

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: P893581

Luminaire Tested: 4MB-5SL-ACL-UNV-L930

Issue Date: 11/11/2024

Test Information

Test Method: LM-79-2019
Report Number: P893581
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-L930
Description: 5000 Lumen 4FT MICROBAY LINEAR BAY with AISLE OPTICS WITH CLEAR LENS, 90CRI, 3000K (C)
Light Source: -
Ballast/Driver: -

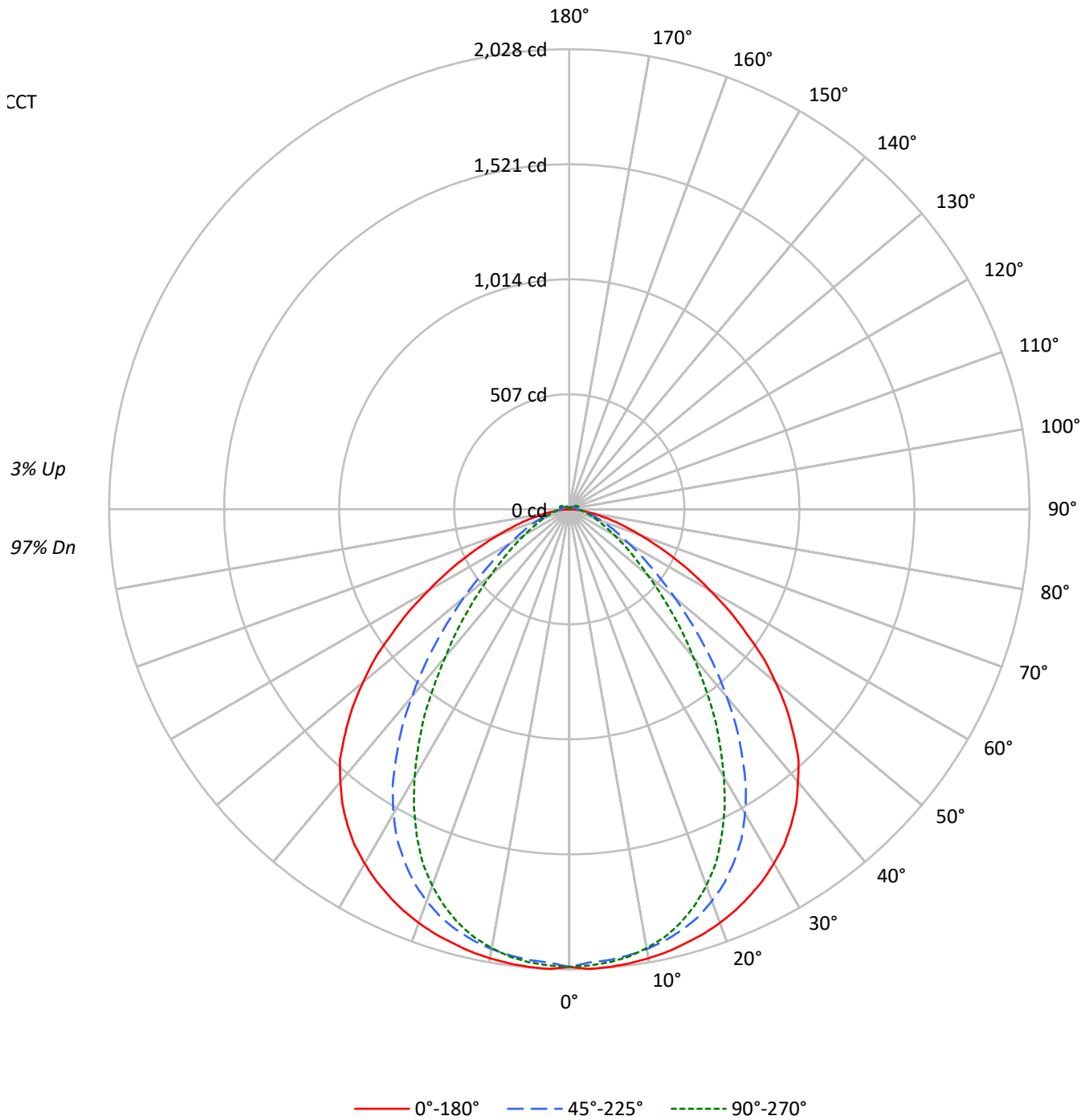
Summary

Lumens per Lamp: N/A
Luminaire Lumens: 4137.0 lumens
Efficiency: N/A
Efficacy: 118.2 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				
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°	20538	20538	20538
5°	20669	19981	19949
10°	20705	19547	19249
15°	20768	19039	18373
20°	20869	18339	17174
25°	20930	17368	15578
30°	20951	16033	13572
35°	20861	14169	11352
40°	20491	11968	8935
45°	19702	9662	6927
50°	18343	7496	5197
55°	16421	5739	3976
60°	14107	4411	3028
65°	11764	3480	2408
70°	9410	2792	1967
75°	7493	2251	1675
80°	5489	1856	1465
85°	3772	1577	1348

