

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: P893910

Luminaire Tested: 4MB-8HL-AOL-UNV-L935

Issue Date: 11/11/2024

Test Information

Test Method: LM-79-2019
Report Number: P893910
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-L935
Description: 8000 Lumen 4FT MICROBAY LINEAR BAY with AISLE OPTICS WITH CLEAR LENS NO UPLIGHT, 9
3500K CCT
Light Source: -
Ballast/Driver: -

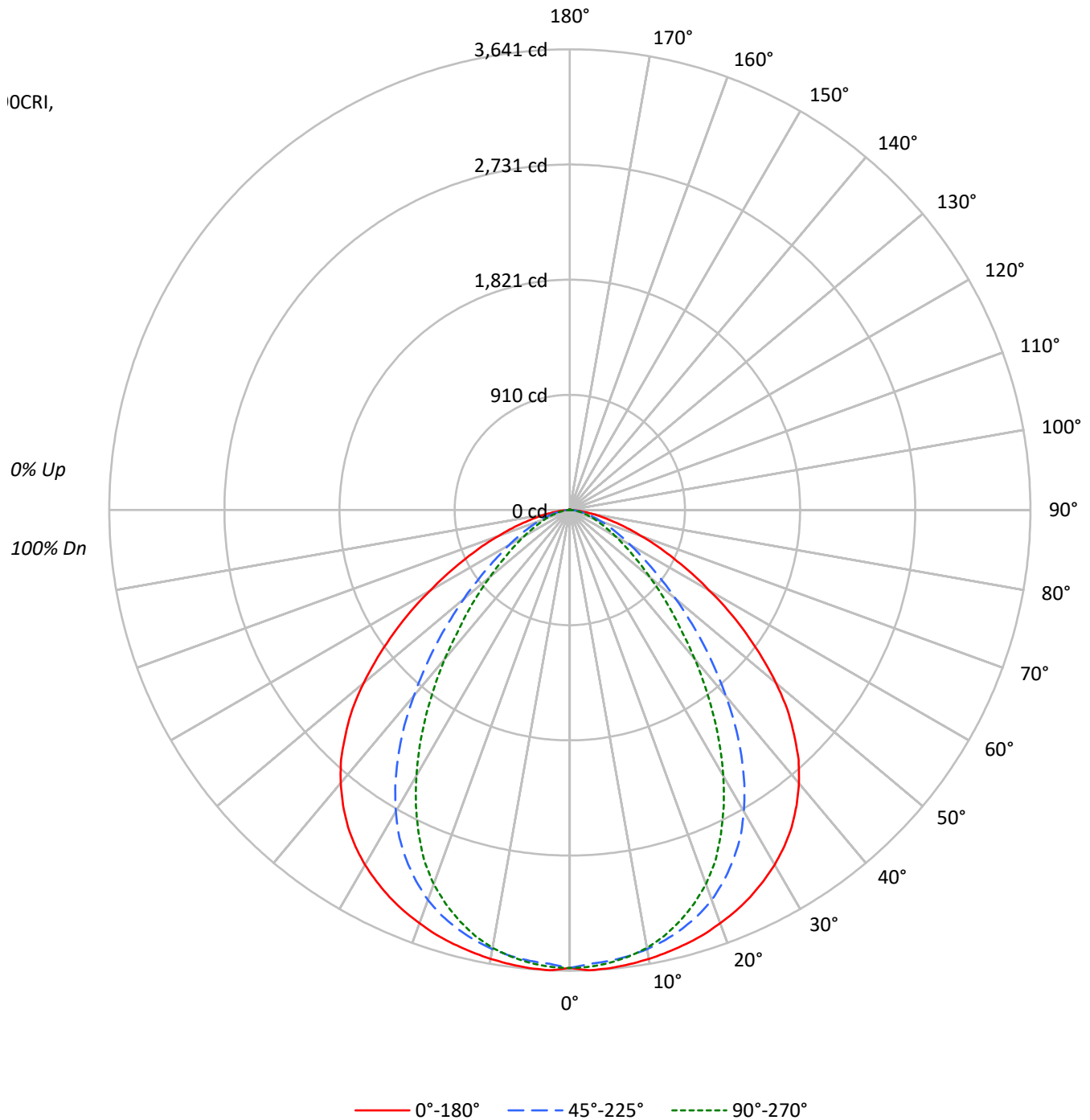
Summary

Lumens per Lamp: N/A
Luminaire Lumens: 7155.1 lumens
Efficiency: N/A
Efficacy: 123.6 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): 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°	36864	36864	36864
5°	37152	36572	36733
10°	37255	36446	36349
15°	37438	36137	35456
20°	37658	35551	34097
25°	37925	34328	31748
30°	38085	32356	28541
35°	38025	29362	24643
40°	37465	25511	20436
45°	36103	21405	16455
50°	33712	17362	13065
55°	30199	13864	10462
60°	25974	11313	8551
65°	21806	9408	7073
70°	17800	7906	6068
75°	14118	6693	5166
80°	10985	5724	4463
85°	8472	5118	3856

