

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: P893961

Luminaire Tested: 4MB-8HL-RFLW-UNV-L830

Issue Date: 11/11/2024

**Test Information**

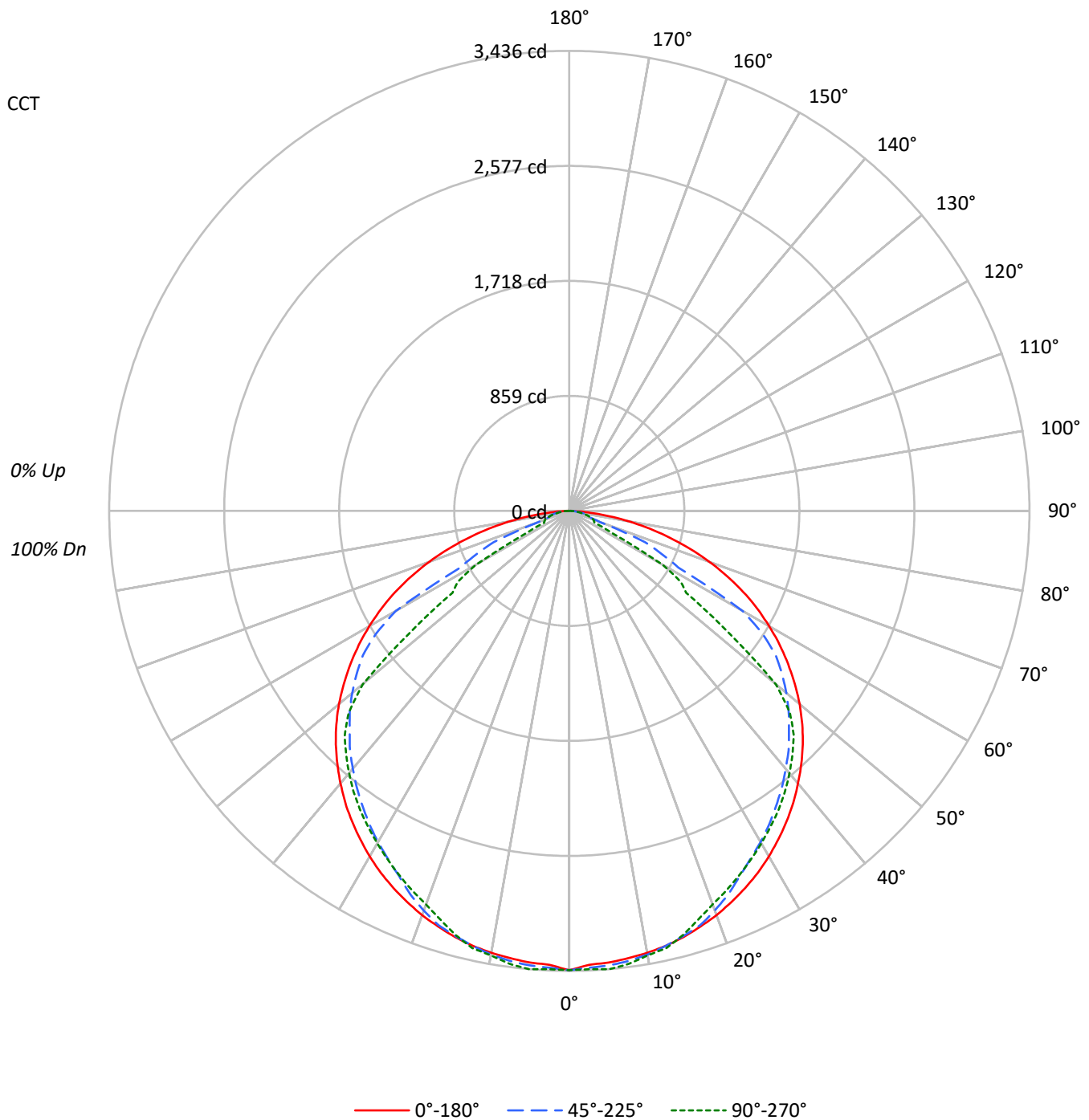
Test Method: LM-79-2019  
Report Number: P893961  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G2-2408-210-7)  
Test Lab: INNOVATION CENTER  
Issue Date: 11/11/2024  
Manufacturer: COOPER LIGHTING SOLUTIONS  
Product Line: METALUX  
Catalog Number: 4MB-8HL-RFLW-UNV-L830  
Description: 8000 Lumen 4FT MICROBAY LINEAR BAY with REFLECTOR WITH WHITE FINISH, 80CRI, 3000K  
Light Source: -  
Ballast/Driver: -

**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 8942.0 lumens  
Efficiency: N/A  
Efficacy: 154.4 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): 57.9  
Input Voltage (V): 120  
Input Current (A<sub>in</sub>): NR  
Voltage Rise (V): NR  
Power Factor: 0.999  
Total Harmonic Distortion (THDi): 4.23  
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°	44539	44539	44539
5°	44130	44420	44792
10°	44195	44362	44445
15°	44291	44192	44092
20°	44403	43891	43220
25°	44524	43116	43025
30°	44694	42824	42998
35°	44854	42661	43179
40°	45043	42608	43360
45°	45285	42587	43538
50°	45354	42748	40677
55°	45155	42618	24122
60°	44773	38844	20916
65°	44039	23480	6332
70°	42298	9309	7263
75°	39188	7636	7425
80°	33912	8061	6954
85°	24091	7554	6615

