

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: P893793

Luminaire Tested: 4MB-7HL-A-UNV-L830

Issue Date: 11/11/2024

Test Information

Test Method: LM-79-2019
Report Number: P893793
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-7HL-A-UNV-L830
Description: 7000 Lumen 4FT MICROBAY LINEAR BAY with AISLE OPTIC, 80CRI, 3000K CCT
Light Source: -
Ballast/Driver: -

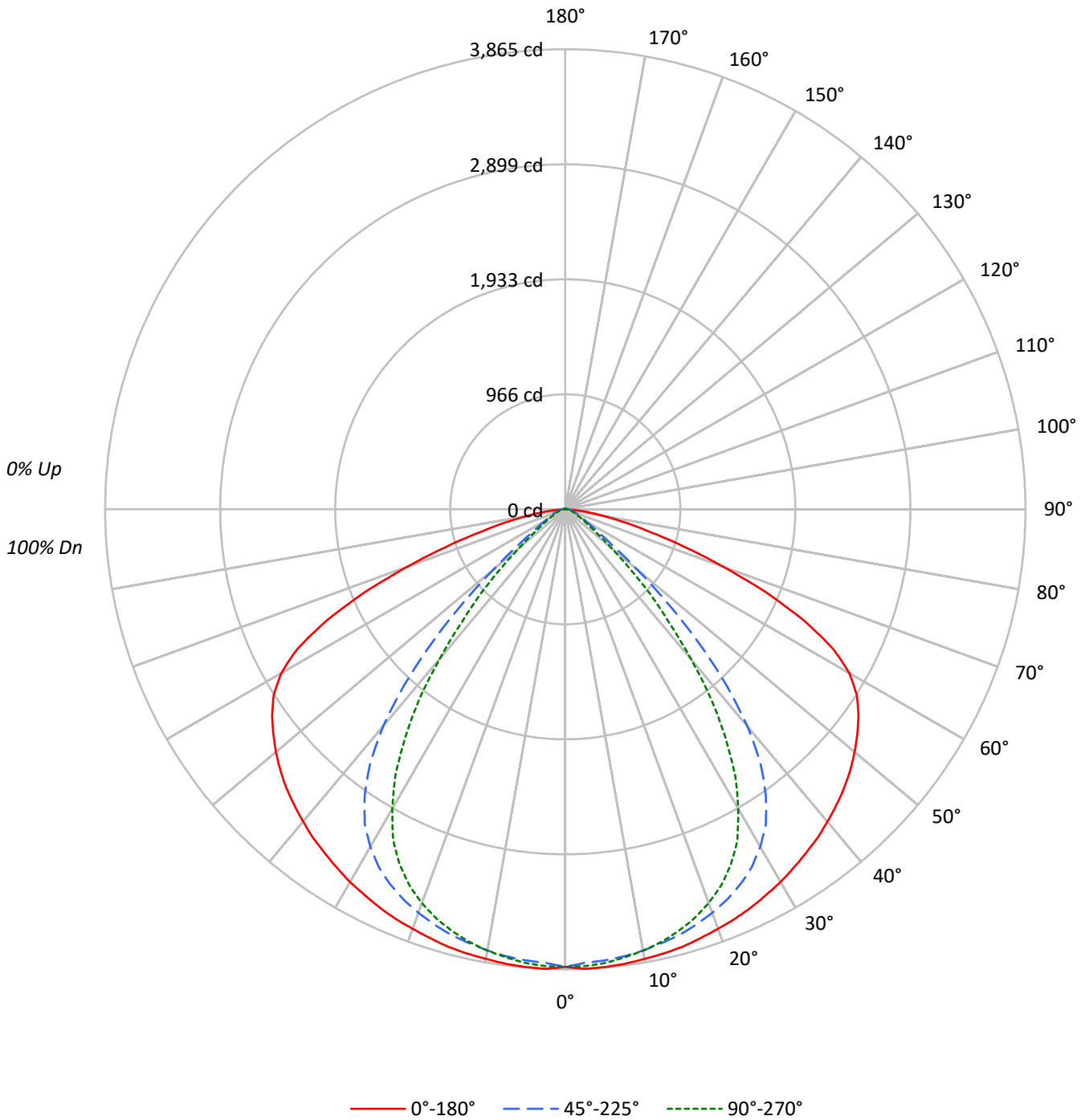
Summary

Lumens per Lamp: N/A
Luminaire Lumens: 7786.1 lumens
Efficiency: N/A
Efficacy: 150.3 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): 51.8
Input Voltage (V): 120
Input Current (A_{in}): NR
Voltage Rise (V): NR
Power Factor: 0.99
Total Harmonic Distortion (THDi): 4
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	90	90	90	88
2	103	96	90	86	100	94	89	85	91	86	83	88	84	81	85	82	79	79	79	79	77
3	95	86	80	74	93	85	79	74	82	77	72	79	75	71	77	73	70	70	70	70	68
4	88	78	71	65	86	77	70	64	74	68	64	72	67	63	70	66	62	62	62	62	60
5	82	71	63	57	80	70	63	57	68	61	56	66	60	56	64	59	55	55	55	55	53
6	76	65	57	51	75	64	56	51	62	55	50	60	55	50	59	54	50	50	50	50	48
7	71	59	51	46	70	58	51	46	57	50	45	56	50	45	54	49	45	45	45	45	43
8	67	55	47	42	65	54	47	41	53	46	41	51	45	41	50	45	41	41	41	41	39
9	63	50	43	38	61	50	43	38	49	42	38	48	42	37	47	41	37	37	37	37	35
10	59	47	39	35	58	46	39	35	45	39	34	44	38	34	43	38	34	34	34	34	32

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	39158	39158	39158
5°	39464	38899	39122
10°	39672	38928	38936
15°	40111	39022	38685
20°	40640	39095	38158
25°	41467	39081	36982
30°	42515	38498	34164
35°	43819	36517	29161
40°	45532	31628	21810
45°	47704	22759	14519
50°	50268	12472	7957
55°	53377	6131	4581
60°	56139	4041	3167
65°	53283	3311	2504
70°	41943	3007	2317
75°	29087	2975	2204
80°	19143	2985	2727
85°	10961	4581	4674

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
 Vertical Angle: 60°
 Luminance: 56139 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	364.7	4.7
10°-20°	1052.5	13.5
20°-30°	1603.4	20.6
30°-40°	1820.9	23.4
40°-50°	1462.1	18.8
50°-60°	784.3	10.1
60°-70°	414.8	5.3
70°-80°	188.1	2.4
80°-90°	59.9	0.8
90°-100°	18.5	0.2
100°-110°	6.7	0.1
110°-120°	2.1	0.0
120°-130°	1.6	0.0
130°-140°	1.6	0.0
140°-150°	1.7	0.0
150°-160°	1.6	0.0
160°-170°	1.2	0.0
170°-180°	0.4	0.0