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
 Vertical Angle: 45°
 Luminance: 36103 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	342.4	4.8
10°-20°	972.0	13.6
20°-30°	1414.4	19.8
30°-40°	1520.5	21.3
40°-50°	1269.9	17.7
50°-60°	852.9	11.9
60°-70°	484.5	6.8
70°-80°	220.7	3.1
80°-90°	56.4	0.8
90°-100°	6.3	0.1
100°-110°	4.6	0.1
110°-120°	2.7	0.0
120°-130°	1.8	0.0
130°-140°	1.7	0.0
140°-150°	1.6	0.0
150°-160°	1.4	0.0
160°-170°	1.0	0.0
170°-180°	0.4	0.0
0°-30°	2728.8	38.1
0°-40°	4249.3	59.4
0°-60°	6372.1	89.1
0°-90°	7133.7	99.7
90°-120°	13.6	0.2
90°-150°	18.6	0.3
90°-180°	21.0	0.3
0°-180°	7155.1	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	3620	3620	3620	3620	3620	
5°	3634	3624	3577	3606	3593	346
15°	3551	3522	3427	3400	3363	1004
25°	3375	3277	3055	2896	2825	1556
35°	3058	2813	2362	2079	1982	1908
45°	2507	2068	1486	1216	1142	1927
55°	1701	1223	781	626	589	1520
65°	905	622	390	313	294	909
75°	359	259	170	138	131	394
85°	72	59	44	35	33	82
90°	9	8	6	5	4	9
95°	12	8	5	3	3	9
105°	9	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°	3619.7	3619.7	3619.7	3619.7	3619.7
2.5°	3641.2	3631.2	3590.3	3621.9	3613.2
5°	3634.1	3624.0	3577.4	3606.1	3593.1
7.5°	3620.4	3610.4	3555.8	3576.6	3559.4
10°	3602.5	3588.1	3524.3	3530.0	3514.9
12.5°	3578.8	3557.3	3481.9	3471.9	3448.2
15°	3550.8	3522.1	3427.4	3400.1	3362.8
17.5°	3518.5	3476.9	3361.4	3303.9	3263.0
20°	3474.7	3421.6	3280.3	3189.1	3146.1
22.5°	3429.5	3357.1	3175.5	3054.9	3003.3
25°	3375.0	3277.4	3054.9	2896.3	2825.3
27.5°	3309.7	3187.7	2919.3	2719.8	2635.1
30°	3238.6	3082.2	2751.4	2521.7	2427.0
32.5°	3153.2	2958.1	2567.7	2305.0	2206.7
35°	3058.5	2813.1	2361.7	2079.0	1982.1
37.5°	2943.7	2645.2	2147.9	1847.9	1754.6
40°	2818.1	2472.2	1918.9	1618.2	1537.2
42.5°	2676.7	2272.7	1696.5	1407.3	1319.7
45°	2506.7	2067.5	1486.2	1215.7	1142.5
47.5°	2333.0	1840.7	1276.7	1031.2	978.8
50°	2127.8	1627.6	1095.8	878.4	824.6
52.5°	1914.6	1418.0	927.2	745.6	697.5
55°	1700.8	1222.8	780.8	625.8	589.2
57.5°	1492.7	1043.4	656.6	528.9	497.3
60°	1275.2	885.5	555.4	445.6	419.8
62.5°	1088.6	748.5	466.5	375.3	353.8
65°	904.9	622.2	390.4	312.9	293.5
67.5°	750.6	513.8	323.6	259.8	243.3
70°	597.8	418.4	265.5	214.6	203.8
72.5°	476.5	333.7	215.3	174.4	163.6
75°	358.8	259.1	170.1	138.5	131.3
77.5°	269.8	196.6	131.3	107.6	99.7
80°	187.3	140.7	97.6	79.7	76.1
82.5°	119.8	96.9	67.5	56.7	52.4
85°	72.5	58.8	43.8	35.2	33.0
87.5°	34.4	28.7	22.2	17.2	15.8
90°	9.3	7.9	5.7	5.0	4.3
92.5°	10.8	7.9	5.0	3.6	2.9
95°	11.5	7.9	5.0	2.9	2.9
97.5°	11.5	8.6	4.3	2.9	2.2
100°	10.8	7.9	4.3	2.9	2.2
102.5°	9.3	7.2	3.6	2.2	2.2
105°	8.6	6.5	3.6	2.2	1.4
107.5°	7.2	5.7	2.9	2.2	1.4
110°	6.5	5.0	2.9	2.2	1.4



