

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: P893907

Luminaire Tested: 4MB-8HL-AOL-UNV-L840

Issue Date: 11/11/2024

Test Information

Test Method: LM-79-2019
Report Number: P893907
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-8HL-AOL-UNV-L840
Description: 8000 Lumen 4FT MICROBAY LINEAR BAY with AISLE OPTICS WITH CLEAR LENS NO UPLIGHT, 8
4000K CCT
Light Source: -
Ballast/Driver: -

Summary

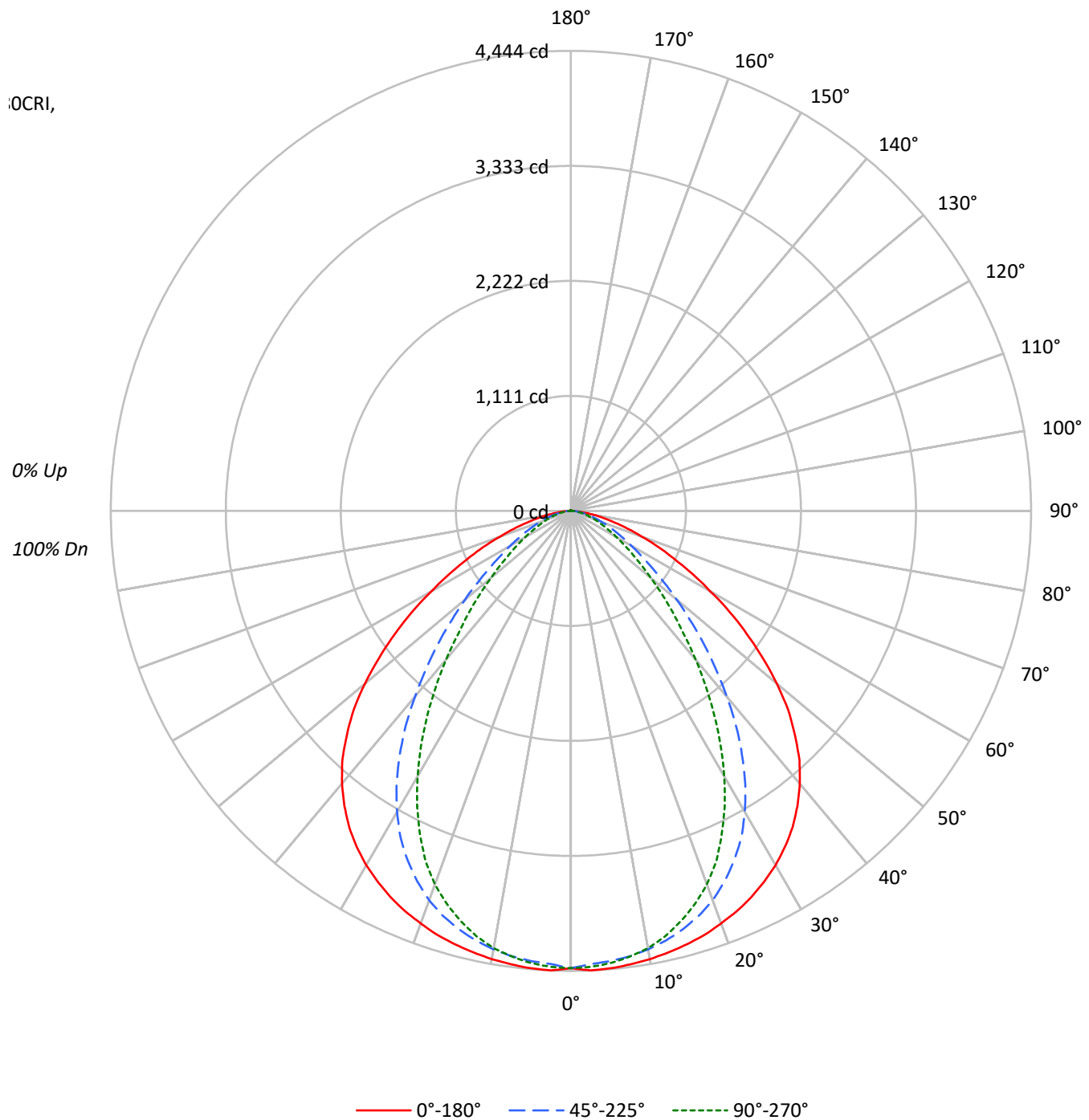
Lumens per Lamp: N/A
Luminaire Lumens: 8732.0 lumens
Efficiency: N/A
Efficacy: 150.8 lumens/watt
Spacing Criteria (0/90/45): 1.32 / 1.05 / 1.16
Luminous Opening: Rectangular (W 0.27' x L: 3.98' x H: 0')
CIE Type: Direct

