

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: P894056

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

Issue Date: 11/11/2024

Test Information

Test Method: LM-79-2019
Report Number: P894056
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-2407-175-5)
Test Lab: INNOVATION CENTER
Issue Date: 11/11/2024
Manufacturer: COOPER LIGHTING SOLUTIONS
Product Line: METALUX
Catalog Number: 4MB-9HL-LVRF-UNV-L950
Description: 9000 Lumen 4FT MICROBAY LINEAR BAY with LOUVER WITH FROSTED INLAY, 90CRI, 5000K C
Light Source: -
Ballast/Driver: -

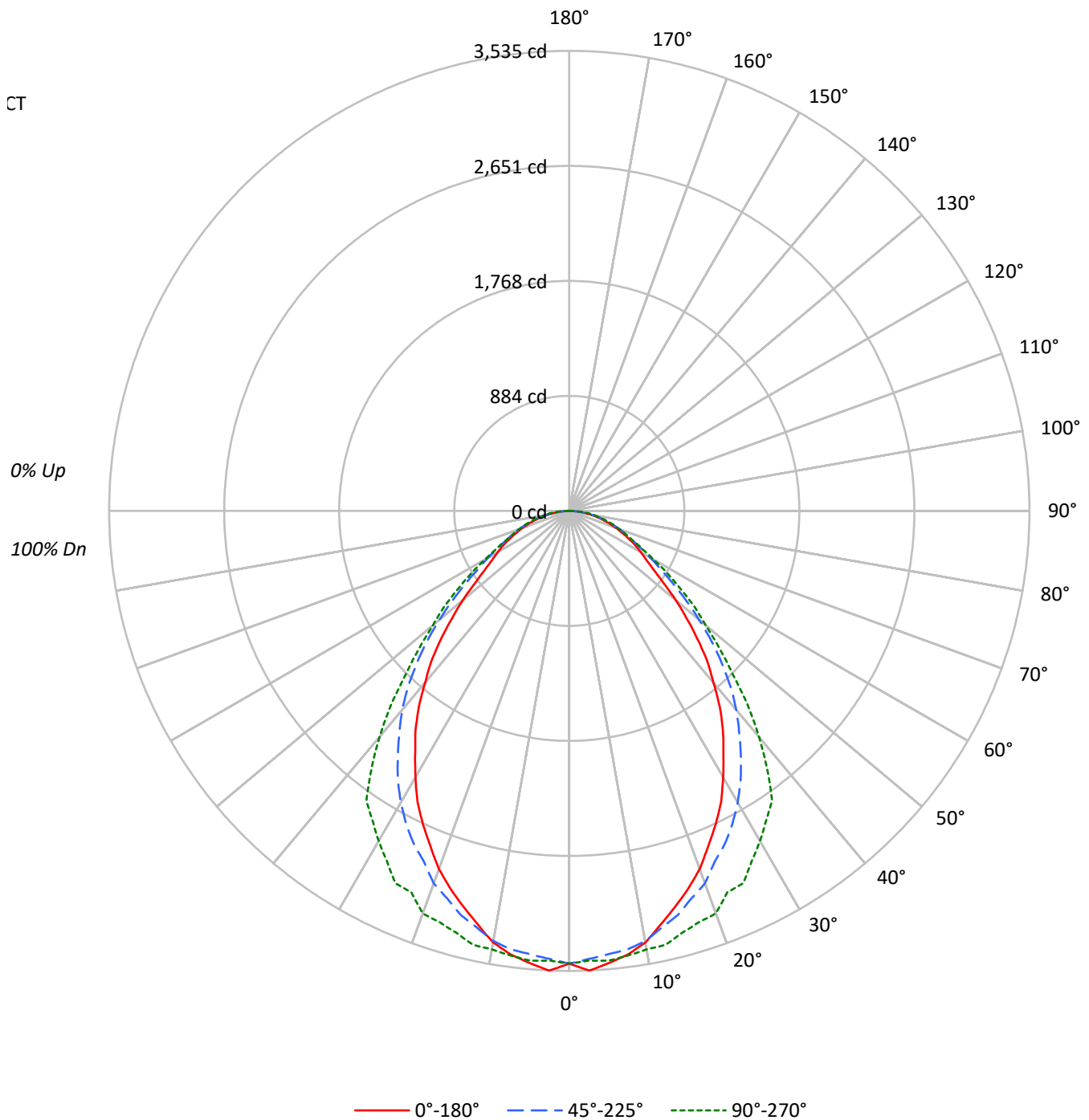
Summary

Lumens per Lamp: N/A
Luminaire Lumens: 7052.0 lumens
Efficiency: N/A
Efficacy: 109.5 lumens/watt
Spacing Criteria (0/90/45): 1.05 / 1.25 / 1.21
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

TEST NUMBER: P894056
CATALOG NUMBER: 4MB-9HL-LVRF-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	102	100
1	110	106	102	99	108	104	100	97	100	97	94	96	93	91	92	90	89	89	89	87
