

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: P894042

Luminaire Tested: 4MB-9HL-LVRA-UNV-L835

Issue Date: 11/11/2024

Test Information

Test Method: LM-79-2019
Report Number: P894042
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-L835
Description: 9000 Lumen 4FT MICROBAY LINEAR BAY with LOUVER WITH AISLE OPTIC, 80CRI, 3500K CCT
Light Source: -
Ballast/Driver: -

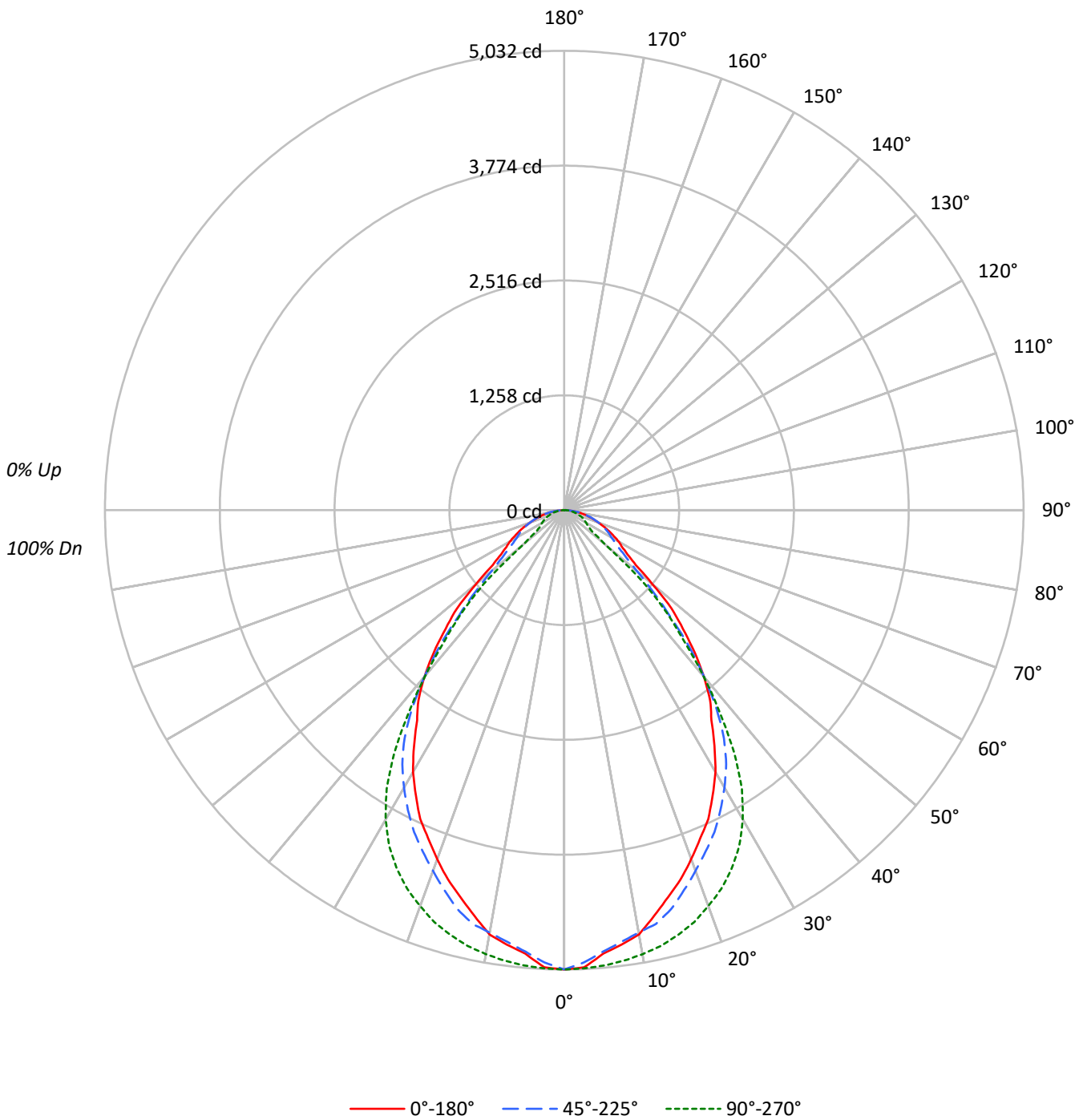
Summary

Lumens per Lamp: N/A
Luminaire Lumens: 8166.0 lumens
Efficiency: N/A
Efficacy: 126.8 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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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	104	101	108	105	102	99	101	98	96	97	95	93	93	92	90	90	90	90	88
2	103	96	91	86	101	95	90	85	91	87	83	88	85	82	85	82	80	80	80	80	78
3	96	87	80	75	94	86	80	75	83	78	73	80	76	72	78	74	71	71	71	71	69
