

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: P893908

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

Issue Date: 11/11/2024

Test Information

Test Method: LM-79-2019
Report Number: P893908
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-L850
Description: 8000 Lumen 4FT MICROBAY LINEAR BAY with AISLE OPTICS WITH CLEAR LENS NO UPLIGHT, 8
5000K CCT
Light Source: -
Ballast/Driver: -

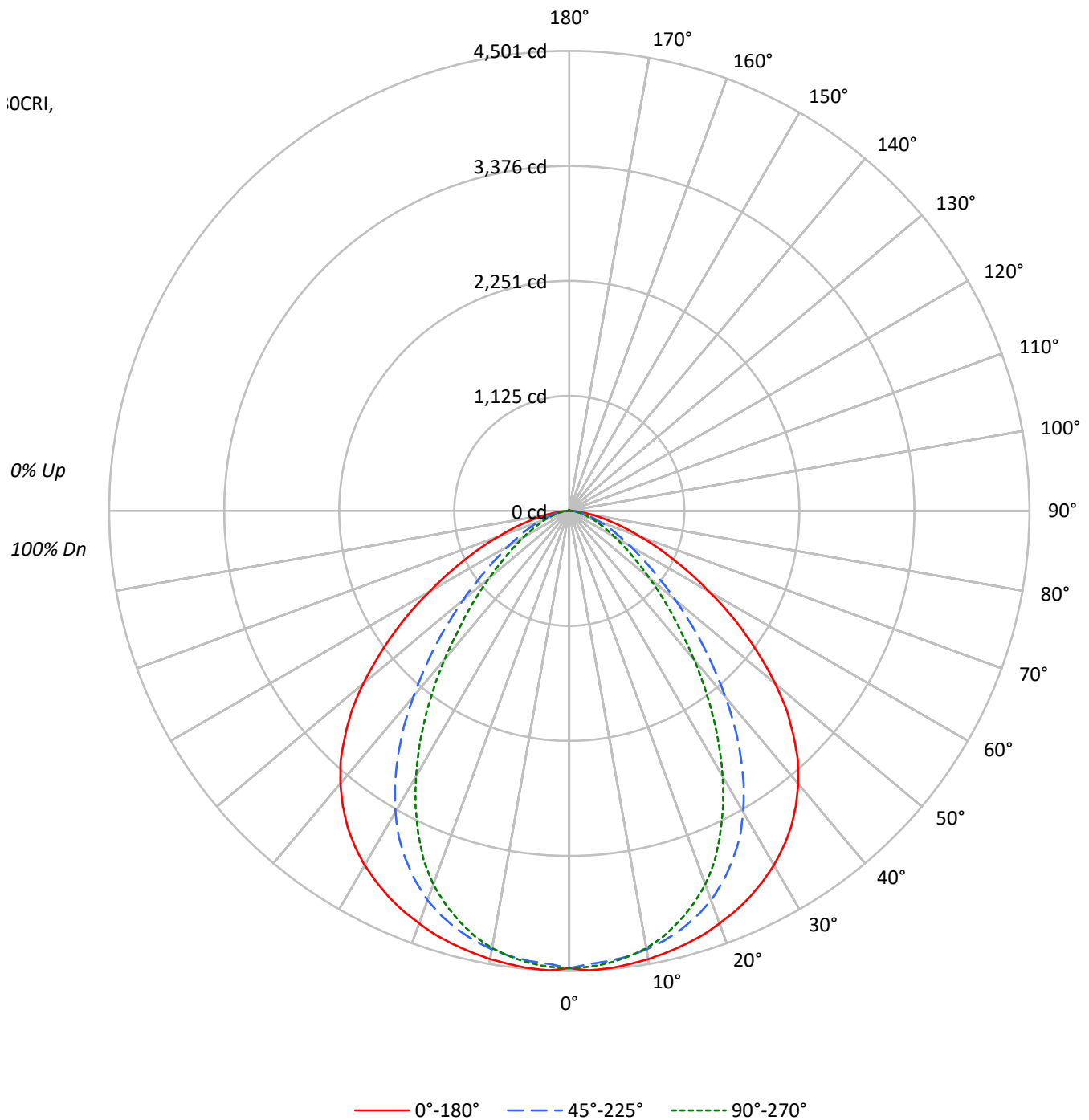
Summary

Lumens per Lamp: N/A
Luminaire Lumens: 8844.0 lumens
Efficiency: N/A
Efficacy: 152.7 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	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	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°	45566	45566	45566
5°	45921	45205	45404
10°	46049	45049	44930
15°	46275	44666	43825
20°	46548	43943	42145
25°	46878	42432	39242
30°	47076	39994	35278
35°	47002	36293	30460
40°	46310	31533	25260
45°	44625	26458	20338
50°	41669	21460	16148
55°	37328	17136	12930
60°	32105	13985	10569
65°	26953	11627	8743
70°	22002	9773	7501
75°	17451	8271	6386
80°	13577	7073	5513
85°	10470	6322	4768

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
 Vertical Angle: 45°
 Luminance: 44625 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	423.2	4.8
10°-20°	1201.4	13.6
20°-30°	1748.3	19.8
30°-40°	1879.5	21.3
40°-50°	1569.6	17.7
50°-60°	1054.3	11.9
60°-70°	598.9	6.8
70°-80°	272.8	3.1
80°-90°	69.7	0.8
90°-100°	7.8	0.1
100°-110°	5.6	0.1
110°-120°	3.3	0.0
120°-130°	2.3	0.0
130°-140°	2.1	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°	3372.9	38.1
0°-40°	5252.4	59.4
0°-60°	7876.3	89.1
0°-90°	8817.7	99.7
90°-120°	16.7	0.2
90°-150°	23.0	0.3
90°-180°	26.0	0.3
0°-180°	8844.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	4474	4474	4474	4474	4474	
5°	4492	4480	4422	4457	4441	427
15°	4389	4354	4236	4203	4157	1240
25°	4172	4051	3776	3580	3492	1923
35°	3780	3477	2919	2570	2450	2359
