

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: P893809

Luminaire Tested: 4MB-7HL-AOL-UNV-L830

Issue Date: 11/11/2024

Test Information

Test Method: LM-79-2019
Report Number: P893809
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-7HL-AOL-UNV-L830
Description: 7000 Lumen 4FT MICROBAY LINEAR BAY with AISLE OPTICS WITH CLEAR LENS NO UPLIGHT, 8
3000K CCT
Light Source: -
Ballast/Driver: -

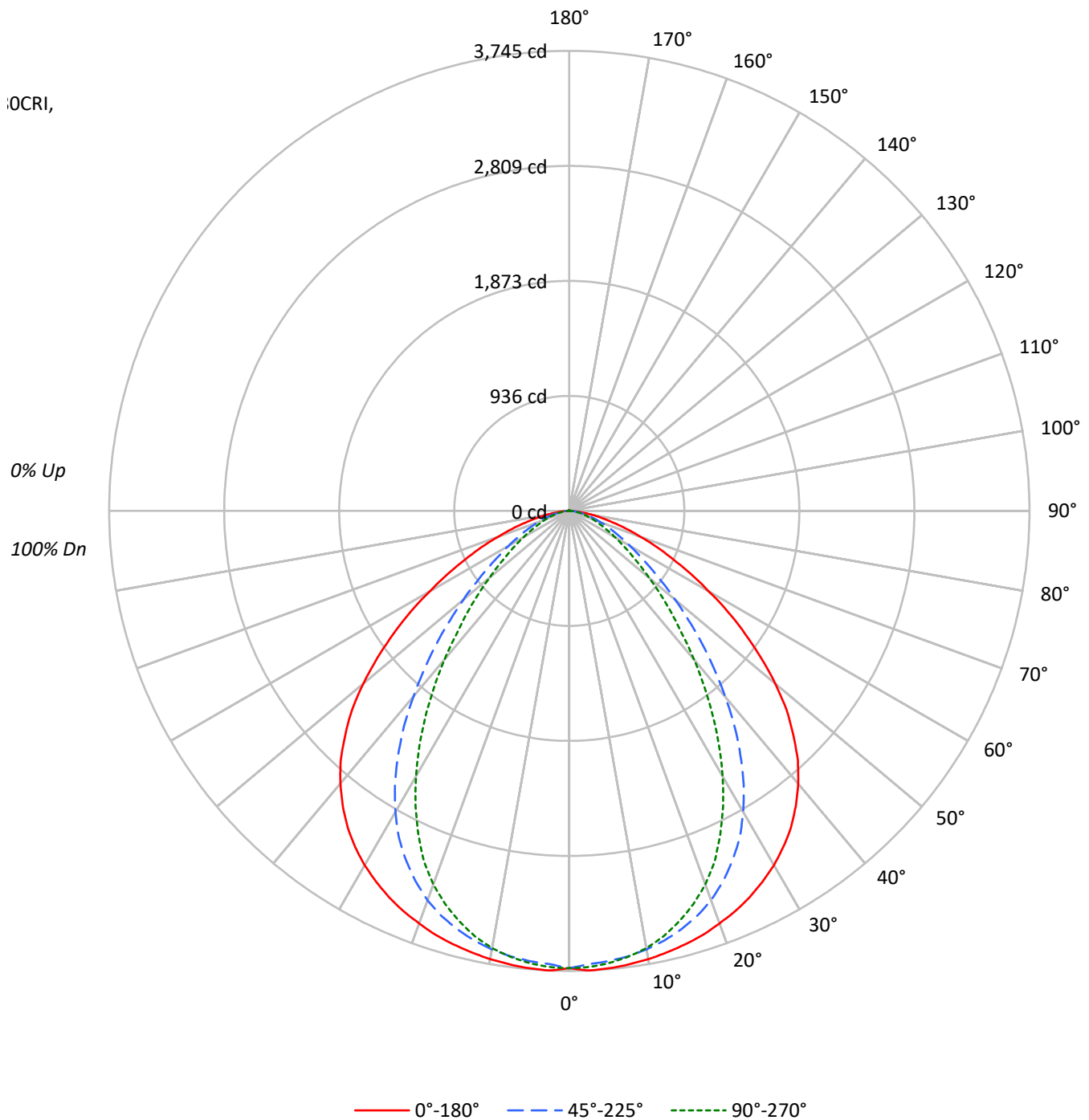
Summary

Lumens per Lamp: N/A
Luminaire Lumens: 7359.0 lumens
Efficiency: N/A
Efficacy: 142.1 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): 51.8
Input Voltage (V): 120
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: 0.99
Total Harmonic Distortion (THDi): 4
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 24 FT

