

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: P894048

Luminaire Tested: 4MB-9HL-LVRA-UNV-L950

Issue Date: 11/11/2024

Test Information

Test Method: LM-79-2019
Report Number: P894048
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-9HL-LVRA-UNV-L950
Description: 9000 Lumen 4FT MICROBAY LINEAR BAY with LOUVER WITH AISLE OPTIC, 90CRI, 5000K CCT
Light Source: -
Ballast/Driver: -

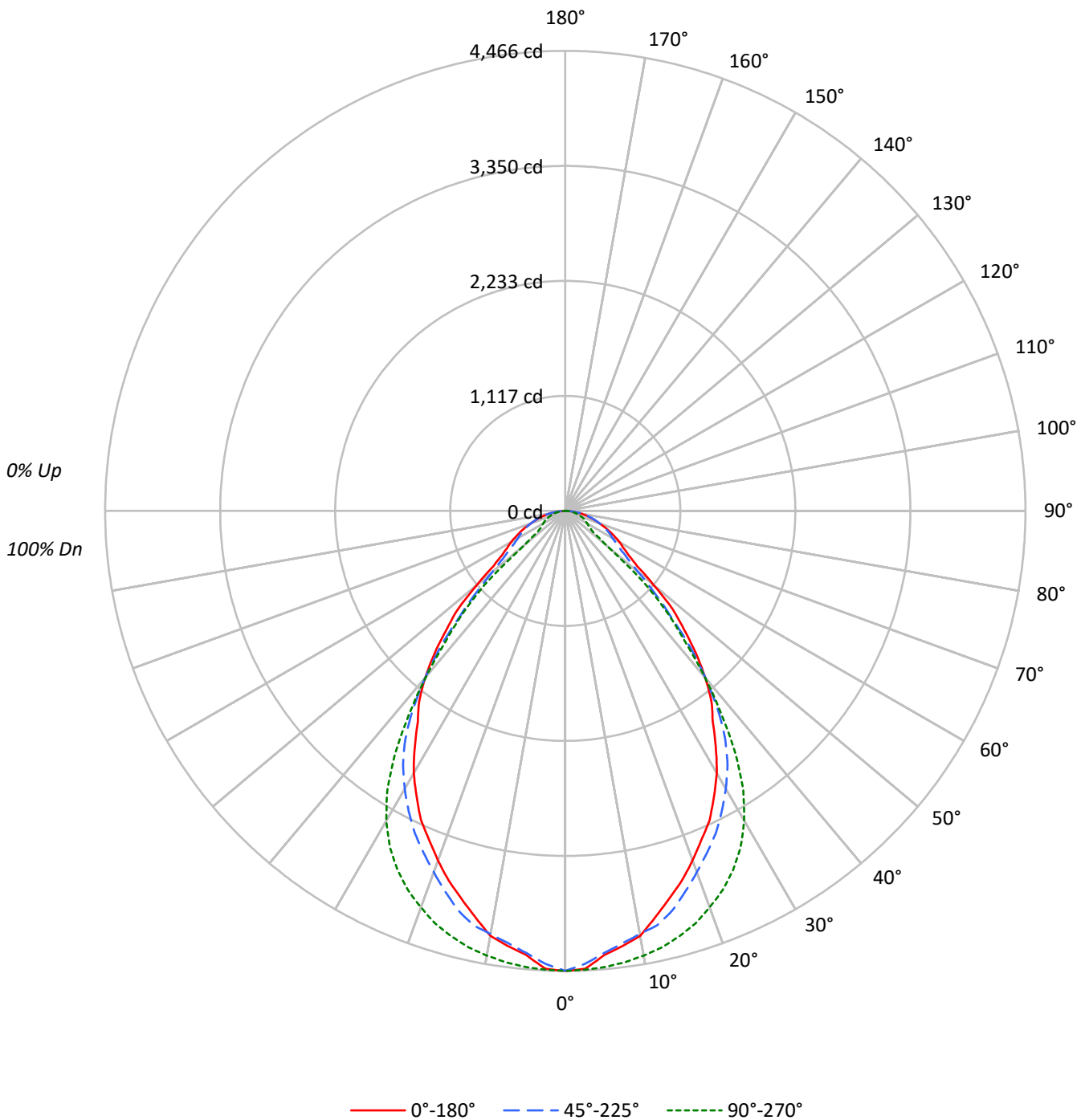
Summary

Lumens per Lamp: N/A
Luminaire Lumens: 7248.0 lumens
Efficiency: N/A
Efficacy: 112.5 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): 64.4
Input Voltage (V): 120
Input Current (A_{in}): NR
Voltage Rise (V): NR
Power Factor: 0.996
Total Harmonic Distortion (THDi): 8.94
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 24 FT

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CATALOG NUMBER: 4MB-9HL-LVRA-UNV-L950

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
RCR																				
0	119	119	119	119	116	116	116	116	111	111	111	106	106	106	102	102	102	102	100	
1	111	107	104	101	108	105	102	99	101	98	96	97	95	93	93	92	90	90	88	
2	103	96	91	86	101	95	90	85	91	87	83	88	85	82	85	82	80	80	78	
3	96	87	80	75	94	86	80	75	83	78	73	80	76	72	78	74	71	71	69	
4	89	79	72	66	87	78	71	66	76	70	65	73	68	64	71	67	63	63	62	
5	83	72	65	59	81	71	64	59	69	63	58	67	62	58	66	61	57	57	55	
6	78	66	59	53	76	65	58	53	64	57	53	62	57	52	61	56	52	52	50	
7	73	61	54	48	71	60	53	48	59	52	48	58	52	47	56	51	47	47	45	
8	68	57	49	44	67	56	49	44	55	48	44	53	48	43	52	47	43	43	41	