4	89	79	72	66	87	78	71	66	76	70	65	73	68	64	71	67	63	63	63	63	62
5	83	72	65	59	81	71	64	59	69	63	58	67	62	58	66	61	57	57	57	57	55
6	78	66	59	53	76	65	58	53	64	57	53	62	57	52	61	56	52	52	52	52	50
7	73	61	54	48	71	60	53	48	59	52	48	58	52	47	56	51	47	47	47	47	45
8	68	57	49	44	67	56	49	44	55	48	44	53	48	43	52	47	43	43	43	43	41
9	64	52	45	40	63	52	45	40	51	44	40	50	44	40	49	44	40	40	40	40	38
10	61	49	42	37	60	48	42	37	47	41	37	47	41	37	46	40	37	37	37	37	35

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	35799	35799	35799
5°	34834	34677	35760
10°	34094	33944	35677
15°	32334	33327	35477
20°	30801	31842	34935
25°	29300	30552	34044
30°	27221	28840	32143
35°	24408	26503	28193
40°	22114	22162	22041
45°	18490	16376	15972
50°	13967	11526	6531
55°	10504	9218	4118
60°	9762	8488	3967
65°	9083	8472	3973
70°	8309	8309	3911
75°	7879	8093	3780
80°	7281	7650	3880
85°	6351	6670	4237