**MAXIMUM LUMINANCE 45°-90°:**

Horizontal Angle: 0°  
 Vertical Angle: 50°  
 Luminance: 45354 cd/sqm



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	324.9	3.6
10°-20°	930.4	10.4
20°-30°	1406.1	15.7
30°-40°	1715.5	19.2
40°-50°	1814.7	20.3
50°-60°	1503.1	16.8
60°-70°	835.6	9.3
70°-80°	338.7	3.8
80°-90°	73.0	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°	2661.4	29.8
0°-40°	4376.9	48.9
0°-60°	7694.7	86.1
0°-90°	8942.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	8942.0	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	3430	3430	3430	3430	3430	
5°	3386	3446	3408	3413	3436	322
15°	3295	3346	3287	3285	3280	931
25°	3108	3130	3009	2990	3003	1433
35°	2830	2795	2691	2702	2724	1771
45°	2466	2339	2319	2348	2371	1901
55°	1995	1859	1882	1292	1066	1782
65°	1433	1314	764	257	206	1413
75°	781	436	152	150	148	825
85°	162	54	51	46	44	203
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	3430.0	3430.0	3430.0	3430.0	3430.0
2.5°	3393.0	3452.2	3415.2	3422.6	3425.8
5°	3385.6	3445.9	3407.8	3413.1	3436.4
7.5°	3369.8	3431.1	3390.9	3394.1	3412.1
10°	3351.8	3407.8	3364.5	3359.2	3370.8
12.5°	3327.5	3378.2	3327.5	3329.6	3344.4
15°	3294.7	3345.5	3287.3	3285.2	3279.9
17.5°	3255.6	3303.2	3246.1	3212.3	3200.6
20°	3213.3	3250.3	3176.3	3124.5	3127.7
22.5°	3162.6	3194.3	3101.3	3053.7	3067.5
25°	3107.6	3129.8	3009.3	2990.3	3003.0
27.5°	3047.4	3064.3	2930.1	2925.8	2936.4
30°	2980.8	2987.1	2856.1	2853.9	2867.7
32.5°	2906.8	2896.2	2776.8	2778.9	2796.9
35°	2829.6	2794.8	2691.2	2701.7	2723.9
37.5°	2748.2	2685.9	2606.6	2620.3	2644.7
40°	2657.3	2572.8	2513.6	2534.7	2558.0
42.5°	2564.3	2454.4	2423.7	2443.8	2466.0
45°	2466.0	2339.2	2319.1	2347.6	2370.9
47.5°	2359.3	2226.1	2222.9	2245.1	2234.5
50°	2245.1	2108.7	2116.1	2086.6	2013.6
52.5°	2122.5	1987.2	2002.0	1874.1	1514.7
55°	1994.6	1859.3	1882.5	1291.7	1065.5
57.5°	1863.5	1728.2	1713.4	988.3	987.3
60°	1724.0	1595.0	1495.7	873.1	805.4
62.5°	1583.4	1456.6	918.5	657.5	370.0
65°	1433.3	1313.9	764.2	256.9	206.1
67.5°	1275.8	1169.1	612.0	193.4	200.8
70°	1114.1	1019.0	245.2	187.1	191.3
72.5°	949.2	786.4	162.8	173.4	173.4
75°	781.1	435.5	152.2	150.1	148.0
77.5°	614.1	291.7	133.2	123.7	120.5
80°	453.5	104.6	107.8	96.2	93.0
82.5°	300.2	81.4	77.2	69.8	67.6
85°	161.7	53.9	50.7	46.5	44.4
87.5°	58.1	27.5	27.5	22.2	20.1
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	25.87	27.44	26.23	27.75	28.07	21.86	23.43	22.22	23.74	24.06
	3H	27.87	29.28	28.25	29.61	29.97	21.99	23.40	22.37	23.72	24.09
	4H	28.49	29.81	28.89	30.15	30.53	22.11	23.43	22.51	23.78	24.15
	6H	28.89	30.10	29.30	30.47	30.86	22.22	23.43	22.63	23.80	24.19
	8H	29.01	30.17	29.43	30.55	30.95	22.25	23.41	22.68	23.80	24.20
	12H	29.08	30.19	29.51	30.57	31.00	22.27	23.38	22.70	23.77	24.19
4H	2H	26.00	27.32	26.40	27.66	28.04	22.58	23.90	22.98	24.25	24.63
	3H	28.16	29.25	28.57	29.64	30.05	22.78	23.87	23.19	24.27	24.67
	4H	28.81	29.79	29.24	30.20	30.64	22.94	23.91	23.37	24.33	24.77
	6H	29.26	30.11	29.71	30.55	31.01	23.10	23.95	23.56	24.39	24.85
	8H	29.40	30.19	29.86	30.63	31.10	23.15	23.95	23.62	24.39	24.86
	12H	29.50	30.21	29.98	30.69	31.16	23.20	23.91	23.68	24.39	24.86
8H	4H	28.75	29.54	29.21	29.98	30.45	23.21	24.00	23.67	24.44	24.91
	6H	29.19	29.85	29.69	30.34	30.81	23.41	24.07	23.91	24.56	25.04
	8H	29.34	29.93	29.85	30.44	30.92	23.50	24.09	24.01	24.60	25.08
	12H	29.47	29.99	29.98	30.48	31.05	23.58	24.11	24.09	24.60	25.16
12H	4H	28.72	29.43	29.20	29.91	30.38	23.22	23.93	23.70	24.41	24.88
	6H	29.15	29.74	29.66	30.25	30.74	23.43	24.02	23.94	24.53	25.02
	8H	29.32	29.84	29.83	30.33	30.90	23.56	24.08	24.06	24.57	25.13