45°	3098	2556	1837	1503	1412	2382
55°	2102	1512	965	774	728	1879
65°	1118	769	482	387	363	1124
75°	444	320	210	171	162	488
85°	90	73	54	44	41	102
90°	12	10	7	6	5	11
95°	14	10	6	4	4	11
105°	11	8	4	3	2	11
115°	5	4	3	2	2	6
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°	4474.2	4474.2	4474.2	4474.2	4474.2
2.5°	4500.8	4488.4	4437.8	4476.8	4466.2
5°	4491.9	4479.5	4421.8	4457.3	4441.3
7.5°	4475.1	4462.6	4395.2	4420.9	4399.7
10°	4452.9	4435.1	4356.2	4363.3	4344.7
12.5°	4423.6	4397.0	4303.9	4291.4	4262.2
15°	4389.0	4353.5	4236.4	4202.7	4156.6
17.5°	4349.1	4297.6	4154.8	4083.9	4033.3
20°	4295.0	4229.3	4054.6	3941.9	3888.7
22.5°	4239.1	4149.5	3925.1	3776.1	3712.2
25°	4171.7	4051.1	3776.1	3580.0	3492.2
27.5°	4091.0	3940.2	3608.4	3361.8	3257.2
30°	4003.2	3809.8	3400.9	3117.0	2999.9
32.5°	3897.6	3656.3	3173.8	2849.1	2727.6
35°	3780.5	3477.1	2919.2	2569.7	2450.0
37.5°	3638.6	3269.6	2654.9	2284.1	2168.8
40°	3483.4	3055.8	2371.9	2000.2	1900.0
42.5°	3308.6	2809.2	2096.9	1739.5	1631.2
45°	3098.4	2555.5	1837.0	1502.6	1412.1
47.5°	2883.7	2275.2	1578.0	1274.7	1209.9
50°	2630.0	2011.8	1354.5	1085.7	1019.2
52.5°	2366.6	1752.8	1146.0	921.6	862.2
55°	2102.3	1511.5	965.1	773.5	728.2
57.5°	1845.0	1289.7	811.6	653.7	614.7
60°	1576.2	1094.6	686.6	550.8	518.9
62.5°	1345.6	925.2	576.6	463.9	437.3
65°	1118.5	769.1	482.5	386.7	362.8
67.5°	927.8	635.1	400.0	321.1	300.7
70°	738.9	517.1	328.2	265.2	251.9
72.5°	589.0	412.5	266.1	215.5	202.2
75°	443.5	320.2	210.2	171.2	162.3
77.5°	333.5	243.0	162.3	133.1	123.3
80°	231.5	173.9	120.6	98.5	94.0
82.5°	148.1	119.7	83.4	70.1	64.8
85°	89.6	72.7	54.1	43.5	40.8
87.5°	42.6	35.5	27.5	21.3	19.5
90°	11.5	9.8	7.1	6.2	5.3
92.5°	13.3	9.8	6.2	4.4	3.5
95°	14.2	9.8	6.2	3.5	3.5
97.5°	14.2	10.6	5.3	3.5	2.7
100°	13.3	9.8	5.3	3.5	2.7
102.5°	11.5	8.9	4.4	2.7	2.7
105°	10.6	8.0	4.4	2.7	1.8
107.5°	8.9	7.1	3.5	2.7	1.8
110°	8.0	6.2	3.5	2.7	1.8



