

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: P893577

Luminaire Tested: 4MB-5SL-ACL-UNV-L830

Issue Date: 11/11/2024

Test Information

Test Method: LM-79-2019
Report Number: P893577
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-5SL-ACL-UNV-L830
Description: 5000 Lumen 4FT MICROBAY LINEAR BAY with AISLE OPTICS WITH CLEAR LENS, 80CRI, 3000K (C)
Light Source: -
Ballast/Driver: -

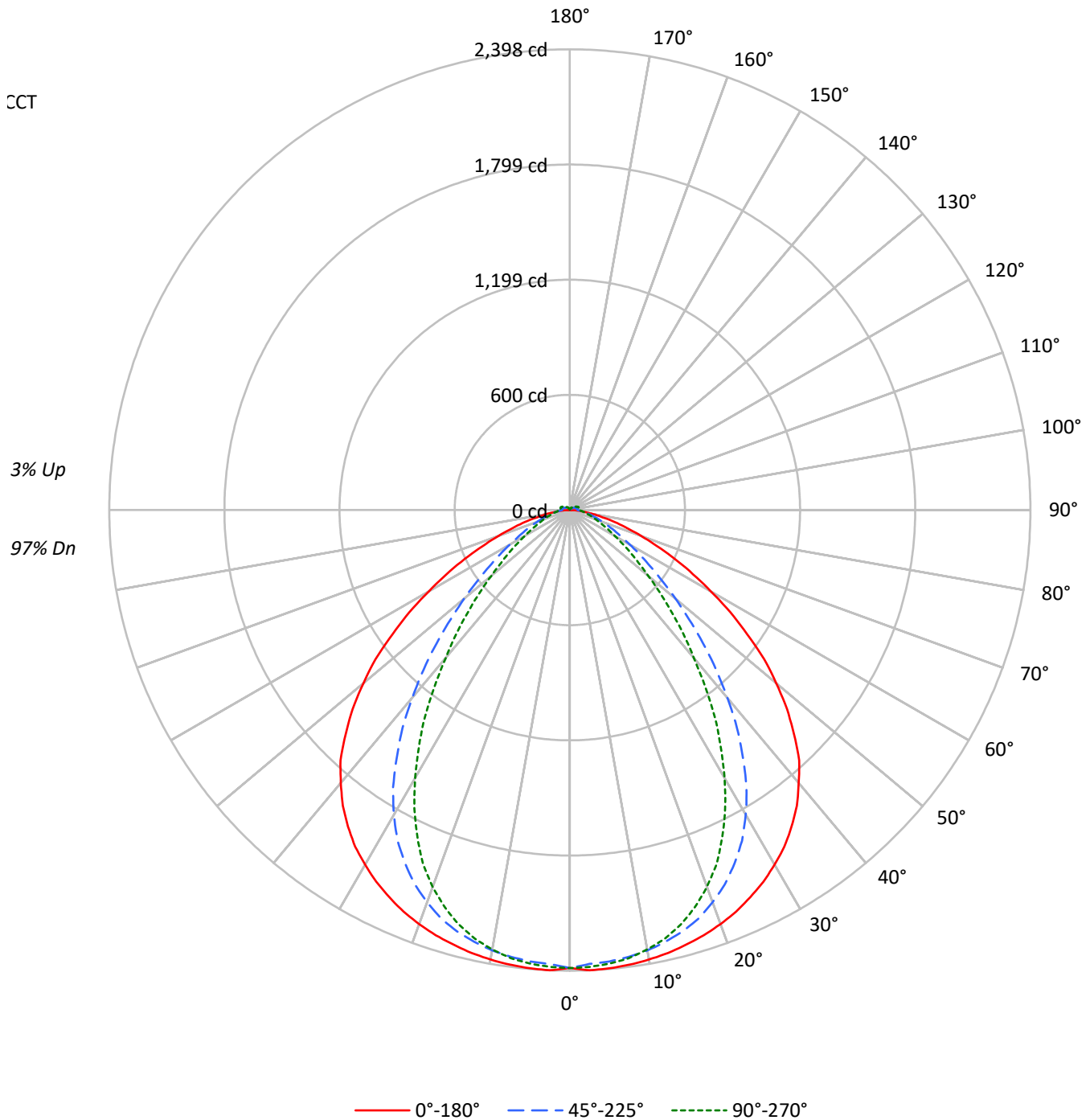
Summary

Lumens per Lamp: N/A
Luminaire Lumens: 4891.0 lumens
Efficiency: N/A
Efficacy: 139.7 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): 35
Input Voltage (V): 120
Input Current (A_{in}): NR
Voltage Rise (V): NR
Power Factor: 0.995
Total Harmonic Distortion (THDi): 9.55
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°	24281	24281	24281
5°	24437	23622	23585
10°	24480	23110	22757
15°	24553	22509	21722
20°	24672	21682	20304
25°	24745	20533	18417
30°	24770	18955	16046
35°	24663	16751	13422
40°	24226	14150	10563
45°	23294	11423	8190
50°	21686	8863	6145
55°	19412	6785	4699
60°	16678	5216	3581
65°	13907	4114	2846
70°	11125	3301	2326
75°	8858	2660	1980
80°	6490	2194	1733
85°	4460	1865	1596

