

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: P894037

Luminaire Tested: 4MB-9HL-LVR-UNV-L930

Issue Date: 11/11/2024

Test Information

Test Method: LM-79-2019
Report Number: P894037
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-2407-175-6)
Test Lab: INNOVATION CENTER
Issue Date: 11/11/2024
Manufacturer: COOPER LIGHTING SOLUTIONS
Product Line: METALUX
Catalog Number: 4MB-9HL-LVR-UNV-L930
Description: 9000 Lumen 4FT MICROBAY LINEAR BAY with LOUVER, 90CRI, 3000K CCT
Light Source: -
Ballast/Driver: -

Summary

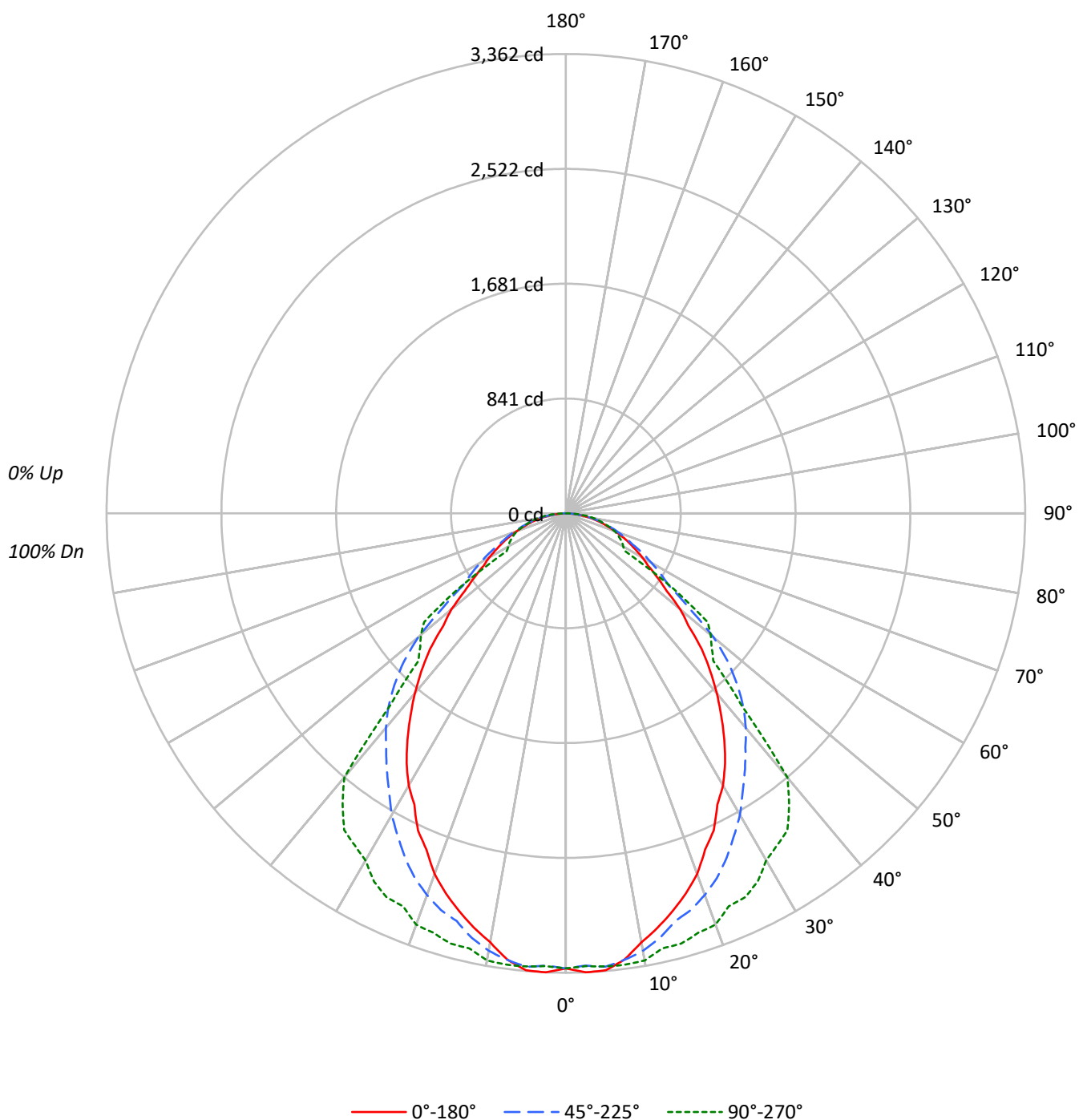
Lumens per Lamp: N/A
Luminaire Lumens: 6970.0 lumens
Efficiency: N/A
Efficacy: 108.2 lumens/watt
Spacing Criteria (0/90/45): 1.05 / 1.32 / 1.26
Luminous Opening: Rectangular (W 0.38' x L: 3.98' x H: 0')
CIE Type: Direct

