

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: P893812

Luminaire Tested: 4MB-7HL-AOL-UNV-L850

Issue Date: 11/11/2024

Test Information

Test Method: LM-79-2019
Report Number: P893812
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-2404-077-19)
Test Lab: INNOVATION CENTER
Issue Date: 11/11/2024
Manufacturer: COOPER LIGHTING SOLUTIONS
Product Line: METALUX
Catalog Number: 4MB-7HL-AOL-UNV-L850
Description: 7000 Lumen 4FT MICROBAY LINEAR BAY with AISLE OPTICS WITH CLEAR LENS NO UPLIGHT, 8
5000K CCT
Light Source: -
Ballast/Driver: -

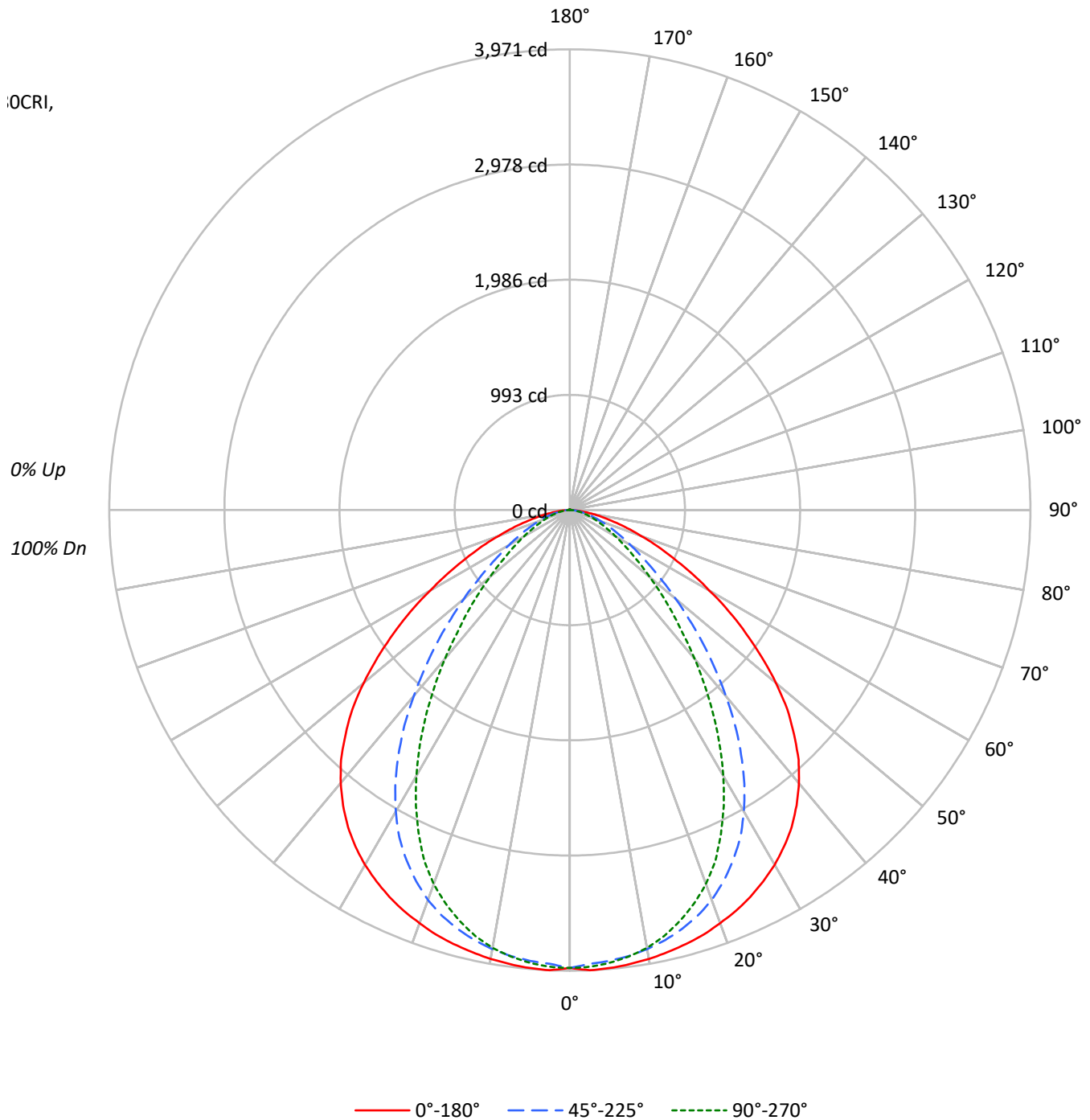
Summary

Lumens per Lamp: N/A
Luminaire Lumens: 7802.9 lumens
Efficiency: N/A
Efficacy: 150.6 lumens/watt
Spacing Criteria (0/90/45): 1.32 / 1.05 / 1.16
Luminous Opening: Rectangular (W 0.27' x L: 3.98' x H: 0')
CIE Type: Direct

Input Watts (W): 51.8
Input Voltage (V): 120
Input Current (A_{in}): NR
Voltage Rise (V): NR
Power Factor: 0.99
Total Harmonic Distortion (THDi): 4
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	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	88
