

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: P893893

Luminaire Tested: 4MB-8HL-A-UNV-L930

Issue Date: 11/11/2024

**Test Information**

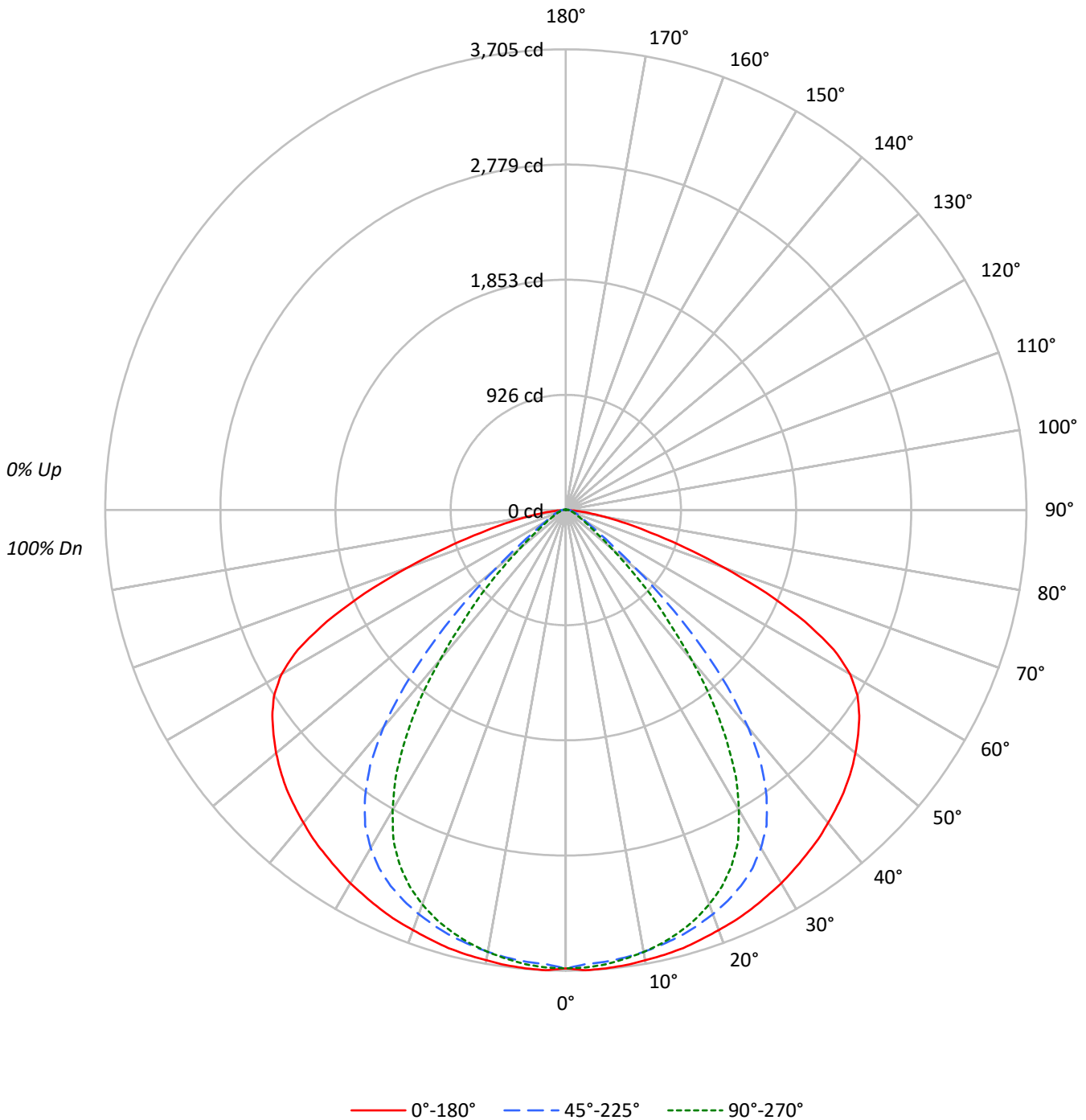
Test Method: LM-79-2019  
Report Number: P893893  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-2404-077-21)  
Test Lab: INNOVATION CENTER  
Issue Date: 11/11/2024  
Manufacturer: COOPER LIGHTING SOLUTIONS  
Product Line: METALUX  
Catalog Number: 4MB-8HL-A-UNV-L930  
Description: 8000 Lumen 4FT MICROBAY LINEAR BAY with AISLE OPTIC, 90CRI, 3000K CCT  
Light Source: -  
Ballast/Driver: -

