

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: P893909

Luminaire Tested: 4MB-8HL-AOL-UNV-L930

Issue Date: 11/11/2024

Test Information

Test Method: LM-79-2019
Report Number: P893909
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-L930
Description: 8000 Lumen 4FT MICROBAY LINEAR BAY with AISLE OPTICS WITH CLEAR LENS NO UPLIGHT, 9
3000K CCT
Light Source: -
Ballast/Driver: -

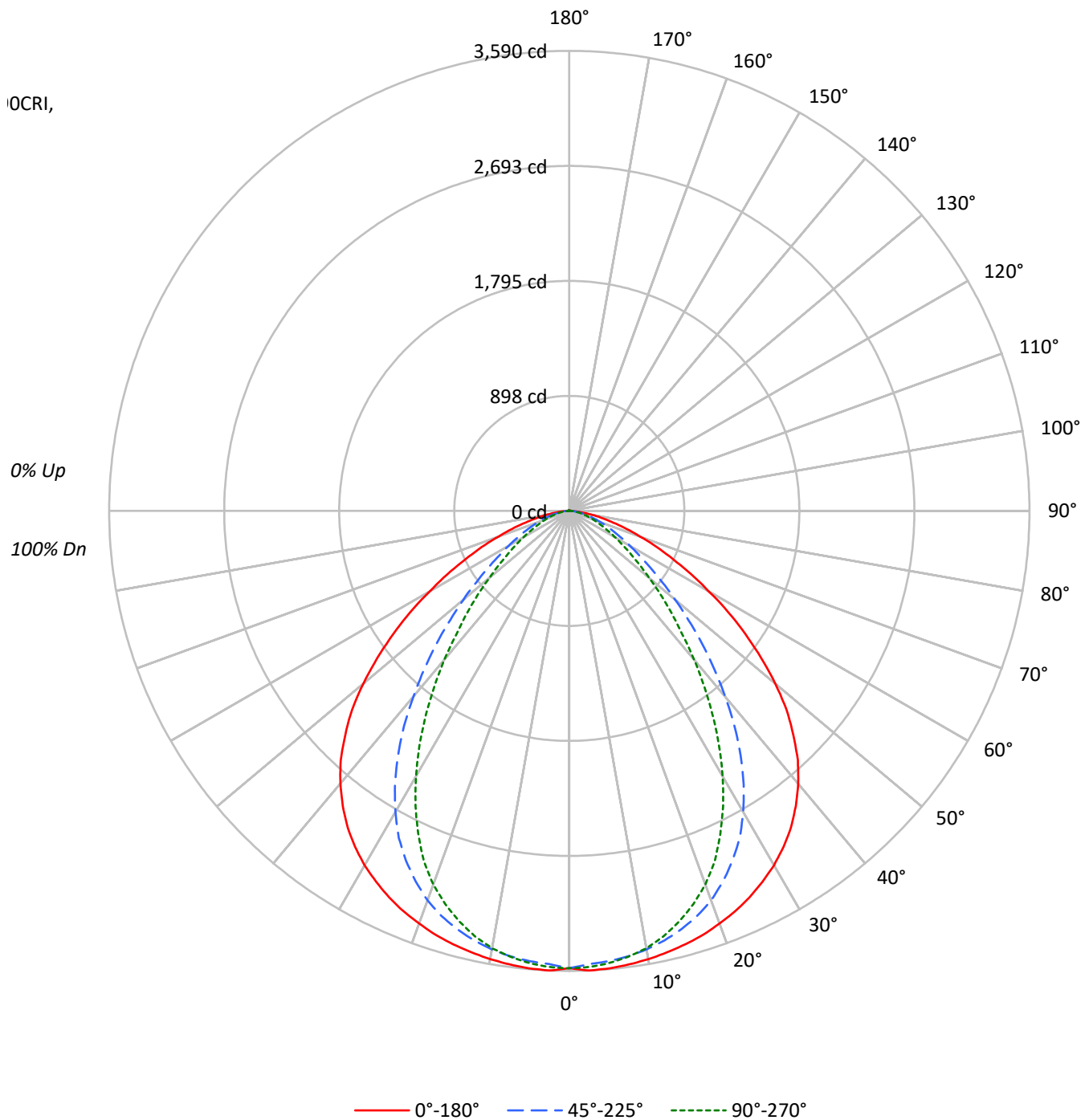
Summary

Lumens per Lamp: N/A
Luminaire Lumens: 7054.9 lumens
Efficiency: N/A
Efficacy: 121.8 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	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°	36348	36348	36348
5°	36632	36061	36219
10°	36733	35936	35841
15°	36915	35632	34960
20°	37133	35054	33620
25°	37395	33848	31304
30°	37553	31903	28142
35°	37494	28952	24298
40°	36942	25155	20151
45°	35598	21106	16225
50°	33240	17119	12881
55°	29776	13670	10314
60°	25611	11156	8430
65°	21503	9275	6974
70°	17550	7796	5985
75°	13922	6599	5096
80°	10832	5642	4399
85°	8355	5048	3798