Input Watts (W): 57.9
Input Voltage (V): 120
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: 0.999
Total Harmonic Distortion (THDi): 4.23
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	0
RCR																				
0	119	119	119	119	116	116	116	116	111	111	111		106	106	106		102	102	102	100
1	111	107	103	100	108	104	101	98	100	98	95		96	94	92		93	91	89	87
2	102	95	90	85	100	93	88	84	90	86	82		87	83	80		84	81	78	76
3	95	85	78	73	92	84	77	72	81	75	71		78	74	70		76	72	68	67
4	87	77	69	63	85	76	69	63	73	67	62		71	66	61		69	64	61	59
5	81	70	62	56	79	69	61	56	67	60	55		65	59	54		63	58	54	52
6	76	64	56	50	74	63	55	50	61	54	49		59	53	49		58	52	48	46
7	70	58	50	45	69	57	50	45	56	49	44		55	48	44		53	48	44	42
8	66	54	46	40	64	53	45	40	52	45	40		50	44	40		49	44	40	38
9	62	49	42	37	61	49	42	37	48	41	37		47	41	36		46	40	36	34
10	58	46	39	34	57	45	38	34	44	38	33		44	38	33		43	37	33	32

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	44989	44989	44989
5°	45340	44632	44829
10°	45466	44478	44360
15°	45689	44101	43270
20°	45959	43387	41612
25°	46284	41895	38745
30°	46480	39487	34831
35°	46406	35833	30073
40°	45723	31134	24939
45°	44059	26124	20082
50°	41142	21188	15944
55°	36854	16919	12766
60°	31699	13808	10435
65°	26614	11480	8632
70°	21722	9648	7405
75°	17231	8169	6308
80°	13407	6985	5443
85°	10341	6240	4709

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°

Vertical Angle: 45°

Luminance: 44059 cd/sqm

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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	417.9	4.8
10°-20°	1186.2	13.6
20°-30°	1726.1	19.8
30°-40°	1855.7	21.3
40°-50°	1549.7	17.7
50°-60°	1040.9	11.9
60°-70°	591.3	6.8
70°-80°	269.4	3.1
80°-90°	68.8	0.8
90°-100°	7.7	0.1
100°-110°	5.6	0.1
110°-120°	3.3	0.0
120°-130°	2.2	0.0
130°-140°	2.0	0.0
140°-150°	1.9	0.0
150°-160°	1.6	0.0
160°-170°	1.2	0.0
170°-180°	0.5	0.0
0°-30°	3330.2	38.1
0°-40°	5185.9	59.4
0°-60°	7776.6	89.1
0°-90°	8706.1	99.7
90°-120°	16.5	0.2
90°-150°	22.6	0.3
90°-180°	26.0	0.3
0°-180°	8732.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	4418	4418	4418	4418	4418	
5°	4435	4423	4366	4401	4385	422
15°	4333	4298	4183	4150	4104	1225
25°	4119	4000	3728	3535	3448	1898
35°	3733	3433	2882	2537	2419	2329
45°	3059	2523	1814	1484	1394	2351
55°	2076	1492	953	764	719	1855
65°	1104	759	476	382	358	1109
75°	438	316	208	169	160	481
85°	88	72	53	43	40	101
90°	11	10	7	6	5	11
95°	14	10	6	4	4	11
105°	10	8	4	3	2	11
115°	5	4	3	2	2	5
125°	4	3	3	2	2	3
135°	3	3	3	3	3	2
145°	3	3	4	4	3	2
155°	3	4	4	4	4	1
165°	4	4	4	5	5	1
175°	4	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°	4417.5	4417.5	4417.5	4417.5	4417.5
2.5°	4443.8	4431.5	4381.6	4420.1	4409.6
5°	4435.0	4422.8	4365.8	4400.9	4385.1
7.5°	4418.4	4406.1	4339.6	4365.0	4343.9
10°	4396.5	4379.0	4301.0	4308.0	4289.6
12.5°	4367.6	4341.3	4249.4	4237.1	4208.2
15°	4333.4	4298.4	4182.8	4149.5	4104.0
17.5°	4294.0	4243.2	4102.2	4032.2	3982.2
20°	4240.6	4175.8	4003.3	3892.0	3839.5
22.5°	4185.4	4097.0	3875.4	3728.3	3665.2
25°	4118.9	3999.7	3728.3	3534.7	3448.0
27.5°	4039.2	3890.3	3562.7	3319.3	3215.9
30°	3952.5	3761.5	3357.8	3077.5	2961.9
32.5°	3848.2	3610.0	3133.6	2813.0	2693.1
35°	3732.6	3433.1	2882.2	2537.2	2418.9
37.5°	3592.5	3228.2	2621.3	2255.2	2141.3
40°	3439.2	3017.1	2341.9	1974.9	1875.9
42.5°	3266.7	2773.6	2070.4	1717.4	1610.6
45°	3059.1	2523.2	1813.8	1483.6	1394.3
47.5°	2847.2	2246.4	1558.0	1258.5	1194.6
50°	2596.7	1986.3	1337.3	1072.0	1006.3
52.5°	2336.6	1730.6	1131.5	909.9	851.3
55°	2075.6	1492.4	952.9	763.7	719.0
57.5°	1821.7	1273.4	801.4	645.5	606.9
60°	1556.3	1080.7	677.9	543.9	512.3
62.5°	1328.6	913.5	569.3	458.0	431.8
65°	1104.4	759.3	476.4	381.8	358.2
67.5°	916.1	627.1	395.0	317.0	296.9
70°	729.5	510.6	324.0	261.9	248.7
72.5°	581.5	407.2	262.7	212.8	199.7
75°	437.9	316.2	207.6	169.0	160.3
77.5°	329.3	240.0	160.3	131.4	121.7
80°	228.6	171.7	119.1	97.2	92.8
82.5°	146.3	118.2	82.3	69.2	63.9
85°	88.5	71.8	53.4	42.9	40.3
87.5°	42.0	35.0	27.1	21.0	19.3
90°	11.4	9.6	7.0	6.1	5.3
92.5°	13.1	9.6	6.1	4.4	3.5
95°	14.0	9.6	6.1	3.5	3.5
97.5°	14.0	10.5	5.3	3.5	2.6
100°	13.1	9.6	5.3	3.5	2.6
102.5°	11.4	8.8	4.4	2.6	2.6
105°	10.5	7.9	4.4	2.6	1.8
107.5°	8.8	7.0	3.5	2.6	1.8
110°	7.9	6.1	3.5	2.6	1.8