**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 7464.0 lumens  
Efficiency: N/A  
Efficacy: 128.9 lumens/watt  
Spacing Criteria (0/90/45): 1.41 / 1.14 / 1.22  
Luminous Opening: Rectangular (W 0.27' 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	111	107	104	101	108	105	102	99	101	98	96	97	95	93	93	91	90	93	91	90	88
2	103	96	90	86	100	94	89	85	91	86	83	88	84	81	85	82	79	85	82	79	77
3	95	86	80	74	93	85	79	74	82	77	72	79	75	71	77	73	70	77	73	70	68
4	88	78	71	65	86	77	70	64	74	68	64	72	67	63	70	66	62	70	66	62	60
5	82	71	63	57	80	70	63	57	68	61	56	66	60	56	64	59	55	64	59	55	53
6	76	65	57	51	75	64	56	51	62	55	50	60	55	50	59	54	50	59	54	50	48
7	71	59	51	46	70	58	51	46	57	50	45	56	50	45	54	49	45	54	49	45	43
8	67	55	47	42	65	54	47	41	53	46	41	51	45	41	50	45	41	50	45	41	39
9	63	50	43	38	61	50	43	38	49	42	38	48	42	37	47	41	37	47	41	37	35
10	59	47	39	35	58	46	39	35	45	39	34	44	38	34	43	38	34	43	38	34	32

**AVERAGE LUMINANCE (cd/sqm):**

	0°	45°	90°
0°	37539	37539	37539
5°	37832	37291	37505
10°	38031	37318	37325
15°	38452	37408	37086
20°	38959	37478	36580
25°	39752	37465	35453
30°	40757	36906	32751
35°	42006	35007	27955
40°	43649	30320	20907
45°	45731	21817	13919
50°	48189	11956	7629
55°	51170	5877	4393
60°	53817	3874	3037
65°	51078	3174	2400
70°	40210	2885	2221
75°	27883	2853	2113
80°	18351	2862	2616
85°	10505	4394	4475

**MAXIMUM LUMINANCE 45°-90°:**

Horizontal Angle: 0°  
 Vertical Angle: 60°  
 Luminance: 53817 cd/sqm



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 CATALOG NUMBER: 4MB-8HL-A-UNV-L930