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
 Vertical Angle: 45°
 Luminance: 23294 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	225.8	4.6
10°-20°	643.3	13.2
20°-30°	937.9	19.2
30°-40°	1007.7	20.6
40°-50°	838.7	17.1
50°-60°	560.9	11.5
60°-70°	321.1	6.6
70°-80°	159.7	3.3
80°-90°	65.3	1.3
90°-100°	37.9	0.8
100°-110°	33.5	0.7
110°-120°	24.5	0.5
120°-130°	15.8	0.3
130°-140°	9.4	0.2
140°-150°	5.3	0.1
150°-160°	2.7	0.1
160°-170°	1.1	0.0
170°-180°	0.3	0.0
0°-30°	1807.1	36.9
0°-40°	2814.8	57.6
0°-60°	4214.5	86.2
0°-90°	4760.6	97.3
90°-120°	95.9	2.0
90°-150°	126.4	2.6
90°-180°	130.0	2.7
0°-180°	4891.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	2384	2384	2384	2384	2384	
5°	2395	2387	2358	2378	2370	228
15°	2342	2326	2270	2254	2233	662
25°	2224	2171	2029	1927	1879	1025
35°	2013	1867	1570	1377	1317	1257
45°	1651	1372	981	794	747	1269
55°	1126	812	511	404	383	1009
65°	603	409	257	209	198	603
75°	243	177	127	113	109	260
85°	47	53	59	62	63	55
90°	7	22	40	48	49	7
95°	10	22	40	48	49	8
105°	7	18	36	47	49	7
115°	4	10	28	38	42	3
125°	2	7	19	28	31	2
135°	1	6	12	19	21	1
145°	1	4	8	12	15	1
155°	1	4	6	8	10	1
165°	2	3	4	5	6	1
175°	2	2	3	3	3	0
180°	2	2	2	2	2	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	2384.2	2384.2	2384.2	2384.2	2384.2
2.5°	2398.1	2391.9	2364.8	2386.3	2380.1
5°	2394.7	2387.0	2358.5	2378.0	2370.3
7.5°	2387.0	2378.7	2346.0	2361.3	2352.9
10°	2375.9	2365.5	2327.9	2335.6	2322.3
12.5°	2362.0	2348.8	2302.2	2300.1	2285.5
15°	2341.8	2325.8	2270.2	2253.5	2233.3
17.5°	2320.9	2297.3	2229.1	2195.1	2167.2
20°	2293.8	2262.5	2172.8	2122.0	2087.3
22.5°	2262.5	2220.1	2109.5	2031.6	1995.4
25°	2223.6	2170.7	2028.8	1926.6	1878.6
27.5°	2181.8	2111.6	1941.2	1807.0	1752.0
30°	2131.8	2044.8	1832.0	1670.6	1611.5
32.5°	2078.9	1960.0	1712.4	1527.4	1462.7
35°	2012.8	1866.8	1570.5	1377.1	1316.6
37.5°	1941.2	1755.5	1430.0	1223.4	1155.3
40°	1854.3	1637.9	1275.6	1071.1	1003.6
42.5°	1768.0	1510.0	1127.4	933.4	875.0
45°	1651.2	1372.3	980.7	793.6	747.0
47.5°	1533.6	1224.8	840.2	680.2	634.3
50°	1402.9	1080.1	717.1	571.0	532.8
52.5°	1275.6	945.2	605.1	482.7	450.0
55°	1126.0	812.4	511.2	404.1	383.2
57.5°	991.1	689.3	431.2	342.2	322.7
60°	848.5	584.2	361.0	289.3	271.3
62.5°	723.3	491.0	303.9	245.5	233.0
65°	603.0	409.0	257.3	208.7	197.5
67.5°	492.4	341.5	217.0	178.1	169.0
70°	395.1	276.8	182.9	151.6	145.4
72.5°	310.9	222.6	152.3	130.8	125.2
75°	242.7	176.7	127.3	112.7	109.2
77.5°	175.3	137.7	106.4	96.7	94.6
80°	123.8	104.3	87.6	83.5	82.1
82.5°	82.1	75.8	72.3	72.3	71.6
85°	47.3	52.9	59.1	61.9	62.6
87.5°	24.3	35.5	47.3	52.9	53.6
90°	7.0	22.3	40.3	48.0	49.4
92.5°	10.4	22.3	39.6	48.0	49.4
95°	10.4	22.3	39.6	48.0	49.4
97.5°	9.7	21.6	39.6	48.0	49.4
100°	9.0	20.2	38.9	48.0	49.4
102.5°	7.7	19.5	37.6	47.3	49.4
105°	7.0	18.1	35.5	46.6	48.7
107.5°	6.3	15.3	33.4	44.5	47.3
110°	4.9	13.2	32.0	42.4	45.9



