

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: P893212

Luminaire Tested: 4MB-10HL-RFLW-UNV-L850

Issue Date: 11/11/2024

**Test Information**

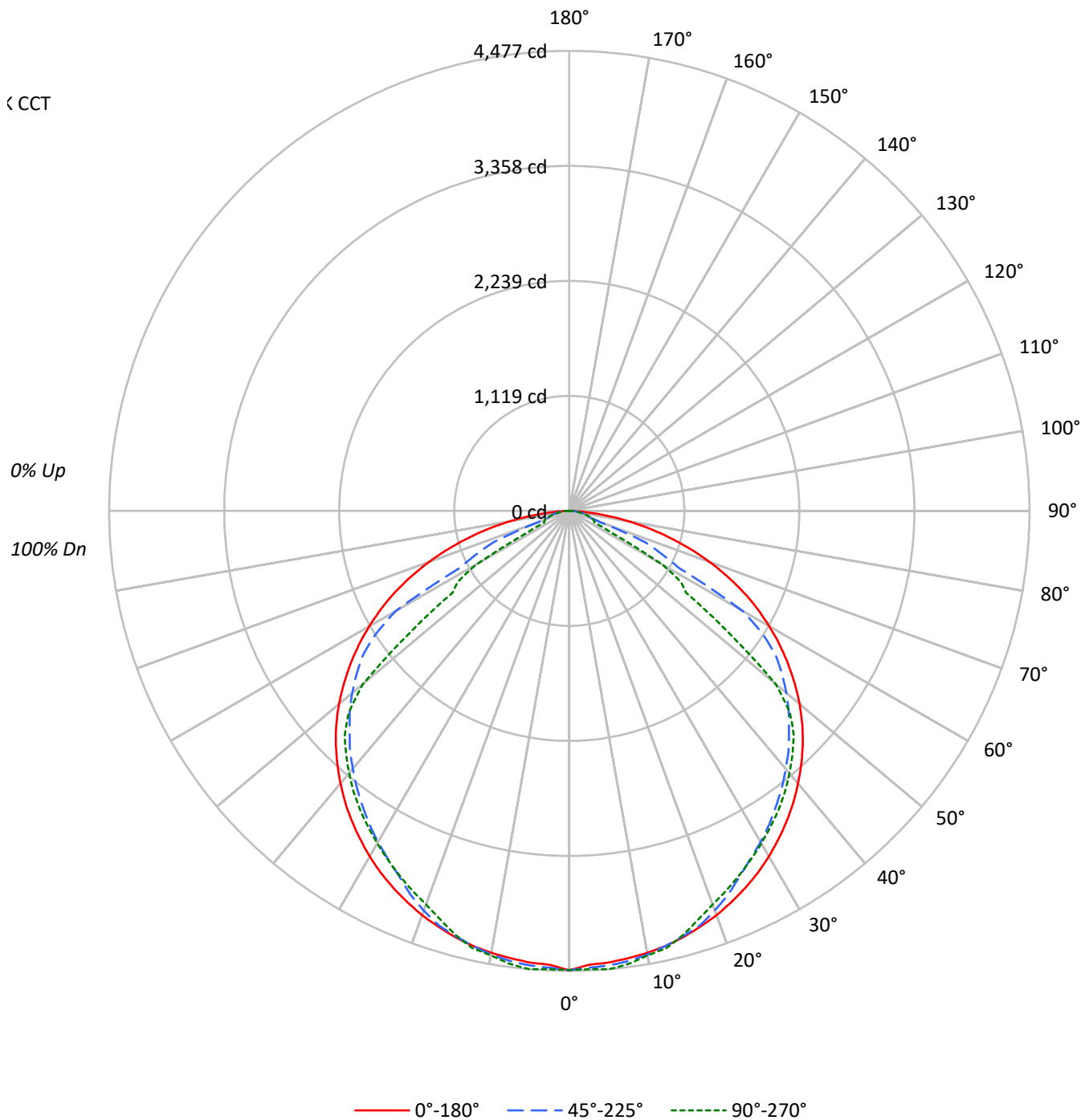
Test Method: LM-79-2019  
Report Number: P893212  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G2-2408-210-7)  
Test Lab: INNOVATION CENTER  
Issue Date: 11/11/2024  
Manufacturer: COOPER LIGHTING SOLUTIONS  
Product Line: METALUX  
Catalog Number: 4MB-10HL-RFLW-UNV-L850  
Description: 10000 Lumen 4FT MICROBAY LINEAR BAY with REFLECTOR WITH WHITE FINISH, 80CRI, 5000K  
Light Source: -  
Ballast/Driver: -

**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 11651.0 lumens  
Efficiency: N/A  
Efficacy: 154.3 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°	58033	58033	58033
5°	57500	57877	58361
10°	57583	57802	57910
15°	57710	57580	57451
20°	57855	57189	56314
25°	58013	56178	56059
30°	58233	55797	56025
35°	58444	55585	56261
40°	58690	55516	56495
45°	59004	55490	56729
50°	59095	55699	53000
55°	58836	55531	31429
60°	58337	50611	27256
65°	57380	30593	8253
70°	55111	12130	9465
75°	51064	9949	9673
80°	44179	10506	9063
85°	31392	9848	8611