**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	349.6	4.7
10°-20°	1008.9	13.5
20°-30°	1537.1	20.6
30°-40°	1745.6	23.4
40°-50°	1401.7	18.8
50°-60°	751.9	10.1
60°-70°	397.7	5.3
70°-80°	180.3	2.4
80°-90°	57.4	0.8
90°-100°	17.8	0.2
100°-110°	6.4	0.1
110°-120°	2.0	0.0
120°-130°	1.5	0.0
130°-140°	1.6	0.0
140°-150°	1.6	0.0
150°-160°	1.5	0.0
160°-170°	1.1	0.0
170°-180°	0.4	0.0
0°-30°	2895.6	38.8
0°-40°	4641.2	62.2
0°-60°	6794.7	91.0
0°-90°	7430.1	99.5
90°-120°	26.1	0.4
90°-150°	30.8	0.4
90°-180°	34.0	0.5
0°-180°	7464.0	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	3686	3686	3686	3686	3686	
5°	3701	3693	3648	3678	3669	352
15°	3647	3624	3548	3538	3517	1031
25°	3538	3481	3334	3218	3155	1634
35°	3379	3235	2816	2407	2248	2120
45°	3175	2687	1515	1054	966	2453
55°	2882	1075	331	258	247	2570
65°	2120	250	132	107	100	2050
75°	709	143	72	57	54	802
85°	90	54	38	38	38	123
90°	4	24	27	31	30	5
95°	4	10	22	19	18	3
105°	2	1	4	10	12	2
115°	1	1	1	3	3	1
125°	1	1	1	2	1	1
135°	2	1	2	2	2	1
145°	2	2	3	3	3	1
155°	3	3	4	4	4	1
165°	3	4	4	5	4	1
175°	4	4	5	6	5	0
180°	5	5	5	5	5	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	3686.0	3686.0	3686.0	3686.0	3686.0
2.5°	3704.8	3697.8	3656.0	3690.9	3681.8
5°	3700.6	3693.0	3647.7	3678.3	3668.6
7.5°	3691.6	3681.8	3630.9	3656.0	3640.7
10°	3677.6	3667.9	3608.6	3626.1	3609.3
12.5°	3663.7	3647.0	3579.4	3585.0	3568.9
15°	3647.0	3624.0	3548.0	3538.3	3517.4
17.5°	3621.2	3595.4	3506.9	3483.9	3454.7
20°	3594.7	3559.9	3458.1	3411.5	3375.2
22.5°	3570.3	3522.2	3402.4	3327.8	3279.1
25°	3537.6	3481.1	3334.1	3217.7	3155.0
27.5°	3502.0	3433.1	3249.8	3075.6	3001.0
30°	3465.8	3375.2	3138.3	2897.2	2785.0
32.5°	3423.3	3311.8	3004.5	2681.2	2548.8
35°	3378.7	3235.2	2815.7	2407.4	2248.5
37.5°	3336.2	3146.7	2583.0	2075.0	1934.3
40°	3283.2	3043.6	2280.6	1718.3	1572.6
42.5°	3231.0	2884.7	1918.2	1376.1	1236.8
45°	3175.2	2686.8	1514.8	1053.5	966.4
47.5°	3111.8	2415.8	1108.6	767.2	691.9
50°	3041.5	2025.6	754.6	522.6	481.5
52.5°	2964.1	1569.2	490.5	360.2	336.5
55°	2881.9	1075.1	331.0	258.5	247.4
57.5°	2783.0	673.8	245.3	194.4	188.1
60°	2642.2	436.9	190.2	156.8	149.1
62.5°	2430.4	312.9	159.6	128.2	121.9
65°	2119.6	250.1	131.7	106.6	99.6
67.5°	1747.5	213.9	112.9	91.3	86.4
70°	1350.4	188.1	96.9	79.4	74.6
72.5°	1007.6	164.4	83.6	69.0	62.7
75°	708.6	142.8	72.5	57.1	53.7
77.5°	498.2	123.3	59.9	48.8	48.1
80°	312.9	102.4	48.8	45.3	44.6
82.5°	190.2	80.8	42.5	41.8	41.1
85°	89.9	53.7	37.6	37.6	38.3
87.5°	29.3	35.5	32.1	33.4	33.4
90°	3.5	24.4	27.2	31.4	30.0
92.5°	3.5	17.4	25.1	25.1	20.2
95°	3.5	9.8	21.6	18.8	18.1
97.5°	3.5	4.9	16.0	18.1	17.4
100°	3.5	2.8	11.8	16.0	17.4
102.5°	2.8	2.1	7.7	13.2	14.6
105°	2.1	1.4	4.2	9.8	11.8
107.5°	1.4	1.4	2.8	7.0	8.4
110°	1.4	0.7	2.1	4.9	5.6



