6H	21.32	21.84	21.88	22.40	22.95	18.17	18.69	18.73	19.25	19.80
	8H	21.43	21.89	21.98	22.43	23.05	18.63	19.09	19.19	19.63	20.26