

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: P893209

Luminaire Tested: 4MB-10HL-RFLW-UNV-L830

Issue Date: 11/11/2024

Test Information

Test Method: LM-79-2019
Report Number: P893209
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G2-2408-210-7)
Test Lab: INNOVATION CENTER
Issue Date: 11/11/2024
Manufacturer: COOPER LIGHTING SOLUTIONS
Product Line: METALUX
Catalog Number: 4MB-10HL-RFLW-UNV-L830
Description: 10000 Lumen 4FT MICROBAY LINEAR BAY with REFLECTOR WITH WHITE FINISH, 80CRI, 3000K
Light Source: -
Ballast/Driver: -

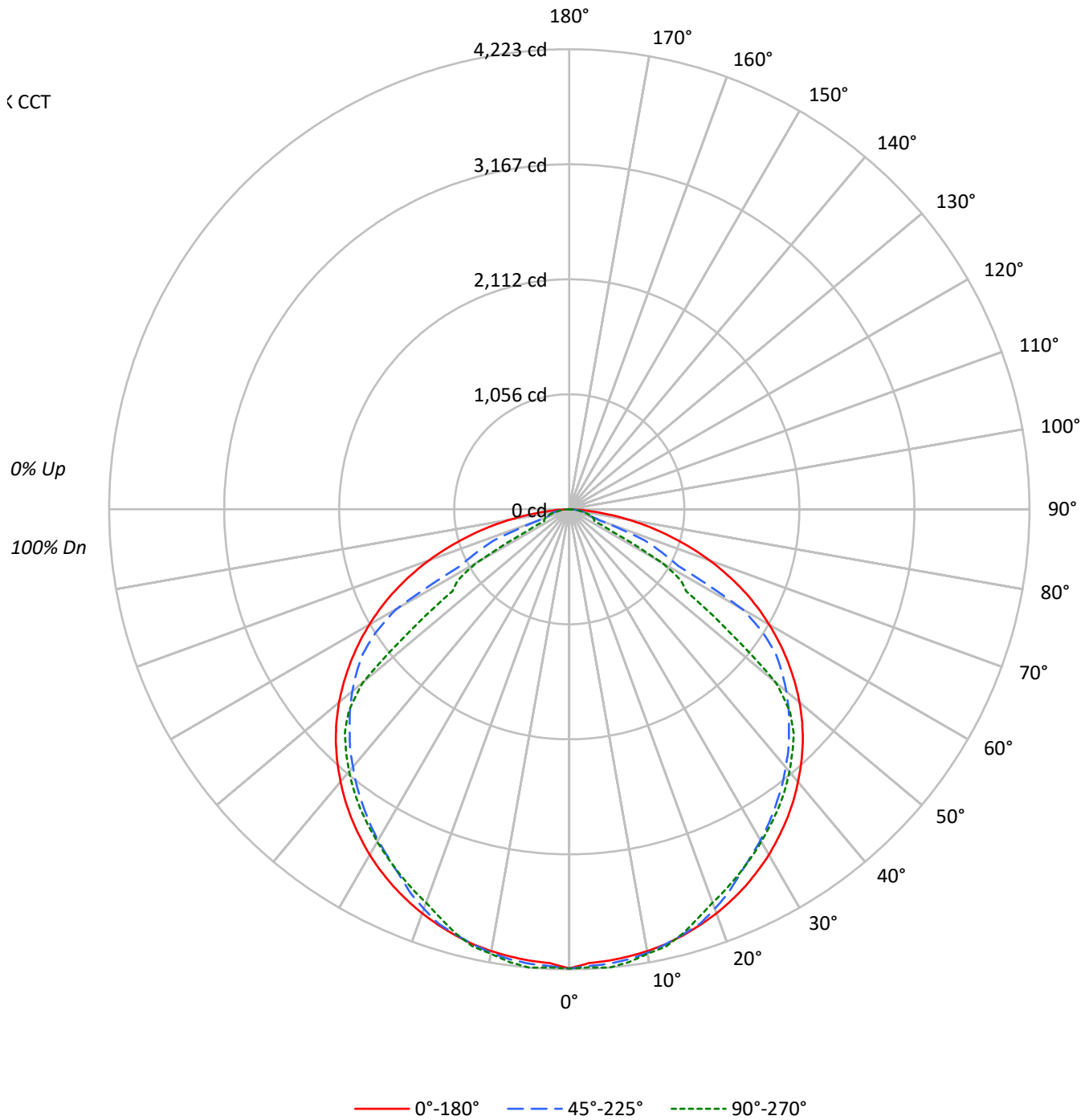
Summary

Lumens per Lamp: N/A
Luminaire Lumens: 10988.0 lumens
Efficiency: N/A
Efficacy: 145.5 lumens/watt
Spacing Criteria (0/90/45): 1.29 / 1.25 / 1.38
Luminous Opening: Rectangular (W 0.21' x L: 3.98' x H: 0')
CIE Type: Direct

Input Watts (W): 75.5
Input Voltage (V): 120
Input Current (A_{in}): 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	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	98	107	103	100	97	99	96	94	95	93	91	92	90	88	88	88	88	86
