

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: P893585

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

Issue Date: 11/11/2024

Test Information

Test Method: LM-79-2019
Report Number: P893585
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-2404-077-14)
Test Lab: INNOVATION CENTER
Issue Date: 11/11/2024
Manufacturer: COOPER LIGHTING SOLUTIONS
Product Line: METALUX
Catalog Number: 4MB-5SL-AOL-UNV-L830
Description: 5000 Lumen 4FT MICROBAY LINEAR BAY with AISLE OPTICS WITH CLEAR LENS NO UPLIGHT, 8
3000K CCT
Light Source: -
Ballast/Driver: -

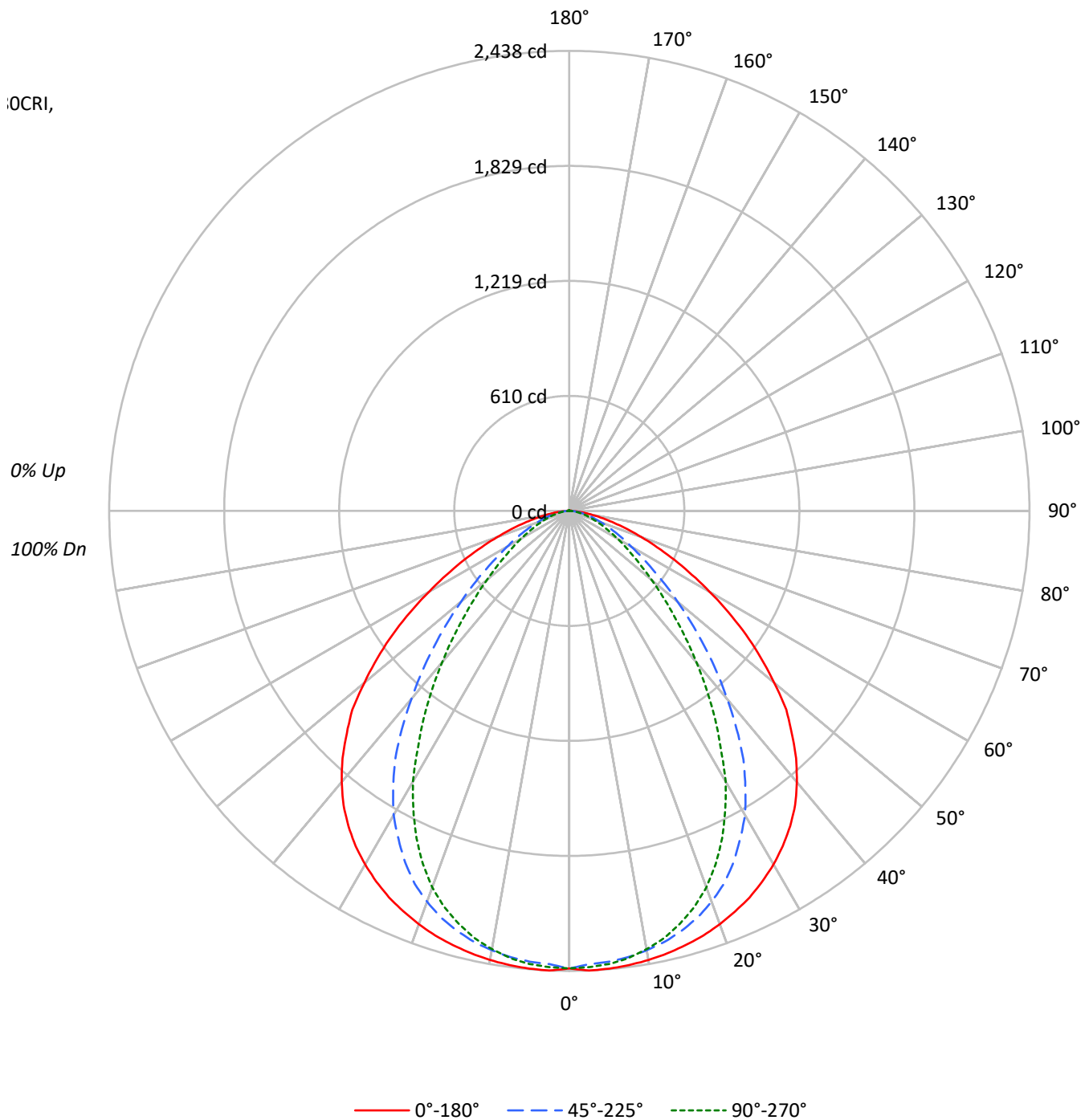
Summary

Lumens per Lamp: N/A
Luminaire Lumens: 4843.1 lumens
Efficiency: N/A
Efficacy: 138.4 lumens/watt
Spacing Criteria (0/90/45): 1.32 / 1.06 / 1.16
Luminous Opening: Rectangular (W 0.27' x L: 3.98' x H: 0')
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

TEST NUMBER: P893585
CATALOG NUMBER: 4MB-5SL-AOL-UNV-L830

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	119	119	119	119	116	116	116	116	111	111	111	106	106	106	102	102	102	102	102	102	100
1	111	107	103	100	108	104	101	98	100	98	95	96	94	92	93	91	89	89	89	89	87