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CATALOG NUMBER: 4MB-7HL-AOL-UNV-L830

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°	37915	37915	37915
5°	38211	37615	37781
10°	38317	37484	37385
15°	38505	37167	36467
20°	38732	36565	35069
25°	39006	35307	32653
30°	39172	33278	29355
35°	39109	30199	25345
40°	38534	26238	21019
45°	37131	22016	16923
50°	34673	17858	13437
55°	31060	14258	10760
60°	26715	11636	8795
65°	22428	9675	7275
70°	18307	8132	6241
75°	14520	6882	5316
80°	11296	5888	4586
85°	8705	5258	3973

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
 Vertical Angle: 45°
 Luminance: 37131 cd/sqm



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 CATALOG NUMBER: 4MB-7HL-AOL-UNV-L830

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	352.2	4.8
10°-20°	999.7	13.6
20°-30°	1454.7	19.8
30°-40°	1563.9	21.3
40°-50°	1306.1	17.7
50°-60°	877.3	11.9
60°-70°	498.4	6.8
70°-80°	227.0	3.1
80°-90°	58.0	0.8
90°-100°	6.5	0.1
100°-110°	4.7	0.1
110°-120°	2.8	0.0
120°-130°	1.9	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°	2806.6	38.1
0°-40°	4370.4	59.4
0°-60°	6553.8	89.1
0°-90°	7337.1	99.7
90°-120°	13.9	0.2
90°-150°	19.1	0.3
90°-180°	22.0	0.3
0°-180°	7359.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	3723	3723	3723	3723	3723	
5°	3738	3727	3679	3709	3696	356
15°	3652	3622	3525	3497	3459	1032
25°	3471	3371	3142	2979	2906	1600
35°	3146	2893	2429	2138	2039	1963
45°	2578	2126	1529	1250	1175	1982
55°	1749	1258	803	644	606	1563
65°	931	640	402	322	302	935
75°	369	266	175	142	135	406
85°	74	60	45	36	34	85
90°	10	8	6	5	4	9
95°	12	8	5	3	3	9
105°	9	7	4	2	2	9
115°	4	4	2	2	2	5
125°	3	2	2	2	2	3
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°	3722.9	3722.9	3722.9	3722.9	3722.9
2.5°	3745.0	3734.7	3692.6	3725.1	3716.3
5°	3737.7	3727.3	3679.4	3708.9	3695.6
7.5°	3723.6	3713.3	3657.2	3678.6	3660.9
10°	3705.2	3690.4	3624.7	3630.6	3615.1
12.5°	3680.8	3658.7	3581.2	3570.9	3546.5
15°	3652.0	3622.5	3525.1	3497.1	3458.7
17.5°	3618.8	3576.0	3457.2	3398.1	3356.1
20°	3573.8	3519.2	3373.8	3280.1	3235.8
22.5°	3527.3	3452.8	3266.0	3142.0	3088.9
25°	3471.2	3370.8	3142.0	2978.9	2905.8
27.5°	3404.1	3278.6	3002.5	2797.3	2710.3
30°	3331.0	3170.1	2829.8	2593.6	2496.2
32.5°	3243.1	3042.4	2640.9	2370.7	2269.6
35°	3145.7	2893.3	2429.0	2138.2	2038.6
37.5°	3027.6	2720.6	2209.1	1900.6	1804.6
40°	2898.5	2542.7	1973.6	1664.4	1581.0
42.5°	2753.1	2337.5	1744.8	1447.4	1357.3
45°	2578.1	2126.4	1528.6	1250.3	1175.0
47.5°	2399.5	1893.2	1313.1	1060.6	1006.7
50°	2188.4	1674.0	1127.1	903.4	848.1
52.5°	1969.2	1458.5	953.6	766.9	717.4
55°	1749.3	1257.7	803.0	643.6	606.0
57.5°	1535.2	1073.2	675.3	544.0	511.5
60°	1311.6	910.8	571.3	458.4	431.8
62.5°	1119.7	769.8	479.8	386.0	363.9
65°	930.7	639.9	401.5	321.8	301.9
67.5°	772.0	528.5	332.9	267.2	250.2
70°	614.8	430.3	273.1	220.7	209.6
72.5°	490.1	343.2	221.4	179.4	168.3
75°	369.0	266.4	174.9	142.5	135.1
77.5°	277.5	202.2	135.1	110.7	102.6
80°	192.6	144.7	100.4	81.9	78.2
82.5°	123.3	99.6	69.4	58.3	53.9
85°	74.5	60.5	45.0	36.2	34.0
87.5°	35.4	29.5	22.9	17.7	16.2
90°	9.6	8.1	5.9	5.2	4.4
92.5°	11.1	8.1	5.2	3.7	3.0
95°	11.8	8.1	5.2	3.0	3.0
97.5°	11.8	8.9	4.4	3.0	2.2
100°	11.1	8.1	4.4	3.0	2.2
102.5°	9.6	7.4	3.7	2.2	2.2
105°	8.9	6.6	3.7	2.2	1.5
107.5°	7.4	5.9	3.0	2.2	1.5
110°	6.6	5.2	3.0	2.2	1.5



