

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: P893138

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

Issue Date: 11/11/2024

**Test Information**

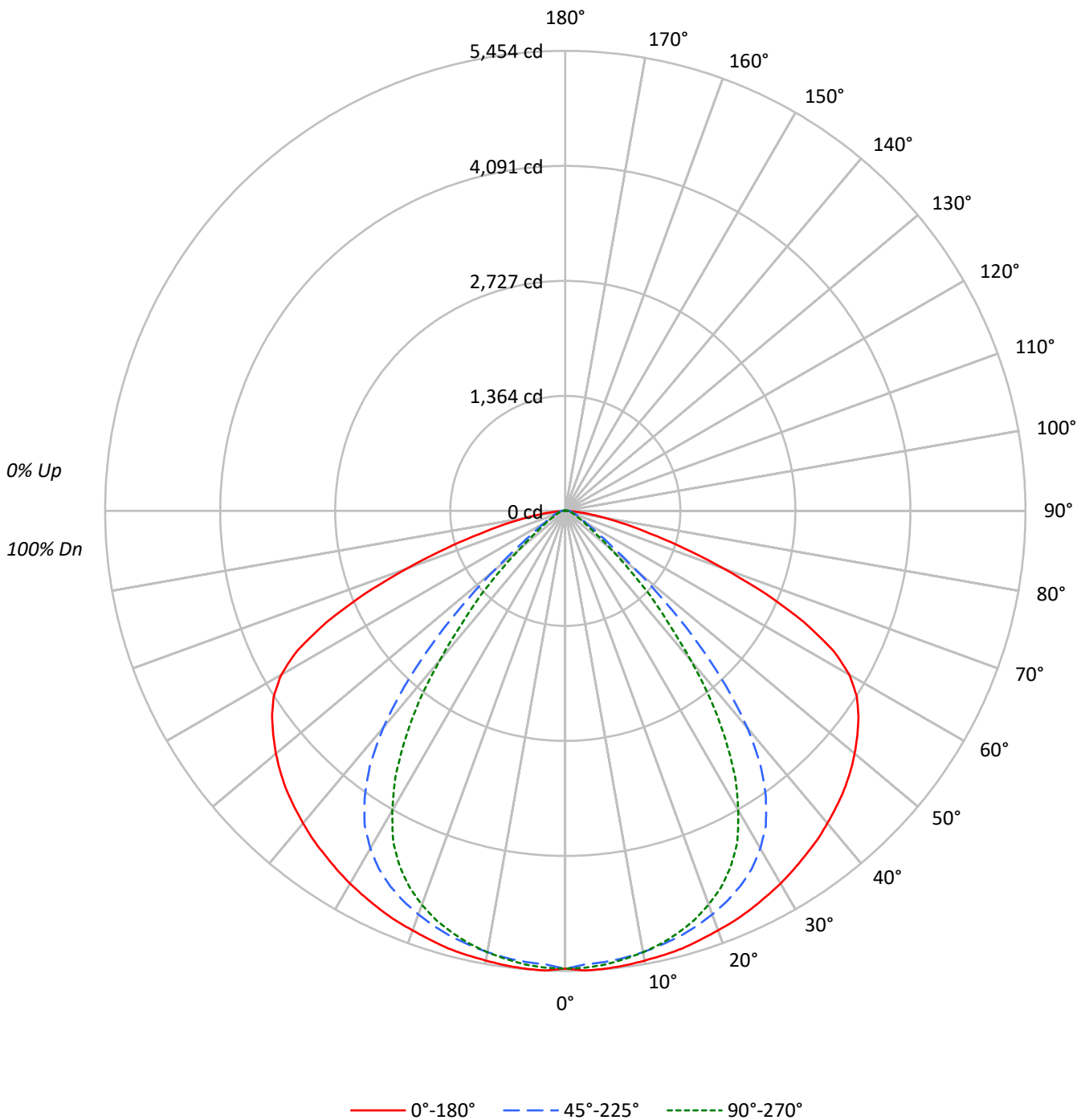
Test Method: LM-79-2019  
Report Number: P893138  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-2404-077-21)  
Test Lab: INNOVATION CENTER  
Issue Date: 11/11/2024  
Manufacturer: COOPER LIGHTING SOLUTIONS  
Product Line: METALUX  
Catalog Number: 4MB-10HL-A-UNV-L835  
Description: 10000 Lumen 4FT MICROBAY LINEAR BAY with AISLE OPTIC, 80CRI, 3500K CCT  
Light Source: -  
Ballast/Driver: -