2	102	95	89	85	100	93	88	84	90	85	82	87	83	80	84	81	78	78	78	78	76
3	94	85	78	73	92	84	77	72	81	75	71	78	73	70	76	72	68	68	68	68	66
4	87	77	69	63	85	76	68	63	73	67	62	71	66	61	69	64	60	60	60	60	58
5	81	70	62	56	79	69	61	55	66	60	55	65	59	54	63	58	54	54	54	54	52
6	75	63	55	50	74	63	55	49	61	54	49	59	53	49	58	52	48	48	48	48	46
7	70	58	50	45	69	57	50	44	56	49	44	54	48	44	53	48	43	43	43	43	42
8	66	53	46	40	64	53	45	40	51	45	40	50	44	40	49	44	39	39	39	39	38
9	62	49	42	37	60	49	42	37	48	41	36	47	41	36	46	40	36	36	36	36	34
10	58	46	38	34	57	45	38	33	44	38	33	43	37	33	43	37	33	33	33	33	31

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	24691	24691	24691
5°	24891	24515	24643
10°	24993	24453	24388
15°	25122	24278	23875
20°	25258	23885	23004
25°	25399	23109	21514
30°	25443	21894	19481
35°	25360	19999	16757
40°	24937	17308	13925
45°	24009	14544	11269
50°	22468	11845	9025
55°	20302	9521	7235
60°	17509	7748	5992
65°	14815	6453	4928
70°	12095	5488	4184
75°	9688	4623	3557
80°	7548	3959	3061
85°	5854	3494	2758

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
 Vertical Angle: 45°
 Luminance: 24009 cd/sqm



