

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: P893801

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

Issue Date: 11/11/2024

Test Information

Test Method: LM-79-2019
Report Number: P893801
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-2404-077-20)
Test Lab: INNOVATION CENTER
Issue Date: 11/11/2024
Manufacturer: COOPER LIGHTING SOLUTIONS
Product Line: METALUX
Catalog Number: 4MB-7HL-ACL-UNV-L830
Description: 7000 Lumen 4FT MICROBAY LINEAR BAY with AISLE OPTICS WITH CLEAR LENS, 80CRI, 3000K (C)
Light Source: -
Ballast/Driver: -

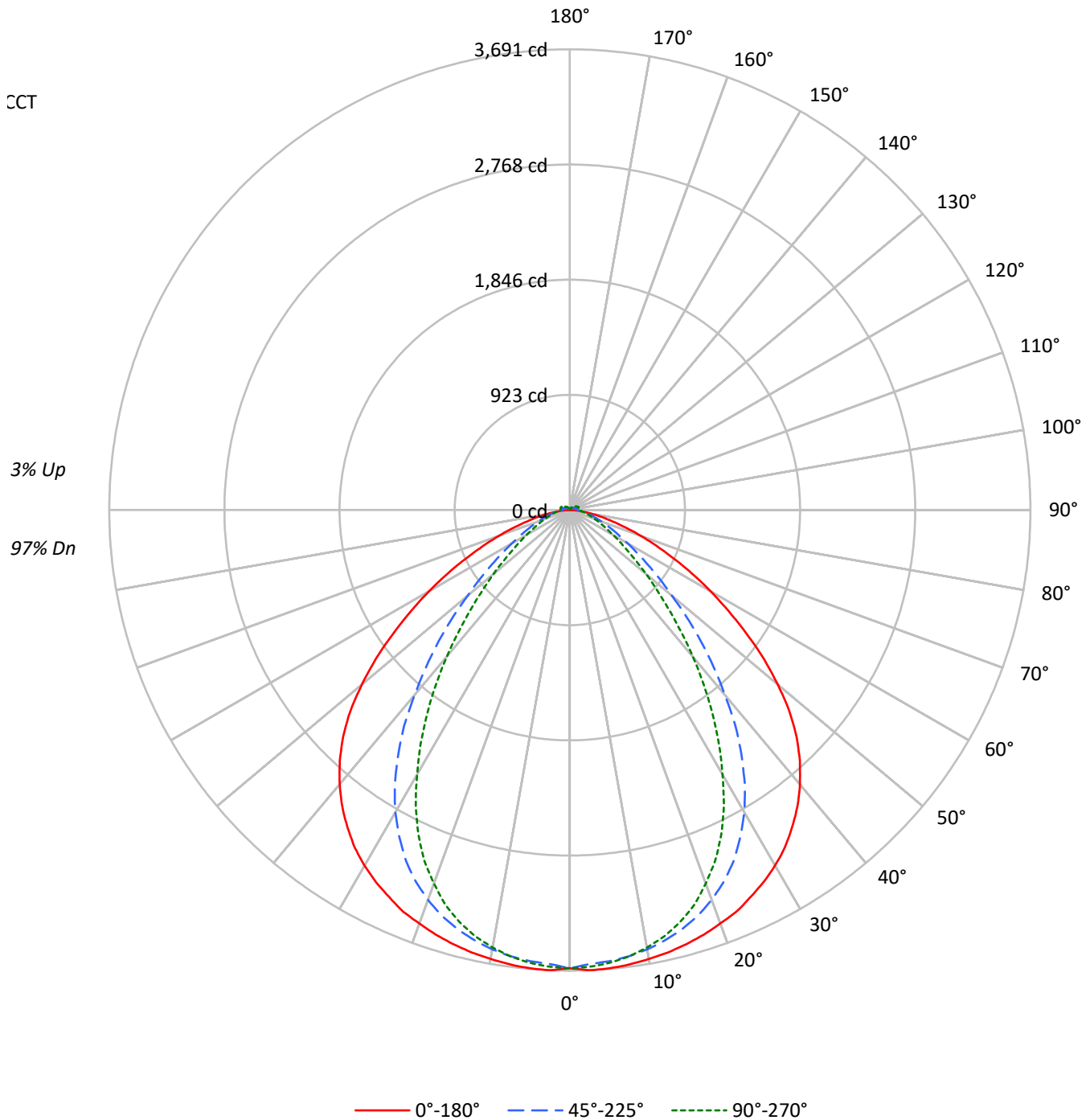
Summary

Lumens per Lamp: N/A
Luminaire Lumens: 7445.0 lumens
Efficiency: N/A
Efficacy: 143.7 lumens/watt
Spacing Criteria (0/90/45): 1.32 / 1.05 / 1.15
Luminous Opening: Rectangular w/ Sides (W: 0.27' x L: 3.98' x H: 0.08')
CIE Type: Direct

