

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: P893901

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

Issue Date: 11/11/2024

Test Information

Test Method: LM-79-2019
Report Number: P893901
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-L930
Description: 8000 Lumen 4FT MICROBAY LINEAR BAY with AISLE OPTICS WITH CLEAR LENS, 90CRI, 3000K (C)
Light Source: -
Ballast/Driver: -

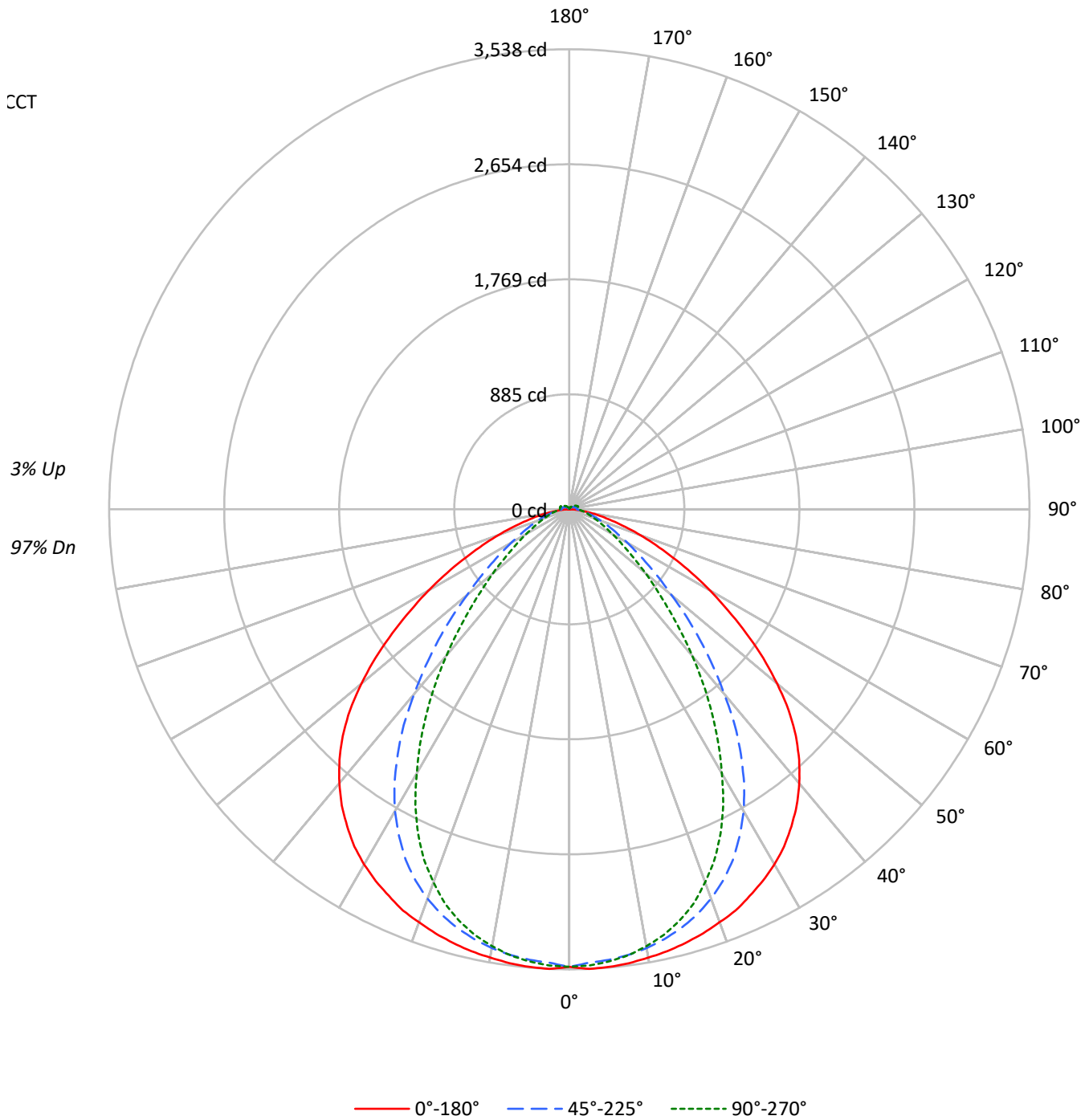
Summary

Lumens per Lamp: N/A
Luminaire Lumens: 7137.0 lumens
Efficiency: N/A
Efficacy: 123.3 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 (A_{in}): 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	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°	35832	35832	35832
5°	36048	34836	34741
10°	36076	34015	33439
15°	36199	33040	31860
20°	36352	31797	29689
25°	36517	30115	26972
30°	36647	27735	23365
35°	36478	24522	19477
40°	35937	20566	15484
45°	34751	16567	11708
50°	32226	12665	8831
55°	28608	9702	6578
60°	24550	7464	5091
65°	20253	5850	4027
70°	16359	4687	3293
75°	12449	3831	2810
80°	9311	3138	2480
85°	6336	2656	2256