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
 Vertical Angle: 45°
 Luminance: 19702 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	191.0	4.6
10°-20°	544.2	13.2
20°-30°	793.4	19.2
30°-40°	852.4	20.6
40°-50°	709.4	17.1
50°-60°	474.5	11.5
60°-70°	271.6	6.6
70°-80°	135.0	3.3
80°-90°	55.3	1.3
90°-100°	32.1	0.8
100°-110°	28.3	0.7
110°-120°	20.8	0.5
120°-130°	13.4	0.3
130°-140°	7.9	0.2
140°-150°	4.5	0.1
150°-160°	2.2	0.1
160°-170°	1.0	0.0
170°-180°	0.2	0.0
0°-30°	1528.5	36.9
0°-40°	2380.9	57.6
0°-60°	3564.8	86.2
0°-90°	4026.7	97.3
90°-120°	81.1	2.0
90°-150°	106.9	2.6
90°-180°	110.0	2.7
0°-180°	4137.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	2017	2017	2017	2017	2017	
5°	2026	2019	1995	2011	2005	193
15°	1981	1967	1920	1906	1889	560
25°	1881	1836	1716	1630	1589	867
35°	1702	1579	1328	1165	1114	1063
45°	1397	1161	830	671	632	1074
55°	952	687	432	342	324	853
65°	510	346	218	176	167	510
75°	205	149	108	95	92	220
85°	40	45	50	52	53	47
90°	6	19	34	41	42	6
95°	9	19	34	41	42	7
105°	6	15	30	39	41	6
115°	3	9	24	32	35	3
125°	2	6	16	24	26	1
135°	1	5	11	16	18	1
145°	1	4	7	11	12	1
155°	1	3	5	6	8	1
165°	2	2	4	4	5	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°	2016.7	2016.7	2016.7	2016.7	2016.7
2.5°	2028.4	2023.2	2000.2	2018.4	2013.2
5°	2025.5	2019.0	1994.9	2011.4	2004.9
7.5°	2019.0	2012.0	1984.3	1997.3	1990.2
10°	2009.6	2000.8	1969.0	1975.5	1964.3
12.5°	1997.9	1986.7	1947.3	1945.5	1933.1
15°	1980.8	1967.3	1920.2	1906.1	1889.0
17.5°	1963.1	1943.1	1885.5	1856.7	1833.1
20°	1940.2	1913.7	1837.8	1794.9	1765.5
22.5°	1913.7	1877.8	1784.3	1718.4	1687.8
25°	1880.8	1836.1	1716.1	1629.6	1589.0
27.5°	1845.5	1786.1	1641.9	1528.4	1481.9
30°	1803.1	1729.6	1549.6	1413.1	1363.1
32.5°	1758.4	1657.8	1448.4	1291.9	1237.2
35°	1702.5	1579.0	1328.4	1164.8	1113.6
37.5°	1641.9	1484.9	1209.5	1034.8	977.2
40°	1568.4	1385.4	1078.9	906.0	848.9
42.5°	1495.5	1277.2	953.6	789.5	740.1
45°	1396.6	1160.7	829.5	671.2	631.8
47.5°	1297.2	1036.0	710.7	575.4	536.5
50°	1186.6	913.6	606.5	483.0	450.6
52.5°	1078.9	799.5	511.8	408.3	380.6
55°	952.5	687.1	432.4	341.8	324.2
57.5°	838.3	583.0	364.7	289.4	273.0
60°	717.7	494.2	305.3	244.7	229.4
62.5°	611.8	415.3	257.1	207.7	197.1
65°	510.1	345.9	217.7	176.5	167.1
67.5°	416.5	288.9	183.5	150.6	143.0
70°	334.2	234.1	154.7	128.2	123.0
72.5°	263.0	188.3	128.8	110.6	105.9
75°	205.3	149.4	107.7	95.3	92.4
77.5°	148.3	116.5	90.0	81.8	80.0
80°	104.7	88.2	74.1	70.6	69.4
82.5°	69.4	64.1	61.2	61.2	60.6
85°	40.0	44.7	50.0	52.4	52.9
87.5°	20.6	30.0	40.0	44.7	45.3
90°	5.9	18.8	34.1	40.6	41.8
92.5°	8.8	18.8	33.5	40.6	41.8
95°	8.8	18.8	33.5	40.6	41.8
97.5°	8.2	18.2	33.5	40.6	41.8
100°	7.6	17.1	32.9	40.6	41.8
102.5°	6.5	16.5	31.8	40.0	41.8
105°	5.9	15.3	30.0	39.4	41.2
107.5°	5.3	12.9	28.2	37.7	40.0
110°	4.1	11.2	27.1	35.9	38.8