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CANDELA DISTRIBUTION (continued):

	0°	22.5°	45°	67.5°	90°
112.5°	6.1	5.3	3.5	2.6	1.8
115°	5.3	4.4	2.6	1.8	1.8
117.5°	4.4	3.5	2.6	1.8	1.8
120°	4.4	3.5	2.6	1.8	1.8
122.5°	3.5	3.5	2.6	1.8	1.8
125°	3.5	2.6	2.6	1.8	1.8
127.5°	2.6	2.6	2.6	1.8	1.8
130°	2.6	2.6	2.6	2.6	1.8
132.5°	2.6	2.6	2.6	2.6	1.8
135°	2.6	2.6	2.6	2.6	2.6
137.5°	2.6	2.6	2.6	2.6	2.6
140°	2.6	2.6	2.6	2.6	2.6
142.5°	2.6	2.6	3.5	2.6	2.6
145°	2.6	2.6	3.5	3.5	2.6
147.5°	2.6	2.6	3.5	3.5	3.5
150°	2.6	2.6	3.5	3.5	3.5
152.5°	2.6	3.5	3.5	3.5	3.5
155°	2.6	3.5	3.5	3.5	3.5
157.5°	3.5	3.5	3.5	4.4	4.4
160°	3.5	3.5	4.4	4.4	4.4
162.5°	3.5	3.5	4.4	4.4	4.4
165°	3.5	3.5	4.4	5.3	5.3
167.5°	3.5	4.4	4.4	5.3	5.3
170°	3.5	4.4	4.4	5.3	5.3
172.5°	3.5	4.4	5.3	5.3	5.3
175°	3.5	4.4	5.3	5.3	5.3
177.5°	4.4	4.4	5.3	5.3	5.3
180°	5.3	5.3	5.3	5.3	5.3

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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	23.53	24.96	23.90	25.28	25.60	18.20	19.64	18.57	19.96	20.28
	3H	24.84	26.12	25.23	26.46	26.83	19.21	20.49	19.60	20.83	21.20
	4H	25.26	26.45	25.67	26.81	27.20	19.56	20.75	19.96	21.11	21.50
	6H	25.52	26.62	25.94	27.00	27.40	19.78	20.89	20.20	21.26	21.66
	8H	25.58	26.63	26.02	27.03	27.44	19.85	20.90	20.29	21.29	21.70
	12H	25.62	26.62	26.05	27.00	27.44	19.89	20.89	20.33	21.28	21.72
4H	2H	23.52	24.71	23.93	25.07	25.46	18.85	20.04	19.26	20.40	20.79
	3H	24.99	25.98	25.41	26.38	26.79	20.04	21.03	20.46	21.43	21.84
	4H	25.50	26.38	25.94	26.81	27.26	20.46	21.34	20.90	21.77	22.21
	6H	25.87	26.64	26.34	27.09	27.56	20.77	21.54	21.24	21.99	22.46
	8H	25.97	26.68	26.44	27.13	27.61	20.87	21.58	21.34	22.03	22.51
	12H	26.04	26.67	26.53	27.16	27.64	20.94	21.57	21.42	22.06	22.54
8H	4H	25.48	26.19	25.95	26.65	27.12	20.80	21.52	21.27	21.97	22.44
	6H	25.90	26.49	26.41	26.99	27.47	21.20	21.78	21.70	22.28	22.77
	8H	26.04	26.57	26.56	27.09	27.58	21.34	21.87	21.86	22.38	22.88
	12H	26.16	26.63	26.68	27.12	27.70	21.46	21.92	21.97	22.42	22.99
12H	4H	25.45	26.09	25.94	26.57	27.05	20.85	21.48	21.34	21.97	22.45
	6H	25.87	26.39	26.39	26.91	27.41	21.26	21.79	21.79	22.31	22.81
	8H	26.04	26.51	26.56	27.01	27.58	21.45	21.92	21.97	22.42	22.99