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
 Vertical Angle: 45°
 Luminance: 34751 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	332.8	4.7
10°-20°	945.1	13.2
20°-30°	1375.7	19.3
30°-40°	1476.3	20.7
40°-50°	1221.6	17.1
50°-60°	809.6	11.3
60°-70°	461.3	6.5
70°-80°	228.7	3.2
80°-90°	92.5	1.3
90°-100°	54.3	0.8
100°-110°	48.4	0.7
110°-120°	36.5	0.5
120°-130°	24.2	0.3
130°-140°	14.9	0.2
140°-150°	8.5	0.1
150°-160°	4.3	0.1
160°-170°	1.9	0.0
170°-180°	0.4	0.0
0°-30°	2653.6	37.2
0°-40°	4129.8	57.9
0°-60°	6161.0	86.3
0°-90°	6943.5	97.3
90°-120°	139.2	2.0
90°-150°	186.8	2.6
90°-180°	193.0	2.7
0°-180°	7137.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	3518	3518	3518	3518	3518	
5°	3533	3523	3478	3504	3492	336
15°	3453	3425	3332	3302	3276	976
25°	3281	3196	2976	2814	2751	1514
35°	2977	2741	2299	1998	1911	1860
45°	2463	2000	1422	1146	1068	1888
55°	1659	1173	731	578	536	1485
65°	878	589	366	295	280	882
75°	341	254	183	160	155	377
85°	67	72	84	89	88	78
90°	9	30	57	70	72	8
95°	11	31	58	70	72	9
105°	8	23	52	67	71	9
115°	5	16	40	57	62	5
125°	3	11	29	42	47	3
135°	2	8	20	30	33	2
145°	3	6	13	20	23	2
155°	3	6	9	13	16	1
165°	4	4	6	8	10	1
175°	4	4	5	5	4	0
180°	4	4	4	4	4	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	3518.4	3518.4	3518.4	3518.4	3518.4
2.5°	3538.2	3530.4	3490.1	3520.5	3511.3
5°	3532.6	3523.4	3478.1	3504.3	3491.5
7.5°	3520.5	3509.2	3458.3	3476.0	3460.4
10°	3501.4	3487.3	3426.4	3430.0	3412.3
12.5°	3480.9	3459.0	3384.7	3374.8	3352.8
15°	3452.6	3425.0	3332.3	3301.9	3275.7
17.5°	3420.1	3381.8	3267.2	3213.4	3179.5
20°	3379.7	3328.8	3186.5	3104.4	3052.1
22.5°	3340.8	3265.8	3090.3	2972.8	2917.6
25°	3281.4	3195.7	2975.6	2813.6	2751.3
27.5°	3222.6	3107.3	2834.8	2636.0	2563.8
30°	3154.0	3002.5	2680.6	2435.7	2346.6
32.5°	3074.7	2887.9	2501.5	2227.7	2132.8
35°	2977.1	2740.7	2299.1	1998.4	1910.6
37.5°	2872.3	2578.7	2090.4	1780.4	1689.9
40°	2750.6	2406.7	1854.0	1554.0	1471.2
42.5°	2615.5	2210.0	1634.7	1341.0	1258.2
45°	2463.3	2000.5	1422.4	1145.7	1067.8
47.5°	2288.5	1786.1	1217.2	969.5	904.4
50°	2084.7	1571.7	1024.7	813.8	765.7
52.5°	1879.5	1370.0	869.7	690.0	638.3
55°	1659.4	1173.3	731.0	578.1	536.4
57.5°	1446.4	999.2	610.7	484.7	455.7
60°	1249.0	843.5	516.6	409.0	385.7
62.5°	1059.3	711.2	432.4	346.0	325.5
65°	878.2	588.8	365.9	295.1	279.5
67.5°	719.0	491.8	308.5	251.9	239.9
70°	581.0	397.7	259.7	215.8	205.9
72.5°	452.2	319.1	218.0	186.8	178.3
75°	341.1	254.0	183.3	159.9	155.0
77.5°	256.9	197.4	151.4	138.0	134.5
80°	177.6	147.2	125.3	119.6	117.5
82.5°	113.2	105.4	102.6	102.6	102.6
85°	67.2	72.2	84.2	89.2	88.5
87.5°	31.8	47.4	67.9	77.1	78.5
90°	9.2	29.7	57.3	70.1	72.2
92.5°	10.6	30.4	57.3	70.1	72.2
95°	10.6	31.1	58.0	70.1	72.2
97.5°	10.6	29.7	57.3	70.8	72.9
100°	10.6	29.0	56.6	70.1	72.9
102.5°	9.2	26.9	54.5	69.3	72.2
105°	8.5	23.4	52.4	67.2	70.8
107.5°	7.1	21.2	50.2	65.1	69.3
110°	6.4	19.1	47.4	63.0	67.9