2	102	95	90	85	100	93	88	84	90	86	82	87	83	80	84	81	78	78	78	78	76
3	95	85	78	73	92	84	77	72	81	75	71	78	74	70	76	72	68	68	68	68	67
4	87	77	69	63	85	76	69	63	73	67	62	71	66	61	69	64	61	61	61	61	59
5	81	70	62	56	79	69	61	56	67	60	55	65	59	54	63	58	54	54	54	54	52
6	76	64	56	50	74	63	55	50	61	54	49	59	53	49	58	52	48	48	48	48	46
7	70	58	50	45	69	57	50	45	56	49	44	55	48	44	53	48	44	44	44	44	42
8	66	54	46	40	64	53	45	40	52	45	40	50	44	40	49	44	40	40	40	40	38
9	62	49	42	37	61	49	42	37	48	41	37	47	41	36	46	40	36	36	36	36	34
10	58	46	39	34	57	45	38	34	44	38	33	44	38	33	43	37	33	33	33	33	32

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	40202	40202	40202
5°	40516	39883	40060
10°	40628	39746	39641
15°	40829	39409	38666
20°	41069	38770	37185
25°	41360	37437	34624
30°	41535	35286	31126
35°	41469	32021	26874
40°	40858	27821	22287
45°	39373	23344	17944
50°	36766	18935	14247
55°	32933	15119	11408
60°	28326	12337	9325
65°	23782	10258	7714
70°	19411	8623	6619
75°	15397	7299	5635
80°	11982	6240	4868
85°	9231	5574	4207