TEST NUMBER: P893893

CATALOG NUMBER: 4MB-8HL-A-UNV-L930

**CANDELA DISTRIBUTION (continued):**

	0°	22.5°	45°	67.5°	90°
112.5°	1.4	0.7	2.1	3.5	3.5
115°	1.4	1.4	1.4	2.8	2.8
117.5°	1.4	1.4	1.4	2.1	2.1
120°	1.4	1.4	1.4	2.1	1.4
122.5°	1.4	1.4	1.4	2.1	1.4
125°	1.4	1.4	1.4	2.1	1.4
127.5°	1.4	1.4	2.1	2.1	1.4
130°	1.4	1.4	2.1	2.1	1.4
132.5°	1.4	1.4	2.1	2.1	2.1
135°	2.1	1.4	2.1	2.1	2.1
137.5°	2.1	2.1	2.1	2.8	2.1
140°	2.1	2.1	2.8	2.8	2.1
142.5°	2.1	2.1	2.8	2.8	2.8
145°	2.1	2.1	2.8	2.8	2.8
147.5°	2.1	2.1	2.8	3.5	2.8
150°	2.1	2.8	3.5	3.5	2.8
152.5°	2.1	2.8	3.5	3.5	3.5
155°	2.8	2.8	3.5	4.2	3.5
157.5°	2.8	2.8	3.5	4.2	3.5
160°	2.8	2.8	4.2	4.2	4.2
162.5°	2.8	3.5	4.2	4.9	4.2
165°	2.8	3.5	4.2	4.9	4.2
167.5°	2.8	3.5	4.2	4.9	4.9
170°	2.8	3.5	4.9	4.9	4.9
172.5°	3.5	3.5	4.9	5.6	4.9
175°	3.5	3.5	4.9	5.6	4.9
177.5°	3.5	3.5	4.9	5.6	4.9
180°	4.9	4.9	4.9	4.9	4.9



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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	22.26	23.65	22.64	23.97	24.30	10.47	11.86	10.85	12.18	12.51
	3H	25.16	26.39	25.55	26.73	27.11	11.43	12.66	11.82	13.00	13.38
	4H	25.94	27.09	26.35	27.45	27.85	11.85	13.00	12.26	13.36	13.75
	6H	26.38	27.44	26.80	27.82	28.22	12.33	13.39	12.75	13.77	14.17
	8H	26.48	27.49	26.92	27.89	28.30	12.64	13.64	13.08	14.04	14.46
	12H	26.52	27.48	26.96	27.87	28.31	13.04	14.00	13.48	14.40	14.84
4H	2H	22.07	23.23	22.48	23.59	23.98	10.99	12.14	11.40	12.50	12.89
	3H	24.99	25.93	25.41	26.35	26.76	12.20	13.14	12.62	13.55	13.97
	4H	25.79	26.63	26.23	27.06	27.51	12.74	13.58	13.18	14.01	14.46
	6H	26.31	27.04	26.78	27.50	27.97	13.37	14.10	13.84	14.56	15.03
	8H	26.46	27.14	26.93	27.59	28.07	13.77	14.46	14.25	14.91	15.39
	12H	26.54	27.14	27.03	27.63	28.12	14.30	14.91	14.80	15.40	15.88
8H	4H	25.67	26.36	26.15	26.81	27.29	13.30	13.98	13.77	14.44	14.92
	6H	26.20	26.76	26.71	27.27	27.76	14.07	14.63	14.58	15.14	15.63
	8H	26.37	26.87	26.90	27.40	27.90	14.59	15.10	15.12	15.62	16.12
	12H	26.49	26.94	27.01	27.44	28.02	15.30	15.74	15.82	16.25	16.82
12H	4H	25.63	26.24	26.13	26.73	27.21	13.55	14.15	14.04	14.64	15.13
	6H	26.15	26.65	26.68	27.18	27.68	14.35	14.85	14.87	15.37	15.87
	8H	26.34	26.79	26.86	27.29	27.87	14.94	15.39	15.46	15.89	16.47