

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: P893146

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

Issue Date: 11/11/2024

Test Information

Test Method: LM-79-2019
Report Number: P893146
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-2404-077-20)
Test Lab: INNOVATION CENTER
Issue Date: 11/11/2024
Manufacturer: COOPER LIGHTING SOLUTIONS
Product Line: METALUX
Catalog Number: 4MB-10HL-ACL-UNV-L835
Description: 10000 Lumen 4FT MICROBAY LINEAR BAY with AISLE OPTICS WITH CLEAR LENS, 80CRI, 3500K
Light Source: -
Ballast/Driver: -

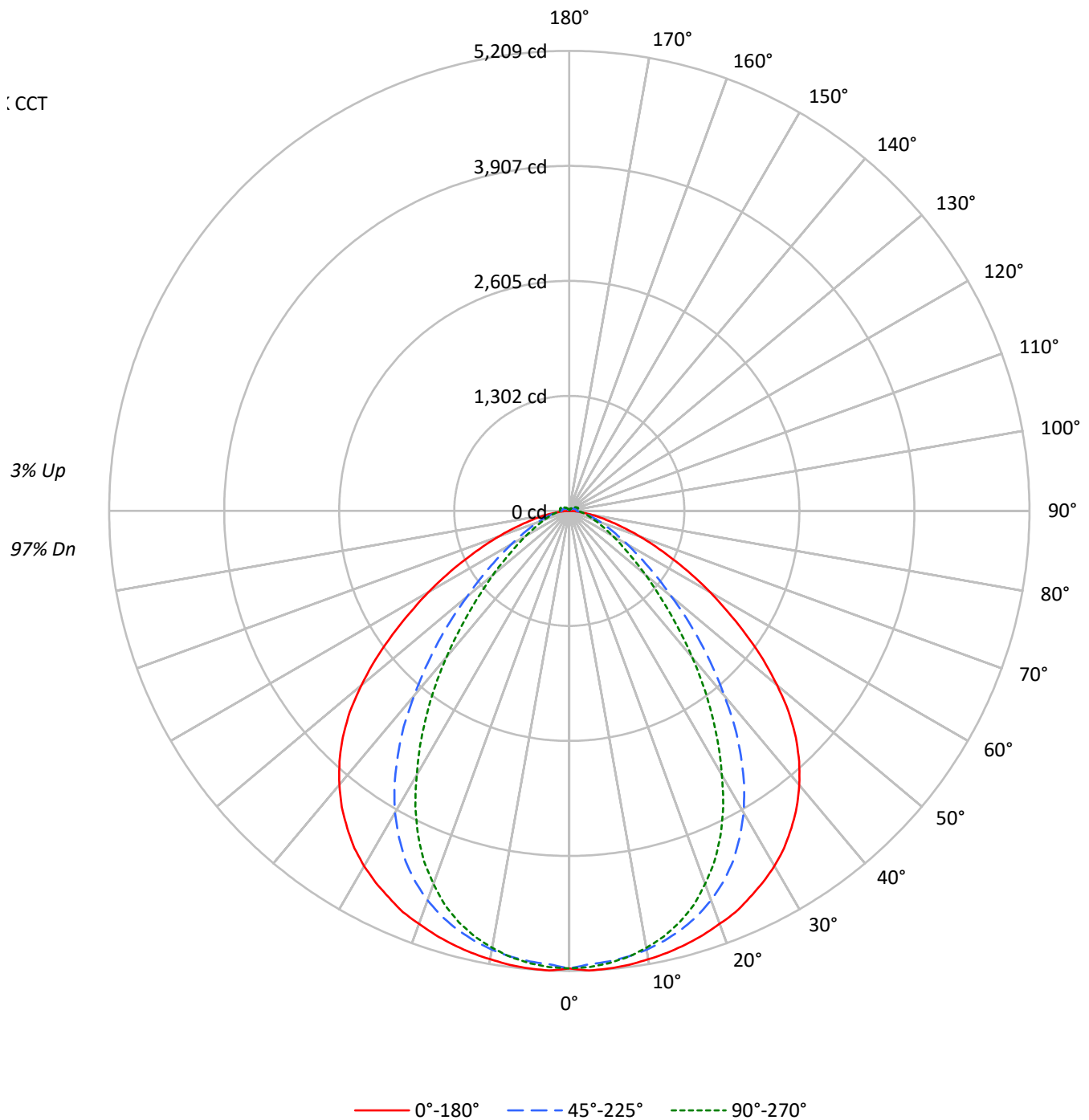
Summary

Lumens per Lamp: N/A
Luminaire Lumens: 10508.0 lumens
Efficiency: N/A
Efficacy: 139.2 lumens/watt
Spacing Criteria (0/90/45): 1.32 / 1.05 / 1.15
Luminous Opening: Rectangular w/ Sides (W: 0.27' x L: 3.98' x H: 0.08')
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				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	118	118	118	118	115	115	115	115	110	110	110	104	104	104	100	100	100	97				97
1	110	106	102	99	107	103	100	97	99	96	94	94	92	90	90	89	87	85				85
2	101	94	89	84	99	92	87	83	88	84	80	85	81	78	82	79	76	74				74
3	94	85	78	72	91	83	76	71	80	74	70	77	72	68	74	70	67	65				65
4	87	76	69	63	84	75	68	62	72	66	61	70	64	60	67	63	59	57				57
5	81	69	61	55	78	68	60	55	66	59	54	63	58	53	61	56	52	50				50
6	75	63	55	49	73	62	54	49	60	53	48	58	52	48	56	51	47	45				45
7	70	58	50	44	68	57	49	44	55	48	43	53	47	43	52	47	42	41				41
8	65	53	45	40	64	52	45	40	51	44	39	49	43	39	48	43	39	37				37
9	61	49	41	36	60	48	41	36	47	40	36	46	40	36	45	39	35	34				34
10	58	45	38	33	56	45	38	33	44	37	33	43	37	33	42	36	32	31				31

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	52757	52757	52757
5°	53074	51290	51151
10°	53117	50081	49232
15°	53298	48645	46908
20°	53521	46816	43712
25°	53764	44340	39713
30°	53956	40835	34400
35°	53707	36105	28677
40°	52911	30280	22798
45°	51164	24392	17238
50°	47447	18647	13002
55°	42121	14285	9684
60°	36145	10990	7494
65°	29820	8613	5929
70°	24086	6901	4850
75°	18329	5638	4137
80°	13709	4619	3652
85°	9335	3912	3319

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
 Vertical Angle: 45°
 Luminance: 51164 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	490.0	4.7
10°-20°	1391.5	13.2
20°-30°	2025.4	19.3
30°-40°	2173.6	20.7
40°-50°	1798.5	17.1
50°-60°	1192.0	11.3
60°-70°	679.2	6.5
70°-80°	336.8	3.2
80°-90°	136.2	1.3
90°-100°	80.0	0.8
100°-110°	71.2	0.7
110°-120°	53.7	0.5
120°-130°	35.7	0.3
130°-140°	21.9	0.2
140°-150°	12.5	0.1