Input Watts (W): 64.4
Input Voltage (V): 120
Input Current (Ain): 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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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	110	106	102	99	108	104	100	97	100	97	94		96	93	91		92	90	89	87
2	101	94	88	83	99	92	87	82	89	84	80		86	82	78		83	80	77	75
3	94	84	77	71	91	83	76	70	80	74	69		77	72	68		75	70	67	65
4	86	76	68	62	84	74	67	61	72	66	60		70	64	60		68	63	59	57
5	80	68	60	54	78	67	60	54	65	59	53		63	57	53		62	56	52	50
6	74	62	54	48	73	61	54	48	60	53	48		58	52	47		56	51	47	45
7	69	57	49	43	68	56	48	43	55	48	43		53	47	42		52	46	42	40
8	65	52	44	39	63	52	44	39	50	43	39		49	43	38		48	42	38	36
9	61	48	41	35	59	48	40	35	47	40	35		46	39	35		45	39	35	33
10	57	45	37	32	56	44	37	32	43	37	32		42	36	32		42	36	32	30

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	23692	23692	23692
5°	23978	23789	23775
10°	23033	23485	24001
15°	22208	22755	24016
20°	21272	22502	24256
25°	20099	21842	24344
30°	18889	20929	24095
35°	17565	19851	24564
40°	15959	19028	23424
45°	14140	17859	15360
50°	12102	15609	15327
55°	10141	11391	11925
60°	9227	10284	6902
65°	8643	9105	7376
70°	7955	8625	7893
75°	7475	8093	8038
80°	6974	7654	8617
85°	5984	6384	9184

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 45°

Vertical Angle: 45°

Luminance: 17859 cd/sqm

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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	316.4	4.5
10°-20°	885.3	12.7
20°-30°	1290.3	18.5
30°-40°	1476.1	21.2
40°-50°	1262.7	18.1
50°-60°	832.7	11.9
60°-70°	503.4	7.2
70°-80°	308.0	4.4
80°-90°	95.1	1.4
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°	2492.0	35.8
0°-40°	3968.1	56.9
0°-60°	6063.5	87.0
0°-90°	6970.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	6970.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	3330	3330	3330	3330	3330	
5°	3357	3354	3331	3324	3329	315
15°	3015	3050	3089	3287	3260	848
25°	2560	2599	2782	3020	3101	1171
35°	2022	2124	2285	2644	2828	1260
45°	1405	1514	1775	1658	1526	1076
55°	818	864	918	1088	961	744
65°	513	526	541	483	438	507
75°	272	279	294	308	292	287
85°	73	72	78	93	112	83
90°	0	0	0	0	0	