0°-30°	3020.5	38.8
0°-40°	4841.4	62.2
0°-60°	7087.8	91.0
0°-90°	7750.6	99.5
90°-120°	27.3	0.4
90°-150°	32.2	0.4
90°-180°	35.0	0.4
0°-180°	7786.1	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	3845	3845	3845	3845	3845	
5°	3860	3852	3805	3837	3827	368
15°	3804	3780	3701	3691	3669	1076
25°	3690	3631	3478	3357	3291	1705
35°	3524	3375	2937	2511	2346	2211
45°	3312	2803	1580	1099	1008	2558
55°	3006	1122	345	270	258	2680
65°	2211	261	137	111	104	2138
75°	739	149	76	60	56	836
85°	94	56	39	39	40	128
90°	4	25	28	33	31	6
95°	4	10	22	20	19	3
105°	2	2	4	10	12	2
115°	2	2	2	3	3	1
125°	2	2	2	2	2	1
135°	2	2	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°	3845.0	3845.0	3845.0	3845.0	3845.0
2.5°	3864.6	3857.4	3813.7	3850.1	3840.6
5°	3860.3	3852.3	3805.0	3837.0	3826.8
7.5°	3850.8	3840.6	3787.6	3813.7	3797.8
10°	3836.3	3826.1	3764.3	3782.5	3765.1
12.5°	3821.7	3804.3	3733.8	3739.6	3722.9
15°	3804.3	3780.3	3701.1	3690.9	3669.1
17.5°	3777.4	3750.5	3658.2	3634.2	3603.7
20°	3749.8	3713.4	3607.3	3558.6	3520.8
22.5°	3724.3	3674.2	3549.2	3471.4	3420.5
25°	3690.2	3631.3	3477.9	3356.6	3291.1
27.5°	3653.1	3581.2	3390.0	3208.3	3130.5
30°	3615.3	3520.8	3273.7	3022.2	2905.2
32.5°	3571.0	3454.7	3134.2	2796.9	2658.8
35°	3524.5	3374.7	2937.2	2511.2	2345.5
37.5°	3480.1	3282.4	2694.4	2164.5	2017.7
40°	3424.9	3174.9	2379.0	1792.4	1640.5
42.5°	3370.4	3009.1	2001.0	1435.5	1290.1
45°	3312.2	2802.7	1580.2	1099.0	1008.1
47.5°	3246.1	2520.0	1156.4	800.3	721.8
50°	3172.7	2112.9	787.2	545.1	502.2
52.5°	3092.0	1636.9	511.7	375.8	351.1
55°	3006.2	1121.5	345.3	269.7	258.0
57.5°	2903.0	702.9	255.8	202.8	196.2
60°	2756.2	455.7	198.4	163.5	155.5
62.5°	2535.2	326.4	166.4	133.7	127.2
65°	2211.1	260.9	137.4	111.2	103.9
67.5°	1822.9	223.1	117.7	95.2	90.1
70°	1408.6	196.2	101.0	82.9	77.8
72.5°	1051.0	171.5	87.2	72.0	65.4
75°	739.2	149.0	75.6	59.6	56.0
77.5°	519.7	128.7	62.5	50.9	50.2
80°	326.4	106.8	50.9	47.2	46.5
82.5°	198.4	84.3	44.3	43.6	42.9
85°	93.8	56.0	39.2	39.2	40.0
87.5°	30.5	37.1	33.4	34.9	34.9
90°	3.6	25.4	28.3	32.7	31.3
92.5°	3.6	18.2	26.2	26.2	21.1
95°	3.6	10.2	22.5	19.6	18.9
97.5°	3.6	5.1	16.7	18.9	18.2
100°	3.6	2.9	12.4	16.7	18.2
102.5°	2.9	2.2	8.0	13.8	15.3
105°	2.2	1.5	4.4	10.2	12.4
107.5°	1.5	1.5	2.9	7.3	8.7
110°	1.5	0.7	2.2	5.1	5.8