150°-160°	6.4	0.1
160°-170°	2.7	0.0
170°-180°	0.7	0.0
0°-30°	3906.9	37.2
0°-40°	6080.5	57.9
0°-60°	9071.0	86.3
0°-90°	10223.2	97.3
90°-120°	204.9	2.0
90°-150°	275.0	2.6
90°-180°	285.0	2.7
0°-180°	10508.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	5180	5180	5180	5180	5180	
5°	5201	5188	5121	5159	5141	495
15°	5083	5043	4906	4861	4823	1437
25°	4831	4705	4381	4142	4051	2229
35°	4383	4035	3385	2942	2813	2739
45°	3627	2945	2094	1687	1572	2779
55°	2443	1727	1076	851	790	2186
65°	1293	867	539	434	412	1299
75°	502	374	270	236	228	554
85°	99	106	124	131	130	114
90°	14	44	84	103	106	12
95°	16	46	85	103	106	13
105°	12	34	77	99	104	13
115°	7	23	59	84	92	7
125°	4	16	43	62	70	4
135°	3	12	29	44	49	3
145°	4	9	20	30	34	3
155°	4	8	14	19	24	2
165°	5	6	9	12	15	1
175°	5	6	7	7	6	0
180°	6	6	6	6	6	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	5180.3	5180.3	5180.3	5180.3	5180.3
2.5°	5209.4	5198.0	5138.6	5183.4	5169.8
5°	5201.1	5187.5	5120.9	5159.4	5140.7
7.5°	5183.4	5166.7	5091.7	5117.7	5094.8
10°	5155.3	5134.4	5044.8	5050.0	5024.0
12.5°	5125.0	5092.7	4983.3	4968.8	4936.5
15°	5083.4	5042.7	4906.2	4861.4	4822.9
17.5°	5035.4	4979.2	4810.4	4731.2	4681.2
20°	4976.0	4901.0	4691.6	4570.8	4493.7
22.5°	4918.7	4808.3	4549.9	4377.0	4295.7
25°	4831.2	4705.2	4381.1	4142.5	4050.9
27.5°	4744.7	4574.9	4173.8	3881.0	3774.8
30°	4643.7	4420.7	3946.7	3586.2	3454.9
32.5°	4527.0	4251.9	3683.1	3279.9	3140.2
35°	4383.2	4035.2	3385.1	2942.3	2813.1
37.5°	4229.0	3796.6	3077.7	2621.4	2488.0
40°	4049.8	3543.5	2729.7	2288.0	2166.1
42.5°	3850.8	3253.8	2406.8	1974.4	1852.5
45°	3626.8	2945.4	2094.2	1686.8	1572.2
47.5°	3369.5	2629.7	1792.0	1427.4	1331.5
50°	3069.4	2314.0	1508.7	1198.2	1127.3
52.5°	2767.2	2017.1	1280.5	1015.8	939.8
55°	2443.2	1727.4	1076.3	851.2	789.7
57.5°	2129.6	1471.1	899.1	713.7	671.0
60°	1838.9	1241.9	760.6	602.2	567.8
62.5°	1559.7	1047.1	636.6	509.5	479.3
65°	1293.0	866.8	538.7	434.5	411.5
67.5°	1058.6	724.1	454.3	370.9	353.2
70°	855.4	585.5	382.4	317.8	303.2
72.5°	665.8	469.9	320.9	275.1	262.6
75°	502.2	374.0	269.8	235.5	228.2
77.5°	378.2	290.7	223.0	203.2	198.0
80°	261.5	216.7	184.4	176.1	173.0
82.5°	166.7	155.2	151.1	151.1	151.1
85°	99.0	106.3	124.0	131.3	130.2
87.5°	46.9	69.8	100.0	113.6	115.6
90°	13.5	43.8	84.4	103.1	106.3
92.5°	15.6	44.8	84.4	103.1	106.3
95°	15.6	45.8	85.4	103.1	106.3
97.5°	15.6	43.8	84.4	104.2	107.3
100°	15.6	42.7	83.4	103.1	107.3
102.5°	13.5	39.6	80.2	102.1	106.3
105°	12.5	34.4	77.1	99.0	104.2
107.5°	10.4	31.3	74.0	95.9	102.1
110°	9.4	28.1	69.8	92.7	100.0



