

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: P893465

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

Issue Date: 11/11/2024

Test Information

Test Method: LM-79-2019
Report Number: P893465
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-L830
Description: 4000 Lumen 4FT MICROBAY LINEAR BAY with AISLE OPTICS WITH CLEAR LENS, 80CRI, 3000K (C)
Light Source: -
Ballast/Driver: -

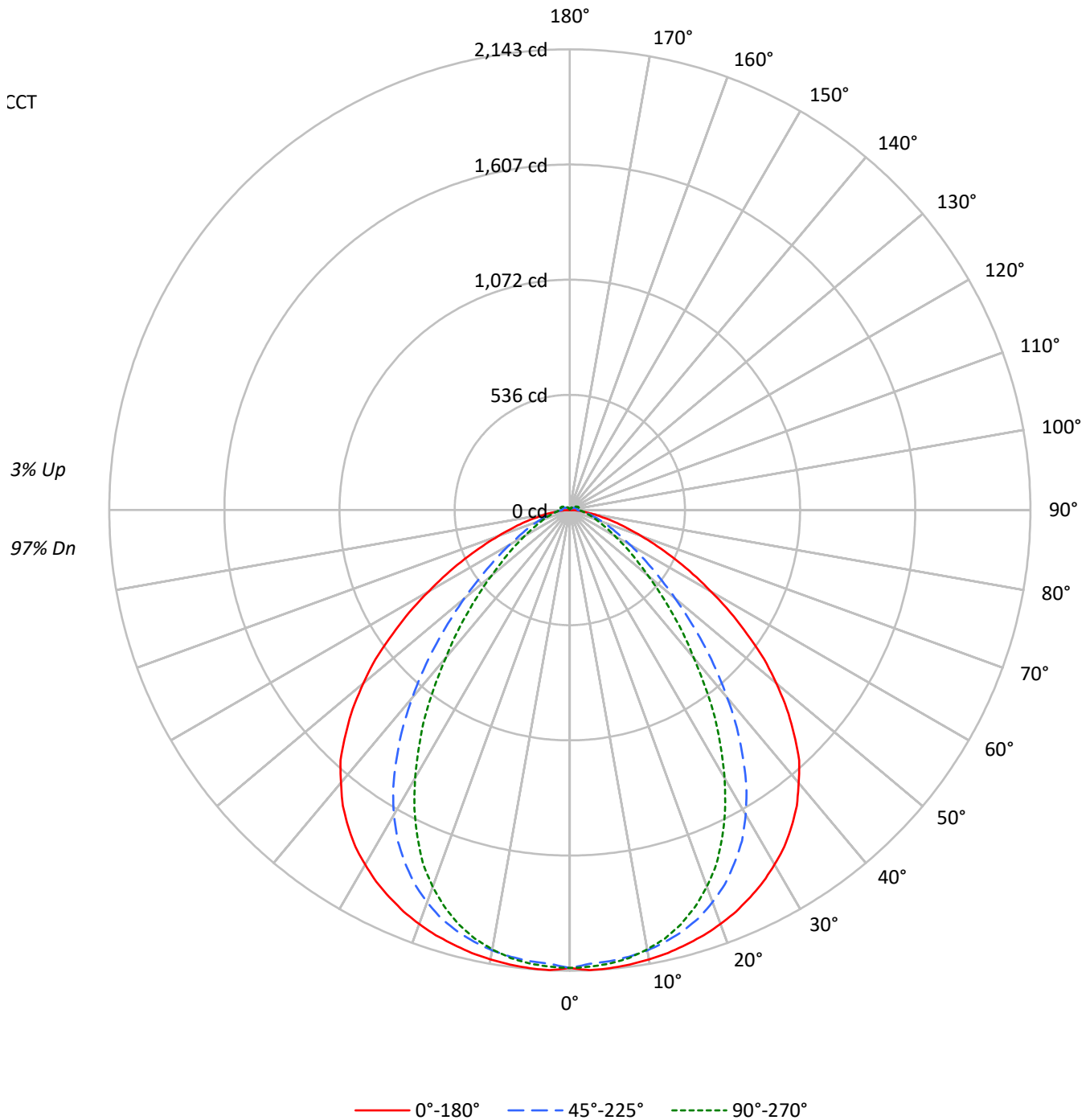
Summary

Lumens per Lamp: N/A
Luminaire Lumens: 4370.0 lumens
Efficiency: N/A
Efficacy: 146.6 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				
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	97			97
1	110	106	102	99	107	103	100	97	99	96	93	94	92	90	90	89	87	85			85
2	101	94	88	84	99	92	87	82	88	84	80	85	81	78	82	79	76	74			74
3	94	85	77	72	91	83	76	71	80	74	69	77	72	68	74	70	66	64			64
4	87	76	68	62	84	75	67	62	72	66	61	69	64	60	67	62	59	57			57
5	80	69	61	55	78	68	60	55	65	59	54	63	58	53	61	56	52	50			50
6	75	63	55	49	73	62	54	49	60	53	48	58	52	47	56	51	47	45			45
7	70	57	50	44	68	57	49	44	55	48	43	53	47	43	52	46	42	40			40
8	65	53	45	40	64	52	45	40	51	44	39	49	43	39	48	42	38	37			37
9	61	49	41	36	60	48	41	36	47	40	36	46	40	35	45	39	35	33			33
10	58	45	38	33	56	45	38	33	44	37	33	43	37	32	42	36	32	31			31

