

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: P893851

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

Issue Date: 11/11/2024

**Test Information**

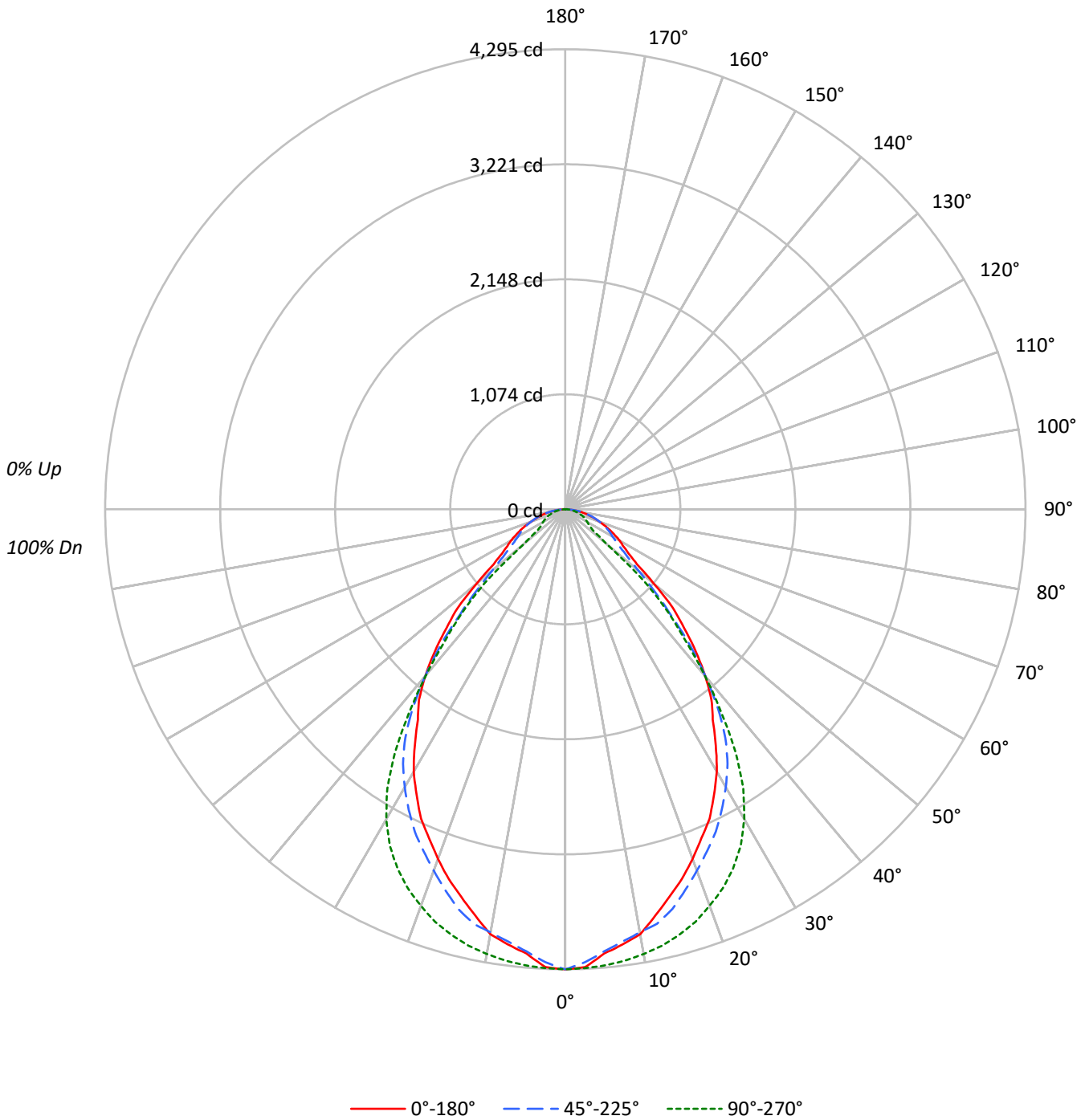
Test Method: LM-79-2019  
Report Number: P893851  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-2404-077-26)  
Test Lab: INNOVATION CENTER  
Issue Date: 11/11/2024  
Manufacturer: COOPER LIGHTING SOLUTIONS  
Product Line: METALUX  
Catalog Number: 4MB-7HL-LVRA-UNV-L840  
Description: 7000 Lumen 4FT MICROBAY LINEAR BAY with LOUVER WITH AISLE OPTIC, 80CRI, 4000K CCT  
Light Source: -  
Ballast/Driver: -

