

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: P893210

Luminaire Tested: 4MB-10HL-RFLW-UNV-L835

Issue Date: 11/11/2024

**Test Information**

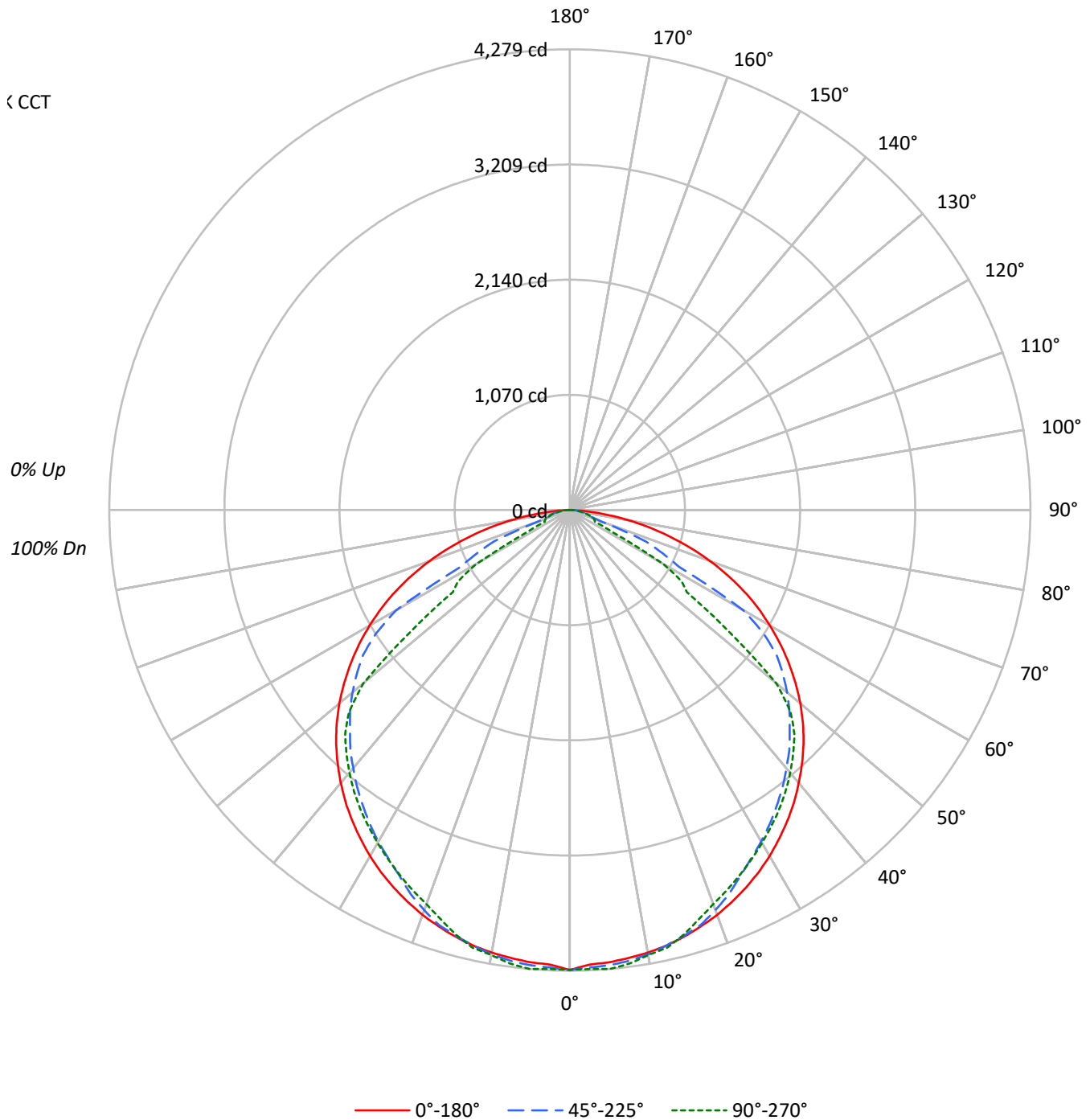
Test Method: LM-79-2019  
Report Number: P893210  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G2-2408-210-7)  
Test Lab: INNOVATION CENTER  
Issue Date: 11/11/2024  
Manufacturer: COOPER LIGHTING SOLUTIONS  
Product Line: METALUX  
Catalog Number: 4MB-10HL-RFLW-UNV-L835  
Description: 10000 Lumen 4FT MICROBAY LINEAR BAY with REFLECTOR WITH WHITE FINISH, 80CRI, 3500K  
Light Source: -  
Ballast/Driver: -

**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 11135.0 lumens  
Efficiency: N/A  
Efficacy: 147.5 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<sub>in</sub>): 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°	55462	55462	55462
5°	54953	55314	55777
10°	55033	55242	55346
15°	55153	55029	54906
20°	55293	54656	53820
25°	55444	53691	53577
30°	55654	53326	53543
35°	55856	53123	53769
40°	56090	53056	53993
45°	56391	53031	54215
50°	56476	53232	50654
55°	56230	53070	30037
60°	55753	48369	26048
65°	54839	29238	7887
70°	52670	11595	9043
75°	48801	9507	9246
80°	42227	10043	8659
85°	30006	9416	8239