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
 Vertical Angle: 45°
 Luminance: 35598 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	337.6	4.8
10°-20°	958.4	13.6
20°-30°	1394.6	19.8
30°-40°	1499.3	21.3
40°-50°	1252.1	17.7
50°-60°	841.0	11.9
60°-70°	477.8	6.8
70°-80°	217.6	3.1
80°-90°	55.6	0.8
90°-100°	6.2	0.1
100°-110°	4.5	0.1
110°-120°	2.6	0.0
120°-130°	1.8	0.0
130°-140°	1.6	0.0
140°-150°	1.5	0.0
150°-160°	1.3	0.0
160°-170°	1.0	0.0
170°-180°	0.4	0.0
0°-30°	2690.6	38.1
0°-40°	4189.9	59.4
0°-60°	6283.0	89.1
0°-90°	7034.0	99.7
90°-120°	13.3	0.2
90°-150°	18.2	0.3
90°-180°	21.0	0.3
0°-180°	7054.9	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	3569	3569	3569	3569	3569	
5°	3583	3573	3527	3556	3543	341
15°	3501	3473	3380	3353	3316	990
25°	3328	3232	3012	2856	2786	1534
35°	3016	2774	2329	2050	1954	1882
45°	2472	2039	1465	1199	1126	1900
55°	1677	1206	770	617	581	1499
65°	892	614	385	308	289	896
75°	354	255	168	137	130	389
85°	72	58	43	35	32	81
90°	9	8	6	5	4	9
95°	11	8	5	3	3	9
105°	8	6	4	2	1	9
115°	4	4	2	1	1	4
125°	3	2	2	1	1	2
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	4	4	1
175°	3	4	4	4	4	0
180°	4	4	4	4	4	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	3569.1	3569.1	3569.1	3569.1	3569.1
2.5°	3590.3	3580.4	3540.1	3571.2	3562.7
5°	3583.3	3573.4	3527.4	3555.7	3542.9
7.5°	3569.8	3559.9	3506.1	3526.7	3509.7
10°	3552.1	3538.0	3475.0	3480.7	3465.8
12.5°	3528.8	3507.6	3433.3	3423.3	3400.0
15°	3501.2	3472.9	3379.5	3352.6	3315.8
17.5°	3469.3	3428.3	3314.4	3257.8	3217.4
20°	3426.2	3373.8	3234.4	3144.6	3102.1
22.5°	3381.6	3310.1	3131.1	3012.2	2961.3
25°	3327.8	3231.6	3012.2	2855.9	2785.8
27.5°	3263.4	3143.1	2878.5	2681.8	2598.3
30°	3193.4	3039.1	2712.9	2486.5	2393.1
32.5°	3109.2	2916.7	2531.8	2272.8	2175.9
35°	3015.8	2773.8	2328.7	2049.9	1954.4
37.5°	2902.6	2608.2	2117.8	1822.1	1730.1
40°	2778.7	2437.7	1892.1	1595.6	1515.7
42.5°	2639.3	2241.0	1672.8	1387.6	1301.3
45°	2471.6	2038.6	1465.4	1198.7	1126.5
47.5°	2300.4	1815.0	1258.8	1016.8	965.2
50°	2098.0	1604.8	1080.5	866.1	813.0
52.5°	1887.9	1398.2	914.2	735.2	687.8
55°	1677.0	1205.7	769.9	617.0	580.9
57.5°	1471.8	1028.8	647.4	521.5	490.4
60°	1257.4	873.2	547.7	439.4	413.9
62.5°	1073.4	738.0	459.9	370.1	348.8
65°	892.3	613.5	384.9	308.5	289.4
67.5°	740.1	506.6	319.1	256.1	239.9
70°	589.4	412.5	261.8	211.6	201.0
72.5°	469.8	329.0	212.3	171.9	161.3
75°	353.8	255.4	167.7	136.6	129.5
77.5°	266.1	193.9	129.5	106.1	98.4
80°	184.7	138.7	96.2	78.5	75.0
82.5°	118.2	95.5	66.5	55.9	51.7
85°	71.5	58.0	43.2	34.7	32.5
87.5°	34.0	28.3	21.9	17.0	15.6
90°	9.2	7.8	5.7	5.0	4.2
92.5°	10.6	7.8	5.0	3.5	2.8
95°	11.3	7.8	5.0	2.8	2.8
97.5°	11.3	8.5	4.2	2.8	2.1
100°	10.6	7.8	4.2	2.8	2.1
102.5°	9.2	7.1	3.5	2.1	2.1
105°	8.5	6.4	3.5	2.1	1.4
107.5°	7.1	5.7	2.8	2.1	1.4
110°	6.4	5.0	2.8	2.1	1.4



