

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: P894051

Luminaire Tested: 4MB-9HL-LVRF-UNV-L840

Issue Date: 11/11/2024

Test Information

Test Method: LM-79-2019
Report Number: P894051
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-L840
Description: 9000 Lumen 4FT MICROBAY LINEAR BAY with LOUVER WITH FROSTED INLAY, 80CRI, 4000K C
Light Source: -
Ballast/Driver: -

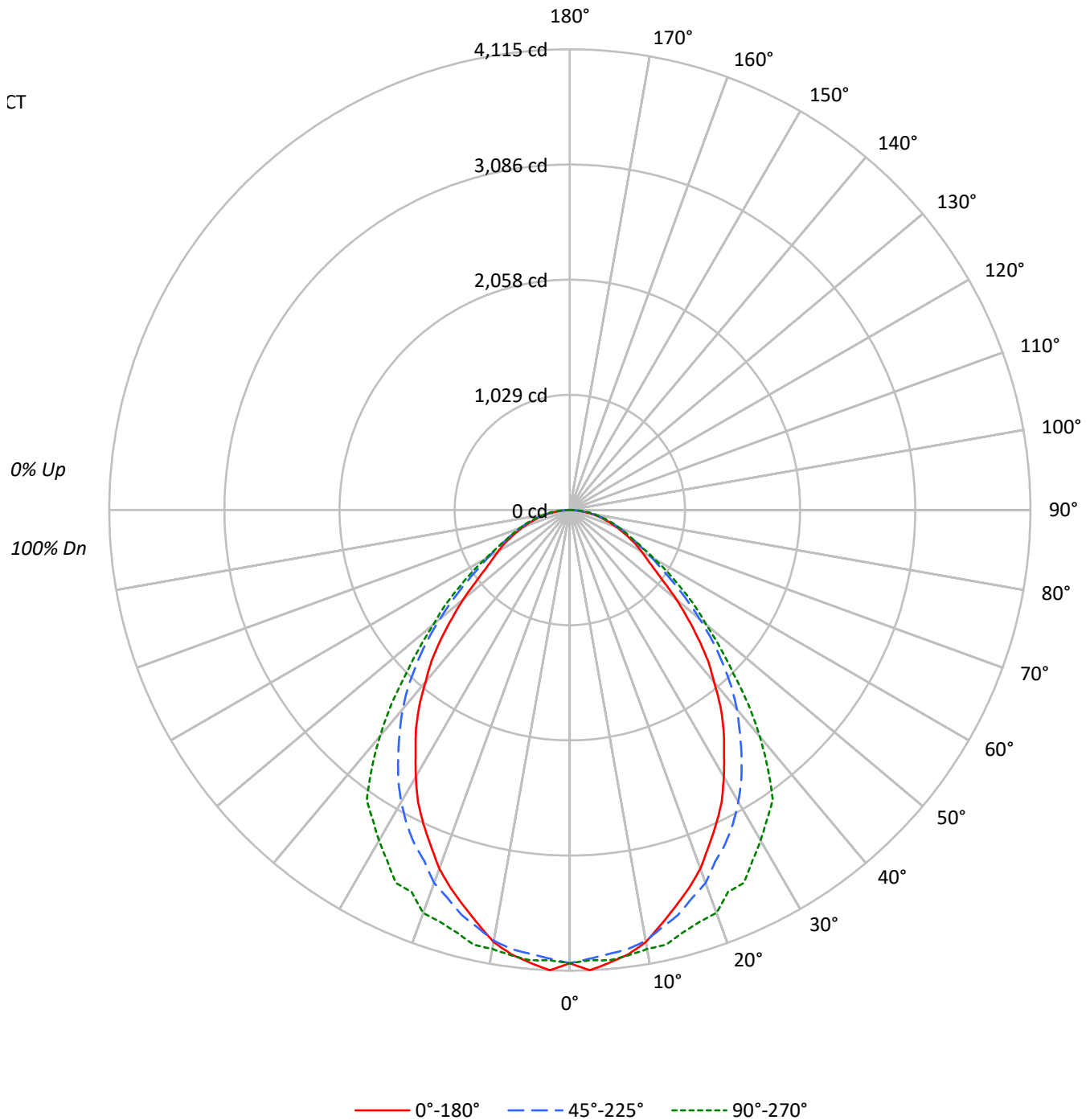
Summary

Lumens per Lamp: N/A
Luminaire Lumens: 8208.0 lumens
Efficiency: N/A
Efficacy: 127.5 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

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

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	28803	28803	28803
5°	28991	28429	28835
10°	28312	28224	28766
15°	26975	27572	28767
20°	25804	26839	29002
25°	24293	25813	28854
30°	22600	24737	28009
35°	20813	23221	27467
40°	18614	21582	24527
45°	16318	19411	20798
50°	13771	16772	17602
55°	11425	14036	15012
60°	10505	11935	12382
65°	9840	10494	10574
70°	9164	9944	9869
75°	8549	9281	9616
80°	7982	8629	9223
85°	6719	7315	10180