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CANDELA DISTRIBUTION (continued):

	0°	22.5°	45°	67.5°	90°
112.5°	3.5	10.0	25.3	34.1	37.1
115°	2.9	8.8	23.5	32.4	35.3
117.5°	2.4	8.2	21.2	30.0	32.9
120°	1.8	7.6	19.4	28.2	30.6
122.5°	1.8	7.1	17.1	25.9	28.2
125°	1.8	5.9	15.9	23.5	25.9
127.5°	1.2	5.3	14.1	21.2	23.5
130°	1.2	5.3	12.9	19.4	21.2
132.5°	1.2	4.7	11.8	17.6	19.4
135°	1.2	4.7	10.6	15.9	17.6
137.5°	1.2	4.1	9.4	14.7	16.5
140°	1.2	4.1	8.8	12.9	14.7
142.5°	1.2	3.5	7.6	12.4	13.5
145°	1.2	3.5	7.1	10.6	12.4
147.5°	1.2	3.5	6.5	10.0	11.2
150°	1.2	2.9	5.9	8.2	10.0
152.5°	1.2	2.9	5.3	7.6	9.4
155°	1.2	2.9	4.7	6.5	8.2
157.5°	1.2	2.9	4.7	5.9	7.1
160°	1.8	2.4	4.1	5.3	6.5
162.5°	1.8	2.4	3.5	4.7	5.9
165°	1.8	2.4	3.5	4.1	5.3
167.5°	1.8	2.4	2.9	3.5	4.1
170°	1.8	1.8	2.9	2.9	2.9
172.5°	1.8	1.8	2.4	2.9	2.4
175°	1.8	1.8	2.4	2.4	2.4
177.5°	1.8	1.8	2.4	2.4	2.4
180°	1.8	1.8	1.8	1.8	1.8



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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	19.24	20.63	19.65	21.00	21.38	14.53	15.92	14.94	16.29	16.68
	3H	20.33	21.57	20.75	21.96	22.39	15.67	16.91	16.09	17.30	17.73
	4H	20.64	21.80	21.08	22.20	22.65	16.17	17.33	16.62	17.74	18.19
	6H	20.78	21.85	21.24	22.28	22.74	16.67	17.74	17.13	18.17	18.63
	8H	20.80	21.82	21.27	22.26	22.73	16.93	17.95	17.40	18.40	18.86
	12H	20.79	21.77	21.27	22.20	22.70	17.23	18.20	17.70	18.64	19.13
4H	2H	19.22	20.38	19.66	20.79	21.23	15.03	16.19	15.47	16.60	17.04
	3H	20.45	21.41	20.91	21.87	22.34	16.34	17.30	16.80	17.76	18.22
	4H	20.84	21.70	21.32	22.17	22.68	16.93	17.80	17.41	18.27	18.77
	6H	21.07	21.82	21.57	22.31	22.84	17.56	18.31	18.06	18.80	19.32
	8H	21.11	21.81	21.62	22.31	22.84	17.88	18.58	18.39	19.07	19.60
	12H	21.12	21.75	21.65	22.28	22.81	18.25	18.88	18.78	19.40	19.94
8H	4H	20.82	21.53	21.33	22.02	22.55	17.17	17.88	17.68	18.37	18.90
	6H	21.10	21.68	21.64	22.22	22.76	17.90	18.48	18.44	19.02	19.56
	8H	21.18	21.70	21.73	22.25	22.81	18.30	18.82	18.86	19.38	19.93
	12H	21.22	21.68	21.78	22.22	22.85	18.80	19.26	19.35	19.80	20.42
12H	4H	20.80	21.43	21.33	21.96	22.49	17.19	17.81	17.72	18.34	18.88
	6H	21.08	21.60	21.64	22.16	22.71	17.93	18.46	18.49	19.01	19.57
	8H	21.19	21.65	21.74	22.19	22.82	18.40	18.86	18.95	19.40	20.02