**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 6971.0 lumens  
Efficiency: N/A  
Efficacy: 134.6 lumens/watt  
Spacing Criteria (0/90/45): 1.02 / 1.16 / 1.12  
Luminous Opening: Rectangular (W 0.38' x L: 3.98' x H: 0')  
CIE Type: Direct  
  
Input Watts (W): 51.8  
Input Voltage (V): 120  
Input Current (A<sub>in</sub>): 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	0
RCR																		
0	119	119	119	119	116	116	116	116	111	111	111	106	106	106	102	102	102	100
1	111	107	104	101	108	105	102	99	101	98	96	97	95	93	93	92	90	88
2	103	96	91	86	101	95	90	85	91	87	83	88	85	82	85	82	80	78
3	96	87	80	75	94	86	80	75	83	78	73	80	76	72	78	74	71	69
4	89	79	72	66	87	78	71	66	76	70	65	73	68	64	71	67	63	62
5	83	72	65	59	81	71	64	59	69	63	58	67	62	58	66	61	57	55
6	78	66	59	53	76	65	58	53	64	57	53	62	57	52	61	56	52	50
7	73	61	54	48	71	60	53	48	59	52	48	58	52	47	56	51	47	45
8	68	57	49	44	67	56	49	44	55	48	44	53	48	43	52	47	43	41
9	64	52	45	40	63	52	45	40	51	44	40	50	44	40	49	44	40	38
10	61	49	42	37	60	48	42	37	47	41	37	47	41	37	46	40	37	35

**AVERAGE LUMINANCE (cd/sqm):**

	0°	45°	90°
0°	30560	30560	30560
5°	29736	29602	30527
10°	29104	28976	30456
15°	27603	28450	30285
20°	26294	27183	29823
25°	25012	26081	29062
30°	23237	24620	27440
35°	20836	22625	24068
40°	18878	18919	18816
45°	15783	13979	13634
50°	11922	9839	5575
55°	8967	7868	3515
60°	8333	7246	3387
65°	7753	7231	3392
70°	7094	7094	3339
75°	6727	6908	3225
80°	6216	6531	3311
85°	5421	5690	3616