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 90°
 Vertical Angle: 45°
 Luminance: 20798 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	382.1	4.7
10°-20°	1065.8	13.0
20°-30°	1535.0	18.7
30°-40°	1694.6	20.6
40°-50°	1454.1	17.7
50°-60°	990.6	12.1
60°-70°	623.2	7.6
70°-80°	354.8	4.3
80°-90°	107.9	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°	2982.9	36.3
0°-40°	4677.5	57.0
0°-60°	7122.2	86.8
0°-90°	8208.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	8208.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	4048	4048	4048	4048	4048	
5°	4059	4043	3980	4064	4037	383
15°	3662	3701	3743	3913	3905	1031
25°	3094	3156	3288	3553	3675	1421
35°	2396	2489	2673	2965	3162	1491
45°	1622	1729	1929	2045	2067	1250
55°	921	978	1132	1186	1210	846
65°	584	594	623	654	628	581
75°	311	313	338	352	350	331
85°	82	85	90	106	125	95
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	4048.2	4048.2	4048.2	4048.2	4048.2
2.5°	4114.7	4072.4	4011.9	4069.9	4025.2
5°	4059.1	4043.3	3980.4	4063.9	4037.3
7.5°	4002.2	3968.3	3957.4	4046.9	4011.9
10°	3918.7	3899.3	3906.6	4021.5	3981.6
12.5°	3786.8	3800.1	3817.0	3963.4	3975.5
15°	3662.1	3700.8	3743.2	3912.6	3905.4
17.5°	3539.9	3593.1	3633.1	3850.9	3856.9
20°	3408.0	3438.2	3544.7	3755.3	3830.3
22.5°	3244.6	3303.9	3395.9	3658.5	3692.4
25°	3094.5	3156.2	3288.1	3553.2	3675.4
27.5°	2937.2	2994.1	3157.4	3428.5	3532.6
30°	2750.8	2827.1	3011.0	3286.9	3409.2
32.5°	2564.4	2675.8	2852.5	3135.7	3277.3
35°	2396.2	2489.4	2673.4	2965.0	3162.3
37.5°	2209.8	2307.9	2494.2	2778.6	2904.5
40°	2004.1	2109.4	2323.6	2553.5	2640.7
42.5°	1827.4	1918.2	2133.6	2295.8	2364.8
45°	1621.7	1729.4	1929.1	2045.3	2067.0
47.5°	1423.2	1546.7	1725.8	1780.2	1822.6
50°	1244.1	1340.9	1515.2	1549.1	1590.2
52.5°	1061.4	1164.2	1316.7	1350.6	1411.1
55°	921.0	977.9	1131.5	1186.0	1210.2
57.5°	818.1	854.4	963.3	1032.3	1039.6
60°	738.2	756.4	838.7	890.7	870.1
62.5°	664.4	678.9	720.1	760.0	733.4
65°	584.5	594.2	623.3	653.5	628.1
67.5°	509.5	520.4	547.0	568.8	547.0
70°	440.5	449.0	478.0	487.7	474.4
72.5°	376.4	380.0	404.2	421.2	412.7
75°	311.0	313.4	337.6	352.2	349.8
77.5°	251.7	255.4	275.9	289.2	282.0
80°	194.8	197.3	210.6	229.9	225.1
82.5°	136.8	141.6	150.1	167.0	180.3
85°	82.3	84.7	89.6	106.5	124.7
87.5°	31.5	33.9	36.3	44.8	59.3
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	19.13	20.61	19.50	20.92	21.24	20.49	21.97	20.86	22.28	22.60
	3H	20.71	22.03	21.09	22.36	22.72	21.78	23.10	22.15	23.43	23.79
	4H	21.31	22.56	21.72	22.91	23.29	22.33	23.57	22.73	23.92	24.30
	6H	21.79	22.93	22.20	23.30	23.69	22.78	23.93	23.19	24.30	24.69
	8H	21.94	23.03	22.37	23.42	23.82	22.97	24.06	23.40	24.45	24.85
	12H	22.04	23.08	22.47	23.47	23.90	23.12	24.17	23.56	24.55	24.98
4H	2H	19.74	20.98	20.14	21.33	21.71	20.86	22.10	21.26	22.45	22.83
	3H	21.55	22.58	21.96	22.98	23.38	22.41	23.44	22.82	23.84	24.24
	4H	22.27	23.20	22.70	23.61	24.05	23.12	24.04	23.55	24.46	24.90
	6H	22.87	23.67	23.33	24.12	24.58	23.73	24.53	24.18	24.97	25.44
	8H	23.07	23.82	23.53	24.27	24.74	23.97	24.73	24.44	25.17	25.64
	12H	23.21	23.88	23.69	24.36	24.83	24.19	24.86	24.67	25.34	25.81
8H	4H	22.60	23.35	23.06	23.79	24.26	23.35	24.10	23.81	24.55	25.02
	6H	23.32	23.94	23.82	24.44	24.91	24.10	24.72	24.59	25.21	25.69
	8H	23.60	24.16	24.11	24.67	25.16	24.43	24.99	24.94	25.50	25.99
	12H	23.81	24.31	24.32	24.80	25.36	24.73	25.23	25.24	25.72	26.29
12H	4H	22.64	23.31	23.12	23.79	24.26	23.36	24.04	23.85	24.52	24.99
	6H	23.39	23.95	23.90	24.46	24.95	24.13	24.69	24.65	25.20	25.69
	8H	23.73	24.22	24.24	24.71	25.28	24.52	25.02	25.03	25.51	26.08