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	21695	21695	21695
5°	21833	21106	21072
10°	21872	20648	20334
15°	21938	20111	19408
20°	22044	19372	18141
25°	22109	18346	16455
30°	22131	16935	14337
35°	22036	14966	11992
40°	21645	12642	9438
45°	20813	10205	7318
50°	19375	7919	5490
55°	17345	6063	4199
60°	14901	4660	3199
65°	12426	3676	2543
70°	9939	2949	2078
75°	7916	2376	1769
80°	5798	1961	1547
85°	3988	1666	1425

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
 Vertical Angle: 45°
 Luminance: 20813 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	201.8	4.6
10°-20°	574.8	13.2
20°-30°	838.0	19.2
30°-40°	900.4	20.6
40°-50°	749.4	17.1
50°-60°	501.2	11.5
60°-70°	286.9	6.6
70°-80°	142.6	3.3
80°-90°	58.4	1.3
90°-100°	33.9	0.8
100°-110°	29.9	0.7
110°-120°	21.9	0.5
120°-130°	14.1	0.3
130°-140°	8.4	0.2
140°-150°	4.7	0.1
150°-160°	2.4	0.1
160°-170°	1.0	0.0
170°-180°	0.2	0.0
0°-30°	1614.6	36.9
0°-40°	2515.0	57.6
0°-60°	3765.5	86.2
0°-90°	4253.5	97.3
90°-120°	85.7	2.0
90°-150°	112.9	2.6
90°-180°	117.0	2.7
0°-180°	4370.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	2130	2130	2130	2130	2130	
5°	2140	2133	2107	2125	2118	204
15°	2092	2078	2028	2013	1995	592
25°	1987	1940	1813	1721	1678	916
35°	1798	1668	1403	1230	1176	1123
45°	1475	1226	876	709	667	1134
55°	1006	726	457	361	342	901
65°	539	365	230	186	176	539
75°	217	158	114	101	98	233
85°	42	47	53	55	56	49
90°	6	20	36	43	44	6
95°	9	20	35	43	44	7
105°	6	16	32	42	44	7
115°	3	9	25	34	37	3
125°	2	6	17	25	27	1
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°	2130.3	2130.3	2130.3	2130.3	2130.3
2.5°	2142.7	2137.1	2112.9	2132.1	2126.5
5°	2139.6	2132.7	2107.3	2124.7	2117.8
7.5°	2132.7	2125.3	2096.1	2109.8	2102.3
10°	2122.8	2113.5	2079.9	2086.8	2075.0
12.5°	2110.4	2098.6	2056.9	2055.1	2042.0
15°	2092.4	2078.1	2028.3	2013.4	1995.4
17.5°	2073.7	2052.6	1991.7	1961.2	1936.4
20°	2049.5	2021.5	1941.3	1896.0	1864.9
22.5°	2021.5	1983.6	1884.8	1815.2	1782.9
25°	1986.7	1939.5	1812.7	1721.4	1678.5
27.5°	1949.4	1886.7	1734.4	1614.5	1565.4
30°	1904.7	1827.0	1636.8	1492.7	1439.9
32.5°	1857.5	1751.2	1530.0	1364.7	1306.9
35°	1798.4	1667.9	1403.2	1230.4	1176.4
37.5°	1734.4	1568.5	1277.7	1093.1	1032.2
40°	1656.7	1463.5	1139.7	957.0	896.7
42.5°	1579.7	1349.1	1007.3	834.0	781.8
45°	1475.3	1226.1	876.2	709.1	667.4
47.5°	1370.3	1094.3	750.7	607.8	566.7
50°	1253.4	965.1	640.7	510.2	476.0
52.5°	1139.7	844.5	540.6	431.3	402.1
55°	1006.1	725.8	456.8	361.1	342.4
57.5°	885.5	615.8	385.3	305.7	288.3
60°	758.1	522.0	322.5	258.5	242.4
62.5°	646.3	438.7	271.6	219.4	208.2
65°	538.8	365.4	229.9	186.4	176.5
67.5°	440.0	305.1	193.9	159.1	151.0
70°	353.0	247.3	163.4	135.5	129.9
72.5°	277.8	198.9	136.1	116.8	111.9
75°	216.9	157.8	113.7	100.7	97.6
77.5°	156.6	123.0	95.1	86.4	84.5
80°	110.6	93.2	78.3	74.6	73.3
82.5°	73.3	67.7	64.6	64.6	64.0
85°	42.3	47.2	52.8	55.3	55.9
87.5°	21.8	31.7	42.3	47.2	47.9
90°	6.2	19.9	36.0	42.9	44.1
92.5°	9.3	19.9	35.4	42.9	44.1
95°	9.3	19.9	35.4	42.9	44.1
97.5°	8.7	19.3	35.4	42.9	44.1
100°	8.1	18.0	34.8	42.9	44.1
102.5°	6.8	17.4	33.6	42.3	44.1
105°	6.2	16.2	31.7	41.6	43.5
107.5°	5.6	13.7	29.8	39.8	42.3
110°	4.4	11.8	28.6	37.9	41.0