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
 Vertical Angle: 45°
 Luminance: 39373 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	373.4	4.8
10°-20°	1060.0	13.6
20°-30°	1542.5	19.8
30°-40°	1658.2	21.3
40°-50°	1384.9	17.7
50°-60°	930.2	11.9
60°-70°	528.4	6.8
70°-80°	240.7	3.1
80°-90°	61.5	0.8
90°-100°	6.9	0.1
100°-110°	4.9	0.1
110°-120°	2.9	0.0
120°-130°	2.0	0.0
130°-140°	1.8	0.0
140°-150°	1.7	0.0
150°-160°	1.4	0.0
160°-170°	1.1	0.0
170°-180°	0.4	0.0
0°-30°	2975.9	38.1
0°-40°	4634.1	59.4
0°-60°	6949.2	89.1
0°-90°	7779.8	99.7
90°-120°	14.7	0.2
90°-150°	20.1	0.3
90°-180°	23.0	0.3
0°-180°	7802.9	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	3948	3948	3948	3948	3948	
5°	3963	3952	3901	3933	3919	377
15°	3872	3841	3738	3708	3667	1094
25°	3681	3574	3332	3159	3081	1696
35°	3336	3068	2576	2267	2162	2081
45°	2734	2255	1621	1326	1246	2101
55°	1855	1334	852	682	642	1658
65°	987	678	426	341	320	991
75°	391	282	186	151	143	430
85°	79	64	48	38	36	90
90°	10	9	6	6	5	10
95°	12	9	6	3	3	10
105°	9	7	4	2	2	10
115°	5	4	2	2	2	5
125°	3	2	2	2	2	3
135°	2	2	2	2	2	2
145°	2	2	3	3	2	1
155°	2	3	3	3	3	1
165°	3	3	4	5	5	1
175°	3	4	5	5	5	0
180°	5	5	5	5	5	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	3947.5	3947.5	3947.5	3947.5	3947.5
2.5°	3971.0	3960.0	3915.4	3949.9	3940.5
5°	3963.2	3952.2	3901.3	3932.7	3918.6
7.5°	3948.3	3937.3	3877.9	3900.6	3881.8
10°	3928.7	3913.1	3843.4	3849.7	3833.3
12.5°	3902.9	3879.4	3797.3	3786.3	3760.5
15°	3872.4	3841.1	3737.8	3708.0	3667.3
17.5°	3837.2	3791.8	3665.8	3603.2	3558.6
20°	3789.4	3731.5	3577.3	3478.0	3431.0
22.5°	3740.1	3661.1	3463.1	3331.6	3275.3
25°	3680.7	3574.2	3331.6	3158.6	3081.2
27.5°	3609.4	3476.4	3183.7	2966.1	2873.8
30°	3532.0	3361.3	3000.6	2750.1	2646.8
32.5°	3438.8	3225.9	2800.2	2513.8	2406.5
35°	3335.5	3067.9	2575.6	2267.2	2161.6
37.5°	3210.3	2884.7	2342.4	2015.2	1913.5
40°	3073.3	2696.1	2092.7	1764.8	1676.4
42.5°	2919.2	2478.6	1850.1	1534.7	1439.2
45°	2733.7	2254.7	1620.8	1325.8	1245.9
47.5°	2544.3	2007.4	1392.3	1124.6	1067.5
50°	2320.5	1775.0	1195.1	957.9	899.2
52.5°	2088.0	1546.5	1011.1	813.1	760.7
55°	1854.8	1333.6	851.5	682.4	642.5
57.5°	1627.8	1137.9	716.1	576.8	542.4
60°	1390.7	965.8	605.7	486.0	457.8
62.5°	1187.2	816.3	508.7	409.3	385.8
65°	986.9	678.5	425.7	341.2	320.1
67.5°	818.6	560.4	353.0	283.3	265.3
70°	651.9	456.3	289.6	234.0	222.3
72.5°	519.7	363.9	234.8	190.2	178.4
75°	391.3	282.5	185.5	151.0	143.2
77.5°	294.3	214.4	143.2	117.4	108.8
80°	204.3	153.4	106.4	86.9	83.0
82.5°	130.7	105.7	73.6	61.8	57.1
85°	79.0	64.2	47.7	38.3	36.0
87.5°	37.6	31.3	24.3	18.8	17.2
90°	10.2	8.6	6.3	5.5	4.7
92.5°	11.7	8.6	5.5	3.9	3.1
95°	12.5	8.6	5.5	3.1	3.1
97.5°	12.5	9.4	4.7	3.1	2.3
100°	11.7	8.6	4.7	3.1	2.3
102.5°	10.2	7.8	3.9	2.3	2.3
105°	9.4	7.0	3.9	2.3	1.6
107.5°	7.8	6.3	3.1	2.3	1.6
110°	7.0	5.5	3.1	2.3	1.6



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CANDELA DISTRIBUTION (continued):

