

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: P893803

Luminaire Tested: 4MB-7HL-ACL-UNV-L840

Issue Date: 11/11/2024

Test Information

Test Method: LM-79-2019
Report Number: P893803
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-L840
Description: 7000 Lumen 4FT MICROBAY LINEAR BAY with AISLE OPTICS WITH CLEAR LENS, 80CRI, 4000K (C)
Light Source: -
Ballast/Driver: -

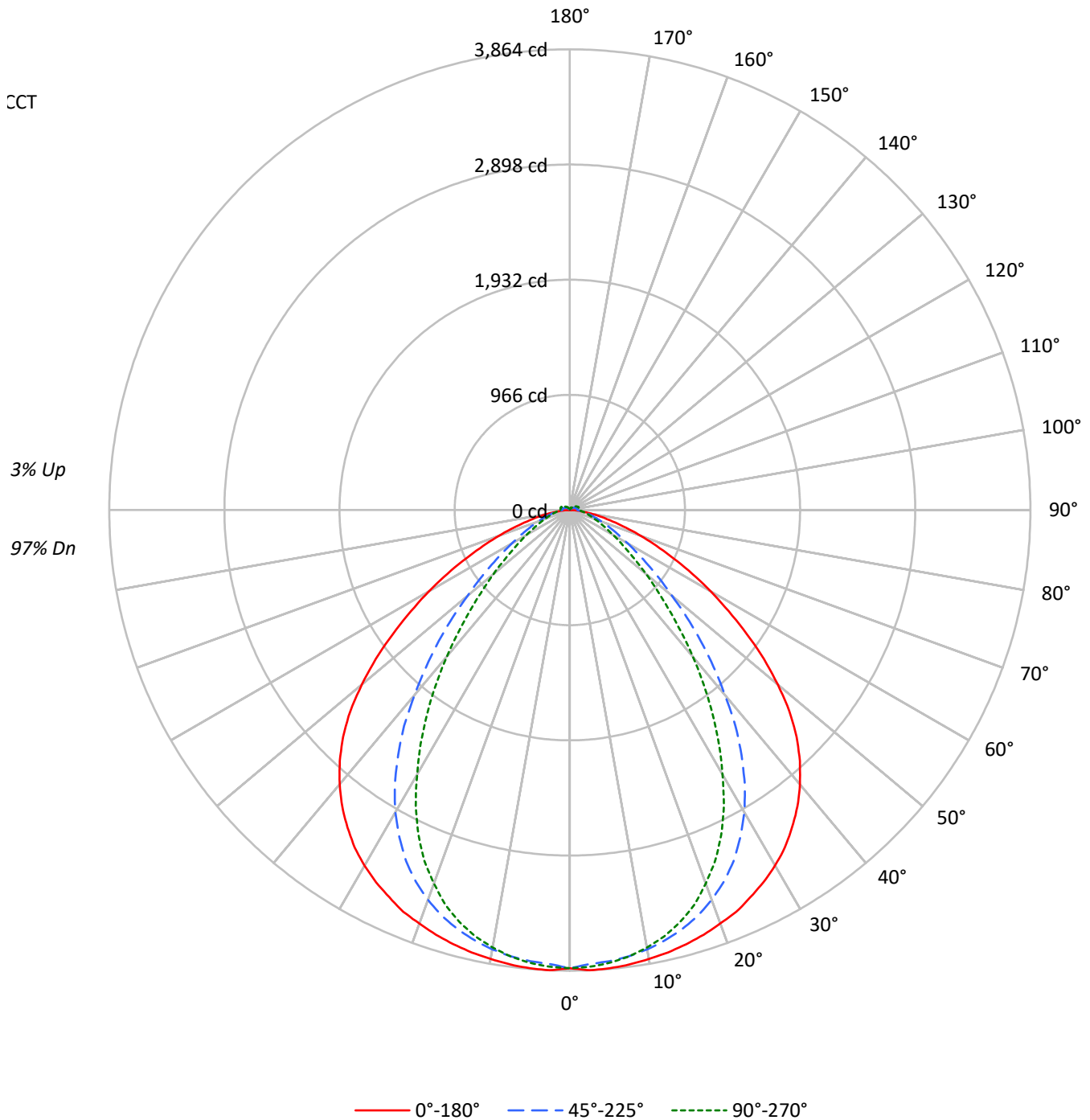
Summary

Lumens per Lamp: N/A
Luminaire Lumens: 7794.0 lumens
Efficiency: N/A
Efficacy: 150.5 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°	39131	39131	39131
5°	39367	38043	37939
10°	39398	37146	36517
15°	39531	36082	34793
20°	39698	34725	32422
25°	39877	32888	29455
30°	40020	30288	25516
35°	39836	26780	21270
40°	39245	22459	16909
45°	37950	18092	12785
50°	35192	13830	9644
55°	31243	10595	7184
60°	26810	8150	5559
65°	22117	6387	4399
70°	17866	5118	3597
75°	13595	4184	3068
80°	10170	3426	2708
85°	6921	2902	2462