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CANDELA DISTRIBUTION (continued):

	0°	22.5°	45°	67.5°	90°
112.5°	5.0	4.3	2.9	2.2	1.4
115°	4.3	3.6	2.2	1.4	1.4
117.5°	3.6	2.9	2.2	1.4	1.4
120°	3.6	2.9	2.2	1.4	1.4
122.5°	2.9	2.9	2.2	1.4	1.4
125°	2.9	2.2	2.2	1.4	1.4
127.5°	2.2	2.2	2.2	1.4	1.4
130°	2.2	2.2	2.2	2.2	1.4
132.5°	2.2	2.2	2.2	2.2	1.4
135°	2.2	2.2	2.2	2.2	2.2
137.5°	2.2	2.2	2.2	2.2	2.2
140°	2.2	2.2	2.2	2.2	2.2
142.5°	2.2	2.2	2.9	2.2	2.2
145°	2.2	2.2	2.9	2.9	2.2
147.5°	2.2	2.2	2.9	2.9	2.9
150°	2.2	2.2	2.9	2.9	2.9
152.5°	2.2	2.9	2.9	2.9	2.9
155°	2.2	2.9	2.9	2.9	2.9
157.5°	2.9	2.9	2.9	3.6	3.6
160°	2.9	2.9	3.6	3.6	3.6
162.5°	2.9	2.9	3.6	3.6	3.6
165°	2.9	2.9	3.6	4.3	4.3
167.5°	2.9	3.6	3.6	4.3	4.3
170°	2.9	3.6	3.6	4.3	4.3
172.5°	2.9	3.6	4.3	4.3	4.3
175°	2.9	3.6	4.3	4.3	4.3
177.5°	3.6	3.6	4.3	4.3	4.3
180°	4.3	4.3	4.3	4.3	4.3



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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	22.83	24.27	23.20	24.59	24.91	17.51	18.95	17.88	19.27	19.59
	3H	24.15	25.43	24.53	25.76	26.13	18.52	19.80	18.91	20.14	20.51
	4H	24.57	25.76	24.97	26.12	26.51	18.86	20.06	19.27	20.42	20.80
	6H	24.83	25.93	25.25	26.30	26.70	19.09	20.19	19.51	20.57	20.97
	8H	24.89	25.94	25.32	26.33	26.74	19.16	20.21	19.59	20.60	21.01
	12H	24.92	25.92	25.36	26.31	26.75	19.20	20.20	19.64	20.59	21.03
4H	2H	22.83	24.02	23.23	24.38	24.77	18.16	19.35	18.56	19.71	20.10
	3H	24.30	25.28	24.72	25.69	26.10	19.35	20.33	19.77	20.74	21.15
	4H	24.81	25.69	25.25	26.12	26.56	19.77	20.65	20.21	21.07	21.52
	6H	25.18	25.94	25.64	26.39	26.86	20.08	20.85	20.55	21.30	21.77
	8H	25.28	25.99	25.75	26.44	26.92	20.18	20.89	20.65	21.34	21.82
	12H	25.35	25.98	25.83	26.47	26.95	20.24	20.88	20.73	21.36	21.84
8H	4H	24.79	25.50	25.26	25.95	26.43	20.11	20.82	20.58	21.28	21.75
	6H	25.21	25.80	25.71	26.29	26.78	20.51	21.09	21.01	21.59	22.08
	8H	25.35	25.88	25.87	26.39	26.89	20.65	21.17	21.17	21.69	22.19
	12H	25.47	25.93	25.98	26.43	27.01	20.76	21.23	21.28	21.73	22.30
12H	4H	24.76	25.39	25.25	25.88	26.36	20.16	20.79	20.64	21.28	21.76
	6H	25.17	25.70	25.70	26.22	26.72	20.57	21.10	21.09	21.62	22.11
	8H	25.35	25.81	25.87	26.31	26.89	20.76	21.23	21.28	21.73	22.30