**MAXIMUM LUMINANCE 45°-90°:**

Horizontal Angle: 22.5°  
 Vertical Angle: 45°  
 Luminance: 16152 cd/sqm



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	396.8	5.7
10°-20°	1093.2	15.7
20°-30°	1550.2	22.2
30°-40°	1597.1	22.9
40°-50°	1115.5	16.0
50°-60°	535.3	7.7
60°-70°	375.5	5.4
70°-80°	234.8	3.4
80°-90°	72.6	1.0
90°-100°	0.0	0.0
100°-110°	0.0	0.0
110°-120°	0.0	0.0
120°-130°	0.0	0.0
130°-140°	0.0	0.0
140°-150°	0.0	0.0
150°-160°	0.0	0.0
160°-170°	0.0	0.0
170°-180°	0.0	0.0
0°-30°	3040.2	43.6
0°-40°	4637.3	66.5
0°-60°	6288.1	90.2
0°-90°	6971.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	6971.0	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	4295	4295	4295	4295	4295	
5°	4164	4158	4145	4253	4274	394
15°	3747	3775	3862	3973	4112	1055
25°	3186	3218	3322	3547	3702	1457
35°	2399	2464	2605	2659	2771	1512
45°	1569	1605	1389	1318	1355	1209
55°	723	688	634	406	283	677
65°	460	431	430	327	202	456
75°	245	241	251	217	117	258
85°	66	66	70	69	44	74
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	4295.2	4295.2	4295.2	4295.2	4295.2
2.5°	4278.6	4265.3	4233.2	4291.9	4287.5
5°	4163.5	4158.0	4144.7	4253.2	4274.2
7.5°	4098.2	4087.1	4071.6	4191.2	4249.8
10°	4028.4	4041.7	4010.7	4120.3	4215.5
12.5°	3884.5	3920.0	3962.0	4047.3	4173.5
15°	3747.3	3774.9	3862.4	3973.1	4111.5
17.5°	3618.8	3650.9	3726.2	3892.3	4039.5
20°	3472.7	3517.0	3590.1	3802.6	3938.8
22.5°	3322.2	3363.1	3455.0	3683.1	3834.7
25°	3186.0	3218.1	3322.2	3546.9	3701.9
27.5°	3005.6	3065.3	3163.9	3380.8	3543.6
30°	2828.4	2879.4	2996.7	3179.4	3339.9
32.5°	2614.8	2688.9	2818.5	2958.0	3091.9
35°	2398.9	2464.2	2604.8	2659.1	2770.9
37.5°	2241.7	2259.4	2339.1	2332.5	2395.6
40°	2032.5	2067.9	2036.9	1953.9	2025.8
42.5°	1806.7	1848.7	1723.6	1627.3	1652.8
45°	1568.6	1605.2	1389.3	1318.5	1355.0
47.5°	1362.7	1359.4	1120.3	1072.7	1021.8
50°	1077.1	1112.6	888.9	800.4	503.7
52.5°	841.3	854.6	732.8	511.4	331.0
55°	722.9	687.5	634.3	406.3	283.4
57.5°	642.1	597.8	562.4	377.5	259.0
60°	585.6	535.8	509.2	358.7	238.0
62.5°	521.4	482.7	472.7	342.1	219.2
65°	460.5	430.6	429.5	326.6	201.5
67.5°	399.6	383.0	387.5	307.8	181.6
70°	341.0	337.6	341.0	283.4	160.5
72.5°	291.1	287.8	296.7	252.4	137.3
75°	244.7	241.3	251.3	217.0	117.3
77.5°	194.8	197.0	203.7	180.4	98.5
80°	151.7	151.7	159.4	141.7	80.8
82.5°	108.5	109.6	114.0	104.1	63.1
85°	66.4	66.4	69.7	68.6	44.3
87.5°	22.1	25.5	29.9	32.1	22.1
90°	0.0	0.0	0.0	0.0	0.0



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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	17.53	18.88	17.89	19.19	19.51	13.86	15.21	14.23	15.53	15.84
	3H	19.27	20.47	19.65	20.80	21.17	15.84	17.04	16.22	17.37	17.74
	4H	19.94	21.07	20.34	21.42	21.80	16.54	17.67	16.94	18.02	18.40
	6H	20.44	21.48	20.86	21.85	22.25	17.06	18.10	17.48	18.47	18.87
	8H	20.62	21.60	21.05	21.99	22.40	17.25	18.23	17.68	18.62	19.03
	12H	20.73	21.67	21.16	22.05	22.48	17.39	18.33	17.82	18.71	19.14
4H	2H	18.06	19.19	18.46	19.54	19.92	15.48	16.61	15.88	16.96	17.34
	3H	20.04	20.97	20.45	21.37	21.77	17.66	18.59	18.07	18.99	19.40
	4H	20.84	21.67	21.27	22.09	22.53	18.54	19.38	18.97	19.79	20.24
	6H	21.48	22.21	21.94	22.65	23.12	19.18	19.91	19.64	20.35	20.82
	8H	21.70	22.38	22.17	22.82	23.29	19.39	20.07	19.86	20.51	20.98
	12H	21.85	22.45	22.34	22.94	23.41	19.55	20.15	20.04	20.63	21.11
8H	4H	21.12	21.80	21.59	22.24	22.71	19.19	19.87	19.66	20.31	20.78
	6H	21.91	22.46	22.41	22.96	23.44	20.05	20.61	20.55	21.10	21.58
	8H	22.21	22.71	22.73	23.22	23.71	20.38	20.88	20.90	21.39	21.88
	12H	22.44	22.88	22.96	23.38	23.95	20.64	21.08	21.16	21.58	22.15
12H	4H	21.14	21.74	21.62	22.22	22.69	19.26	19.86	19.75	20.34	20.82
	6H	21.96	22.46	22.48	22.97	23.46	20.19	20.69	20.71	21.20	21.69
	8H	22.32	22.76	22.84	23.26	23.83	20.60	21.04	21.11	21.54	22.11