Input Watts (W): 51.8
Input Voltage (V): 120
Input Current (A_{in}): 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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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	118	118	118	118	115	115	115	115	110	110	110	104	104	104	100	100	100	97			97
1	110	106	102	99	107	103	100	97	99	96	94	94	92	90	90	89	87	85			85
2	101	94	89	84	99	92	87	83	88	84	80	85	81	78	82	79	76	74			74
3	94	85	78	72	91	83	76	71	80	74	70	77	72	68	74	70	67	65			65
4	87	76	69	63	84	75	68	62	72	66	61	70	64	60	67	63	59	57			57
5	81	69	61	55	78	68	60	55	66	59	54	63	58	53	61	56	52	50			50
6	75	63	55	49	73	62	54	49	60	53	48	58	52	48	56	51	47	45			45
7	70	58	50	44	68	57	49	44	55	48	43	53	47	43	52	47	42	41			41
8	65	53	45	40	64	52	45	40	51	44	39	49	43	39	48	43	39	37			37
9	61	49	41	36	60	48	41	36	47	40	36	46	40	36	45	39	35	34			34
10	58	45	38	33	56	45	38	33	44	37	33	43	37	33	42	36	32	31			31

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	37379	37379	37379
5°	37603	36339	36240
10°	37633	35483	34881
15°	37762	34466	33235
20°	37921	33169	30970
25°	38093	31416	28137
30°	38229	28931	24373
35°	38052	25581	20318
40°	37488	21453	16153
45°	36250	17282	12213
50°	33617	13211	9212
55°	29843	10120	6861
60°	25609	7786	5310
65°	21128	6101	4201
70°	17063	4889	3436
75°	12986	3996	2932
80°	9714	3274	2586
85°	6610	2770	2353

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
 Vertical Angle: 45°
 Luminance: 36250 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	347.2	4.7
10°-20°	985.9	13.2
20°-30°	1435.0	19.3
30°-40°	1540.0	20.7
40°-50°	1274.3	17.1
50°-60°	844.6	11.3
60°-70°	481.2	6.5
70°-80°	238.6	3.2
80°-90°	96.5	1.3
90°-100°	56.7	0.8
100°-110°	50.4	0.7
110°-120°	38.1	0.5
120°-130°	25.3	0.3
130°-140°	15.5	0.2
140°-150°	8.9	0.1
150°-160°	4.5	0.1
160°-170°	1.9	0.0
170°-180°	0.5	0.0
0°-30°	2768.1	37.2
0°-40°	4308.1	57.9
0°-60°	6426.9	86.3
0°-90°	7243.2	97.3
90°-120°	145.2	2.0
90°-150°	194.9	2.6
90°-180°	202.0	2.7
0°-180°	7445.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	3670	3670	3670	3670	3670	
5°	3685	3675	3628	3656	3642	351
15°	3602	3573	3476	3444	3417	1018
25°	3423	3334	3104	2935	2870	1579
35°	3106	2859	2398	2085	1993	1941
45°	2570	2087	1484	1195	1114	1969
55°	1731	1224	762	603	560	1549
65°	916	614	382	308	292	920
75°	356	265	191	167	162	393
85°	70	75	88	93	92	81
90°	10	31	60	73	75	9
95°	11	32	60	73	75	9
105°	9	24	55	70	74	9
115°	5	16	42	60	65	5
125°	3	11	30	44	50	3
135°	2	9	21	31	35	2
145°	3	7	14	21	24	2
155°	3	6	10	13	17	1
165°	4	4	7	8	10	1
175°	4	4	5	5	4	0
180°	4	4	4	4	4	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	3670.3	3670.3	3670.3	3670.3	3670.3
2.5°	3690.9	3682.8	3640.7	3672.5	3662.9
5°	3685.0	3675.4	3628.2	3655.5	3642.2
7.5°	3672.5	3660.7	3607.5	3626.0	3609.7
10°	3652.5	3637.8	3574.3	3578.0	3559.5
12.5°	3631.1	3608.2	3530.7	3520.4	3497.5
15°	3601.6	3572.8	3476.1	3444.4	3417.1
17.5°	3567.6	3527.8	3408.2	3352.1	3316.7
20°	3525.6	3472.4	3324.0	3238.4	3183.8
22.5°	3485.0	3406.7	3223.7	3101.1	3043.5
25°	3423.0	3333.6	3104.1	2935.0	2870.1
27.5°	3361.7	3241.4	2957.2	2749.7	2674.4
30°	3290.1	3132.1	2796.2	2540.8	2447.8
32.5°	3207.4	3012.5	2609.5	2323.8	2224.9
35°	3105.5	2859.0	2398.4	2084.6	1993.1
37.5°	2996.3	2689.9	2180.6	1857.3	1762.8
40°	2869.3	2510.6	1934.0	1621.1	1534.7
42.5°	2728.3	2305.3	1705.2	1398.9	1312.5
45°	2569.6	2086.8	1483.8	1195.1	1113.9
47.5°	2387.3	1863.2	1269.7	1011.3	943.4
50°	2174.7	1639.5	1068.9	848.9	798.7
52.5°	1960.6	1429.1	907.2	719.7	665.8
55°	1731.0	1223.9	762.5	603.1	559.5
57.5°	1508.8	1042.3	637.1	505.7	475.4
60°	1302.9	879.9	538.9	426.7	402.3
62.5°	1105.1	741.9	451.0	361.0	339.6
65°	916.1	614.2	381.6	307.8	291.6
67.5°	750.0	513.0	321.8	262.8	250.2
70°	606.0	414.9	270.9	225.1	214.8
72.5°	471.7	332.9	227.4	194.9	186.0
75°	355.8	265.0	191.2	166.8	161.7
77.5°	268.0	206.0	158.0	143.9	140.3
80°	185.3	153.5	130.7	124.8	122.5
82.5°	118.1	110.0	107.0	107.0	107.0
85°	70.1	75.3	87.8	93.0	92.3
87.5°	33.2	49.5	70.9	80.5	81.9
90°	9.6	31.0	59.8	73.1	75.3
92.5°	11.1	31.7	59.8	73.1	75.3
95°	11.1	32.5	60.5	73.1	75.3
97.5°	11.1	31.0	59.8	73.8	76.0
100°	11.1	30.3	59.1	73.1	76.0
102.5°	9.6	28.1	56.8	72.3	75.3
105°	8.9	24.4	54.6	70.1	73.8
107.5°	7.4	22.1	52.4	67.9	72.3
110°	6.6	19.9	49.5	65.7	70.9



