

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: P893203

Luminaire Tested: 4MB-10HL-LVRF-UNV-L840

Issue Date: 11/11/2024

Test Information

Test Method: LM-79-2019
Report Number: P893203
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-10HL-LVRF-UNV-L840
Description: 10000 Lumen 4FT MICROBAY LINEAR BAY with LOUVER WITH FROSTED INLAY, 80CRI, 4000K (C
Light Source: -
Ballast/Driver: -

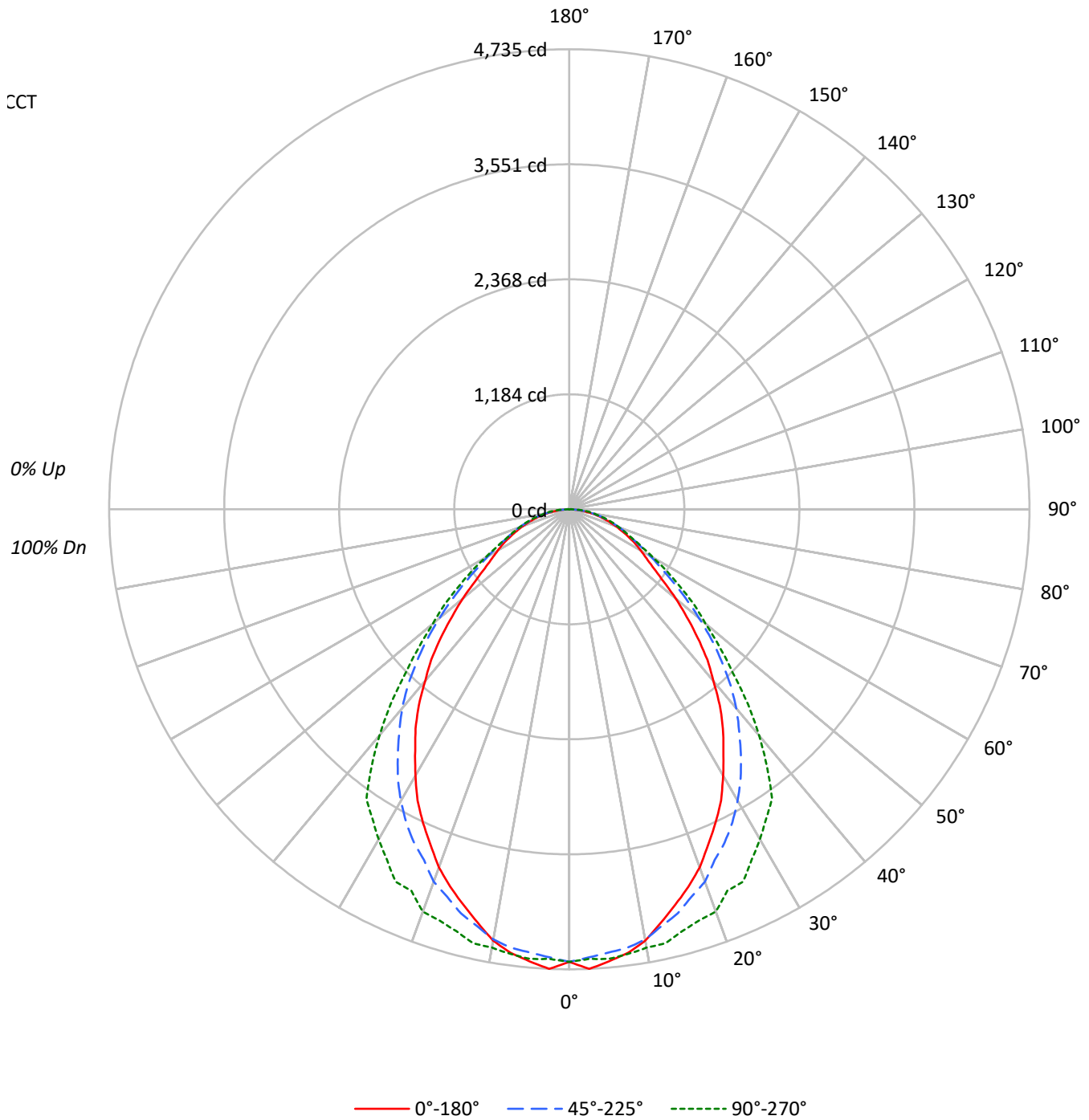
Summary

Lumens per Lamp: N/A
Luminaire Lumens: 9445.0 lumens
Efficiency: N/A
Efficacy: 125.1 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): 75.5
Input Voltage (V): 120
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: 0.997
Total Harmonic Distortion (THDi): 7.45
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
RCR																				
0	119	119	119	119	116	116	116	116	111	111	111	106	106	106	102	102	102	102	100	
1	110	106	102	99	108	104	100	97	100	97	94	96	93	91	92	90	89	87	87	