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
 Vertical Angle: 45°
 Luminance: 37950 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	363.5	4.7
10°-20°	1032.1	13.2
20°-30°	1502.3	19.3
30°-40°	1612.2	20.7
40°-50°	1334.0	17.1
50°-60°	884.2	11.3
60°-70°	503.8	6.5
70°-80°	249.8	3.2
80°-90°	101.0	1.3
90°-100°	59.4	0.8
100°-110°	52.8	0.7
110°-120°	39.8	0.5
120°-130°	26.5	0.3
130°-140°	16.2	0.2
140°-150°	9.3	0.1
150°-160°	4.8	0.1
160°-170°	2.0	0.0
170°-180°	0.5	0.0
0°-30°	2897.8	37.2
0°-40°	4510.0	57.9
0°-60°	6728.2	86.3
0°-90°	7582.8	97.3
90°-120°	152.0	2.0
90°-150°	204.0	2.6
90°-180°	211.0	2.7
0°-180°	7794.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	3842	3842	3842	3842	3842	
5°	3858	3848	3798	3827	3813	367
15°	3770	3740	3639	3606	3577	1066
25°	3583	3490	3250	3073	3005	1653
35°	3251	2993	2511	2182	2086	2031
45°	2690	2185	1553	1251	1166	2061
55°	1812	1281	798	631	586	1621
65°	959	643	400	322	305	963
75°	372	277	200	175	169	411
85°	73	79	92	97	97	85
90°	10	32	63	76	79	9
95°	12	34	63	76	79	9
105°	9	26	57	73	77	10
115°	5	17	44	63	68	5
125°	3	12	32	46	52	3
135°	2	9	22	32	36	2
145°	3	7	15	22	26	2
155°	3	6	10	14	18	1
165°	4	5	7	8	11	1
175°	4	5	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°	3842.3	3842.3	3842.3	3842.3	3842.3
2.5°	3863.9	3855.4	3811.4	3844.6	3834.6
5°	3857.8	3847.7	3798.3	3826.8	3812.9
7.5°	3844.6	3832.3	3776.6	3795.9	3778.9
10°	3823.8	3808.3	3741.8	3745.7	3726.4
12.5°	3801.3	3777.4	3696.2	3685.4	3661.5
15°	3770.4	3740.3	3639.1	3605.8	3577.2
17.5°	3734.9	3693.2	3568.0	3509.2	3472.1
20°	3690.8	3635.2	3479.9	3390.2	3333.0
22.5°	3648.3	3566.4	3374.8	3246.5	3186.2
25°	3583.4	3489.9	3249.6	3072.6	3004.6
27.5°	3519.3	3393.3	3095.8	2878.6	2799.8
30°	3444.3	3278.9	2927.3	2659.9	2562.6
32.5°	3357.8	3153.7	2731.8	2432.7	2329.2
35°	3251.1	2993.0	2510.8	2182.4	2086.5
37.5°	3136.7	2816.0	2282.8	1944.3	1845.4
40°	3003.8	2628.3	2024.7	1697.0	1606.6
42.5°	2856.2	2413.4	1785.1	1464.4	1374.0
45°	2690.1	2184.7	1553.3	1251.1	1166.1
47.5°	2499.2	1950.5	1329.2	1058.7	987.6
50°	2276.6	1716.4	1119.0	888.7	836.2
52.5°	2052.5	1496.1	949.8	753.5	697.1
55°	1812.2	1281.3	798.3	631.4	585.8
57.5°	1579.6	1091.2	666.9	529.4	497.7
60°	1364.0	921.2	564.1	446.7	421.2
62.5°	1156.9	776.7	472.2	377.9	355.5
65°	959.0	643.0	399.5	322.3	305.3
67.5°	785.2	537.1	336.9	275.1	262.0
70°	634.5	434.3	283.6	235.7	224.9
72.5°	493.8	348.5	238.0	204.0	194.7
75°	372.5	277.4	200.2	174.7	169.2
77.5°	280.5	215.6	165.4	150.7	146.8
80°	194.0	160.7	136.8	130.6	128.3
82.5°	123.6	115.1	112.1	112.1	112.1
85°	73.4	78.8	92.0	97.4	96.6
87.5°	34.8	51.8	74.2	84.2	85.8
90°	10.0	32.5	62.6	76.5	78.8
92.5°	11.6	33.2	62.6	76.5	78.8
95°	11.6	34.0	63.4	76.5	78.8
97.5°	11.6	32.5	62.6	77.3	79.6
100°	11.6	31.7	61.8	76.5	79.6
102.5°	10.0	29.4	59.5	75.7	78.8
105°	9.3	25.5	57.2	73.4	77.3
107.5°	7.7	23.2	54.9	71.1	75.7
110°	7.0	20.9	51.8	68.8	74.2