2	102	94	88	83	99	92	87	82	89	84	80	86	82	78	83	80	77	77	77	75
3	94	84	77	71	91	83	76	70	80	74	69	77	72	68	75	70	67	67	67	65
4	87	76	68	62	84	74	67	61	72	66	61	70	64	60	68	63	59	59	59	57
5	80	68	60	54	78	67	60	54	65	59	53	63	58	53	62	57	52	52	52	50
6	75	62	54	48	73	61	54	48	60	53	48	58	52	47	57	51	47	47	47	45
7	70	57	49	43	68	56	49	43	55	48	43	53	47	42	52	46	42	42	42	40
8	65	52	44	39	64	52	44	39	50	44	39	49	43	39	48	43	38	38	38	37
9	61	48	41	36	60	48	40	35	47	40	35	46	40	35	45	39	35	35	35	33
10	57	45	37	33	56	44	37	32	43	37	32	43	36	32	42	36	32	32	32	30

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	24746	24746	24746
5°	24908	24425	24774
10°	24324	24249	24714
15°	23176	23689	24715
20°	22170	23059	24917
25°	20872	22179	24790
30°	19417	21253	24064
35°	17881	19950	23598
40°	15993	18542	21073
45°	14020	16677	17869
50°	11832	14410	15124
55°	9816	12060	12898
60°	9026	10254	10638
65°	8455	9015	9084
70°	7874	8544	8479
75°	7345	7975	8261
80°	6859	7412	7924
85°	5772	6278	8743

