

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: P893892

Luminaire Tested: 4MB-8HL-A-UNV-L850

Issue Date: 11/11/2024

Test Information

Test Method: LM-79-2019
Report Number: P893892
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-2404-077-21)
Test Lab: INNOVATION CENTER
Issue Date: 11/11/2024
Manufacturer: COOPER LIGHTING SOLUTIONS
Product Line: METALUX
Catalog Number: 4MB-8HL-A-UNV-L850
Description: 8000 Lumen 4FT MICROBAY LINEAR BAY with AISLE OPTIC, 80CRI, 5000K CCT
Light Source: -
Ballast/Driver: -

Summary

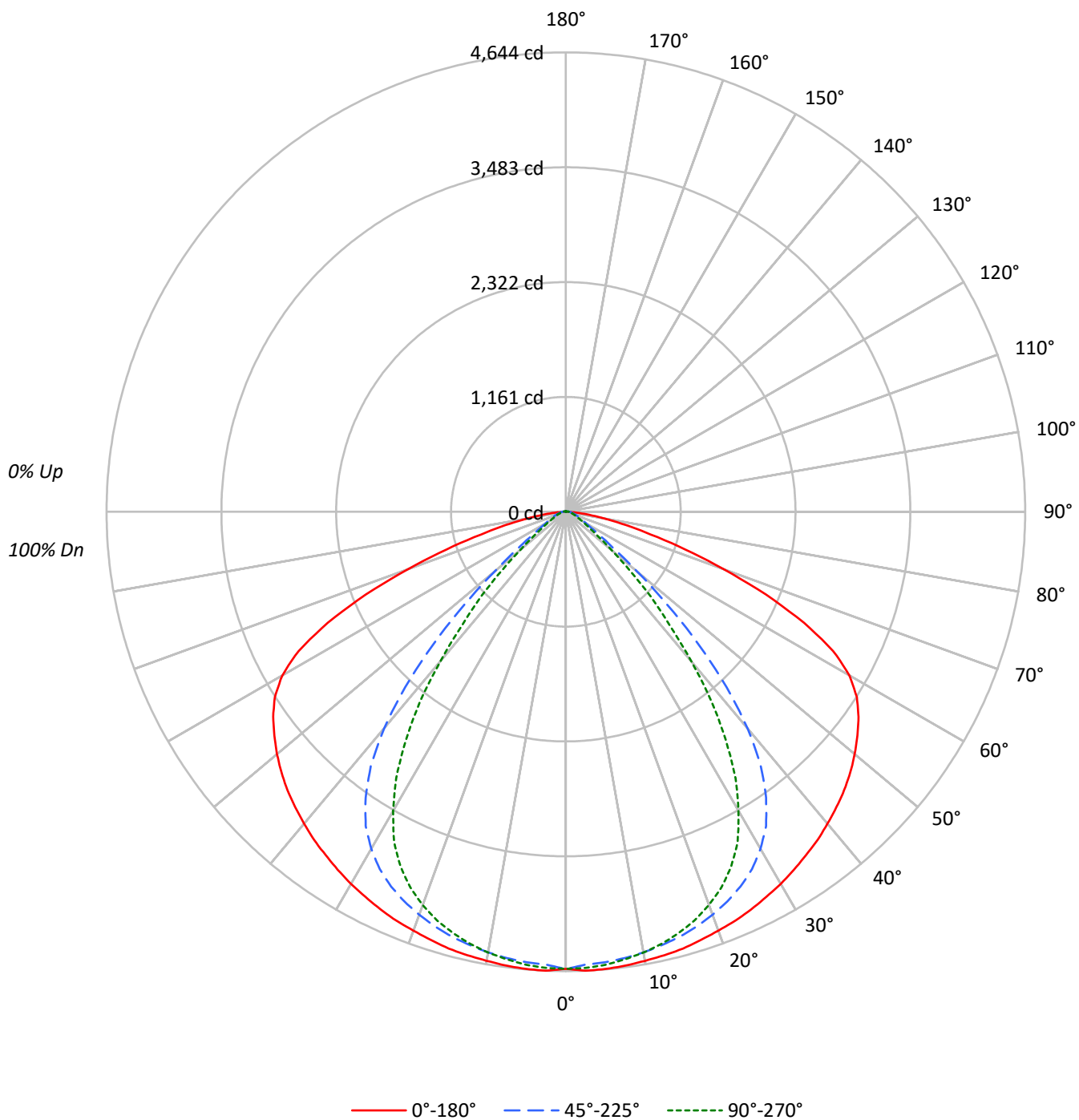
Lumens per Lamp: N/A
Luminaire Lumens: 9355.9 lumens
Efficiency: N/A
Efficacy: 161.6 lumens/watt
Spacing Criteria (0/90/45): 1.41 / 1.14 / 1.22
Luminous Opening: Rectangular (W 0.27' x L: 3.98' x H: 0')
CIE Type: Direct

