

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: P893211

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

Issue Date: 11/11/2024

Test Information

Test Method: LM-79-2019
Report Number: P893211
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-L840
Description: 10000 Lumen 4FT MICROBAY LINEAR BAY with REFLECTOR WITH WHITE FINISH, 80CRI, 4000K
Light Source: -
Ballast/Driver: -

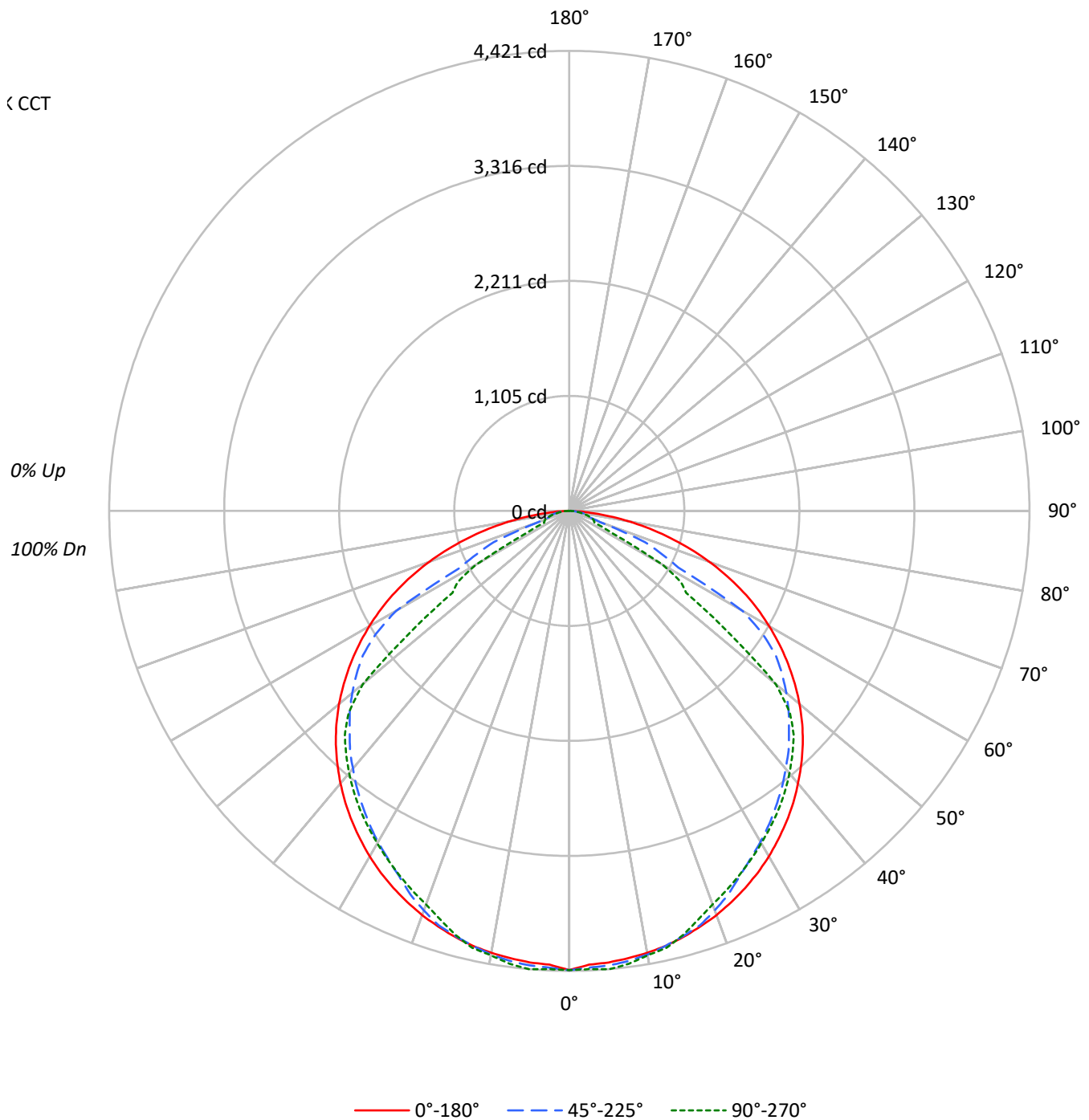
Summary

Lumens per Lamp: N/A
Luminaire Lumens: 11504.0 lumens
Efficiency: N/A
Efficacy: 152.4 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 (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	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°	57301	57301	57301
5°	56775	57147	57625
10°	56857	57073	57180
15°	56981	56854	56726
20°	57125	56468	55603
25°	57281	55469	55353
30°	57499	55093	55317
35°	57707	54882	55551
40°	57950	54816	55783
45°	58261	54788	56013
50°	58349	54998	52331
55°	58093	54829	31031
60°	57599	49972	26910
65°	56657	30209	8148
70°	54416	11978	9343
75°	50416	9823	9552
80°	43626	10372	8951
85°	31004	9729	8507