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CANDELA DISTRIBUTION (continued):

	0°	22.5°	45°	67.5°	90°
112.5°	5.7	17.0	43.9	60.9	65.1
115°	5.0	15.6	40.3	57.3	62.3
117.5°	4.2	14.2	36.8	53.8	59.4
120°	3.5	12.7	34.0	50.2	55.2
122.5°	3.5	12.0	31.1	46.0	51.7
125°	2.8	10.6	29.0	42.5	47.4
127.5°	2.8	9.9	26.2	38.9	43.2
130°	2.1	9.9	24.1	36.1	40.3
132.5°	2.1	9.2	21.2	32.6	36.8
135°	2.1	8.5	19.8	29.7	33.3
137.5°	2.1	8.5	17.7	27.6	31.1
140°	2.8	7.8	15.6	24.8	28.3
142.5°	2.8	7.1	14.9	22.6	25.5
145°	2.8	6.4	13.4	20.5	23.4
147.5°	2.8	6.4	12.0	18.4	21.2
150°	2.8	5.7	11.3	16.3	19.1
152.5°	2.8	5.7	10.6	14.2	17.7
155°	2.8	5.7	9.2	12.7	16.3
157.5°	2.8	5.0	8.5	11.3	14.2
160°	3.5	5.0	7.8	9.9	12.7
162.5°	3.5	5.0	7.1	9.2	11.3
165°	3.5	4.2	6.4	7.8	9.9
167.5°	3.5	4.2	6.4	7.1	8.5
170°	3.5	4.2	5.7	5.7	6.4
172.5°	3.5	4.2	5.0	5.7	4.2
175°	3.5	4.2	5.0	5.0	4.2
177.5°	3.5	4.2	4.2	5.0	4.2
180°	4.2	4.2	4.2	4.2	4.2



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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	21.10	22.49	21.51	22.86	23.24	16.22	17.60	16.63	17.98	18.36
	3H	22.19	23.43	22.62	23.82	24.25	17.36	18.60	17.79	18.99	19.42
	4H	22.49	23.65	22.94	24.05	24.50	17.87	19.02	18.31	19.43	19.88
	6H	22.63	23.70	23.09	24.13	24.59	18.37	19.44	18.83	19.87	20.33
	8H	22.65	23.66	23.12	24.11	24.58	18.64	19.65	19.11	20.10	20.57
	12H	22.64	23.61	23.12	24.05	24.54	18.93	19.90	19.41	20.34	20.84
4H	2H	21.07	22.23	21.52	22.64	23.08	16.72	17.88	17.17	18.29	18.73
	3H	22.31	23.26	22.77	23.72	24.19	18.04	19.00	18.50	19.45	19.92
	4H	22.68	23.54	23.16	24.01	24.51	18.64	19.50	19.12	19.96	20.47
	6H	22.91	23.66	23.41	24.15	24.68	19.26	20.01	19.77	20.51	21.03
	8H	22.94	23.64	23.45	24.14	24.67	19.59	20.29	20.10	20.78	21.32
	12H	22.95	23.57	23.48	24.10	24.64	19.96	20.59	20.49	21.12	21.65
8H	4H	22.66	23.36	23.17	23.86	24.39	18.88	19.58	19.39	20.07	20.61
	6H	22.94	23.51	23.48	24.06	24.60	19.61	20.19	20.16	20.73	21.27
	8H	23.00	23.52	23.56	24.08	24.63	20.02	20.54	20.58	21.10	21.65
	12H	23.04	23.50	23.60	24.04	24.67	20.51	20.97	21.07	21.52	22.14
12H	4H	22.64	23.26	23.17	23.79	24.33	18.90	19.52	19.42	20.05	20.58
	6H	22.91	23.43	23.47	23.99	24.54	19.65	20.17	20.21	20.73	21.28
	8H	23.01	23.47	23.57	24.01	24.64	20.11	20.57	20.67	21.11	21.74