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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	3329.8	3329.8	3329.8	3329.8	3329.8
2.5°	3362.1	3352.3	3312.2	3350.3	3316.1
5°	3357.2	3354.2	3330.8	3323.9	3328.8
7.5°	3292.6	3299.5	3295.6	3368.9	3331.7
10°	3188.0	3201.7	3250.6	3353.3	3322.0
12.5°	3105.9	3116.6	3182.1	3334.7	3261.3
15°	3014.9	3050.1	3089.2	3286.8	3260.4
17.5°	2917.1	2950.4	3043.3	3222.2	3219.3
20°	2809.5	2871.2	2971.9	3138.1	3203.6
22.5°	2663.8	2747.0	2888.8	3100.0	3112.7
25°	2560.2	2599.3	2782.2	3019.8	3101.0
27.5°	2402.7	2477.1	2663.8	2904.4	3038.4
30°	2299.1	2360.7	2547.5	2836.9	2932.8
32.5°	2169.0	2242.4	2409.6	2763.6	2879.0
35°	2022.3	2124.0	2285.4	2644.3	2828.1
37.5°	1867.8	1968.5	2159.2	2545.5	2684.4
40°	1718.2	1804.2	2048.7	2427.2	2522.0
42.5°	1564.7	1657.6	1922.6	2193.5	1897.2
45°	1405.3	1513.8	1774.9	1658.5	1526.5
47.5°	1216.5	1349.5	1611.6	1332.9	1446.3
50°	1093.3	1165.7	1410.2	1256.6	1384.7
52.5°	930.0	1027.8	1132.4	1173.5	1308.4
55°	817.5	863.5	918.3	1088.4	961.3
57.5°	713.9	754.9	818.5	767.7	512.4
60°	648.4	666.9	722.7	548.6	485.0
62.5°	574.0	592.6	633.7	512.4	465.5
65°	513.4	526.1	540.8	483.1	438.1
67.5°	448.9	455.7	471.4	445.9	411.7
70°	382.4	392.1	414.6	407.8	379.4
72.5°	323.7	332.5	352.0	361.8	335.4
75°	271.9	278.7	294.4	308.0	292.4
77.5°	216.1	223.0	243.5	258.2	251.3
80°	170.2	171.1	186.8	201.5	210.3
82.5°	119.3	121.3	133.0	148.6	166.2
85°	73.3	72.4	78.2	92.9	112.5
87.5°	28.4	27.4	32.3	39.1	57.7
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	18.82	20.30	19.19	20.62	20.93	18.50	19.98	18.87	20.29	20.61
	3H	20.38	21.71	20.76	22.04	22.40	20.12	21.44	20.50	21.77	22.13
	4H	20.98	22.22	21.38	22.57	22.95	20.87	22.11	21.27	22.46	22.84
	6H	21.44	22.58	21.85	22.95	23.34	21.53	22.68	21.95	23.05	23.44
	8H	21.59	22.68	22.02	23.07	23.47	21.81	22.90	22.24	23.29	23.69
	12H	21.69	22.73	22.12	23.12	23.55	22.03	23.08	22.46	23.46	23.89
4H	2H	19.42	20.66	19.82	21.01	21.38	19.16	20.40	19.56	20.75	21.13
	3H	21.20	22.23	21.62	22.63	23.03	21.05	22.07	21.46	22.47	22.88
	4H	21.93	22.86	22.36	23.27	23.71	21.94	22.87	22.37	23.28	23.72
	6H	22.51	23.32	22.97	23.76	24.22	22.75	23.55	23.21	24.00	24.46
	8H	22.71	23.46	23.18	23.91	24.38	23.08	23.83	23.54	24.27	24.74
	12H	22.85	23.52	23.33	24.00	24.47	23.35	24.02	23.83	24.50	24.97
8H	4H	22.25	23.01	22.72	23.45	23.92	22.26	23.02	22.73	23.46	23.93
	6H	22.96	23.59	23.46	24.08	24.56	23.21	23.84	23.71	24.33	24.81
	8H	23.23	23.79	23.75	24.30	24.79	23.63	24.19	24.14	24.70	25.19
	12H	23.44	23.94	23.95	24.43	25.00	24.00	24.49	24.51	24.99	25.55
12H	4H	22.29	22.96	22.78	23.44	23.92	22.29	22.96	22.77	23.44	23.91
	6H	23.03	23.60	23.55	24.11	24.59	23.26	23.83	23.78	24.34	24.83
	8H	23.36	23.86	23.87	24.35	24.92	23.74	24.24	24.25	24.73	25.30