

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: P893981

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

Issue Date: 11/11/2024

Test Information

Test Method: LM-79-2019
Report Number: P893981
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-2403-334-3)
Test Lab: INNOVATION CENTER
Issue Date: 11/11/2024
Manufacturer: COOPER LIGHTING SOLUTIONS
Product Line: METALUX
Catalog Number: 4MB-8HL-RNDU-UNV-L930
Description: 8000 Lumen 4FT MICROBAY LINEAR BAY with ROUND FROSTED LENS WITH UPLIGHT, 90CRI, 5
Light Source: -
Ballast/Driver: -

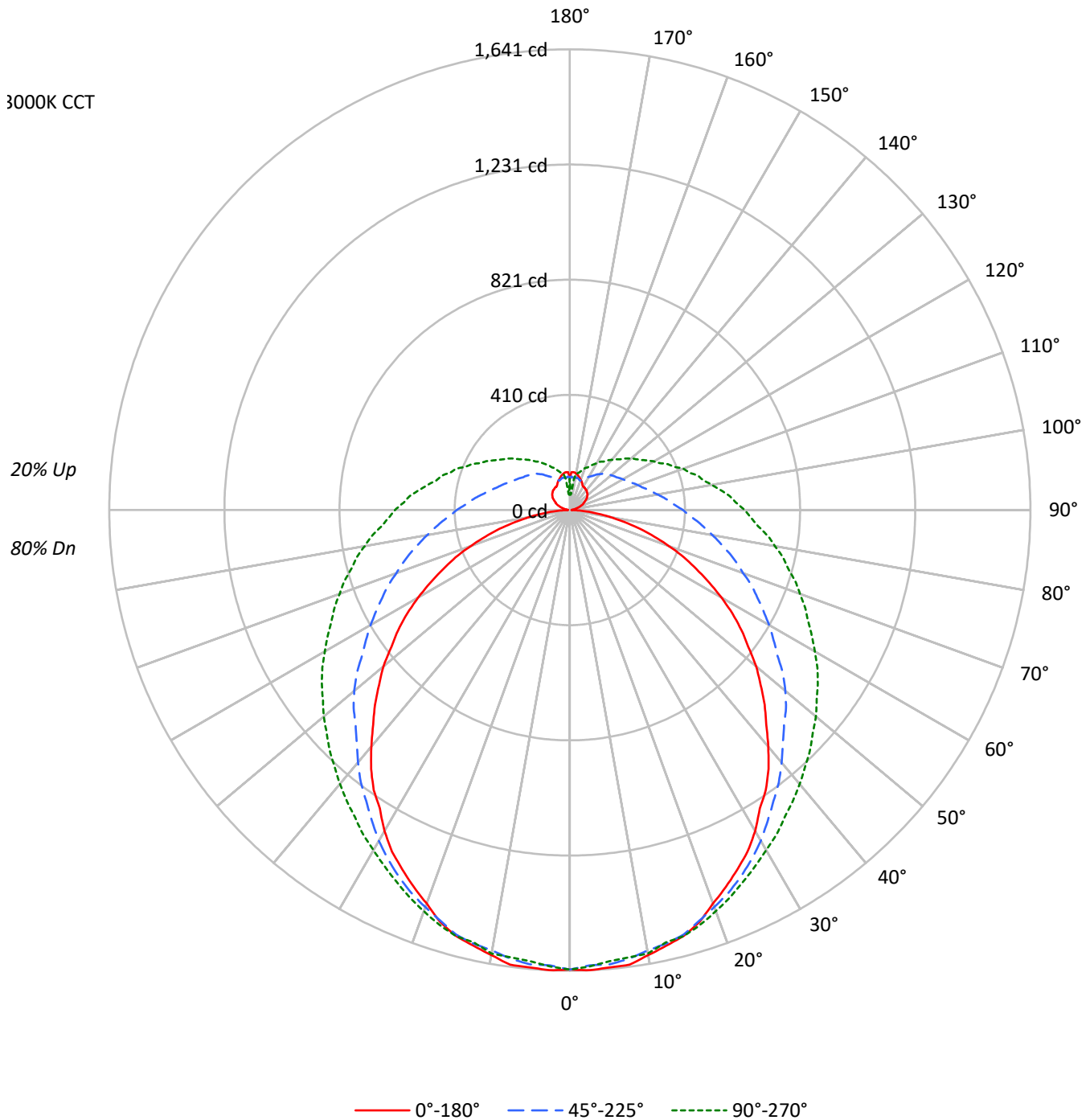
Summary

Lumens per Lamp: N/A
Luminaire Lumens: 6882.0 lumens
Efficiency: N/A
Efficacy: 118.9 lumens/watt
Spacing Criteria (0/90/45): 1.2 / 1.28 / 1.37
Luminous Opening: Rectangular w/ Sides (W: 0.38' x L: 3.98' x H: 0.21')
CIE Type: Semi-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
RCR																				
0	114	114	114	114	109	109	109	109	100	100	100	91	91	91	83	83	83	80		
1	102	96	91	86	97	92	87	83	84	80	77	76	73	71	69	67	65	61		
2	92	82	75	68	87	79	72	66	72	66	61	66	61	57	60	56	53	49		
3	83	72	63	56	79	69	61	54	63	56	51	57	52	47	52	48	44	41		
4	76	63	54	47	72	60	52	45	55	48	43	51	45	40	46	41	37	34		
5	69	56	47	40	66	54	45	39	49	42	37	45	39	34	41	36	32	29		
6	64	50	41	35	61	48	40	34	44	37	32	41	35	30	38	32	28	26		
7	59	46	37	30	56	44	35	30	40	33	28	37	31	26	34	29	25	23		
8	55	41	33	27	52	40	32	26	37	30	25	34	28	24	31	26	22	20		
9	51	38	30	24	49	37	29	23	34	27	22	31	25	21	29	24	20	18		
10	48	35	27	22	46	34	26	21	31	25	20	29	23	19	27	22	18	16		

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	11648	11648	11648
5°	11626	11185	10995
10°	11523	10708	10568
15°	11406	10355	10091
20°	11082	9872	9600
25°	10826	9444	9137
30°	10529	8978	8732
35°	10203	8472	8380
40°	9783	8039	8109
45°	9385	7625	7868
50°	9034	7370	7664
55°	8623	6972	7506
60°	8135	6720	7360
65°	7526	6495	7250
70°	6844	6313	7245
75°	5958	6243	7266
80°	4685	6210	7407
85°	3085	6348	7575

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
 Vertical Angle: 45°
 Luminance: 9385 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	155.0	2.3
10°-20°	442.8	6.4
20°-30°	665.0	9.7
30°-40°	798.5	11.6
40°-50°	844.6	12.3
50°-60°	814.0	11.8
60°-70°	722.1	10.5
70°-80°	592.2	8.6
80°-90°	458.4	6.7
90°-100°	357.6	5.2
100°-110°	284.7	4.1
110°-120°	227.5	3.3
120°-130°	179.4	2.6
130°-140°	136.9	2.0
140°-150°	96.3	1.4
150°-160°	61.6	0.9
160°-170°	34.5	0.5
170°-180°	10.9	0.2
0°-30°	1262.8	18.3
0°-40°	2061.3	30.0