	0°	22.5°	45°	67.5°	90°
112.5°	5.5	4.7	3.1	2.3	1.6
115°	4.7	3.9	2.3	1.6	1.6
117.5°	3.9	3.1	2.3	1.6	1.6
120°	3.9	3.1	2.3	1.6	1.6
122.5°	3.1	3.1	2.3	1.6	1.6
125°	3.1	2.3	2.3	1.6	1.6
127.5°	2.3	2.3	2.3	1.6	1.6
130°	2.3	2.3	2.3	2.3	1.6
132.5°	2.3	2.3	2.3	2.3	1.6
135°	2.3	2.3	2.3	2.3	2.3
137.5°	2.3	2.3	2.3	2.3	2.3
140°	2.3	2.3	2.3	2.3	2.3
142.5°	2.3	2.3	3.1	2.3	2.3
145°	2.3	2.3	3.1	3.1	2.3
147.5°	2.3	2.3	3.1	3.1	3.1
150°	2.3	2.3	3.1	3.1	3.1
152.5°	2.3	3.1	3.1	3.1	3.1
155°	2.3	3.1	3.1	3.1	3.1
157.5°	3.1	3.1	3.1	3.9	3.9
160°	3.1	3.1	3.9	3.9	3.9
162.5°	3.1	3.1	3.9	3.9	3.9
165°	3.1	3.1	3.9	4.7	4.7
167.5°	3.1	3.9	3.9	4.7	4.7
170°	3.1	3.9	3.9	4.7	4.7
172.5°	3.1	3.9	4.7	4.7	4.7
175°	3.1	3.9	4.7	4.7	4.7
177.5°	3.9	3.9	4.7	4.7	4.7
180°	4.7	4.7	4.7	4.7	4.7



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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	23.14	24.57	23.51	24.89	25.21	17.81	19.25	18.18	19.57	19.89
	3H	24.45	25.73	24.84	26.07	26.44	18.82	20.10	19.21	20.44	20.81
	4H	24.87	26.06	25.27	26.42	26.81	19.17	20.36	19.57	20.72	21.10
	6H	25.13	26.23	25.55	26.60	27.01	19.39	20.50	19.81	20.87	21.27
	8H	25.19	26.24	25.63	26.63	27.04	19.46	20.51	19.89	20.90	21.31
	12H	25.22	26.22	25.66	26.61	27.05	19.50	20.50	19.94	20.89	21.33
4H	2H	23.13	24.32	23.53	24.68	25.07	18.46	19.65	18.86	20.01	20.40
	3H	24.60	25.58	25.02	25.99	26.40	19.65	20.64	20.07	21.04	21.45
	4H	25.11	25.99	25.55	26.42	26.86	20.07	20.95	20.51	21.38	21.82
	6H	25.48	26.24	25.95	26.69	27.16	20.38	21.15	20.85	21.60	22.07
	8H	25.58	26.29	26.05	26.74	27.22	20.48	21.19	20.95	21.64	22.12
	12H	25.65	26.28	26.14	26.77	27.25	20.54	21.18	21.03	21.66	22.14
8H	4H	25.09	25.80	25.56	26.25	26.73	20.41	21.13	20.88	21.58	22.05
	6H	25.51	26.10	26.01	26.60	27.08	20.81	21.39	21.31	21.89	22.38
	8H	25.65	26.18	26.17	26.70	27.19	20.95	21.47	21.47	21.99	22.49
	12H	25.77	26.23	26.29	26.73	27.31	21.06	21.53	21.58	22.03	22.60
12H	4H	25.06	25.70	25.55	26.18	26.66	20.46	21.09	20.95	21.58	22.06
	6H	25.48	26.00	26.00	26.52	27.02	20.87	21.40	21.39	21.92	22.41
	8H	25.65	26.12	26.17	26.62	27.19	21.06	21.53	21.58	22.03	22.60