2	102	94	88	83	99	92	87	82	89	84	80	86	82	78	83	80	77	75	75	
3	94	84	77	71	91	83	76	70	80	74	69	77	72	68	75	70	67	65	65	
4	87	76	68	62	84	74	67	61	72	66	61	70	64	60	68	63	59	57	57	
5	80	68	60	54	78	67	60	54	65	59	53	63	58	53	62	57	52	50	50	
6	75	62	54	48	73	61	54	48	60	53	48	58	52	47	57	51	47	45	45	
7	70	57	49	43	68	56	49	43	55	48	43	53	47	42	52	46	42	40	40	
8	65	52	44	39	64	52	44	39	50	44	39	49	43	39	48	43	38	37	37	
9	61	48	41	36	60	48	40	35	47	40	35	46	40	35	45	39	35	33	33	
10	57	45	37	33	56	44	37	32	43	37	32	43	36	32	42	36	32	30	30	

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	33143	33143	33143
5°	33360	32713	33180
10°	32578	32477	33102
15°	31040	31728	33102
20°	29693	30884	33373
25°	27955	29704	33202
30°	26006	28466	32230
35°	23949	26720	31607
40°	21419	24834	28223
45°	18777	22336	23934
50°	15846	19299	20255
55°	13146	16152	17275
60°	12088	13733	14248
65°	11324	12074	12169
70°	10545	11444	11356
75°	9839	10680	11065
80°	9186	9928	10612
85°	7731	8417	11707