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CANDELA DISTRIBUTION (continued):

	0°	22.5°	45°	67.5°	90°
112.5°	4.2	11.8	29.9	40.3	43.8
115°	3.5	10.4	27.8	38.3	41.7
117.5°	2.8	9.7	25.0	35.5	38.9
120°	2.1	9.0	23.0	33.4	36.2
122.5°	2.1	8.3	20.2	30.6	33.4
125°	2.1	7.0	18.8	27.8	30.6
127.5°	1.4	6.3	16.7	25.0	27.8
130°	1.4	6.3	15.3	23.0	25.0
132.5°	1.4	5.6	13.9	20.9	23.0
135°	1.4	5.6	12.5	18.8	20.9
137.5°	1.4	4.9	11.1	17.4	19.5
140°	1.4	4.9	10.4	15.3	17.4
142.5°	1.4	4.2	9.0	14.6	16.0
145°	1.4	4.2	8.3	12.5	14.6
147.5°	1.4	4.2	7.7	11.8	13.2
150°	1.4	3.5	7.0	9.7	11.8
152.5°	1.4	3.5	6.3	9.0	11.1
155°	1.4	3.5	5.6	7.7	9.7
157.5°	1.4	3.5	5.6	7.0	8.3
160°	2.1	2.8	4.9	6.3	7.7
162.5°	2.1	2.8	4.2	5.6	7.0
165°	2.1	2.8	4.2	4.9	6.3
167.5°	2.1	2.8	3.5	4.2	4.9
170°	2.1	2.1	3.5	3.5	3.5
172.5°	2.1	2.1	2.8	3.5	2.8
175°	2.1	2.1	2.8	2.8	2.8
177.5°	2.1	2.1	2.8	2.8	2.8
180°	2.1	2.1	2.1	2.1	2.1



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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	19.82	21.21	20.23	21.58	21.96	15.11	16.50	15.52	16.88	17.26
	3H	20.91	22.15	21.33	22.54	22.97	16.25	17.50	16.68	17.88	18.31
	4H	21.22	22.38	21.66	22.79	23.23	16.75	17.92	17.20	18.32	18.77
	6H	21.36	22.44	21.82	22.86	23.32	17.25	18.33	17.71	18.75	19.21
	8H	21.38	22.40	21.85	22.85	23.31	17.51	18.53	17.99	18.98	19.45
	12H	21.37	22.35	21.85	22.79	23.28	17.81	18.78	18.28	19.22	19.71
4H	2H	19.80	20.96	20.24	21.37	21.81	15.61	16.77	16.06	17.18	17.62
	3H	21.04	22.00	21.49	22.45	22.92	16.92	17.88	17.38	18.34	18.81
	4H	21.42	22.28	21.90	22.75	23.26	17.52	18.38	18.00	18.85	19.35
	6H	21.65	22.40	22.16	22.90	23.42	18.14	18.89	18.64	19.38	19.91
	8H	21.69	22.39	22.20	22.89	23.42	18.46	19.16	18.97	19.66	20.19
	12H	21.70	22.33	22.23	22.86	23.39	18.83	19.46	19.36	19.99	20.52
8H	4H	21.41	22.11	21.92	22.60	23.13	17.76	18.46	18.27	18.95	19.48
	6H	21.68	22.26	22.23	22.81	23.35	18.48	19.06	19.02	19.60	20.14
	8H	21.76	22.28	22.32	22.84	23.39	18.89	19.41	19.44	19.96	20.52
	12H	21.80	22.26	22.36	22.80	23.43	19.38	19.84	19.93	20.38	21.01
12H	4H	21.38	22.01	21.91	22.54	23.07	17.77	18.40	18.30	18.92	19.46
	6H	21.66	22.19	22.22	22.74	23.29	18.52	19.04	19.08	19.60	20.15
	8H	21.77	22.23	22.33	22.77	23.40	18.98	19.44	19.53	19.98	20.61