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
 Vertical Angle: 50°
 Luminance: 58349 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	418.0	3.6
10°-20°	1197.0	10.4
20°-30°	1808.9	15.7
30°-40°	2207.1	19.2
40°-50°	2334.7	20.3
50°-60°	1933.7	16.8
60°-70°	1075.0	9.3
70°-80°	435.7	3.8
80°-90°	94.0	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°	3423.9	29.8
0°-40°	5631.0	48.9
0°-60°	9899.4	86.1
0°-90°	11504.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	11504.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	4413	4413	4413	4413	4413	
5°	4356	4433	4384	4391	4421	414
15°	4239	4304	4229	4226	4220	1197
25°	3998	4027	3872	3847	3863	1844
35°	3640	3596	3462	3476	3504	2279
45°	3173	3009	2984	3020	3050	2446
55°	2566	2392	2422	1662	1371	2293
65°	1844	1690	983	330	265	1818
75°	1005	560	196	193	190	1061
85°	208	69	65	60	57	261
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	4412.8	4412.8	4412.8	4412.8	4412.8
2.5°	4365.2	4441.3	4393.7	4403.2	4407.3
5°	4355.7	4433.2	4384.2	4391.0	4420.9
7.5°	4335.3	4414.1	4362.5	4366.5	4389.6
10°	4312.1	4384.2	4328.5	4321.7	4336.6
12.5°	4280.9	4346.1	4280.9	4283.6	4302.6
15°	4238.7	4304.0	4229.2	4226.5	4219.7
17.5°	4188.4	4249.6	4176.2	4132.6	4117.7
20°	4134.0	4181.6	4086.4	4019.8	4023.8
22.5°	4068.7	4109.5	3989.8	3928.7	3946.3
25°	3998.0	4026.6	3871.5	3847.1	3863.4
27.5°	3920.5	3942.3	3769.6	3764.1	3777.7
30°	3834.8	3843.0	3674.4	3671.6	3689.3
32.5°	3739.6	3726.0	3572.4	3575.1	3598.2
35°	3640.4	3595.5	3462.2	3475.8	3504.4
37.5°	3535.7	3455.4	3353.4	3371.1	3402.4
40°	3418.7	3309.9	3233.8	3261.0	3290.9
42.5°	3299.0	3157.6	3118.2	3144.0	3172.6
45°	3172.6	3009.4	2983.5	3020.3	3050.2
47.5°	3035.2	2863.9	2859.8	2888.4	2874.8
50°	2888.4	2712.9	2722.5	2684.4	2590.5
52.5°	2730.6	2556.5	2575.6	2411.0	1948.7
55°	2566.1	2392.0	2421.9	1661.8	1370.7
57.5°	2397.4	2223.4	2204.3	1271.5	1270.1
60°	2217.9	2052.0	1924.2	1123.2	1036.2
62.5°	2037.1	1873.9	1181.7	845.8	476.0
65°	1844.0	1690.3	983.2	330.4	265.2
67.5°	1641.4	1504.0	787.4	248.9	258.4
70°	1433.3	1310.9	315.5	240.7	246.1
72.5°	1221.2	1011.7	209.4	223.0	223.0
75°	1004.9	560.3	195.8	193.1	190.4
77.5°	790.1	375.3	171.3	159.1	155.0
80°	583.4	134.6	138.7	123.7	119.7
82.5°	386.2	104.7	99.3	89.8	87.0
85°	208.1	69.4	65.3	59.8	57.1
87.5°	74.8	35.4	35.4	28.6	25.8
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	26.74	28.32	27.11	28.63	28.94	22.73	24.31	23.10	24.62	24.93
	3H	28.75	30.16	29.13	30.48	30.85	22.87	24.27	23.24	24.60	24.96
	4H	29.36	30.68	29.76	31.03	31.41	22.98	24.30	23.38	24.65	25.03
	6H	29.76	30.98	30.17	31.35	31.74	23.09	24.31	23.50	24.68	25.07
	8H	29.88	31.04	30.31	31.43	31.83	23.13	24.29	23.55	24.67	25.07
	12H	29.95	31.06	30.38	31.44	31.87	23.15	24.26	23.58	24.64	25.07
4H	2H	26.87	28.19	27.27	28.54	28.92	23.46	24.78	23.86	25.13	25.50
	3H	29.03	30.12	29.44	30.52	30.92	23.66	24.74	24.07	25.14	25.54
	4H	29.69	30.66	30.12	31.08	31.52	23.81	24.79	24.24	25.20	25.64
	6H	30.13	30.98	30.59	31.42	31.88	23.98	24.83	24.43	25.27	25.73
	8H	30.27	31.07	30.74	31.51	31.98	24.03	24.82	24.49	25.27	25.73
	12H	30.38	31.09	30.86	31.56	32.04	24.07	24.78	24.56	25.26	25.73
8H	4H	29.62	30.42	30.09	30.86	31.33	24.08	24.88	24.55	25.32	25.79
	6H	30.07	30.72	30.56	31.21	31.69	24.29	24.95	24.79	25.44	25.91
	8H	30.21	30.80	30.73	31.31	31.80	24.37	24.96	24.89	25.47	25.96
	12H	30.35	30.87	30.85	31.36	31.92	24.46	24.98	24.97	25.47	26.04
12H	4H	29.60	30.31	30.08	30.78	31.25	24.10	24.81	24.58	25.28	25.75
	6H	30.02	30.61	30.54	31.12	31.61	24.31	24.90	24.82	25.41	25.89
	8H	30.20	30.72	30.70	31.21	31.77	24.43	24.95	24.94	25.44	26.01