

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: P893470

Luminaire Tested: 4MB-4SL-ACL-UNV-L935

Issue Date: 11/11/2024

Test Information

Test Method: LM-79-2019
Report Number: P893470
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-L935
Description: 4000 Lumen 4FT MICROBAY LINEAR BAY with AISLE OPTICS WITH CLEAR LENS, 90CRI, 3500K (C)
Light Source: -
Ballast/Driver: -

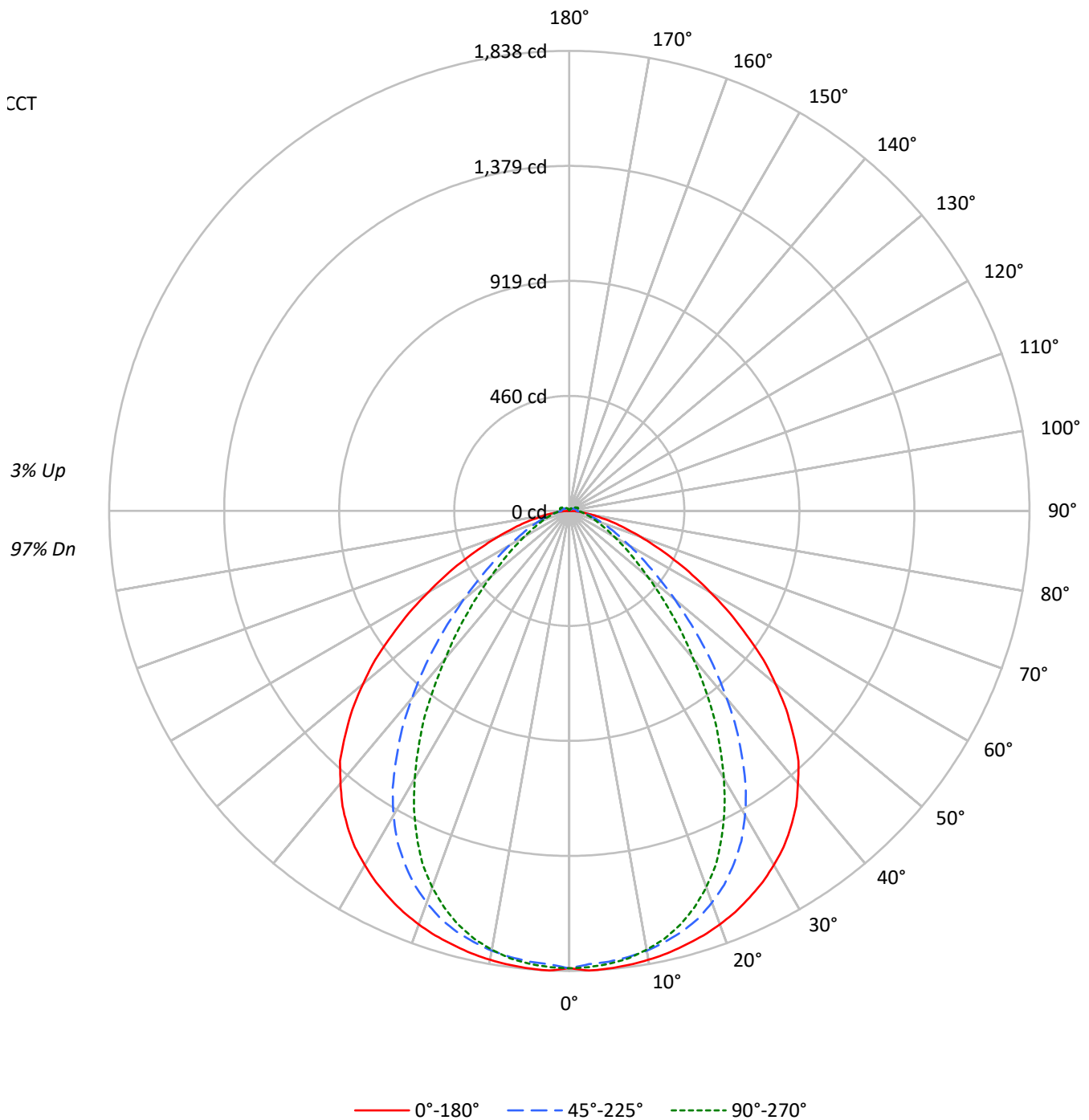
Summary

Lumens per Lamp: N/A
Luminaire Lumens: 3749.0 lumens
Efficiency: N/A
Efficacy: 125.8 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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CATALOG NUMBER: 4MB-4SL-ACL-UNV-L935

