

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: P893897

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

Issue Date: 11/11/2024

Test Information

Test Method: LM-79-2019
Report Number: P893897
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-8HL-ACL-UNV-L830
Description: 8000 Lumen 4FT MICROBAY LINEAR BAY with AISLE OPTICS WITH CLEAR LENS, 80CRI, 3000K (CCT)
Light Source: -
Ballast/Driver: -

Summary

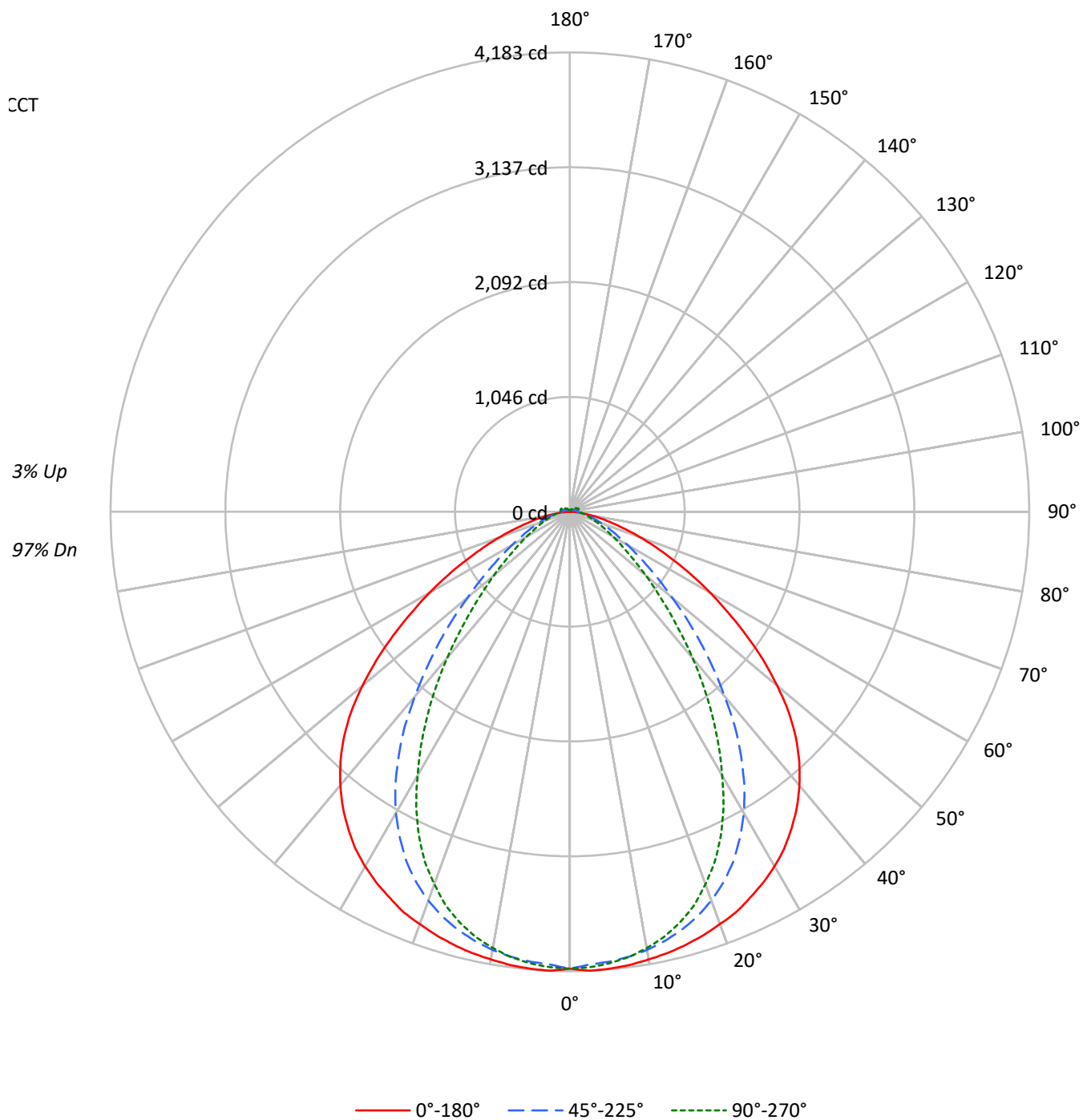
Lumens per Lamp: N/A
Luminaire Lumens: 8438.0 lumens
Efficiency: N/A
Efficacy: 145.7 lumens/watt
Spacing Criteria (0/90/45): 1.32 / 1.05 / 1.15
Luminous Opening: Rectangular w/ Sides (W: 0.27' x L: 3.98' x H: 0.08')
CIE Type: Direct