0°-60°	3719.8	54.1
0°-90°	5492.5	79.8
90°-120°	869.8	12.6
90°-150°	1282.4	18.6
90°-180°	1389.0	20.2
0°-180°	6882.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1637	1637	1637	1637	1637	
5°	1635	1640	1624	1636	1613	156
15°	1570	1571	1566	1576	1571	441
25°	1413	1436	1441	1466	1461	651
35°	1218	1236	1265	1318	1335	759
45°	982	1011	1080	1182	1210	757
55°	747	785	903	1026	1079	667
65°	497	566	737	890	937	494
75°	259	373	587	745	805	274
85°	60	227	455	619	674	68
90°	6	180	403	560	623	6
95°	8	149	356	512	572	8
105°	28	121	285	418	472	29
115°	53	118	236	342	386	51
125°	74	120	203	280	310	65
135°	87	116	182	237	255	67
145°	94	107	150	199	211	59
155°	104	110	124	156	174	48
165°	124	121	116	114	141	35
175°	136	131	116	95	60	13
180°	111	111	111	111	111	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1637.1	1637.1	1637.1	1637.1	1637.1
2.5°	1640.7	1646.2	1623.3	1637.1	1627.0
5°	1635.2	1639.8	1624.2	1636.2	1613.3
7.5°	1633.4	1631.6	1612.3	1627.9	1606.9
10°	1609.6	1616.0	1593.1	1614.2	1604.1
12.5°	1589.5	1602.3	1582.1	1598.6	1577.6
15°	1570.2	1571.1	1565.7	1575.7	1571.1
17.5°	1538.2	1546.4	1533.6	1556.5	1548.3
20°	1491.5	1517.1	1505.2	1526.3	1520.8
22.5°	1453.0	1465.9	1475.9	1499.7	1492.4
25°	1412.7	1435.6	1441.1	1465.9	1461.3
27.5°	1371.5	1381.6	1402.7	1429.2	1430.1
30°	1320.3	1331.3	1360.6	1390.8	1399.0
32.5°	1259.8	1294.6	1312.0	1357.8	1370.6
35°	1217.7	1236.0	1265.3	1317.5	1334.9
37.5°	1162.8	1183.9	1223.2	1284.6	1305.6
40°	1099.6	1130.7	1173.8	1249.8	1274.5
42.5°	1036.4	1073.1	1123.4	1212.2	1240.6
45°	981.5	1010.8	1079.5	1182.0	1210.4
47.5°	922.0	957.7	1044.7	1142.7	1174.7
50°	867.1	903.7	1002.6	1106.0	1144.5
52.5°	801.1	843.3	956.8	1063.9	1108.8
55°	747.1	784.7	902.8	1025.5	1078.6
57.5°	687.6	729.7	860.7	997.1	1045.6
60°	623.5	676.6	819.4	961.4	1008.1
62.5°	560.3	623.5	777.3	926.6	972.4
65°	497.2	565.8	737.0	889.9	936.6
67.5°	440.4	514.6	700.4	849.7	907.3
70°	376.3	465.1	657.4	812.1	872.6
72.5°	315.9	420.3	622.6	781.9	842.3
75°	259.1	372.6	586.9	745.3	804.8
77.5°	202.3	327.8	549.4	712.3	777.3
80°	148.3	291.2	516.4	680.3	742.5
82.5°	102.5	259.1	484.3	653.7	712.3
85°	60.4	227.1	455.0	618.9	673.9
87.5°	27.5	201.4	424.8	592.4	646.4
90°	6.4	180.4	402.9	560.3	622.6
92.5°	6.4	163.9	376.3	536.5	593.3
95°	8.2	149.2	356.2	511.8	572.2
97.5°	11.0	138.3	337.9	488.9	542.0
100°	15.6	130.9	317.7	462.4	514.6
102.5°	21.1	125.4	299.4	438.6	487.1
105°	27.5	120.9	284.7	418.4	472.4
107.5°	33.9	119.0	270.1	399.2	445.0
110°	40.3	118.1	259.1	379.1	430.3



