

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: P893811

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

Issue Date: 11/11/2024

Test Information

Test Method: LM-79-2019
Report Number: P893811
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-L840
Description: 7000 Lumen 4FT MICROBAY LINEAR BAY with AISLE OPTICS WITH CLEAR LENS NO UPLIGHT, 8
4000K CCT
Light Source: -
Ballast/Driver: -

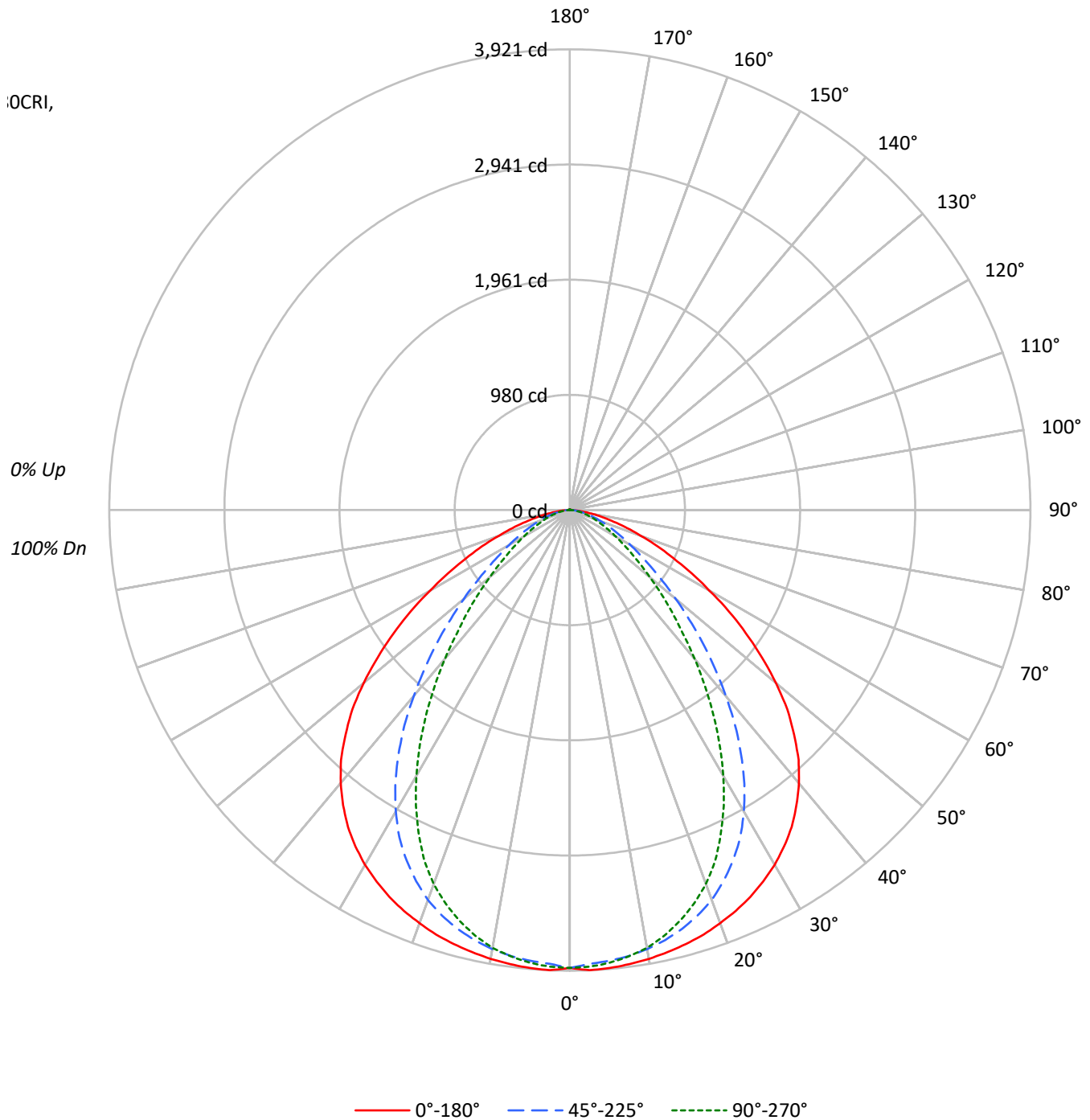
Summary

Lumens per Lamp: N/A
Luminaire Lumens: 7703.9 lumens
Efficiency: N/A
Efficacy: 148.7 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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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°	39692	39692	39692
5°	40002	39378	39551
10°	40113	39242	39138
15°	40311	38910	38176
20°	40549	38279	36713
25°	40835	36962	34184
30°	41007	34838	30730
35°	40943	31615	26534
40°	40340	27469	22004
45°	38873	23047	17717
50°	36298	18694	14066
55°	32516	14927	11264
60°	27968	12182	9207
65°	23481	10128	7615
70°	19164	8513	6533
75°	15200	7205	5564
80°	11829	6164	4803
85°	9114	5504	4148