TEST NUMBER: P893465
 CATALOG NUMBER: 4MB-4SL-ACL-UNV-L830

CANDELA DISTRIBUTION (continued):

	0°	22.5°	45°	67.5°	90°
112.5°	3.7	10.6	26.7	36.0	39.2
115°	3.1	9.3	24.9	34.2	37.3
117.5°	2.5	8.7	22.4	31.7	34.8
120°	1.9	8.1	20.5	29.8	32.3
122.5°	1.9	7.5	18.0	27.3	29.8
125°	1.9	6.2	16.8	24.9	27.3
127.5°	1.2	5.6	14.9	22.4	24.9
130°	1.2	5.6	13.7	20.5	22.4
132.5°	1.2	5.0	12.4	18.6	20.5
135°	1.2	5.0	11.2	16.8	18.6
137.5°	1.2	4.4	9.9	15.5	17.4
140°	1.2	4.4	9.3	13.7	15.5
142.5°	1.2	3.7	8.1	13.1	14.3
145°	1.2	3.7	7.5	11.2	13.1
147.5°	1.2	3.7	6.8	10.6	11.8
150°	1.2	3.1	6.2	8.7	10.6
152.5°	1.2	3.1	5.6	8.1	9.9
155°	1.2	3.1	5.0	6.8	8.7
157.5°	1.2	3.1	5.0	6.2	7.5
160°	1.9	2.5	4.4	5.6	6.8
162.5°	1.9	2.5	3.7	5.0	6.2
165°	1.9	2.5	3.7	4.4	5.6
167.5°	1.9	2.5	3.1	3.7	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	19.43	20.82	19.84	21.19	21.57	14.72	16.11	15.13	16.48	16.87
	3H	20.52	21.76	20.94	22.15	22.58	15.86	17.10	16.28	17.49	17.92
	4H	20.83	21.99	21.27	22.39	22.84	16.36	17.52	16.81	17.93	18.38
	6H	20.97	22.04	21.43	22.47	22.93	16.86	17.93	17.32	18.36	18.82
	8H	20.99	22.01	21.46	22.45	22.92	17.12	18.14	17.59	18.59	19.05
	12H	20.98	21.96	21.46	22.39	22.89	17.42	18.39	17.89	18.83	19.32
4H	2H	19.41	20.57	19.85	20.98	21.42	15.22	16.38	15.66	16.79	17.23
	3H	20.64	21.60	21.10	22.06	22.53	16.53	17.49	16.99	17.95	18.41
	4H	21.03	21.89	21.51	22.36	22.87	17.13	17.99	17.60	18.46	18.96
	6H	21.26	22.01	21.76	22.50	23.03	17.75	18.50	18.25	18.99	19.52
	8H	21.30	22.00	21.81	22.50	23.03	18.07	18.77	18.58	19.26	19.79
	12H	21.31	21.94	21.84	22.47	23.00	18.44	19.07	18.97	19.59	20.13
8H	4H	21.01	21.72	21.52	22.21	22.74	17.36	18.07	17.87	18.56	19.09
	6H	21.29	21.87	21.83	22.41	22.95	18.09	18.67	18.63	19.21	19.75
	8H	21.36	21.89	21.92	22.44	23.00	18.49	19.01	19.05	19.57	20.12
	12H	21.41	21.87	21.97	22.41	23.04	18.99	19.45	19.54	19.99	20.61
12H	4H	20.99	21.62	21.52	22.15	22.68	17.38	18.01	17.91	18.53	19.07
	6H	21.27	21.79	21.83	22.35	22.90	18.13	18.65	18.68	19.20	19.76
	8H	21.38	21.84	21.93	22.38	23.01	18.59	19.05	19.14	19.59	20.21