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 90°
 Vertical Angle: 45°
 Luminance: 23934 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	439.7	4.7
10°-20°	1226.5	13.0
20°-30°	1766.3	18.7
30°-40°	1950.0	20.6
40°-50°	1673.2	17.7
50°-60°	1139.9	12.1
60°-70°	717.1	7.6
70°-80°	408.3	4.3
80°-90°	124.1	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°	3432.4	36.3
0°-40°	5382.5	57.0
0°-60°	8195.6	86.8
0°-90°	9445.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	9445.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	4658	4658	4658	4658	4658	
5°	4671	4653	4580	4676	4646	441
15°	4214	4259	4307	4502	4494	1186
25°	3561	3632	3784	4089	4229	1635
35°	2757	2865	3076	3412	3639	1715
45°	1866	1990	2220	2354	2379	1438
55°	1060	1125	1302	1365	1393	974
65°	673	684	717	752	723	668
75°	358	361	388	405	402	381
85°	95	98	103	122	143	109
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	4658.2	4658.2	4658.2	4658.2	4658.2
2.5°	4734.8	4686.1	4616.5	4683.3	4631.8
5°	4670.8	4652.7	4580.3	4676.3	4645.7
7.5°	4605.3	4566.3	4553.8	4656.9	4616.5
10°	4509.2	4487.0	4495.3	4627.6	4581.7
12.5°	4357.4	4372.8	4392.3	4560.8	4574.7
15°	4214.0	4258.6	4307.3	4502.3	4493.9
17.5°	4073.4	4134.6	4180.6	4431.3	4438.2
20°	3921.6	3956.4	4078.9	4321.2	4407.6
22.5°	3733.6	3801.8	3907.6	4209.8	4248.8
25°	3560.9	3631.9	3783.7	4088.7	4229.3
27.5°	3379.8	3445.3	3633.3	3945.2	4065.0
30°	3165.4	3253.1	3464.8	3782.3	3923.0
32.5°	2950.9	3079.0	3282.4	3608.2	3771.2
35°	2757.3	2864.6	3076.3	3411.9	3638.9
37.5°	2542.9	2655.7	2870.1	3197.4	3342.2
40°	2306.1	2427.3	2673.8	2938.4	3038.7
42.5°	2102.8	2207.3	2455.2	2641.8	2721.1
45°	1866.1	1990.0	2219.8	2353.5	2378.6
47.5°	1637.7	1779.7	1985.8	2048.5	2097.3
50°	1431.6	1543.0	1743.5	1782.5	1829.9
52.5°	1221.3	1339.7	1515.1	1554.1	1623.8
55°	1059.8	1125.2	1302.1	1364.7	1392.6
57.5°	941.4	983.2	1108.5	1187.9	1196.2
60°	849.5	870.4	965.1	1025.0	1001.3
62.5°	764.5	781.2	828.6	874.6	843.9
65°	672.6	683.8	717.2	752.0	722.8
67.5°	586.3	598.8	629.5	654.5	629.5
70°	506.9	516.7	550.1	561.2	545.9
72.5°	433.1	437.3	465.1	484.6	474.9
75°	357.9	360.7	388.5	405.2	402.5
77.5°	289.7	293.8	317.5	332.8	324.5
80°	224.2	227.0	242.3	264.6	259.0
82.5°	157.4	162.9	172.7	192.2	207.5
85°	94.7	97.5	103.1	122.5	143.4
87.5°	36.2	39.0	41.8	51.5	68.2
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	19.62	21.10	19.98	21.41	21.73	20.98	22.46	21.34	22.77	23.09
	3H	21.20	22.52	21.58	22.85	23.21	22.26	23.59	22.64	23.92	24.28
	4H	21.80	23.04	22.20	23.39	23.77	22.82	24.06	23.22	24.41	24.79
	6H	22.27	23.42	22.69	23.79	24.18	23.27	24.42	23.68	24.78	25.18
	8H	22.43	23.52	22.86	23.91	24.31	23.46	24.55	23.88	24.94	25.34
	12H	22.53	23.57	22.96	23.95	24.38	23.61	24.66	24.04	25.04	25.47
4H	2H	20.23	21.47	20.63	21.82	22.20	21.35	22.59	21.75	22.94	23.32
	3H	22.04	23.06	22.45	23.47	23.87	22.90	23.93	23.31	24.33	24.73
	4H	22.76	23.69	23.19	24.10	24.54	23.61	24.53	24.04	24.95	25.39
	6H	23.36	24.16	23.81	24.60	25.07	24.21	25.02	24.67	25.46	25.92
	8H	23.56	24.31	24.02	24.76	25.22	24.46	25.21	24.93	25.66	26.13
	12H	23.70	24.37	24.18	24.85	25.32	24.68	25.35	25.16	25.83	26.30
8H	4H	23.09	23.84	23.55	24.28	24.75	23.84	24.59	24.30	25.04	25.50
	6H	23.81	24.43	24.31	24.92	25.40	24.58	25.21	25.08	25.70	26.18
	8H	24.09	24.65	24.60	25.16	25.64	24.91	25.47	25.43	25.98	26.47
	12H	24.30	24.79	24.81	25.29	25.85	25.22	25.72	25.73	26.21	26.77
12H	4H	23.12	23.80	23.61	24.27	24.75	23.85	24.52	24.34	25.00	25.48
	6H	23.88	24.44	24.39	24.95	25.44	24.62	25.18	25.14	25.69	26.18
	8H	24.21	24.71	24.72	25.20	25.77	25.01	25.50	25.52	26.00	26.56