TEST NUMBER: P893809

CATALOG NUMBER: 4MB-7HL-AOL-UNV-L830

CANDELA DISTRIBUTION (continued):

	0°	22.5°	45°	67.5°	90°
112.5°	5.2	4.4	3.0	2.2	1.5
115°	4.4	3.7	2.2	1.5	1.5
117.5°	3.7	3.0	2.2	1.5	1.5
120°	3.7	3.0	2.2	1.5	1.5
122.5°	3.0	3.0	2.2	1.5	1.5
125°	3.0	2.2	2.2	1.5	1.5
127.5°	2.2	2.2	2.2	1.5	1.5
130°	2.2	2.2	2.2	2.2	1.5
132.5°	2.2	2.2	2.2	2.2	1.5
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	3.0	2.2	2.2
145°	2.2	2.2	3.0	3.0	2.2
147.5°	2.2	2.2	3.0	3.0	3.0
150°	2.2	2.2	3.0	3.0	3.0
152.5°	2.2	3.0	3.0	3.0	3.0
155°	2.2	3.0	3.0	3.0	3.0
157.5°	3.0	3.0	3.0	3.7	3.7
160°	3.0	3.0	3.7	3.7	3.7
162.5°	3.0	3.0	3.7	3.7	3.7
165°	3.0	3.0	3.7	4.4	4.4
167.5°	3.0	3.7	3.7	4.4	4.4
170°	3.0	3.7	3.7	4.4	4.4
172.5°	3.0	3.7	4.4	4.4	4.4
175°	3.0	3.7	4.4	4.4	4.4
177.5°	3.7	3.7	4.4	4.4	4.4
180°	4.4	4.4	4.4	4.4	4.4



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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	22.93	24.37	23.30	24.69	25.01	17.61	19.04	17.98	19.36	19.69
	3H	24.25	25.53	24.63	25.86	26.23	18.62	19.90	19.00	20.23	20.60
	4H	24.66	25.86	25.07	26.22	26.60	18.96	20.16	19.37	20.51	20.90
	6H	24.93	26.03	25.34	26.40	26.80	19.19	20.29	19.61	20.67	21.07
	8H	24.99	26.03	25.42	26.43	26.84	19.26	20.30	19.69	20.70	21.11
	12H	25.02	26.02	25.46	26.41	26.85	19.30	20.30	19.73	20.69	21.12
4H	2H	22.93	24.12	23.33	24.48	24.86	18.26	19.45	18.66	19.81	20.19
	3H	24.40	25.38	24.81	25.79	26.20	19.45	20.43	19.86	20.84	21.25
	4H	24.91	25.79	25.35	26.21	26.66	19.87	20.75	20.31	21.17	21.62
	6H	25.28	26.04	25.74	26.49	26.96	20.18	20.94	20.65	21.39	21.86
	8H	25.38	26.09	25.85	26.54	27.02	20.27	20.99	20.75	21.44	21.91
	12H	25.44	26.08	25.93	26.56	27.04	20.34	20.98	20.83	21.46	21.94
8H	4H	24.89	25.60	25.36	26.05	26.53	20.21	20.92	20.68	21.37	21.85
	6H	25.31	25.89	25.81	26.39	26.88	20.60	21.19	21.11	21.69	22.18
	8H	25.45	25.97	25.97	26.49	26.99	20.74	21.27	21.27	21.79	22.29
	12H	25.56	26.03	26.08	26.53	27.10	20.86	21.33	21.38	21.83	22.40
12H	4H	24.86	25.49	25.35	25.98	26.46	20.25	20.89	20.74	21.37	21.85
	6H	25.27	25.80	25.79	26.32	26.81	20.67	21.20	21.19	21.71	22.21
	8H	25.45	25.91	25.96	26.41	26.99	20.86	21.33	21.38	21.82	22.40