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CANDELA DISTRIBUTION (continued):

	0°	22.5°	45°	67.5°	90°
112.5°	6.2	18.5	47.9	66.5	71.1
115°	5.4	17.0	44.0	62.6	68.0
117.5°	4.6	15.5	40.2	58.7	64.9
120°	3.9	13.9	37.1	54.9	60.3
122.5°	3.9	13.1	34.0	50.2	56.4
125°	3.1	11.6	31.7	46.4	51.8
127.5°	3.1	10.8	28.6	42.5	47.1
130°	2.3	10.8	26.3	39.4	44.0
132.5°	2.3	10.0	23.2	35.5	40.2
135°	2.3	9.3	21.6	32.5	36.3
137.5°	2.3	9.3	19.3	30.1	34.0
140°	3.1	8.5	17.0	27.0	30.9
142.5°	3.1	7.7	16.2	24.7	27.8
145°	3.1	7.0	14.7	22.4	25.5
147.5°	3.1	7.0	13.1	20.1	23.2
150°	3.1	6.2	12.4	17.8	20.9
152.5°	3.1	6.2	11.6	15.5	19.3
155°	3.1	6.2	10.0	13.9	17.8
157.5°	3.1	5.4	9.3	12.4	15.5
160°	3.9	5.4	8.5	10.8	13.9
162.5°	3.9	5.4	7.7	10.0	12.4
165°	3.9	4.6	7.0	8.5	10.8
167.5°	3.9	4.6	7.0	7.7	9.3
170°	3.9	4.6	6.2	6.2	7.0
172.5°	3.9	4.6	5.4	6.2	4.6
175°	3.9	4.6	5.4	5.4	4.6
177.5°	3.9	4.6	4.6	5.4	4.6
180°	4.6	4.6	4.6	4.6	4.6



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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	21.41	22.79	21.82	23.16	23.55	16.53	17.91	16.94	18.28	18.67
	3H	22.50	23.74	22.93	24.13	24.56	17.67	18.91	18.09	19.29	19.72
	4H	22.79	23.95	23.24	24.36	24.81	18.17	19.33	18.62	19.74	20.18
	6H	22.94	24.01	23.40	24.43	24.89	18.68	19.75	19.14	20.17	20.63
	8H	22.95	23.97	23.43	24.41	24.88	18.94	19.96	19.42	20.40	20.87
	12H	22.95	23.92	23.42	24.35	24.85	19.24	20.21	19.72	20.65	21.14
4H	2H	21.38	22.54	21.83	22.94	23.39	17.03	18.19	17.47	18.59	19.04
	3H	22.61	23.57	23.07	24.03	24.49	18.35	19.30	18.80	19.76	20.23
	4H	22.99	23.85	23.47	24.32	24.82	18.94	19.80	19.42	20.27	20.78
	6H	23.22	23.96	23.72	24.46	24.98	19.57	20.32	20.08	20.81	21.34
	8H	23.25	23.95	23.76	24.44	24.98	19.90	20.59	20.41	21.09	21.62
	12H	23.26	23.88	23.79	24.41	24.95	20.27	20.89	20.80	21.42	21.96
8H	4H	22.97	23.67	23.48	24.16	24.70	19.19	19.89	19.70	20.38	20.91
	6H	23.24	23.82	23.79	24.36	24.90	19.92	20.50	20.46	21.04	21.58
	8H	23.31	23.82	23.87	24.38	24.94	20.33	20.85	20.89	21.40	21.96
	12H	23.34	23.80	23.90	24.35	24.97	20.82	21.28	21.38	21.82	22.45
12H	4H	22.95	23.57	23.48	24.10	24.63	19.20	19.82	19.73	20.35	20.89
	6H	23.22	23.74	23.78	24.30	24.85	19.96	20.47	20.52	21.03	21.59
	8H	23.32	23.78	23.87	24.32	24.94	20.42	20.88	20.98	21.42	22.05