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
RW	70	50	30	10	70	50	30	10	50	30	10		50	30	10		50
RCR																	
0	119	119	119	119	116	116	116	116	111	111	111		106	106	106		102
1	111	107	104	101	108	105	102	99	101	98	96		97	95	93		93
2	103	96	90	86	100	94	89	85	91	86	83		88	84	81		85
3	95	86	80	74	93	85	79	74	82	77	72		79	75	71		77
4	88	78	71	65	86	77	70	64	74	68	64		72	67	63		70
5	82	71	63	57	80	70	63	57	68	61	56		66	60	56		64
6	76	65	57	51	75	64	56	51	62	55	50		60	55	50		59
7	71	59	51	46	70	58	51	46	57	50	45		56	50	45		54
8	67	55	47	42	65	54	47	41	53	46	41		51	45	41		50
9	63	50	43	38	61	50	43	38	49	42	38		48	42	37		47
10	59	47	39	35	58	46	39	35	45	39	34		44	38	34		43

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	47054	47054	47054
5°	47422	46743	47011
10°	47671	46778	46787
15°	48198	46891	46486
20°	48834	46979	45853
25°	49828	46963	44440
30°	51088	46260	41053
35°	52655	43880	35041
40°	54714	38005	26208
45°	57324	27348	17447
50°	60403	14987	9562
55°	64140	7367	5506
60°	67460	4856	3807
65°	64026	3979	3010
70°	50403	3615	2784
75°	34954	3573	2648
80°	23002	3583	3278
85°	13169	5515	5609

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°

Vertical Angle: 60°

Luminance: 67460 cd/sqm

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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	438.2	4.7
10°-20°	1264.7	13.5
20°-30°	1926.7	20.6
30°-40°	2188.1	23.4
40°-50°	1757.0	18.8
50°-60°	942.5	10.1
60°-70°	498.5	5.3
70°-80°	226.0	2.4
80°-90°	72.0	0.8
90°-100°	22.3	0.2
100°-110°	8.0	0.1
110°-120°	2.5	0.0
120°-130°	1.8	0.0
130°-140°	1.9	0.0
140°-150°	2.1	0.0
150°-160°	1.9	0.0
160°-170°	1.4	0.0
170°-180°	0.5	0.0
0°-30°	3629.6	38.8
0°-40°	5817.6	62.2
0°-60°	8517.1	91.0
0°-90°	9313.5	99.5
90°-120°	32.7	0.3
90°-150°	38.5	0.4
90°-180°	42.0	0.4
0°-180°	9355.9	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	4620	4620	4620	4620	4620	
5°	4639	4629	4572	4611	4598	442
15°	4571	4543	4447	4435	4409	1293
25°	4434	4364	4179	4033	3955	2049
35°	4235	4055	3529	3018	2818	2657
45°	3980	3368	1899	1321	1211	3074
55°	3612	1348	415	324	310	3221
65°	2657	314	165	134	125	2569
75°	888	179	91	72	67	1005
85°	113	67	47	47	48	154
90°	4	31	34	39	38	7
95°	4	12	27	24	23	4
105°	3	2	5	12	15	3
115°	2	2	2	4	4	2
125°	2	2	2	3	2	2
135°	3	2	3	3	3	2
145°	3	3	4	4	4	2
155°	4	4	4	5	4	1
165°	4	4	5	6	5	1
175°	4	4	6	7	6	0
180°	6	6	6	6	6	

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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	4620.3	4620.3	4620.3	4620.3	4620.3
2.5°	4643.9	4635.2	4582.8	4626.4	4615.1
5°	4638.7	4629.1	4572.3	4610.7	4598.5
7.5°	4627.3	4615.1	4551.3	4582.8	4563.6
10°	4609.8	4597.6	4523.4	4545.2	4524.3
12.5°	4592.4	4571.4	4486.7	4493.7	4473.6
15°	4571.4	4542.6	4447.4	4435.2	4409.0
17.5°	4539.1	4506.8	4395.9	4367.0	4330.4
20°	4505.9	4462.2	4334.7	4276.2	4230.8
22.5°	4475.3	4415.1	4264.8	4171.4	4110.3
25°	4434.3	4363.5	4179.3	4033.4	3954.8
27.5°	4389.7	4303.3	4073.6	3855.2	3761.8
30°	4344.3	4230.8	3933.8	3631.6	3491.0
32.5°	4291.1	4151.3	3766.1	3360.9	3194.9
35°	4235.2	4055.2	3529.4	3017.6	2818.5
37.5°	4181.9	3944.3	3237.7	2601.0	2424.6
40°	4115.5	3815.0	2858.7	2153.8	1971.3
42.5°	4050.0	3615.9	2404.5	1725.0	1550.3
45°	3980.1	3367.9	1898.8	1320.6	1211.4
47.5°	3900.6	3028.1	1389.6	961.6	867.3
50°	3812.4	2539.0	945.9	655.1	603.5
52.5°	3715.5	1966.9	614.9	451.6	421.9
55°	3612.4	1347.7	414.9	324.0	310.1
57.5°	3488.4	844.6	307.4	243.7	235.8
60°	3312.0	547.6	238.4	196.5	186.9
62.5°	3046.4	392.2	200.0	160.7	152.8
65°	2656.9	313.6	165.1	133.6	124.9
67.5°	2190.5	268.1	141.5	114.4	108.3
70°	1692.7	235.8	121.4	99.6	93.5
72.5°	1262.9	206.1	104.8	86.5	78.6
75°	888.3	179.0	90.8	71.6	67.3
77.5°	624.5	154.6	75.1	61.1	60.3
80°	392.2	128.4	61.1	56.8	55.9
82.5°	238.4	101.3	53.3	52.4	51.5
85°	112.7	67.3	47.2	47.2	48.0
87.5°	36.7	44.5	40.2	41.9	41.9
90°	4.4	30.6	34.1	39.3	37.6
92.5°	4.4	21.8	31.4	31.4	25.3
95°	4.4	12.2	27.1	23.6	22.7
97.5°	4.4	6.1	20.1	22.7	21.8
100°	4.4	3.5	14.8	20.1	21.8
102.5°	3.5	2.6	9.6	16.6	18.3
105°	2.6	1.7	5.2	12.2	14.8
107.5°	1.7	1.7	3.5	8.7	10.5
110°	1.7	0.9	2.6	6.1	7.0