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
 Vertical Angle: 45°
 Luminance: 38873 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	368.7	4.8
10°-20°	1046.6	13.6
20°-30°	1522.9	19.8
30°-40°	1637.2	21.3
40°-50°	1367.3	17.7
50°-60°	918.4	11.9
60°-70°	521.7	6.8
70°-80°	237.7	3.1
80°-90°	60.7	0.8
90°-100°	6.8	0.1
100°-110°	4.9	0.1
110°-120°	2.9	0.0
120°-130°	2.0	0.0
130°-140°	1.8	0.0
140°-150°	1.7	0.0
150°-160°	1.4	0.0
160°-170°	1.1	0.0
170°-180°	0.4	0.0
0°-30°	2938.2	38.1
0°-40°	4575.4	59.4
0°-60°	6861.0	89.1
0°-90°	7681.1	99.7
90°-120°	14.6	0.2
90°-150°	19.9	0.3
90°-180°	23.0	0.3
0°-180°	7703.9	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	3897	3897	3897	3897	3897	
5°	3913	3902	3852	3883	3869	372
15°	3823	3792	3690	3661	3621	1081
25°	3634	3529	3289	3119	3042	1675
35°	3293	3029	2543	2238	2134	2055
45°	2699	2226	1600	1309	1230	2075
55°	1831	1317	841	674	634	1637
65°	974	670	420	337	316	979
75°	386	279	183	149	141	425
85°	78	63	47	38	36	89
90°	10	8	6	5	5	9
95°	12	8	5	3	3	10
105°	9	7	4	2	2	10
115°	5	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	5	5	1
175°	3	4	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°	3897.4	3897.4	3897.4	3897.4	3897.4
2.5°	3920.6	3909.8	3865.8	3899.8	3890.5
5°	3912.9	3902.1	3851.9	3882.8	3868.8
7.5°	3898.2	3887.4	3828.7	3851.1	3832.5
10°	3878.9	3863.4	3794.7	3800.9	3784.6
12.5°	3853.4	3830.2	3749.1	3738.3	3712.8
15°	3823.3	3792.4	3690.4	3661.0	3620.8
17.5°	3788.5	3743.7	3619.3	3557.5	3513.4
20°	3741.4	3684.2	3532.0	3433.8	3387.5
22.5°	3692.7	3614.6	3419.1	3289.3	3233.7
25°	3634.0	3528.9	3289.3	3118.6	3042.1
27.5°	3563.6	3432.3	3143.3	2928.5	2837.3
30°	3487.1	3318.7	2962.5	2715.2	2613.2
32.5°	3395.2	3185.0	2764.7	2481.9	2376.0
35°	3293.2	3028.9	2542.9	2238.5	2134.2
37.5°	3169.6	2848.1	2312.7	1989.7	1889.2
40°	3034.3	2661.9	2066.2	1742.4	1655.1
42.5°	2882.1	2447.1	1826.6	1515.2	1421.0
45°	2699.0	2226.1	1600.2	1308.9	1230.1
47.5°	2512.0	1981.9	1374.6	1110.4	1053.9
50°	2291.0	1752.5	1179.9	945.8	887.8
52.5°	2061.5	1526.8	998.3	802.8	751.1
55°	1831.3	1316.7	840.7	673.8	634.4
57.5°	1607.2	1123.5	707.0	569.5	535.5
60°	1373.1	953.5	598.1	479.8	452.0
62.5°	1172.2	805.9	502.2	404.1	380.9
65°	974.4	669.9	420.3	336.9	316.0
67.5°	808.2	553.2	348.5	279.7	261.9
70°	643.6	450.5	285.9	231.0	219.4
72.5°	513.1	359.3	231.8	187.8	176.2
75°	386.3	278.9	183.1	149.1	141.4
77.5°	290.5	211.7	141.4	115.9	107.4
80°	201.7	151.4	105.1	85.8	81.9
82.5°	129.0	104.3	72.6	61.0	56.4
85°	78.0	63.4	47.1	37.9	35.5
87.5°	37.1	30.9	24.0	18.5	17.0
90°	10.0	8.5	6.2	5.4	4.6
92.5°	11.6	8.5	5.4	3.9	3.1
95°	12.4	8.5	5.4	3.1	3.1
97.5°	12.4	9.3	4.6	3.1	2.3
100°	11.6	8.5	4.6	3.1	2.3
102.5°	10.0	7.7	3.9	2.3	2.3
105°	9.3	7.0	3.9	2.3	1.5
107.5°	7.7	6.2	3.1	2.3	1.5
110°	7.0	5.4	3.1	2.3	1.5