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CANDELA DISTRIBUTION (continued):

	0°	22.5°	45°	67.5°	90°
112.5°	6.2	5.3	3.5	2.7	1.8
115°	5.3	4.4	2.7	1.8	1.8
117.5°	4.4	3.5	2.7	1.8	1.8
120°	4.4	3.5	2.7	1.8	1.8
122.5°	3.5	3.5	2.7	1.8	1.8
125°	3.5	2.7	2.7	1.8	1.8
127.5°	2.7	2.7	2.7	1.8	1.8
130°	2.7	2.7	2.7	2.7	1.8
132.5°	2.7	2.7	2.7	2.7	1.8
135°	2.7	2.7	2.7	2.7	2.7
137.5°	2.7	2.7	2.7	2.7	2.7
140°	2.7	2.7	2.7	2.7	2.7
142.5°	2.7	2.7	3.5	2.7	2.7
145°	2.7	2.7	3.5	3.5	2.7
147.5°	2.7	2.7	3.5	3.5	3.5
150°	2.7	2.7	3.5	3.5	3.5
152.5°	2.7	3.5	3.5	3.5	3.5
155°	2.7	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	23.57	25.00	23.94	25.32	25.65	18.25	19.68	18.62	20.00	20.32
	3H	24.89	26.16	25.27	26.50	26.87	19.26	20.54	19.64	20.87	21.24
	4H	25.30	26.50	25.71	26.85	27.24	19.60	20.80	20.01	21.15	21.54
	6H	25.56	26.67	25.98	27.04	27.44	19.83	20.93	20.25	21.30	21.70
	8H	25.63	26.67	26.06	27.07	27.48	19.90	20.94	20.33	21.34	21.75
	12H	25.66	26.66	26.10	27.05	27.48	19.94	20.94	20.37	21.32	21.76
4H	2H	23.56	24.76	23.97	25.11	25.50	18.89	20.09	19.30	20.44	20.83
	3H	25.04	26.02	25.45	26.43	26.84	20.09	21.07	20.50	21.48	21.89
	4H	25.55	26.43	25.99	26.85	27.30	20.51	21.39	20.94	21.81	22.26
	6H	25.92	26.68	26.38	27.13	27.60	20.82	21.58	21.28	22.03	22.50
	8H	26.01	26.73	26.49	27.18	27.65	20.91	21.63	21.38	22.08	22.55
	12H	26.08	26.72	26.57	27.20	27.68	20.98	21.61	21.47	22.10	22.58
8H	4H	25.53	26.24	26.00	26.69	27.17	20.85	21.56	21.32	22.01	22.49
	6H	25.95	26.53	26.45	27.03	27.52	21.24	21.83	21.75	22.33	22.81
	8H	26.09	26.61	26.61	27.13	27.63	21.38	21.91	21.90	22.43	22.92
	12H	26.20	26.67	26.72	27.17	27.74	21.50	21.97	22.02	22.46	23.04
12H	4H	25.50	26.13	25.99	26.62	27.10	20.89	21.53	21.38	22.01	22.49
	6H	25.91	26.44	26.43	26.96	27.45	21.31	21.83	21.83	22.35	22.85
	8H	26.08	26.55	26.60	27.05	27.62	21.50	21.96	22.01	22.46	23.04