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 90°
 Vertical Angle: 45°
 Luminance: 17869 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	328.3	4.7
10°-20°	915.7	13.0
20°-30°	1318.8	18.7
30°-40°	1455.9	20.6
40°-50°	1249.3	17.7
50°-60°	851.1	12.1
60°-70°	535.4	7.6
70°-80°	304.8	4.3
80°-90°	92.7	1.3
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°	2562.8	36.3
0°-40°	4018.7	57.0
0°-60°	6119.1	86.8
0°-90°	7052.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	7052.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	3478	3478	3478	3478	3478	
5°	3487	3474	3420	3492	3469	329
15°	3146	3180	3216	3362	3355	886
25°	2659	2712	2825	3053	3158	1221
35°	2059	2139	2297	2547	2717	1281
45°	1393	1486	1657	1757	1776	1074
55°	791	840	972	1019	1040	727
65°	502	510	536	562	540	499
75°	267	269	290	303	300	285
85°	71	73	77	92	107	81
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	3478.0	3478.0	3478.0	3478.0	3478.0
2.5°	3535.2	3498.8	3446.8	3496.7	3458.3
5°	3487.4	3473.9	3419.8	3491.5	3468.7
7.5°	3438.5	3409.4	3400.0	3477.0	3446.8
10°	3366.8	3350.1	3356.4	3455.1	3420.8
12.5°	3253.4	3264.9	3279.4	3405.2	3415.6
15°	3146.3	3179.6	3216.0	3361.6	3355.3
17.5°	3041.3	3087.1	3121.4	3308.5	3313.7
20°	2928.0	2954.0	3045.5	3226.4	3290.9
22.5°	2787.6	2838.6	2917.6	3143.2	3172.3
25°	2658.7	2711.7	2825.1	3052.8	3157.8
27.5°	2523.5	2572.4	2712.8	2945.7	3035.1
30°	2363.4	2428.9	2586.9	2824.0	2929.0
32.5°	2203.3	2298.9	2450.7	2694.0	2815.7
35°	2058.7	2138.8	2296.8	2547.4	2716.9
37.5°	1898.6	1982.8	2143.0	2387.3	2495.4
40°	1721.9	1812.3	1996.4	2193.9	2268.8
42.5°	1570.0	1648.0	1833.1	1972.4	2031.7
45°	1393.3	1485.8	1657.4	1757.2	1775.9
47.5°	1222.8	1328.8	1482.7	1529.5	1565.9
50°	1068.9	1152.1	1301.8	1330.9	1366.3
52.5°	911.9	1000.3	1131.3	1160.4	1212.4
55°	791.3	840.1	972.2	1019.0	1039.8
57.5°	702.9	734.1	827.7	886.9	893.2
60°	634.3	649.9	720.6	765.3	747.6
62.5°	570.8	583.3	618.7	653.0	630.1
65°	502.2	510.5	535.5	561.5	539.6
67.5°	437.7	447.1	470.0	488.7	470.0
70°	378.5	385.8	410.7	419.0	407.6
72.5°	323.4	326.5	347.3	361.8	354.6
75°	267.2	269.3	290.1	302.6	300.5
77.5°	216.3	219.4	237.1	248.5	242.3
80°	167.4	169.5	180.9	197.6	193.4
82.5°	117.5	121.7	128.9	143.5	154.9
85°	70.7	72.8	76.9	91.5	107.1
87.5°	27.0	29.1	31.2	38.5	50.9
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	18.60	20.08	18.97	20.40	20.71	19.96	21.44	20.33	21.76	22.07
	3H	20.18	21.51	20.56	21.83	22.20	21.25	22.57	21.63	22.90	23.26
	4H	20.79	22.03	21.19	22.38	22.76	21.80	23.04	22.20	23.39	23.77
	6H	21.26	22.40	21.67	22.77	23.16	22.25	23.40	22.67	23.77	24.16
	8H	21.41	22.51	21.84	22.90	23.30	22.44	23.53	22.87	23.92	24.32
	12H	21.51	22.56	21.94	22.94	23.37	22.60	23.64	23.03	24.02	24.45
4H	2H	19.22	20.46	19.62	20.81	21.19	20.33	21.57	20.73	21.92	22.30
	3H	21.02	22.05	21.43	22.45	22.85	21.89	22.91	22.30	23.32	23.72
	4H	21.74	22.67	22.18	23.09	23.53	22.59	23.52	23.02	23.93	24.37
	6H	22.34	23.15	22.80	23.59	24.05	23.20	24.00	23.66	24.45	24.91
	8H	22.54	23.30	23.01	23.74	24.21	23.45	24.20	23.91	24.64	25.11
	12H	22.68	23.35	23.16	23.83	24.30	23.66	24.33	24.14	24.81	25.28
8H	4H	22.07	22.82	22.53	23.27	23.74	22.82	23.58	23.29	24.02	24.49
	6H	22.79	23.42	23.29	23.91	24.39	23.57	24.19	24.07	24.68	25.16
	8H	23.07	23.63	23.59	24.14	24.63	23.90	24.46	24.41	24.97	25.46
	12H	23.28	23.78	23.79	24.27	24.84	24.21	24.70	24.72	25.19	25.76
12H	4H	22.11	22.78	22.59	23.26	23.73	22.84	23.51	23.32	23.99	24.46
	6H	22.86	23.42	23.38	23.93	24.42	23.61	24.17	24.12	24.68	25.16
	8H	23.20	23.69	23.71	24.19	24.75	23.99	24.49	24.50	24.98	25.55