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°	18612	18612	18612
5°	18730	18107	18078
10°	18763	17714	17444
15°	18820	17253	16650
20°	18911	16619	15563
25°	18967	15739	14117
30°	18986	14529	12299
35°	18905	12840	10288
40°	18569	10845	8097
45°	17854	8755	6278
50°	16622	6793	4710
55°	14880	5200	3603
60°	12784	3998	2744
65°	10659	3154	2181
70°	8526	2530	1782
75°	6792	2040	1517
80°	4975	1683	1328
85°	3423	1429	1223

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
 Vertical Angle: 45°
 Luminance: 17854 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	173.1	4.6
10°-20°	493.1	13.2
20°-30°	718.9	19.2
30°-40°	772.4	20.6
40°-50°	642.9	17.1
50°-60°	430.0	11.5
60°-70°	246.1	6.6
70°-80°	122.4	3.3
80°-90°	50.1	1.3
90°-100°	29.1	0.8
100°-110°	25.6	0.7
110°-120°	18.8	0.5
120°-130°	12.1	0.3
130°-140°	7.2	0.2
140°-150°	4.1	0.1
150°-160°	2.0	0.1
160°-170°	0.9	0.0
170°-180°	0.2	0.0
0°-30°	1385.2	36.9
0°-40°	2157.6	57.6
0°-60°	3230.4	86.2
0°-90°	3649.0	97.3
90°-120°	73.5	2.0
90°-150°	96.9	2.6
90°-180°	100.0	2.7
0°-180°	3749.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1828	1828	1828	1828	1828	
5°	1836	1830	1808	1823	1817	175
15°	1795	1783	1740	1727	1712	508
25°	1704	1664	1555	1477	1440	786
35°	1543	1431	1204	1056	1009	964
45°	1266	1052	752	608	573	973
55°	863	623	392	310	294	773
65°	462	314	197	160	151	462
75°	186	135	98	86	84	200
85°	36	40	45	47	48	42
90°	5	17	31	37	38	5
95°	8	17	30	37	38	6
105°	5	14	27	36	37	6
115°	3	8	21	29	32	3
125°	2	5	14	21	24	1
135°	1	4	10	14	16	1
145°	1	3	6	10	11	1
155°	1	3	4	6	8	1
165°	2	2	3	4	5	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°	1827.5	1827.5	1827.5	1827.5	1827.5
2.5°	1838.2	1833.4	1812.6	1829.1	1824.3
5°	1835.5	1829.7	1807.8	1822.7	1816.9
7.5°	1829.7	1823.3	1798.2	1809.9	1803.6
10°	1821.1	1813.1	1784.4	1790.2	1780.1
12.5°	1810.5	1800.4	1764.6	1763.0	1751.8
15°	1795.0	1782.8	1740.1	1727.3	1711.9
17.5°	1779.0	1760.9	1708.7	1682.5	1661.2
20°	1758.2	1734.2	1665.5	1626.6	1599.9
22.5°	1734.2	1701.7	1617.0	1557.2	1529.5
25°	1704.4	1663.9	1555.1	1476.7	1440.0
27.5°	1672.4	1618.6	1487.9	1385.1	1342.9
30°	1634.0	1567.4	1404.2	1280.6	1235.2
32.5°	1593.5	1502.3	1312.5	1170.7	1121.2
35°	1542.9	1430.9	1203.8	1055.6	1009.2
37.5°	1487.9	1345.6	1096.1	937.8	885.5
40°	1421.3	1255.5	977.7	821.0	769.3
42.5°	1355.2	1157.4	864.2	715.4	670.7
45°	1265.6	1051.8	751.7	608.3	572.6
47.5°	1175.5	938.8	644.0	521.4	486.2
50°	1075.3	827.9	549.6	437.7	408.4
52.5°	977.7	724.5	463.8	370.0	344.9
55°	863.1	622.7	391.8	309.7	293.8
57.5°	759.7	528.3	330.5	262.3	247.4
60°	650.4	447.8	276.7	221.8	207.9
62.5°	554.4	376.4	233.0	188.2	178.6
65°	462.2	313.5	197.3	159.9	151.4
67.5°	377.5	261.8	166.3	136.5	129.5
70°	302.8	212.2	140.2	116.2	111.4
72.5°	238.3	170.6	116.8	100.2	96.0
75°	186.1	135.4	97.6	86.4	83.7
77.5°	134.3	105.6	81.6	74.1	72.5
80°	94.9	80.0	67.2	64.0	62.9
82.5°	62.9	58.1	55.4	55.4	54.9
85°	36.3	40.5	45.3	47.4	48.0
87.5°	18.7	27.2	36.3	40.5	41.1
90°	5.3	17.1	30.9	36.8	37.9
92.5°	8.0	17.1	30.4	36.8	37.9
95°	8.0	17.1	30.4	36.8	37.9
97.5°	7.5	16.5	30.4	36.8	37.9
100°	6.9	15.5	29.9	36.8	37.9
102.5°	5.9	14.9	28.8	36.3	37.9
105°	5.3	13.9	27.2	35.7	37.3
107.5°	4.8	11.7	25.6	34.1	36.3
110°	3.7	10.1	24.5	32.5	35.2