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CANDELA DISTRIBUTION (continued):

	0°	22.5°	45°	67.5°	90°
112.5°	1.7	0.9	2.6	4.4	4.4
115°	1.7	1.7	1.7	3.5	3.5
117.5°	1.7	1.7	1.7	2.6	2.6
120°	1.7	1.7	1.7	2.6	1.7
122.5°	1.7	1.7	1.7	2.6	1.7
125°	1.7	1.7	1.7	2.6	1.7
127.5°	1.7	1.7	2.6	2.6	1.7
130°	1.7	1.7	2.6	2.6	1.7
132.5°	1.7	1.7	2.6	2.6	2.6
135°	2.6	1.7	2.6	2.6	2.6
137.5°	2.6	2.6	2.6	3.5	2.6
140°	2.6	2.6	3.5	3.5	2.6
142.5°	2.6	2.6	3.5	3.5	3.5
145°	2.6	2.6	3.5	3.5	3.5
147.5°	2.6	2.6	3.5	4.4	3.5
150°	2.6	3.5	4.4	4.4	3.5
152.5°	2.6	3.5	4.4	4.4	4.4
155°	3.5	3.5	4.4	5.2	4.4
157.5°	3.5	3.5	4.4	5.2	4.4
160°	3.5	3.5	5.2	5.2	5.2
162.5°	3.5	4.4	5.2	6.1	5.2
165°	3.5	4.4	5.2	6.1	5.2
167.5°	3.5	4.4	5.2	6.1	6.1
170°	3.5	4.4	6.1	6.1	6.1
172.5°	4.4	4.4	6.1	7.0	6.1
175°	4.4	4.4	6.1	7.0	6.1
177.5°	4.4	4.4	6.1	7.0	6.1
180°	6.1	6.1	6.1	6.1	6.1

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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	23.05	24.44	23.42	24.76	25.09	11.26	12.65	11.63	12.97	13.30
	3H	25.95	27.18	26.33	27.52	27.89	12.22	13.45	12.60	13.79	14.16
	4H	26.73	27.88	27.14	28.24	28.63	12.64	13.79	13.05	14.15	14.54
	6H	27.17	28.22	27.59	28.60	29.01	13.12	14.18	13.54	14.55	14.96
	8H	27.27	28.27	27.70	28.67	29.08	13.42	14.43	13.86	14.83	15.24
	12H	27.30	28.26	27.74	28.66	29.10	13.83	14.79	14.27	15.18	15.62
4H	2H	22.86	24.01	23.27	24.37	24.76	11.78	12.93	12.19	13.29	13.68
	3H	25.78	26.72	26.20	27.13	27.55	12.99	13.93	13.41	14.34	14.75
	4H	26.57	27.42	27.01	27.84	28.29	13.52	14.37	13.96	14.79	15.25
	6H	27.10	27.83	27.57	28.28	28.76	14.16	14.89	14.63	15.34	15.82
	8H	27.24	27.92	27.72	28.38	28.86	14.56	15.24	15.03	15.70	16.18
	12H	27.32	27.93	27.81	28.42	28.90	15.09	15.69	15.58	16.18	16.67
8H	4H	26.46	27.14	26.93	27.60	28.08	14.09	14.77	14.56	15.22	15.70
	6H	26.99	27.55	27.50	28.05	28.54	14.86	15.42	15.37	15.92	16.41
	8H	27.15	27.66	27.68	28.18	28.68	15.38	15.88	15.91	16.41	16.91
	12H	27.27	27.72	27.79	28.22	28.80	16.08	16.53	16.60	17.03	17.61
12H	4H	26.42	27.02	26.91	27.51	28.00	14.33	14.94	14.83	15.43	15.91
	6H	26.93	27.44	27.46	27.96	28.46	15.13	15.64	15.66	16.16	16.66
	8H	27.12	27.57	27.65	28.07	28.65	15.73	16.17	16.25	16.68	17.26