2	101	93	87	82	98	91	85	81	88	83	79	85	81	77	82	78	75	75	75	75	73
3	92	82	75	69	90	81	74	68	78	72	67	75	70	66	73	68	65	65	65	65	62
4	85	73	65	59	82	72	64	58	70	63	57	67	61	57	65	60	56	56	56	56	54
5	78	66	57	51	76	65	56	50	62	55	50	61	54	49	59	53	49	49	49	49	47
6	72	59	51	44	70	58	50	44	56	49	44	55	48	43	53	48	43	43	43	43	41
7	67	54	45	39	65	53	45	39	51	44	39	50	43	39	49	43	38	38	38	38	36
8	62	49	41	35	61	48	40	35	47	40	35	46	39	35	45	39	34	34	34	34	32
9	58	45	37	32	57	44	37	31	43	36	31	42	36	31	41	35	31	31	31	31	29
10	54	42	34	29	53	41	34	29	40	33	28	39	33	28	38	32	28	28	28	28	26

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	54729	54729	54729
5°	54228	54584	55040
10°	54307	54512	54615
15°	54426	54304	54181
20°	54563	53935	53110
25°	54712	52981	52870
30°	54920	52623	52835
35°	55118	52420	53059
40°	55351	52356	53281
45°	55647	52331	53501
50°	55731	52529	49984
55°	55488	52370	29641
60°	55018	47731	25703
65°	54116	28854	7783
70°	51975	11439	8926
75°	48159	9382	9121
80°	41666	9908	8547
85°	29604	9282	8135