TEST NUMBER: P893470
 CATALOG NUMBER: 4MB-4SL-ACL-UNV-L935

CANDELA DISTRIBUTION (continued):

	0°	22.5°	45°	67.5°	90°
112.5°	3.2	9.1	22.9	30.9	33.6
115°	2.7	8.0	21.3	29.3	32.0
117.5°	2.1	7.5	19.2	27.2	29.9
120°	1.6	6.9	17.6	25.6	27.7
122.5°	1.6	6.4	15.5	23.5	25.6
125°	1.6	5.3	14.4	21.3	23.5
127.5°	1.1	4.8	12.8	19.2	21.3
130°	1.1	4.8	11.7	17.6	19.2
132.5°	1.1	4.3	10.7	16.0	17.6
135°	1.1	4.3	9.6	14.4	16.0
137.5°	1.1	3.7	8.5	13.3	14.9
140°	1.1	3.7	8.0	11.7	13.3
142.5°	1.1	3.2	6.9	11.2	12.3
145°	1.1	3.2	6.4	9.6	11.2
147.5°	1.1	3.2	5.9	9.1	10.1
150°	1.1	2.7	5.3	7.5	9.1
152.5°	1.1	2.7	4.8	6.9	8.5
155°	1.1	2.7	4.3	5.9	7.5
157.5°	1.1	2.7	4.3	5.3	6.4
160°	1.6	2.1	3.7	4.8	5.9
162.5°	1.6	2.1	3.2	4.3	5.3
165°	1.6	2.1	3.2	3.7	4.8
167.5°	1.6	2.1	2.7	3.2	3.7
170°	1.6	1.6	2.7	2.7	2.7
172.5°	1.6	1.6	2.1	2.7	2.1
175°	1.6	1.6	2.1	2.1	2.1
177.5°	1.6	1.6	2.1	2.1	2.1
180°	1.6	1.6	1.6	1.6	1.6



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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	18.89	20.28	19.30	20.66	21.04	14.19	15.58	14.60	15.95	16.33
	3H	19.99	21.23	20.41	21.62	22.04	15.33	16.57	15.75	16.96	17.39
	4H	20.29	21.46	20.74	21.86	22.31	15.83	16.99	16.27	17.40	17.84
	6H	20.44	21.51	20.90	21.93	22.39	16.33	17.40	16.79	17.83	18.28
	8H	20.46	21.48	20.93	21.92	22.39	16.59	17.61	17.06	18.05	18.52
	12H	20.45	21.43	20.93	21.86	22.36	16.88	17.86	17.36	18.30	18.79
4H	2H	18.87	20.04	19.32	20.44	20.89	14.69	15.85	15.13	16.25	16.70
	3H	20.11	21.07	20.57	21.53	21.99	16.00	16.96	16.46	17.42	17.88
	4H	20.50	21.36	20.98	21.83	22.33	16.59	17.46	17.07	17.93	18.43
	6H	20.73	21.48	21.23	21.97	22.50	17.21	17.96	17.72	18.46	18.98
	8H	20.77	21.47	21.28	21.97	22.50	17.53	18.24	18.04	18.73	19.26
	12H	20.78	21.41	21.31	21.93	22.47	17.91	18.53	18.44	19.06	19.60
8H	4H	20.48	21.18	20.99	21.68	22.21	16.83	17.53	17.34	18.03	18.56
	6H	20.76	21.34	21.30	21.88	22.42	17.56	18.14	18.10	18.68	19.22
	8H	20.83	21.35	21.39	21.91	22.46	17.96	18.48	18.52	19.04	19.59
	12H	20.88	21.34	21.43	21.88	22.51	18.45	18.91	19.01	19.45	20.08
12H	4H	20.46	21.09	20.99	21.61	22.15	16.85	17.47	17.38	18.00	18.54
	6H	20.74	21.26	21.30	21.82	22.37	17.59	18.12	18.15	18.67	19.22
	8H	20.85	21.31	21.40	21.85	22.47	18.05	18.52	18.61	19.06	19.68