**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 10988.1 lumens  
Efficiency: N/A  
Efficacy: 145.5 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): 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		0
RCR																			
0	119	119	119	119	116	116	116	116	111	111	111	106	106	106	102	102	102		100
1	111	107	104	101	108	105	102	99	101	98	96	97	95	93	93	91	90		88
2	103	96	90	86	100	94	89	85	91	86	83	88	84	81	85	82	79		77
3	95	86	80	74	93	85	79	74	82	77	72	79	75	71	77	73	70		68
4	88	78	71	65	86	77	70	64	74	68	64	72	67	63	70	66	62		60
5	82	71	63	57	80	70	63	57	68	61	56	66	60	56	64	59	55		53
6	76	65	57	51	75	64	56	51	62	55	50	60	55	50	59	54	50		48
7	71	59	51	46	70	58	51	46	57	50	45	56	50	45	54	49	45		43
8	67	55	47	42	65	54	47	41	53	46	41	51	45	41	50	45	41		39
9	63	50	43	38	61	50	43	38	49	42	38	48	42	37	47	41	37		35
10	59	47	39	35	58	46	39	35	45	39	34	44	38	34	43	38	34		32

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

	0°	45°	90°
0°	55263	55263	55263
5°	55693	54896	55211
10°	55988	54937	54948
15°	56606	55071	54594
20°	57353	55173	53851
25°	58520	55155	52192
30°	59999	54330	48215
35°	61839	51534	41153
40°	64258	44634	30778
45°	67324	32118	20491
50°	70939	17601	11230
55°	75328	8651	6465
60°	79227	5703	4471
65°	75195	4673	3535
70°	59193	4246	3269
75°	41049	4199	3109
80°	27014	4211	3847
85°	15459	6474	6590

**MAXIMUM LUMINANCE 45°-90°:**

Horizontal Angle: 0°  
 Vertical Angle: 60°  
 Luminance: 79227 cd/sqm



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	514.6	4.7
10°-20°	1485.3	13.5
20°-30°	2262.8	20.6
30°-40°	2569.7	23.4
40°-50°	2063.4	18.8
50°-60°	1106.9	10.1
60°-70°	585.4	5.3
70°-80°	265.4	2.4
80°-90°	84.5	0.8
90°-100°	26.1	0.2
100°-110°	9.4	0.1
110°-120°	2.9	0.0
120°-130°	2.2	0.0
130°-140°	2.3	0.0
140°-150°	2.4	0.0
150°-160°	2.2	0.0
160°-170°	1.7	0.0
170°-180°	0.6	0.0
0°-30°	4262.7	38.8
0°-40°	6832.4	62.2
0°-60°	10002.7	91.0
0°-90°	10938.1	99.5
90°-120°	38.5	0.4
90°-150°	45.4	0.4
90°-180°	50.0	0.5
0°-180°	10988.1	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	5426	5426	5426	5426	5426	
5°	5448	5436	5370	5415	5401	519
15°	5369	5335	5223	5209	5178	1518
25°	5208	5125	4908	4737	4645	2406
35°	4974	4763	4145	3544	3310	3121
45°	4674	3955	2230	1551	1423	3610
55°	4242	1583	487	381	364	3783
65°	3120	368	194	157	147	3018
75°	1043	210	107	84	79	1180
85°	132	79	55	55	56	180
90°	5	36	40	46	44	8
95°	5	14	32	28	27	4
105°	3	2	6	14	17	3
115°	2	2	2	4	4	2
125°	2	2	2	3	2	2
135°	3	2	3	3	3	2
145°	3	3	4	4	4	2
155°	4	4	5	6	5	2
165°	4	5	6	7	6	1
175°	5	5	7	8	7	0
180°	7	7	7	7	7	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	5426.3	5426.3	5426.3	5426.3	5426.3
2.5°	5454.0	5443.7	5382.2	5433.4	5420.1
5°	5447.8	5436.5	5369.8	5415.0	5400.6
7.5°	5434.5	5420.1	5345.2	5382.2	5359.6
10°	5414.0	5399.6	5312.4	5338.1	5313.4
12.5°	5393.4	5368.8	5269.3	5277.5	5253.9
15°	5368.8	5335.0	5223.2	5208.8	5178.0
17.5°	5330.9	5292.9	5162.6	5128.8	5085.7
20°	5291.9	5240.6	5090.8	5022.1	4968.8
22.5°	5256.0	5185.2	5008.8	4899.0	4827.2
25°	5207.8	5124.7	4908.3	4737.0	4644.6
27.5°	5155.5	5053.9	4784.1	4527.7	4417.9
30°	5102.1	4968.8	4620.0	4265.1	4100.0
32.5°	5039.6	4875.4	4423.1	3947.1	3752.2
35°	4973.9	4762.6	4145.1	3544.0	3310.1
37.5°	4911.3	4632.3	3802.5	3054.7	2847.5
40°	4833.4	4480.5	3357.3	2529.5	2315.1
42.5°	4756.4	4246.6	2823.9	2025.9	1820.7
45°	4674.4	3955.3	2230.0	1550.9	1422.7
47.5°	4581.0	3556.3	1632.0	1129.4	1018.6
50°	4477.4	2981.9	1110.9	769.3	708.8
52.5°	4363.6	2310.0	722.1	530.3	495.4
55°	4242.5	1582.7	487.2	380.6	364.1
57.5°	4096.9	991.9	361.1	286.2	277.0
60°	3889.7	643.2	280.0	230.8	219.5
62.5°	3577.8	460.6	234.9	188.7	179.5
65°	3120.4	368.2	193.9	156.9	146.7
67.5°	2572.6	314.9	166.2	134.4	127.2
70°	1987.9	277.0	142.6	116.9	109.8
72.5°	1483.2	242.1	123.1	101.6	92.3
75°	1043.2	210.3	106.7	84.1	79.0
77.5°	733.4	181.6	88.2	71.8	70.8
80°	460.6	150.8	71.8	66.7	65.6
82.5°	280.0	119.0	62.6	61.5	60.5
85°	132.3	79.0	55.4	55.4	56.4
87.5°	43.1	52.3	47.2	49.2	49.2
90°	5.1	35.9	40.0	46.2	44.1
92.5°	5.1	25.6	36.9	36.9	29.7
95°	5.1	14.4	31.8	27.7	26.7
97.5°	5.1	7.2	23.6	26.7	25.6
100°	5.1	4.1	17.4	23.6	25.6
102.5°	4.1	3.1	11.3	19.5	21.5
105°	3.1	2.1	6.2	14.4	17.4
107.5°	2.1	2.1	4.1	10.3	12.3
110°	2.1	1.0	3.1	7.2	8.2