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 22.5°
 Vertical Angle: 45°
 Luminance: 18920 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	464.8	5.7
10°-20°	1280.6	15.7
20°-30°	1816.0	22.2
30°-40°	1870.8	22.9
40°-50°	1306.7	16.0
50°-60°	627.0	7.7
60°-70°	439.9	5.4
70°-80°	275.0	3.4
80°-90°	85.1	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°	3561.4	43.6
0°-40°	5432.2	66.5
0°-60°	7366.0	90.2
0°-90°	8166.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	8166.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	5032	5032	5032	5032	5032	
5°	4877	4871	4855	4982	5007	462
15°	4390	4422	4524	4654	4816	1236
25°	3732	3770	3892	4155	4336	1707
35°	2810	2887	3051	3115	3246	1771
45°	1838	1880	1628	1544	1587	1416
55°	847	805	743	476	332	794
65°	540	504	503	383	236	534
75°	287	283	294	254	138	302
85°	78	78	82	80	52	87
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	5031.5	5031.5	5031.5	5031.5	5031.5
2.5°	5012.1	4996.5	4958.9	5027.7	5022.5
5°	4877.2	4870.7	4855.2	4982.3	5006.9
7.5°	4800.7	4787.7	4769.6	4909.6	4978.4
10°	4719.0	4734.6	4698.3	4826.6	4938.2
12.5°	4550.4	4591.9	4641.2	4741.1	4888.9
15°	4389.6	4422.1	4524.5	4654.2	4816.3
17.5°	4239.2	4276.8	4365.0	4559.5	4732.0
20°	4068.0	4119.9	4205.5	4454.5	4614.0
22.5°	3891.7	3939.6	4047.3	4314.4	4492.1
25°	3732.2	3769.8	3891.7	4154.9	4336.5
27.5°	3520.8	3590.8	3706.2	3960.4	4151.0
30°	3313.3	3372.9	3510.4	3724.4	3912.4
32.5°	3063.0	3149.9	3301.6	3465.0	3621.9
35°	2810.1	2886.7	3051.3	3114.9	3245.9
37.5°	2626.0	2646.7	2740.1	2732.3	2806.3
40°	2380.9	2422.4	2386.1	2288.8	2373.1
42.5°	2116.4	2165.6	2019.1	1906.3	1936.1
45°	1837.6	1880.3	1627.5	1544.5	1587.3
47.5°	1596.3	1592.5	1312.4	1256.6	1196.9
50°	1261.8	1303.3	1041.3	937.6	590.0
52.5°	985.6	1001.1	858.5	599.1	387.7
55°	846.8	805.3	743.1	475.9	332.0
57.5°	752.1	700.3	658.8	442.2	303.4
60°	686.0	627.6	596.5	420.2	278.8
62.5°	610.8	565.4	553.7	400.7	256.8
65°	539.5	504.5	503.2	382.6	236.0
67.5°	468.1	448.7	453.9	360.5	212.7
70°	399.4	395.5	399.4	332.0	188.0
72.5°	341.1	337.2	347.5	295.7	160.8
75°	286.6	282.7	294.4	254.2	137.5
77.5°	228.2	230.8	238.6	211.4	115.4
80°	177.7	177.7	186.7	166.0	94.7
82.5°	127.1	128.4	133.6	121.9	73.9
85°	77.8	77.8	81.7	80.4	51.9
87.5°	25.9	29.8	35.0	37.6	25.9
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	18.08	19.43	18.44	19.74	20.06	14.41	15.76	14.77	16.08	16.39
	3H	19.82	21.02	20.20	21.35	21.72	16.39	17.59	16.77	17.92	18.29
	4H	20.49	21.62	20.89	21.97	22.35	17.09	18.22	17.49	18.57	18.95
	6H	20.99	22.03	21.41	22.40	22.80	17.61	18.65	18.03	19.02	19.42
	8H	21.17	22.15	21.60	22.54	22.95	17.80	18.78	18.23	19.17	19.58
	12H	21.28	22.22	21.71	22.60	23.03	17.94	18.88	18.37	19.26	19.69
4H	2H	18.61	19.74	19.01	20.09	20.47	16.03	17.16	16.43	17.51	17.89
	3H	20.59	21.52	21.00	21.92	22.32	18.21	19.14	18.62	19.54	19.95
	4H	21.39	22.22	21.82	22.64	23.08	19.09	19.93	19.52	20.34	20.79
	6H	22.03	22.75	22.49	23.20	23.67	19.73	20.46	20.19	20.90	21.37
	8H	22.25	22.93	22.72	23.37	23.84	19.94	20.62	20.41	21.06	21.54
	12H	22.40	23.00	22.89	23.49	23.96	20.10	20.70	20.59	21.18	21.66
8H	4H	21.67	22.35	22.14	22.79	23.26	19.74	20.42	20.21	20.86	21.33
	6H	22.45	23.01	22.96	23.51	23.99	20.60	21.16	21.10	21.65	22.13
	8H	22.76	23.26	23.28	23.77	24.26	20.93	21.43	21.45	21.94	22.43
	12H	22.99	23.43	23.51	23.93	24.50	21.19	21.63	21.71	22.13	22.70
12H	4H	21.69	22.29	22.17	22.77	23.24	19.81	20.41	20.30	20.89	21.37
	6H	22.51	23.01	23.03	23.52	24.01	20.74	21.24	21.26	21.75	22.24
	8H	22.87	23.31	23.39	23.81	24.38	21.15	21.59	21.66	22.09	22.66