TEST NUMBER: P893585
 CATALOG NUMBER: 4MB-5SL-AOL-UNV-L830

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	229.6	4.7
10°-20°	653.3	13.5
20°-30°	952.2	19.7
30°-40°	1026.4	21.2
40°-50°	860.5	17.8
50°-60°	582.6	12.0
60°-70°	332.2	6.9
70°-80°	151.9	3.1
80°-90°	39.8	0.8
90°-100°	4.9	0.1
100°-110°	3.3	0.1
110°-120°	1.8	0.0
120°-130°	1.1	0.0
130°-140°	1.0	0.0
140°-150°	0.9	0.0
150°-160°	0.7	0.0
160°-170°	0.6	0.0
170°-180°	0.2	0.0
0°-30°	1835.1	37.9
0°-40°	2861.6	59.1
0°-60°	4304.6	88.9
0°-90°	4828.5	99.7
90°-120°	10.1	0.2
90°-150°	13.1	0.3
90°-180°	15.0	0.3
0°-180°	4843.1	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	2424	2424	2424	2424	2424	
5°	2435	2427	2398	2418	2410	232
15°	2383	2362	2303	2287	2264	673
25°	2260	2200	2056	1962	1915	1041
35°	2040	1886	1609	1412	1348	1273
45°	1667	1391	1010	832	782	1283
55°	1143	837	536	435	408	1018
65°	615	428	268	217	204	613
75°	246	181	118	96	90	268
85°	50	42	30	25	24	58
90°	7	7	4	4	3	7
95°	10	6	4	2	2	8
105°	7	5	2	1	1	8
115°	4	3	1	1	1	3
125°	1	1	1	1	1	1
135°	1	1	1	1	1	1
145°	1	1	1	1	1	1
155°	1	1	1	2	2	1
165°	1	2	2	2	2	0
175°	2	2	2	3	3	0
180°	2	2	2	2	2	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	2424.4	2424.4	2424.4	2424.4	2424.4
2.5°	2438.3	2432.1	2404.2	2427.2	2420.2
5°	2434.8	2427.2	2398.0	2417.5	2410.5
7.5°	2427.9	2418.1	2385.5	2400.1	2391.0
10°	2416.8	2404.9	2364.6	2372.9	2358.3
12.5°	2401.5	2386.9	2338.9	2336.8	2319.4
15°	2382.7	2361.8	2302.7	2287.4	2264.4
17.5°	2359.7	2333.3	2259.6	2229.0	2201.2
20°	2330.5	2296.4	2203.9	2155.3	2122.6
22.5°	2297.1	2251.2	2139.3	2061.4	2025.9
25°	2260.3	2200.5	2056.5	1961.9	1914.6
27.5°	2214.4	2139.3	1960.5	1838.1	1789.4
30°	2163.6	2068.3	1861.8	1705.3	1656.6
32.5°	2105.9	1987.0	1735.9	1562.0	1493.9
35°	2039.8	1886.1	1608.6	1411.8	1347.8
37.5°	1965.4	1781.1	1456.3	1260.2	1195.5
40°	1875.7	1656.6	1301.9	1107.9	1047.4
42.5°	1779.0	1530.0	1153.8	963.2	911.1
45°	1667.0	1390.9	1009.8	832.5	782.4
47.5°	1559.2	1250.5	874.9	712.9	671.8
50°	1418.1	1100.9	747.6	603.7	569.6
52.5°	1280.4	962.5	639.1	516.0	484.0
55°	1143.4	836.7	536.2	434.7	407.5
57.5°	998.7	713.6	451.4	367.9	349.8
60°	859.6	607.1	380.4	308.8	294.2
62.5°	732.3	509.1	322.0	260.8	246.9
65°	614.8	427.7	267.8	217.0	204.5
67.5°	503.5	351.9	223.2	180.8	171.8
70°	406.2	285.1	184.3	148.8	140.5
72.5°	322.0	228.1	147.4	121.7	112.7
75°	246.2	180.8	117.5	96.0	90.4
77.5°	183.6	136.3	90.4	73.7	69.5
80°	128.7	98.8	67.5	55.6	52.2
82.5°	87.6	68.2	47.3	38.9	36.9
85°	50.1	42.4	29.9	25.0	23.6
87.5°	25.7	22.3	16.0	11.8	10.4
90°	7.0	7.0	4.2	3.5	2.8
92.5°	11.1	6.3	4.2	2.8	2.1
95°	10.4	6.3	3.5	2.1	2.1
97.5°	9.7	6.3	2.8	2.1	1.4
100°	9.0	5.6	2.8	1.4	1.4
102.5°	8.3	5.6	2.8	1.4	1.4
105°	7.0	4.9	2.1	1.4	0.7
107.5°	6.3	4.2	2.1	1.4	0.7
110°	4.9	3.5	2.1	1.4	0.7