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CANDELA DISTRIBUTION (continued):

	0°	22.5°	45°	67.5°	90°
112.5°	5.9	17.7	45.8	63.5	67.9
115°	5.2	16.2	42.1	59.8	65.0
117.5°	4.4	14.8	38.4	56.1	62.0
120°	3.7	13.3	35.4	52.4	57.6
122.5°	3.7	12.5	32.5	48.0	53.9
125°	3.0	11.1	30.3	44.3	49.5
127.5°	3.0	10.3	27.3	40.6	45.0
130°	2.2	10.3	25.1	37.6	42.1
132.5°	2.2	9.6	22.1	34.0	38.4
135°	2.2	8.9	20.7	31.0	34.7
137.5°	2.2	8.9	18.5	28.8	32.5
140°	3.0	8.1	16.2	25.8	29.5
142.5°	3.0	7.4	15.5	23.6	26.6
145°	3.0	6.6	14.0	21.4	24.4
147.5°	3.0	6.6	12.5	19.2	22.1
150°	3.0	5.9	11.8	17.0	19.9
152.5°	3.0	5.9	11.1	14.8	18.5
155°	3.0	5.9	9.6	13.3	17.0
157.5°	3.0	5.2	8.9	11.8	14.8
160°	3.7	5.2	8.1	10.3	13.3
162.5°	3.7	5.2	7.4	9.6	11.8
165°	3.7	4.4	6.6	8.1	10.3
167.5°	3.7	4.4	6.6	7.4	8.9
170°	3.7	4.4	5.9	5.9	6.6
172.5°	3.7	4.4	5.2	5.9	4.4
175°	3.7	4.4	5.2	5.2	4.4
177.5°	3.7	4.4	4.4	5.2	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	21.25	22.63	21.66	23.00	23.39	16.37	17.75	16.78	18.12	18.51
	3H	22.34	23.58	22.77	23.97	24.40	17.51	18.75	17.93	19.13	19.56
	4H	22.63	23.79	23.08	24.20	24.65	18.01	19.17	18.46	19.58	20.03
	6H	22.78	23.85	23.24	24.27	24.73	18.52	19.59	18.98	20.01	20.47
	8H	22.79	23.81	23.27	24.26	24.72	18.78	19.80	19.26	20.25	20.71
	12H	22.79	23.76	23.26	24.19	24.69	19.08	20.05	19.56	20.49	20.98
4H	2H	21.22	22.38	21.67	22.78	23.23	16.87	18.03	17.32	18.43	18.88
	3H	22.45	23.41	22.91	23.87	24.33	18.19	19.14	18.65	19.60	20.07
	4H	22.83	23.69	23.31	24.16	24.66	18.78	19.64	19.26	20.11	20.62
	6H	23.06	23.80	23.56	24.30	24.82	19.41	20.16	19.92	20.65	21.18
	8H	23.09	23.79	23.60	24.28	24.82	19.74	20.43	20.25	20.93	21.46
	12H	23.10	23.72	23.63	24.25	24.79	20.11	20.73	20.64	21.26	21.80
8H	4H	22.81	23.51	23.32	24.00	24.54	19.03	19.73	19.54	20.22	20.75
	6H	23.08	23.66	23.63	24.20	24.74	19.76	20.34	20.30	20.88	21.42
	8H	23.15	23.66	23.71	24.22	24.78	20.17	20.69	20.73	21.24	21.80
	12H	23.19	23.65	23.74	24.19	24.81	20.66	21.12	21.22	21.66	22.29
12H	4H	22.79	23.41	23.32	23.94	24.47	19.04	19.66	19.57	20.19	20.73
	6H	23.06	23.58	23.62	24.14	24.69	19.80	20.32	20.36	20.87	21.43
	8H	23.16	23.62	23.71	24.16	24.79	20.26	20.72	20.82	21.26	21.89