**MAXIMUM LUMINANCE 45°-90°:**

Horizontal Angle: 0°  
 Vertical Angle: 50°  
 Luminance: 56476 cd/sqm



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	404.6	3.6
10°-20°	1158.6	10.4
20°-30°	1750.9	15.7
30°-40°	2136.3	19.2
40°-50°	2259.8	20.3
50°-60°	1871.7	16.8
60°-70°	1040.5	9.3
70°-80°	421.8	3.8
80°-90°	90.9	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°	3314.1	29.8
0°-40°	5450.4	48.9
0°-60°	9581.8	86.1
0°-90°	11135.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	11135.0	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	4271	4271	4271	4271	4271	
5°	4216	4291	4244	4250	4279	401
15°	4103	4166	4094	4091	4084	1159
25°	3870	3897	3747	3724	3740	1785
35°	3524	3480	3351	3364	3392	2206
45°	3071	2913	2888	2923	2952	2367
55°	2484	2315	2344	1608	1327	2219
65°	1785	1636	952	320	257	1760
75°	973	542	190	187	184	1027
85°	201	67	63	58	55	253
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	4271.2	4271.2	4271.2	4271.2	4271.2
2.5°	4225.2	4298.9	4252.8	4262.0	4266.0
5°	4215.9	4291.0	4243.6	4250.2	4279.1
7.5°	4196.2	4272.5	4222.5	4226.5	4248.8
10°	4173.8	4243.6	4189.6	4183.0	4197.5
12.5°	4143.5	4206.7	4143.5	4146.2	4164.6
15°	4102.7	4165.9	4093.5	4090.9	4084.3
17.5°	4054.0	4113.3	4042.2	4000.1	3985.6
20°	4001.4	4047.5	3955.3	3890.8	3894.8
22.5°	3938.2	3977.7	3861.9	3802.6	3819.8
25°	3869.8	3897.4	3747.4	3723.7	3739.5
27.5°	3794.7	3815.8	3648.6	3643.4	3656.5
30°	3711.8	3719.7	3556.5	3553.9	3571.0
32.5°	3619.7	3606.5	3457.8	3460.4	3482.8
35°	3523.6	3480.2	3351.2	3364.3	3392.0
37.5°	3422.2	3344.6	3245.9	3263.0	3293.3
40°	3309.0	3203.7	3130.0	3156.4	3185.3
42.5°	3193.2	3056.3	3018.2	3043.2	3070.8
45°	3070.8	2912.9	2887.8	2923.4	2952.3
47.5°	2937.9	2772.0	2768.1	2795.7	2782.5
50°	2795.7	2625.9	2635.1	2598.3	2507.5
52.5°	2643.0	2474.5	2493.0	2333.7	1886.2
55°	2483.8	2315.3	2344.2	1608.5	1326.8
57.5°	2320.5	2152.1	2133.6	1230.7	1229.4
60°	2146.8	1986.2	1862.5	1087.2	1003.0
62.5°	1971.7	1813.8	1143.8	818.7	460.7
65°	1784.8	1636.1	951.6	319.8	256.7
67.5°	1588.7	1455.8	762.1	240.9	250.1
70°	1387.3	1268.9	305.4	233.0	238.2
72.5°	1182.0	979.3	202.7	215.9	215.9
75°	972.7	542.3	189.5	186.9	184.3
77.5°	764.7	363.3	165.8	154.0	150.1
80°	564.7	130.3	134.3	119.8	115.8
82.5°	373.8	101.4	96.1	86.9	84.2
85°	201.4	67.1	63.2	57.9	55.3
87.5°	72.4	34.2	34.2	27.6	25.0
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	26.63	28.20	26.99	28.52	28.83	22.62	24.19	22.98	24.51	24.82
	3H	28.64	30.04	29.01	30.37	30.73	22.75	24.16	23.13	24.49	24.85
	4H	29.25	30.57	29.65	30.92	31.29	22.87	24.19	23.27	24.54	24.91
	6H	29.65	30.87	30.06	31.23	31.62	22.98	24.20	23.39	24.56	24.95
	8H	29.77	30.93	30.19	31.32	31.72	23.01	24.17	23.44	24.56	24.96
	12H	29.84	30.95	30.27	31.33	31.76	23.04	24.15	23.47	24.53	24.96
4H	2H	26.76	28.08	27.16	28.43	28.80	23.34	24.66	23.74	25.01	25.39
	3H	28.92	30.01	29.33	30.41	30.81	23.54	24.63	23.95	25.03	25.43
	4H	29.57	30.55	30.01	30.97	31.40	23.70	24.67	24.13	25.09	25.53
	6H	30.02	30.87	30.48	31.31	31.77	23.86	24.71	24.32	25.15	25.61
	8H	30.16	30.95	30.62	31.40	31.86	23.92	24.71	24.38	25.15	25.62
	12H	30.26	30.97	30.75	31.45	31.92	23.96	24.67	24.44	25.15	25.62
8H	4H	29.51	30.30	29.97	30.75	31.21	23.97	24.76	24.43	25.21	25.67
	6H	29.95	30.61	30.45	31.10	31.58	24.18	24.83	24.67	25.32	25.80
	8H	30.10	30.69	30.61	31.20	31.69	24.26	24.85	24.77	25.36	25.85
	12H	30.23	30.75	30.74	31.25	31.81	24.35	24.87	24.85	25.36	25.92
12H	4H	29.48	30.19	29.97	30.67	31.14	23.98	24.69	24.47	25.17	25.64
	6H	29.91	30.50	30.42	31.01	31.50	24.19	24.78	24.71	25.29	25.78
	8H	30.08	30.61	30.59	31.10	31.66	24.32	24.84	24.83	25.33	25.90