**MAXIMUM LUMINANCE 45°-90°:**

Horizontal Angle: 0°  
 Vertical Angle: 50°  
 Luminance: 59095 cd/sqm



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	423.3	3.6
10°-20°	1212.3	10.4
20°-30°	1832.0	15.7
30°-40°	2235.3	19.2
40°-50°	2364.5	20.3
50°-60°	1958.4	16.8
60°-70°	1088.7	9.3
70°-80°	441.3	3.8
80°-90°	95.1	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°	3467.7	29.8
0°-40°	5702.9	48.9
0°-60°	10025.9	86.1
0°-90°	11651.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	11651.0	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	4469	4469	4469	4469	4469	
5°	4411	4490	4440	4447	4477	420
15°	4293	4359	4283	4280	4274	1213
25°	4049	4078	3921	3896	3913	1868
35°	3687	3641	3506	3520	3549	2308
45°	3213	3048	3022	3059	3089	2477
55°	2599	2423	2453	1683	1388	2322
65°	1868	1712	996	335	269	1842
75°	1018	567	198	196	193	1075
85°	211	70	66	61	58	265
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	4469.2	4469.2	4469.2	4469.2	4469.2
2.5°	4421.0	4498.1	4449.9	4459.5	4463.6
5°	4411.3	4489.8	4440.2	4447.1	4477.4
7.5°	4390.7	4470.5	4418.2	4422.3	4445.7
10°	4367.2	4440.2	4383.8	4376.9	4392.0
12.5°	4335.6	4401.7	4335.6	4338.3	4357.6
15°	4292.9	4359.0	4283.2	4280.5	4273.6
17.5°	4241.9	4303.9	4229.5	4185.4	4170.3
20°	4186.8	4235.0	4138.6	4071.1	4075.3
22.5°	4120.7	4162.0	4040.8	3978.9	3996.8
25°	4049.1	4078.0	3921.0	3896.2	3912.7
27.5°	3970.6	3992.6	3817.7	3812.2	3826.0
30°	3883.8	3892.1	3721.3	3718.6	3736.5
32.5°	3787.4	3773.6	3618.0	3620.8	3644.2
35°	3686.9	3641.4	3506.5	3520.2	3549.2
37.5°	3580.8	3499.6	3396.3	3414.2	3445.9
40°	3462.4	3352.2	3275.1	3302.6	3332.9
42.5°	3341.2	3198.0	3158.0	3184.2	3213.1
45°	3213.1	3047.8	3021.7	3058.9	3089.2
47.5°	3074.0	2900.5	2896.3	2925.3	2911.5
50°	2925.3	2747.6	2757.2	2718.7	2623.6
52.5°	2765.5	2589.2	2608.5	2441.9	1973.6
55°	2598.9	2422.6	2452.9	1683.0	1388.3
57.5°	2428.1	2251.8	2232.5	1287.7	1286.3
60°	2246.3	2078.3	1948.8	1137.6	1049.5
62.5°	2063.1	1897.8	1196.8	856.6	482.0
65°	1867.5	1711.9	995.7	334.7	268.6
67.5°	1662.3	1523.2	797.4	252.0	261.7
70°	1451.6	1327.7	319.5	243.8	249.3
72.5°	1236.8	1024.7	212.1	225.9	225.9
75°	1017.8	567.4	198.3	195.6	192.8
77.5°	800.2	380.1	173.5	161.1	157.0
80°	590.8	136.3	140.5	125.3	121.2
82.5°	391.1	106.0	100.5	90.9	88.1
85°	210.7	70.2	66.1	60.6	57.8
87.5°	75.7	35.8	35.8	28.9	26.2
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	26.79	28.36	27.15	28.67	28.99	22.78	24.35	23.14	24.66	24.98
	3H	28.79	30.20	29.17	30.53	30.89	22.91	24.32	23.29	24.64	25.00
	4H	29.41	30.72	29.80	31.07	31.45	23.03	24.35	23.43	24.69	25.07
	6H	29.81	31.02	30.22	31.39	31.78	23.14	24.35	23.55	24.72	25.11
	8H	29.92	31.08	30.35	31.47	31.87	23.17	24.33	23.60	24.72	25.12
	12H	30.00	31.10	30.43	31.49	31.92	23.19	24.30	23.62	24.68	25.11
4H	2H	26.92	28.24	27.32	28.58	28.96	23.50	24.82	23.90	25.17	25.55
	3H	29.08	30.17	29.49	30.56	30.97	23.70	24.79	24.11	25.19	25.59
	4H	29.73	30.71	30.16	31.12	31.56	23.85	24.83	24.29	25.25	25.69
	6H	30.18	31.03	30.63	31.47	31.93	24.02	24.87	24.48	25.31	25.77
	8H	30.32	31.11	30.78	31.55	32.02	24.07	24.87	24.54	25.31	25.78
	12H	30.42	31.13	30.90	31.61	32.08	24.12	24.83	24.60	25.31	25.78
8H	4H	29.67	30.46	30.13	30.90	31.37	24.13	24.92	24.59	25.36	25.83
	6H	30.11	30.77	30.61	31.26	31.73	24.33	24.99	24.83	25.48	25.96
	8H	30.26	30.85	30.77	31.36	31.84	24.42	25.01	24.93	25.52	26.00
	12H	30.39	30.91	30.90	31.40	31.97	24.50	25.03	25.01	25.52	26.08
12H	4H	29.64	30.35	30.12	30.83	31.30	24.14	24.85	24.62	25.33	25.80
	6H	30.07	30.66	30.58	31.17	31.65	24.35	24.94	24.86	25.45	25.94
	8H	30.24	30.76	30.75	31.25	31.82	24.47	25.00	24.98	25.49	26.05