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**CANDELA DISTRIBUTION (continued):**

	0°	22.5°	45°	67.5°	90°
112.5°	2.1	1.0	3.1	5.1	5.1
115°	2.1	2.1	2.1	4.1	4.1
117.5°	2.1	2.1	2.1	3.1	3.1
120°	2.1	2.1	2.1	3.1	2.1
122.5°	2.1	2.1	2.1	3.1	2.1
125°	2.1	2.1	2.1	3.1	2.1
127.5°	2.1	2.1	3.1	3.1	2.1
130°	2.1	2.1	3.1	3.1	2.1
132.5°	2.1	2.1	3.1	3.1	3.1
135°	3.1	2.1	3.1	3.1	3.1
137.5°	3.1	3.1	3.1	4.1	3.1
140°	3.1	3.1	4.1	4.1	3.1
142.5°	3.1	3.1	4.1	4.1	4.1
145°	3.1	3.1	4.1	4.1	4.1
147.5°	3.1	3.1	4.1	5.1	4.1
150°	3.1	4.1	5.1	5.1	4.1
152.5°	3.1	4.1	5.1	5.1	5.1
155°	4.1	4.1	5.1	6.2	5.1
157.5°	4.1	4.1	5.1	6.2	5.1
160°	4.1	4.1	6.2	6.2	6.2
162.5°	4.1	5.1	6.2	7.2	6.2
165°	4.1	5.1	6.2	7.2	6.2
167.5°	4.1	5.1	6.2	7.2	7.2
170°	4.1	5.1	7.2	7.2	7.2
172.5°	5.1	5.1	7.2	8.2	7.2
175°	5.1	5.1	7.2	8.2	7.2
177.5°	5.1	5.1	7.2	8.2	7.2
180°	7.2	7.2	7.2	7.2	7.2



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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	23.61	24.99	23.98	25.32	25.64	11.82	13.20	12.19	13.53	13.85
	3H	26.50	27.74	26.89	28.08	28.45	12.77	14.01	13.16	14.35	14.72
	4H	27.29	28.44	27.70	28.80	29.19	13.19	14.35	13.60	14.71	15.10
	6H	27.72	28.78	28.15	29.16	29.57	13.67	14.73	14.10	15.11	15.52
	8H	27.82	28.83	28.26	29.23	29.64	13.98	14.99	14.42	15.39	15.80
	12H	27.86	28.82	28.30	29.21	29.66	14.39	15.35	14.83	15.74	16.18
4H	2H	23.42	24.57	23.83	24.93	25.32	12.33	13.49	12.74	13.85	14.24
	3H	26.34	27.28	26.76	27.69	28.10	13.54	14.49	13.96	14.90	15.31
	4H	27.13	27.97	27.57	28.40	28.85	14.08	14.93	14.52	15.35	15.81
	6H	27.66	28.39	28.13	28.84	29.32	14.72	15.45	15.18	15.90	16.38
	8H	27.80	28.48	28.28	28.94	29.42	15.12	15.80	15.59	16.26	16.74
	12H	27.88	28.49	28.37	28.98	29.46	15.65	16.25	16.14	16.74	17.23
8H	4H	27.02	27.70	27.49	28.15	28.63	14.64	15.33	15.12	15.78	16.26
	6H	27.55	28.11	28.05	28.61	29.10	15.42	15.98	15.92	16.48	16.97
	8H	27.71	28.22	28.24	28.74	29.24	15.94	16.44	16.46	16.96	17.47
	12H	27.83	28.28	28.35	28.78	29.36	16.64	17.09	17.16	17.59	18.17
12H	4H	26.98	27.58	27.47	28.07	28.56	14.89	15.50	15.38	15.99	16.47
	6H	27.49	28.00	28.02	28.52	29.02	15.69	16.20	16.22	16.72	17.22
	8H	27.68	28.13	28.20	28.63	29.21	16.28	16.73	16.81	17.23	17.81