Input Watts (W): 57.9
Input Voltage (V): 120
Input Current (Ain): 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	0
RCR																				
0	118	118	118	118	115	115	115	115	110	110	110		104	104	104		100	100	100	97
1	110	106	102	99	107	103	100	97	99	96	94		94	92	90		90	89	87	85
2	101	94	89	84	99	92	87	83	88	84	80		85	81	78		82	79	76	74
3	94	85	78	72	91	83	76	71	80	74	70		77	72	68		74	70	67	65
4	87	76	69	63	84	75	68	62	72	66	61		70	64	60		67	63	59	57
5	81	69	61	55	78	68	60	55	66	59	54		63	58	53		61	56	52	50
6	75	63	55	49	73	62	54	49	60	53	48		58	52	48		56	51	47	45
7	70	58	50	44	68	57	49	44	55	48	43		53	47	43		52	47	42	41
8	65	53	45	40	64	52	45	40	51	44	39		49	43	39		48	43	39	37
9	61	49	41	36	60	48	41	36	47	40	36		46	40	36		45	39	35	34
10	58	45	38	33	56	45	38	33	44	37	33		43	37	33		42	36	32	31

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	42364	42364	42364
5°	42619	41186	41074
10°	42653	40215	39534
15°	42798	39062	37668
20°	42978	37594	35101
25°	43173	35606	31890
30°	43327	32791	27624
35°	43128	28992	23028
40°	42487	24315	18307
45°	41086	19587	13842
50°	38100	14974	10440
55°	33824	11471	7777
60°	29026	8824	6019
65°	23946	6915	4762
70°	19341	5541	3895
75°	14719	4529	3321
80°	11009	3709	2932
85°	7496	3142	2666

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°

Vertical Angle: 45°

Luminance: 41086 cd/sqm

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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	393.5	4.7
10°-20°	1117.4	13.2
20°-30°	1626.4	19.3
30°-40°	1745.4	20.7
40°-50°	1444.2	17.1
50°-60°	957.2	11.3
60°-70°	545.4	6.5
70°-80°	270.4	3.2
80°-90°	109.4	1.3
90°-100°	64.2	0.8
100°-110°	57.2	0.7
110°-120°	43.1	0.5
120°-130°	28.6	0.3
130°-140°	17.6	0.2
140°-150°	10.0	0.1
150°-160°	5.1	0.1
160°-170°	2.2	0.0
170°-180°	0.5	0.0
0°-30°	3137.3	37.2
0°-40°	4882.7	57.9
0°-60°	7284.1	86.3
0°-90°	8209.3	97.3
90°-120°	164.6	2.0
90°-150°	220.8	2.6
90°-180°	229.0	2.7
0°-180°	8438.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	4160	4160	4160	4160	4160	
5°	4176	4166	4112	4143	4128	397
15°	4082	4049	3940	3904	3873	1154
25°	3880	3778	3518	3326	3253	1790
35°	3520	3240	2718	2363	2259	2199
45°	2912	2365	1682	1354	1262	2232
55°	1962	1387	864	684	634	1755
65°	1038	696	432	349	330	1043
75°	403	300	217	189	183	445
85°	80	85	100	105	105	92
90°	11	35	68	83	85	10
95°	12	37	69	83	85	10
105°	10	28	62	80	84	10
115°	6	18	48	68	74	6
125°	3	12	34	50	56	3
135°	2	10	23	35	39	2
145°	3	8	16	24	28	2
155°	3	7	11	15	19	2
165°	4	5	8	9	12	1
175°	4	5	6	6	5	0
180°	5	5	5	5	5	

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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	4159.8	4159.8	4159.8	4159.8	4159.8
2.5°	4183.2	4174.0	4126.3	4162.3	4151.4
5°	4176.5	4165.6	4112.1	4143.1	4128.0
7.5°	4162.3	4148.9	4088.7	4109.6	4091.2
10°	4139.7	4123.0	4051.0	4055.2	4034.3
12.5°	4115.4	4089.5	4001.7	3989.9	3964.0
15°	4082.0	4049.3	3939.7	3903.8	3872.8
17.5°	4043.5	3998.3	3862.8	3799.2	3759.0
20°	3995.8	3935.6	3767.4	3670.3	3608.4
22.5°	3949.8	3861.1	3653.6	3514.7	3449.5
25°	3879.5	3778.3	3518.1	3326.5	3252.9
27.5°	3810.1	3673.7	3351.6	3116.5	3031.2
30°	3728.9	3549.9	3169.2	2879.7	2774.3
32.5°	3635.2	3414.3	2957.5	2633.7	2521.6
35°	3519.8	3240.3	2718.2	2362.7	2258.9
37.5°	3395.9	3048.7	2471.4	2105.0	1997.9
40°	3252.0	2845.4	2192.0	1837.3	1739.4
42.5°	3092.2	2612.8	1932.6	1585.4	1487.5
45°	2912.4	2365.2	1681.7	1354.5	1262.5
47.5°	2705.7	2111.7	1439.0	1146.2	1069.2
50°	2464.7	1858.2	1211.5	962.1	905.2
52.5°	2222.1	1619.7	1028.2	815.7	754.7
55°	1961.9	1387.2	864.3	683.5	634.2
57.5°	1710.1	1181.3	722.0	573.1	538.8
60°	1476.7	997.3	610.7	483.6	456.0
62.5°	1252.5	840.8	511.2	409.1	384.9
65°	1038.3	696.1	432.5	348.9	330.5
67.5°	850.0	581.5	364.8	297.8	283.6
70°	686.9	470.2	307.0	255.2	243.5
72.5°	534.6	377.3	257.7	220.9	210.8
75°	403.3	300.4	216.7	189.1	183.2
77.5°	303.7	233.4	179.0	163.1	159.0
80°	210.0	174.0	148.1	141.4	138.9
82.5°	133.9	124.7	121.3	121.3	121.3
85°	79.5	85.3	99.6	105.4	104.6
87.5°	37.6	56.1	80.3	91.2	92.9
90°	10.9	35.1	67.8	82.8	85.3
92.5°	12.5	36.0	67.8	82.8	85.3
95°	12.5	36.8	68.6	82.8	85.3
97.5°	12.5	35.1	67.8	83.7	86.2
100°	12.5	34.3	66.9	82.8	86.2
102.5°	10.9	31.8	64.4	82.0	85.3
105°	10.0	27.6	61.9	79.5	83.7
107.5°	8.4	25.1	59.4	77.0	82.0
110°	7.5	22.6	56.1	74.5	80.3