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CANDELA DISTRIBUTION (continued):

	0°	22.5°	45°	67.5°	90°
112.5°	8.3	25.0	64.6	89.6	95.9
115°	7.3	22.9	59.4	84.4	91.7
117.5°	6.3	20.8	54.2	79.2	87.5
120°	5.2	18.8	50.0	74.0	81.3
122.5°	5.2	17.7	45.8	67.7	76.1
125°	4.2	15.6	42.7	62.5	69.8
127.5°	4.2	14.6	38.5	57.3	63.6
130°	3.1	14.6	35.4	53.1	59.4
132.5°	3.1	13.5	31.3	47.9	54.2
135°	3.1	12.5	29.2	43.8	49.0
137.5°	3.1	12.5	26.0	40.6	45.8
140°	4.2	11.5	22.9	36.5	41.7
142.5°	4.2	10.4	21.9	33.3	37.5
145°	4.2	9.4	19.8	30.2	34.4
147.5°	4.2	9.4	17.7	27.1	31.3
150°	4.2	8.3	16.7	24.0	28.1
152.5°	4.2	8.3	15.6	20.8	26.0
155°	4.2	8.3	13.5	18.8	24.0
157.5°	4.2	7.3	12.5	16.7	20.8
160°	5.2	7.3	11.5	14.6	18.8
162.5°	5.2	7.3	10.4	13.5	16.7
165°	5.2	6.3	9.4	11.5	14.6
167.5°	5.2	6.3	9.4	10.4	12.5
170°	5.2	6.3	8.3	8.3	9.4
172.5°	5.2	6.3	7.3	8.3	6.3
175°	5.2	6.3	7.3	7.3	6.3
177.5°	5.2	6.3	6.3	7.3	6.3
180°	6.3	6.3	6.3	6.3	6.3



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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	22.44	23.83	22.85	24.20	24.59	17.56	18.95	17.97	19.32	19.71
	3H	23.54	24.78	23.96	25.16	25.59	18.71	19.94	19.13	20.33	20.76
	4H	23.83	24.99	24.28	25.40	25.84	19.21	20.37	19.66	20.78	21.22
	6H	23.98	25.05	24.44	25.47	25.93	19.72	20.79	20.18	21.21	21.67
	8H	23.99	25.01	24.47	25.45	25.92	19.98	21.00	20.46	21.44	21.91
	12H	23.98	24.95	24.46	25.39	25.89	20.28	21.25	20.76	21.69	22.18
4H	2H	22.42	23.57	22.86	23.98	24.43	18.06	19.22	18.51	19.63	20.08
	3H	23.65	24.61	24.11	25.06	25.53	19.38	20.34	19.84	20.80	21.26
	4H	24.02	24.88	24.50	25.35	25.86	19.98	20.84	20.46	21.31	21.81
	6H	24.25	25.00	24.76	25.50	26.02	20.61	21.36	21.11	21.85	22.38
	8H	24.29	24.99	24.80	25.48	26.01	20.93	21.63	21.44	22.13	22.66
	12H	24.30	24.92	24.83	25.45	25.98	21.31	21.93	21.84	22.46	23.00
8H	4H	24.01	24.71	24.52	25.20	25.73	20.23	20.92	20.74	21.42	21.95
	6H	24.28	24.86	24.82	25.40	25.94	20.96	21.53	21.50	22.08	22.62
	8H	24.34	24.86	24.90	25.42	25.97	21.37	21.88	21.93	22.44	23.00
	12H	24.38	24.84	24.94	25.38	26.01	21.86	22.32	22.42	22.86	23.49
12H	4H	23.98	24.61	24.51	25.14	25.67	20.24	20.86	20.77	21.39	21.93
	6H	24.26	24.78	24.82	25.34	25.89	20.99	21.51	21.55	22.07	22.62
	8H	24.35	24.81	24.91	25.35	25.98	21.46	21.92	22.01	22.46	23.09