9	64	52	45	40	63	52	45	40	51	44	40	50	44	40	49	44	40	40	38	
10	61	49	42	37	60	48	42	37	47	41	37	47	41	37	46	40	37	37	35	

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	31775	31775	31775
5°	30918	30778	31740
10°	30261	30128	31666
15°	28699	29581	31488
20°	27339	28263	31008
25°	26006	27117	30217
30°	24161	25598	28530
35°	21664	23524	25024
40°	19627	19671	19563
45°	16411	14535	14176
50°	12396	10231	5797
55°	9323	8181	3656
60°	8665	7535	3522
65°	8061	7519	3527
70°	7375	7375	3472
75°	6994	7183	3354
80°	6462	6789	3442
85°	5641	5919	3755

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 22.5°
 Vertical Angle: 45°
 Luminance: 16794 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	412.5	5.7
10°-20°	1136.7	15.7
20°-30°	1611.8	22.2
30°-40°	1660.5	22.9
40°-50°	1159.8	16.0
50°-60°	556.5	7.7
60°-70°	390.4	5.4
70°-80°	244.1	3.4
80°-90°	75.5	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°	3161.0	43.6
0°-40°	4821.6	66.5
0°-60°	6537.9	90.2
0°-90°	7248.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	7248.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	4466	4466	4466	4466	4466	
5°	4329	4323	4309	4422	4444	410
15°	3896	3925	4016	4131	4275	1097
25°	3313	3346	3454	3688	3849	1515
35°	2494	2562	2708	2765	2881	1572
45°	1631	1669	1444	1371	1409	1257
55°	752	715	660	422	295	704
65°	479	448	447	340	210	474
75°	254	251	261	226	122	268
85°	69	69	72	71	46	77
90°	0	0	0	0	0	



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CATALOG NUMBER: 4MB-9HL-LVRA-UNV-L950

CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	4465.9	4465.9	4465.9	4465.9	4465.9
2.5°	4448.6	4434.8	4401.5	4462.5	4457.9
5°	4328.9	4323.2	4309.4	4422.2	4444.0
7.5°	4261.0	4249.5	4233.4	4357.7	4418.7
10°	4188.5	4202.3	4170.1	4284.1	4383.0
12.5°	4038.9	4075.7	4119.5	4208.1	4339.3
15°	3896.2	3924.9	4015.9	4131.0	4274.8
17.5°	3762.6	3796.0	3874.3	4046.9	4200.0
20°	3610.7	3656.8	3732.7	3953.7	4095.3
22.5°	3454.2	3496.8	3592.3	3829.4	3987.1
25°	3312.6	3346.0	3454.2	3687.8	3849.0
27.5°	3125.0	3187.1	3289.6	3515.2	3684.4
30°	2940.8	2993.8	3115.8	3305.7	3472.6
32.5°	2718.7	2795.8	2930.5	3075.5	3214.8
35°	2494.2	2562.1	2708.3	2764.7	2881.0
37.5°	2330.8	2349.2	2432.1	2425.2	2490.8
40°	2113.2	2150.1	2117.9	2031.5	2106.3
42.5°	1878.4	1922.2	1792.1	1692.0	1718.5
45°	1631.0	1669.0	1444.5	1370.9	1408.8
47.5°	1416.9	1413.4	1164.8	1115.3	1062.4
50°	1119.9	1156.8	924.3	832.2	523.7
52.5°	874.8	888.6	762.0	531.8	344.2
55°	751.6	714.8	659.5	422.4	294.7
57.5°	667.6	621.5	584.7	392.5	269.3
60°	608.9	557.1	529.5	372.9	247.5
62.5°	542.1	501.8	491.5	355.7	227.9
65°	478.8	447.7	446.6	339.5	209.5
67.5°	415.5	398.2	402.9	320.0	188.8
70°	354.5	351.1	354.5	294.7	166.9
72.5°	302.7	299.3	308.5	262.4	142.7
75°	254.4	250.9	261.3	225.6	122.0
77.5°	202.6	204.9	211.8	187.6	102.4
80°	157.7	157.7	165.7	147.3	84.0
82.5°	112.8	113.9	118.6	108.2	65.6
85°	69.1	69.1	72.5	71.4	46.0
87.5°	23.0	26.5	31.1	33.4	23.0
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	17.66	19.02	18.03	19.33	19.64	14.00	15.35	14.36	15.66	15.98
	3H	19.40	20.61	19.78	20.94	21.30	15.97	17.18	16.35	17.51	17.87
	4H	20.07	21.20	20.48	21.55	21.93	16.68	17.80	17.08	18.15	18.54
	6H	20.58	21.62	20.99	21.99	22.38	17.20	18.24	17.61	18.61	19.00
	8H	20.75	21.74	21.18	22.13	22.53	17.38	18.37	17.81	18.76	19.16
	12H	20.86	21.80	21.29	22.19	22.62	17.52	18.47	17.96	18.85	19.28
4H	2H	18.19	19.32	18.60	19.67	20.05	15.62	16.75	16.02	17.10	17.48
	3H	20.17	21.10	20.58	21.50	21.91	17.80	18.73	18.21	19.13	19.53
	4H	20.97	21.81	21.41	22.23	22.67	18.68	19.51	19.11	19.93	20.37
	6H	21.62	22.34	22.08	22.79	23.25	19.32	20.04	19.78	20.49	20.95
	8H	21.84	22.51	22.30	22.96	23.43	19.53	20.20	19.99	20.65	21.12
	12H	21.99	22.59	22.48	23.07	23.55	19.69	20.29	20.17	20.77	21.24
8H	4H	21.26	21.93	21.72	22.38	22.85	19.32	20.00	19.79	20.45	20.92
	6H	22.04	22.60	22.54	23.09	23.57	20.19	20.74	20.69	21.24	21.72
	8H	22.34	22.84	22.86	23.36	23.85	20.51	21.01	21.03	21.53	22.02
	12H	22.58	23.02	23.09	23.51	24.08	20.78	21.22	21.29	21.71	22.28
12H	4H	21.27	21.87	21.76	22.36	22.83	19.40	20.00	19.88	20.48	20.95
	6H	22.09	22.59	22.61	23.11	23.60	20.32	20.82	20.84	21.34	21.83
	8H	22.46	22.90	22.97	23.39	23.96	20.74	21.18	21.25	21.67	22.24