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CANDELA DISTRIBUTION (continued):

	0°	22.5°	45°	67.5°	90°
112.5°	46.7	117.2	247.2	360.7	401.9
115°	53.1	118.1	236.2	341.5	385.5
117.5°	56.8	118.1	226.1	325.0	361.7
120°	62.3	119.0	218.8	307.6	346.1
122.5°	67.8	119.0	211.5	294.8	328.7
125°	74.2	119.9	203.3	280.2	310.4
127.5°	77.8	119.9	198.7	270.1	297.6
130°	81.5	119.0	192.3	257.3	285.7
132.5°	85.1	117.2	188.6	245.4	271.9
135°	87.0	116.3	182.2	237.1	255.4
137.5°	89.7	113.5	175.8	225.2	245.4
140°	92.5	112.6	166.6	216.1	233.5
142.5°	92.5	109.9	160.2	207.8	223.4
145°	94.3	107.1	150.2	198.7	210.6
147.5°	96.1	106.2	142.8	189.5	204.2
150°	96.1	105.3	136.4	179.5	193.2
152.5°	98.0	106.2	130.0	170.3	183.1
155°	104.4	109.9	123.6	155.6	174.0
157.5°	109.9	113.5	117.2	144.7	163.9
160°	114.4	116.3	111.7	133.7	159.3
162.5°	118.1	119.0	112.6	123.6	149.2
165°	123.6	120.9	116.3	113.5	141.0
167.5°	128.2	122.7	118.1	110.8	134.6
170°	131.8	126.4	116.3	104.4	131.8
172.5°	134.6	127.3	117.2	98.0	110.8
175°	135.5	130.9	116.3	95.2	60.4
177.5°	134.6	131.8	119.9	94.3	54.0
180°	110.8	110.8	110.8	110.8	110.8



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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	15.57	16.89	16.21	17.55	18.32	18.98	20.30	19.62	20.96	21.73
	3H	17.03	18.23	17.68	18.90	19.70	21.82	23.02	22.47	23.69	24.49
	4H	17.50	18.64	18.17	19.32	20.13	23.27	24.41	23.94	25.09	25.90
	6H	17.77	18.84	18.46	19.53	20.36	24.83	25.89	25.51	26.59	27.41
	8H	17.83	18.85	18.53	19.57	20.40	25.64	26.66	26.34	27.38	28.21
	12H	17.85	18.83	18.56	19.54	20.40	26.52	27.50	27.23	28.21	29.07
4H	2H	16.71	17.85	17.38	18.54	19.35	19.32	20.46	19.99	21.15	21.96
	3H	18.41	19.39	19.10	20.11	20.94	22.39	23.37	23.08	24.09	24.92
	4H	19.01	19.92	19.72	20.64	21.50	24.03	24.93	24.73	25.65	26.51
	6H	19.42	20.22	20.14	20.97	21.83	25.79	26.58	26.50	27.33	28.20
	8H	19.53	20.29	20.26	21.03	21.91	26.72	27.47	27.44	28.21	29.10
	12H	19.59	20.28	20.34	21.05	21.93	27.73	28.41	28.47	29.18	30.07
8H	4H	20.04	20.80	20.77	21.54	22.42	24.21	24.96	24.93	25.71	26.59
	6H	20.69	21.33	21.44	22.12	23.00	26.15	26.79	26.90	27.57	28.46
	8H	20.92	21.50	21.68	22.28	23.18	27.23	27.81	27.99	28.59	29.49
	12H	21.07	21.58	21.83	22.36	23.31	28.43	28.95	29.20	29.73	30.68
12H	4H	20.37	21.06	21.12	21.83	22.71	24.20	24.89	24.95	25.66	26.54
	6H	21.18	21.76	21.94	22.54	23.44	26.18	26.76	26.94	27.55	28.44
	8H	21.53	22.05	22.30	22.82	23.78	27.33	27.84	28.09	28.62	29.57