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CANDELA DISTRIBUTION (continued):

	0°	22.5°	45°	67.5°	90°
112.5°	6.7	20.1	51.9	72.0	77.0
115°	5.9	18.4	47.7	67.8	73.6
117.5°	5.0	16.7	43.5	63.6	70.3
120°	4.2	15.1	40.2	59.4	65.3
122.5°	4.2	14.2	36.8	54.4	61.1
125°	3.3	12.5	34.3	50.2	56.1
127.5°	3.3	11.7	31.0	46.0	51.0
130°	2.5	11.7	28.4	42.7	47.7
132.5°	2.5	10.9	25.1	38.5	43.5
135°	2.5	10.0	23.4	35.1	39.3
137.5°	2.5	10.0	20.9	32.6	36.8
140°	3.3	9.2	18.4	29.3	33.5
142.5°	3.3	8.4	17.6	26.8	30.1
145°	3.3	7.5	15.9	24.3	27.6
147.5°	3.3	7.5	14.2	21.8	25.1
150°	3.3	6.7	13.4	19.2	22.6
152.5°	3.3	6.7	12.5	16.7	20.9
155°	3.3	6.7	10.9	15.1	19.2
157.5°	3.3	5.9	10.0	13.4	16.7
160°	4.2	5.9	9.2	11.7	15.1
162.5°	4.2	5.9	8.4	10.9	13.4
165°	4.2	5.0	7.5	9.2	11.7
167.5°	4.2	5.0	7.5	8.4	10.0
170°	4.2	5.0	6.7	6.7	7.5
172.5°	4.2	5.0	5.9	6.7	5.0
175°	4.2	5.0	5.9	5.9	5.0
177.5°	4.2	5.0	5.0	5.9	5.0
180°	5.0	5.0	5.0	5.0	5.0

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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	21.68	23.07	22.09	23.44	23.82	16.80	18.19	17.21	18.56	18.94
	3H	22.78	24.01	23.20	24.40	24.83	17.94	19.18	18.37	19.57	20.00
	4H	23.07	24.23	23.52	24.64	25.08	18.45	19.61	18.89	20.01	20.46
	6H	23.22	24.28	23.68	24.71	25.17	18.96	20.02	19.42	20.45	20.91
	8H	23.23	24.25	23.70	24.69	25.16	19.22	20.24	19.69	20.68	21.15
	12H	23.22	24.19	23.70	24.63	25.12	19.52	20.49	19.99	20.92	21.42
4H	2H	21.65	22.81	22.10	23.22	23.67	17.30	18.46	17.75	18.87	19.31
	3H	22.89	23.85	23.35	24.30	24.77	18.62	19.58	19.08	20.03	20.50
	4H	23.26	24.12	23.74	24.59	25.10	19.22	20.08	19.70	20.55	21.05
	6H	23.49	24.24	24.00	24.73	25.26	19.85	20.59	20.35	21.09	21.61
	8H	23.53	24.22	24.04	24.72	25.25	20.17	20.87	20.68	21.36	21.90
	12H	23.53	24.16	24.06	24.69	25.22	20.55	21.17	21.08	21.70	22.23
8H	4H	23.25	23.94	23.76	24.44	24.97	19.46	20.16	19.97	20.66	21.19
	6H	23.52	24.09	24.06	24.64	25.18	20.20	20.77	20.74	21.31	21.86
	8H	23.58	24.10	24.14	24.66	25.21	20.60	21.12	21.16	21.68	22.23
	12H	23.62	24.08	24.18	24.62	25.25	21.10	21.56	21.65	22.10	22.72
12H	4H	23.22	23.84	23.75	24.37	24.91	19.48	20.10	20.01	20.63	21.16
	6H	23.50	24.01	24.06	24.57	25.13	20.23	20.75	20.79	21.31	21.86
	8H	23.59	24.05	24.15	24.59	25.22	20.69	21.15	21.25	21.69	22.32