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CANDELA DISTRIBUTION (continued):

	0°	22.5°	45°	67.5°	90°
112.5°	5.4	4.6	3.1	2.3	1.5
115°	4.6	3.9	2.3	1.5	1.5
117.5°	3.9	3.1	2.3	1.5	1.5
120°	3.9	3.1	2.3	1.5	1.5
122.5°	3.1	3.1	2.3	1.5	1.5
125°	3.1	2.3	2.3	1.5	1.5
127.5°	2.3	2.3	2.3	1.5	1.5
130°	2.3	2.3	2.3	2.3	1.5
132.5°	2.3	2.3	2.3	2.3	1.5
135°	2.3	2.3	2.3	2.3	2.3
137.5°	2.3	2.3	2.3	2.3	2.3
140°	2.3	2.3	2.3	2.3	2.3
142.5°	2.3	2.3	3.1	2.3	2.3
145°	2.3	2.3	3.1	3.1	2.3
147.5°	2.3	2.3	3.1	3.1	3.1
150°	2.3	2.3	3.1	3.1	3.1
152.5°	2.3	3.1	3.1	3.1	3.1
155°	2.3	3.1	3.1	3.1	3.1
157.5°	3.1	3.1	3.1	3.9	3.9
160°	3.1	3.1	3.9	3.9	3.9
162.5°	3.1	3.1	3.9	3.9	3.9
165°	3.1	3.1	3.9	4.6	4.6
167.5°	3.1	3.9	3.9	4.6	4.6
170°	3.1	3.9	3.9	4.6	4.6
172.5°	3.1	3.9	4.6	4.6	4.6
175°	3.1	3.9	4.6	4.6	4.6
177.5°	3.9	3.9	4.6	4.6	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	23.09	24.53	23.46	24.85	25.17	17.77	19.20	18.14	19.52	19.85
	3H	24.41	25.69	24.79	26.02	26.39	18.78	20.06	19.16	20.39	20.76
	4H	24.82	26.02	25.23	26.38	26.76	19.12	20.32	19.53	20.67	21.06
	6H	25.08	26.19	25.50	26.56	26.96	19.35	20.45	19.77	20.82	21.23
	8H	25.15	26.19	25.58	26.59	27.00	19.42	20.46	19.85	20.86	21.27
	12H	25.18	26.18	25.62	26.57	27.01	19.46	20.46	19.89	20.85	21.28
4H	2H	23.08	24.28	23.49	24.64	25.02	18.41	19.61	18.82	19.97	20.35
	3H	24.56	25.54	24.97	25.95	26.36	19.61	20.59	20.02	21.00	21.41
	4H	25.07	25.95	25.51	26.37	26.82	20.03	20.91	20.47	21.33	21.78
	6H	25.44	26.20	25.90	26.65	27.12	20.34	21.10	20.80	21.55	22.02
	8H	25.53	26.25	26.01	26.70	27.18	20.43	21.15	20.90	21.60	22.07
	12H	25.60	26.24	26.09	26.72	27.20	20.50	21.13	20.99	21.62	22.10
8H	4H	25.05	25.76	25.52	26.21	26.69	20.37	21.08	20.84	21.53	22.01
	6H	25.47	26.05	25.97	26.55	27.04	20.76	21.35	21.27	21.85	22.33
	8H	25.61	26.13	26.13	26.65	27.15	20.90	21.43	21.42	21.95	22.44
	12H	25.72	26.19	26.24	26.69	27.26	21.02	21.49	21.54	21.98	22.56
12H	4H	25.02	25.65	25.51	26.14	26.62	20.41	21.05	20.90	21.53	22.01
	6H	25.43	25.96	25.95	26.48	26.97	20.83	21.36	21.35	21.87	22.37
	8H	25.61	26.07	26.12	26.57	27.14	21.02	21.48	21.53	21.98	22.56