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CANDELA DISTRIBUTION (continued):

	0°	22.5°	45°	67.5°	90°
112.5°	5.0	4.2	2.8	2.1	1.4
115°	4.2	3.5	2.1	1.4	1.4
117.5°	3.5	2.8	2.1	1.4	1.4
120°	3.5	2.8	2.1	1.4	1.4
122.5°	2.8	2.8	2.1	1.4	1.4
125°	2.8	2.1	2.1	1.4	1.4
127.5°	2.1	2.1	2.1	1.4	1.4
130°	2.1	2.1	2.1	2.1	1.4
132.5°	2.1	2.1	2.1	2.1	1.4
135°	2.1	2.1	2.1	2.1	2.1
137.5°	2.1	2.1	2.1	2.1	2.1
140°	2.1	2.1	2.1	2.1	2.1
142.5°	2.1	2.1	2.8	2.1	2.1
145°	2.1	2.1	2.8	2.8	2.1
147.5°	2.1	2.1	2.8	2.8	2.8
150°	2.1	2.1	2.8	2.8	2.8
152.5°	2.1	2.8	2.8	2.8	2.8
155°	2.1	2.8	2.8	2.8	2.8
157.5°	2.8	2.8	2.8	3.5	3.5
160°	2.8	2.8	3.5	3.5	3.5
162.5°	2.8	2.8	3.5	3.5	3.5
165°	2.8	2.8	3.5	4.2	4.2
167.5°	2.8	3.5	3.5	4.2	4.2
170°	2.8	3.5	3.5	4.2	4.2
172.5°	2.8	3.5	4.2	4.2	4.2
175°	2.8	3.5	4.2	4.2	4.2
177.5°	3.5	3.5	4.2	4.2	4.2
180°	4.2	4.2	4.2	4.2	4.2



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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	22.79	24.22	23.16	24.54	24.86	17.46	18.90	17.83	19.22	19.54
	3H	24.10	25.38	24.48	25.71	26.09	18.47	19.75	18.86	20.09	20.46
	4H	24.52	25.71	24.92	26.07	26.46	18.82	20.01	19.22	20.37	20.75
	6H	24.78	25.88	25.20	26.25	26.65	19.04	20.14	19.46	20.52	20.92
	8H	24.84	25.89	25.27	26.28	26.69	19.11	20.16	19.54	20.55	20.96
	12H	24.87	25.87	25.31	26.26	26.70	19.15	20.15	19.59	20.54	20.98
4H	2H	22.78	23.97	23.18	24.33	24.72	18.11	19.30	18.51	19.66	20.05
	3H	24.25	25.23	24.67	25.64	26.05	19.30	20.28	19.72	20.69	21.10
	4H	24.76	25.64	25.20	26.07	26.51	19.72	20.60	20.16	21.03	21.47
	6H	25.13	25.89	25.60	26.34	26.81	20.03	20.80	20.50	21.25	21.72
	8H	25.23	25.94	25.70	26.39	26.87	20.13	20.84	20.60	21.29	21.77
	12H	25.30	25.93	25.79	26.42	26.90	20.19	20.83	20.68	21.31	21.79
8H	4H	24.74	25.45	25.21	25.90	26.38	20.06	20.78	20.53	21.23	21.70
	6H	25.16	25.75	25.66	26.25	26.73	20.46	21.04	20.96	21.54	22.03
	8H	25.30	25.83	25.82	26.34	26.84	20.60	21.12	21.12	21.64	22.14
	12H	25.42	25.88	25.94	26.38	26.96	20.71	21.18	21.23	21.68	22.25
12H	4H	24.71	25.35	25.20	25.83	26.31	20.11	20.74	20.60	21.23	21.71
	6H	25.13	25.65	25.65	26.17	26.67	20.52	21.05	21.04	21.57	22.06
	8H	25.30	25.77	25.82	26.26	26.84	20.71	21.18	21.23	21.68	22.25