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CANDELA DISTRIBUTION (continued):

	0°	22.5°	45°	67.5°	90°
112.5°	1.5	0.7	2.2	3.6	3.6
115°	1.5	1.5	1.5	2.9	2.9
117.5°	1.5	1.5	1.5	2.2	2.2
120°	1.5	1.5	1.5	2.2	1.5
122.5°	1.5	1.5	1.5	2.2	1.5
125°	1.5	1.5	1.5	2.2	1.5
127.5°	1.5	1.5	2.2	2.2	1.5
130°	1.5	1.5	2.2	2.2	1.5
132.5°	1.5	1.5	2.2	2.2	2.2
135°	2.2	1.5	2.2	2.2	2.2
137.5°	2.2	2.2	2.2	2.9	2.2
140°	2.2	2.2	2.9	2.9	2.2
142.5°	2.2	2.2	2.9	2.9	2.9
145°	2.2	2.2	2.9	2.9	2.9
147.5°	2.2	2.2	2.9	3.6	2.9
150°	2.2	2.9	3.6	3.6	2.9
152.5°	2.2	2.9	3.6	3.6	3.6
155°	2.9	2.9	3.6	4.4	3.6
157.5°	2.9	2.9	3.6	4.4	3.6
160°	2.9	2.9	4.4	4.4	4.4
162.5°	2.9	3.6	4.4	5.1	4.4
165°	2.9	3.6	4.4	5.1	4.4
167.5°	2.9	3.6	4.4	5.1	5.1
170°	2.9	3.6	5.1	5.1	5.1
172.5°	3.6	3.6	5.1	5.8	5.1
175°	3.6	3.6	5.1	5.8	5.1
177.5°	3.6	3.6	5.1	5.8	5.1
180°	5.1	5.1	5.1	5.1	5.1



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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	22.41	23.80	22.78	24.12	24.45	10.62	12.01	10.99	12.33	12.66
	3H	25.31	26.54	25.69	26.88	27.25	11.58	12.81	11.96	13.15	13.53
	4H	26.09	27.24	26.50	27.60	27.99	12.00	13.15	12.41	13.51	13.90
	6H	26.53	27.59	26.95	27.97	28.37	12.48	13.54	12.90	13.91	14.32
	8H	26.63	27.63	27.06	28.03	28.45	12.79	13.79	13.22	14.19	14.61
	12H	26.66	27.63	27.10	28.02	28.46	13.19	14.15	13.63	14.54	14.99
4H	2H	22.22	23.37	22.63	23.73	24.12	11.14	12.29	11.55	12.65	13.04
	3H	25.14	26.08	25.56	26.49	26.91	12.35	13.29	12.77	13.70	14.12
	4H	25.93	26.78	26.37	27.20	27.66	12.88	13.73	13.33	14.16	14.61
	6H	26.46	27.19	26.93	27.64	28.12	13.52	14.25	13.99	14.70	15.18
	8H	26.60	27.29	27.08	27.74	28.22	13.92	14.60	14.40	15.06	15.54
	12H	26.68	27.29	27.18	27.78	28.26	14.45	15.06	14.94	15.55	16.03
8H	4H	25.82	26.50	26.29	26.96	27.44	13.45	14.13	13.92	14.58	15.06
	6H	26.35	26.91	26.86	27.41	27.90	14.22	14.78	14.73	15.28	15.77
	8H	26.52	27.02	27.04	27.54	28.04	14.74	15.25	15.27	15.77	16.27
	12H	26.63	27.08	27.16	27.58	28.16	15.44	15.89	15.96	16.39	16.97
12H	4H	25.78	26.38	26.27	26.87	27.36	13.69	14.30	14.19	14.79	15.27
	6H	26.30	26.80	26.82	27.32	27.82	14.49	15.00	15.02	15.52	16.02
	8H	26.49	26.93	27.01	27.44	28.02	15.09	15.54	15.61	16.04	16.62