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
 Vertical Angle: 50°
 Luminance: 55731 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	399.2	3.6
10°-20°	1143.3	10.4
20°-30°	1727.8	15.7
30°-40°	2108.1	19.2
40°-50°	2229.9	20.3
50°-60°	1847.0	16.8
60°-70°	1026.7	9.3
70°-80°	416.2	3.8
80°-90°	89.7	0.8
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°	3270.3	29.8
0°-40°	5378.4	48.9
0°-60°	9455.3	86.1
0°-90°	10988.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	10988.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	4215	4215	4215	4215	4215	
5°	4160	4234	4188	4194	4223	396
15°	4049	4111	4040	4037	4030	1144
25°	3819	3846	3698	3674	3690	1761
35°	3477	3434	3307	3320	3347	2177
45°	3030	2874	2850	2885	2913	2336
55°	2451	2285	2313	1587	1309	2190
65°	1761	1614	939	316	253	1737
75°	960	535	187	184	182	1013
85°	199	66	62	57	55	250
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	4214.8	4214.8	4214.8	4214.8	4214.8
2.5°	4169.4	4242.1	4196.7	4205.7	4209.6
5°	4160.3	4234.3	4187.6	4194.1	4222.6
7.5°	4140.8	4216.1	4166.8	4170.7	4192.8
10°	4118.7	4187.6	4134.3	4127.8	4142.1
12.5°	4088.8	4151.2	4088.8	4091.4	4109.6
15°	4048.6	4110.9	4039.5	4036.9	4030.4
17.5°	4000.5	4059.0	3988.8	3947.3	3933.0
20°	3948.6	3994.0	3903.1	3839.5	3843.4
22.5°	3886.2	3925.2	3810.9	3752.4	3769.3
25°	3818.7	3846.0	3697.9	3674.5	3690.1
27.5°	3744.6	3765.4	3600.5	3595.3	3608.3
30°	3662.8	3670.6	3509.6	3507.0	3523.8
32.5°	3571.9	3558.9	3412.1	3414.7	3436.8
35°	3477.1	3434.2	3306.9	3319.9	3347.2
37.5°	3377.1	3300.4	3203.0	3219.9	3249.8
40°	3265.4	3161.5	3088.7	3114.7	3143.3
42.5°	3151.1	3016.0	2978.3	3003.0	3030.3
45°	3030.3	2874.4	2849.7	2884.8	2913.4
47.5°	2899.1	2735.4	2731.5	2758.8	2745.8
50°	2758.8	2591.2	2600.3	2564.0	2474.3
52.5°	2608.1	2441.9	2460.1	2302.9	1861.3
55°	2451.0	2284.7	2313.3	1587.2	1309.3
57.5°	2289.9	2123.7	2105.5	1214.4	1213.1
60°	2118.5	1960.0	1837.9	1072.9	989.7
62.5°	1945.7	1789.8	1128.7	807.9	454.6
65°	1761.3	1614.5	939.1	315.6	253.3
67.5°	1567.7	1436.6	752.0	237.7	246.8
70°	1369.0	1252.1	301.3	229.9	235.1
72.5°	1166.4	966.4	200.0	213.0	213.0
75°	959.9	535.1	187.0	184.4	181.8
77.5°	754.6	358.5	163.7	152.0	148.1
80°	557.2	128.6	132.5	118.2	114.3
82.5°	368.9	100.0	94.8	85.7	83.1
85°	198.7	66.2	62.3	57.2	54.6
87.5°	71.4	33.8	33.8	27.3	24.7
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	26.58	28.16	26.95	28.47	28.78	22.57	24.15	22.94	24.46	24.77
	3H	28.59	30.00	28.97	30.32	30.69	22.71	24.11	23.08	24.44	24.80
	4H	29.20	30.52	29.60	30.87	31.25	22.82	24.14	23.22	24.49	24.87
	6H	29.60	30.82	30.01	31.19	31.58	22.93	24.15	23.34	24.52	24.91
	8H	29.72	30.88	30.15	31.27	31.67	22.97	24.13	23.39	24.51	24.92
	12H	29.79	30.90	30.22	31.28	31.71	22.99	24.10	23.42	24.48	24.91
4H	2H	26.71	28.03	27.11	28.38	28.76	23.30	24.62	23.70	24.97	25.34
	3H	28.87	29.96	29.28	30.36	30.76	23.50	24.58	23.91	24.98	25.38
	4H	29.53	30.50	29.96	30.92	31.36	23.65	24.63	24.08	25.04	25.48
	6H	29.97	30.82	30.43	31.26	31.72	23.82	24.67	24.27	25.11	25.57
	8H	30.11	30.91	30.58	31.35	31.82	23.87	24.66	24.33	25.11	25.57
	12H	30.22	30.93	30.70	31.40	31.88	23.92	24.62	24.40	25.10	25.57
8H	4H	29.46	30.26	29.93	30.70	31.17	23.92	24.72	24.39	25.16	25.63
	6H	29.91	30.56	30.40	31.05	31.53	24.13	24.79	24.63	25.28	25.75
	8H	30.05	30.64	30.57	31.15	31.64	24.21	24.80	24.73	25.31	25.80
	12H	30.19	30.71	30.69	31.20	31.76	24.30	24.82	24.81	25.31	25.88
12H	4H	29.44	30.15	29.92	30.62	31.09	23.94	24.65	24.42	25.12	25.59
	6H	29.86	30.45	30.38	30.96	31.45	24.15	24.74	24.66	25.25	25.73
	8H	30.04	30.56	30.55	31.05	31.61	24.27	24.79	24.78	25.29	25.85