TEST NUMBER: P893585

CATALOG NUMBER: 4MB-5SL-AOL-UNV-L830

CANDELA DISTRIBUTION (continued):

	0°	22.5°	45°	67.5°	90°
112.5°	4.2	3.5	1.4	1.4	0.7
115°	3.5	2.8	1.4	0.7	0.7
117.5°	2.8	2.1	1.4	0.7	0.7
120°	2.1	2.1	1.4	0.7	0.7
122.5°	2.1	1.4	1.4	0.7	0.7
125°	1.4	1.4	1.4	0.7	0.7
127.5°	1.4	1.4	1.4	0.7	0.7
130°	1.4	1.4	1.4	0.7	0.7
132.5°	1.4	1.4	1.4	1.4	0.7
135°	0.7	1.4	1.4	1.4	0.7
137.5°	1.4	1.4	1.4	1.4	1.4
140°	1.4	1.4	1.4	1.4	1.4
142.5°	1.4	1.4	1.4	1.4	1.4
145°	1.4	1.4	1.4	1.4	1.4
147.5°	1.4	1.4	1.4	1.4	1.4
150°	1.4	1.4	1.4	1.4	1.4
152.5°	1.4	1.4	1.4	1.4	1.4
155°	1.4	1.4	1.4	2.1	2.1
157.5°	1.4	1.4	2.1	2.1	2.1
160°	1.4	1.4	2.1	2.1	2.1
162.5°	1.4	1.4	2.1	2.1	2.1
165°	1.4	2.1	2.1	2.1	2.1
167.5°	1.4	2.1	2.1	2.1	2.8
170°	1.4	2.1	2.1	2.8	2.8
172.5°	1.4	2.1	2.1	2.8	2.8
175°	2.1	2.1	2.1	2.8	2.8
177.5°	2.1	2.1	2.1	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	21.51	22.95	21.88	23.27	23.59	16.35	17.79	16.72	18.11	18.43
	3H	22.82	24.10	23.20	24.44	24.81	17.36	18.65	17.75	18.98	19.35
	4H	23.24	24.44	23.65	24.80	25.18	17.70	18.90	18.11	19.25	19.64
	6H	23.51	24.61	23.93	24.99	25.39	17.92	19.03	18.34	19.40	19.80
	8H	23.58	24.63	24.01	25.03	25.44	17.99	19.04	18.42	19.44	19.85
	12H	23.62	24.62	24.05	25.01	25.45	18.03	19.04	18.47	19.43	19.86
4H	2H	21.51	22.71	21.91	23.06	23.45	16.98	18.17	17.38	18.53	18.92
	3H	22.97	23.96	23.39	24.37	24.78	18.17	19.16	18.59	19.57	19.98
	4H	23.50	24.38	23.94	24.81	25.25	18.59	19.47	19.03	19.90	20.34
	6H	23.88	24.64	24.34	25.09	25.56	18.90	19.67	19.36	20.12	20.59
	8H	23.99	24.70	24.46	25.15	25.63	18.99	19.71	19.46	20.16	20.64
	12H	24.06	24.70	24.55	25.19	25.67	19.06	19.70	19.55	20.19	20.67
8H	4H	23.48	24.20	23.95	24.65	25.12	18.92	19.64	19.39	20.09	20.57
	6H	23.91	24.50	24.42	25.00	25.49	19.31	19.90	19.82	20.40	20.89
	8H	24.07	24.60	24.59	25.11	25.61	19.46	19.99	19.98	20.50	21.00
	12H	24.20	24.67	24.71	25.16	25.74	19.58	20.05	20.10	20.55	21.12
12H	4H	23.45	24.09	23.94	24.57	25.05	18.97	19.61	19.46	20.09	20.57
	6H	23.88	24.41	24.40	24.93	25.42	19.38	19.91	19.90	20.43	20.93
	8H	24.07	24.54	24.59	25.04	25.61	19.57	20.04	20.09	20.54	21.11