

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: P893881

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

Issue Date: 11/11/2024

Test Information

Test Method: LM-79-2019
Report Number: P893881
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-7HL-RNDU-UNV-L830
Description: 7000 Lumen 4FT MICROBAY LINEAR BAY with ROUND FROSTED LENS WITH UPLIGHT, 80CRI, 5
Light Source: -
Ballast/Driver: -

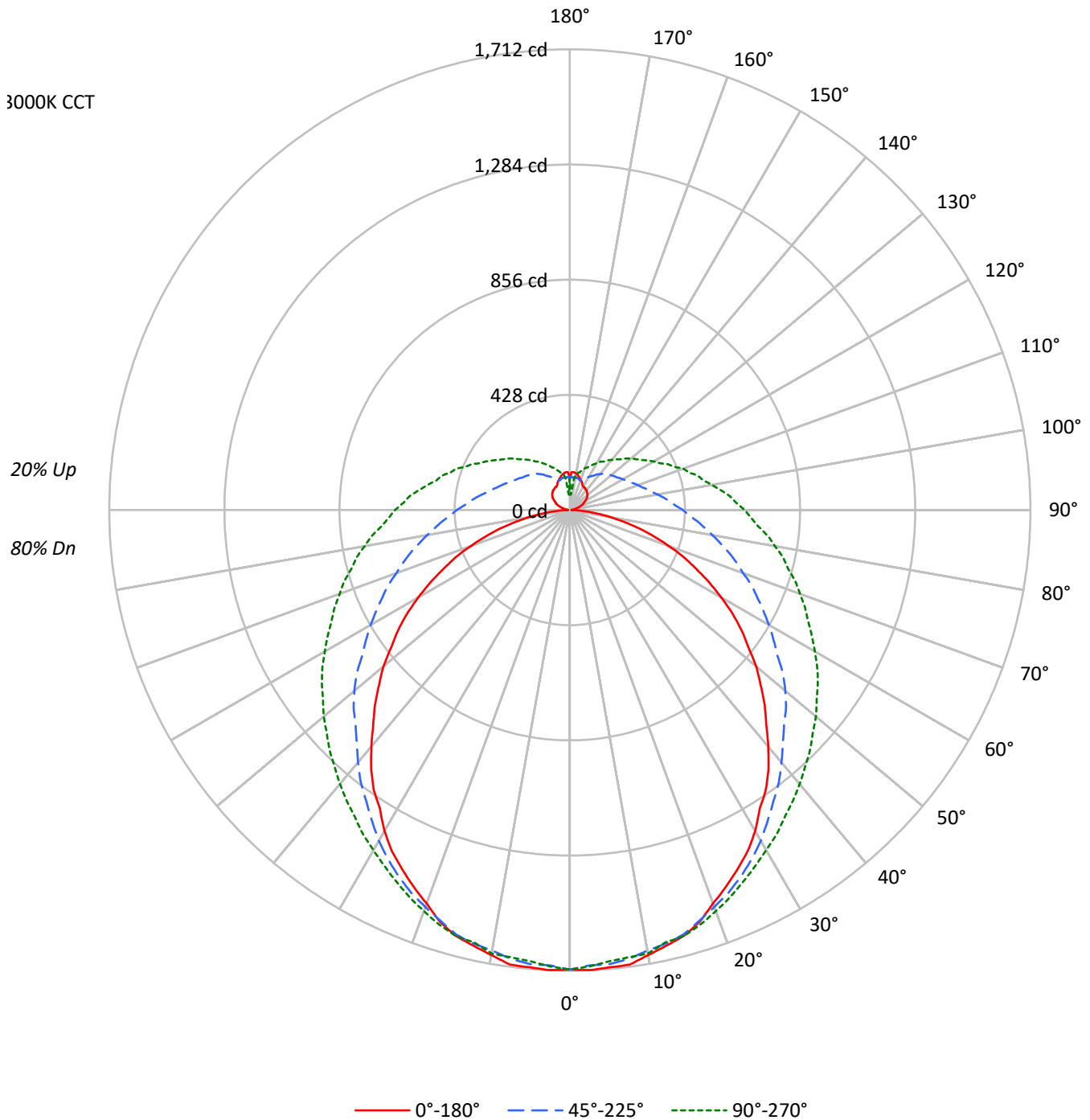
Summary

Lumens per Lamp: N/A
Luminaire Lumens: 7179.0 lumens
Efficiency: N/A
Efficacy: 138.6 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): 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
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°	12150	12150	12150
5°	12128	11668	11470
10°	12020	11171	11024
15°	11899	10802	10527
20°	11560	10298	10014
25°	11294	9852	9531
30°	10983	9365	9108
35°	10643	8838	8741
40°	10206	8385	8459
45°	9790	7954	8207
50°	9424	7687	7995
55°	8996	7273	7830
60°	8486	7010	7678
65°	7850	6776	7563
70°	7138	6586	7557
75°	6216	6513	7579
80°	4887	6478	7727
85°	3218	6622	7902

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
 Vertical Angle: 45°
 Luminance: 9790 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	161.7	2.3
10°-20°	462.0	6.4
20°-30°	693.6	9.7
30°-40°	833.0	11.6
40°-50°	881.1	12.3
50°-60°	849.1	11.8
60°-70°	753.3	10.5
70°-80°	617.8	8.6
80°-90°	478.1	6.7
90°-100°	373.0	5.2
100°-110°	297.0	4.1
110°-120°	237.3	3.3
120°-130°	187.2	2.6
130°-140°	142.9	2.0
140°-150°	100.4	1.4
150°-160°	64.2	0.9
160°-170°	36.0	0.5
170°-180°	11.4	0.2
0°-30°	1317.3	18.3
0°-40°	2150.2	30.0
0°-60°	3880.4	54.1
0°-90°	5729.6	79.8
90°-120°	907.3	12.6
90°-150°	1337.8	18.6
90°-180°	1449.0	20.2
0°-180°	7179.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1708	1708	1708	1708	1708	
5°	1706	1711	1694	1707	1683	162
15°	1638	1639	1633	1644	1639	460
25°	1474	1498	1503	1529	1524	679
35°	1270	1289	1320	1374	1392	792
45°	1024	1054	1126	1233	1263	790
55°	779	818	942	1070	1125	695
65°	519	590	769	928	977	516
75°	270	389	612	778	840	286
85°	63	237	475	646	703	71
90°	7	188	420	584	650	7
95°	9	156	372	534	597	9
105°	29	126	297	436	493	30
115°	55	123	246	356	402	54
125°	77	125	212	292	324	68
135°	91	121	190	247	266	70
145°	98	112	157	207	220	62
155°	109	115	129	162	182	50
165°	129	126	121	118	147	36
175°	141	137	121	99	63	13
180°	116	116	116	116	116	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1707.7	1707.7	1707.7	1707.7	1707.7
2.5°	1711.5	1717.3	1693.4	1707.7	1697.2
5°	1705.8	1710.6	1694.3	1706.8	1682.9
7.5°	1703.9	1702.0	1681.9	1698.2	1676.2
10°	1679.1	1685.7	1661.9	1683.8	1673.3
12.5°	1658.1	1671.4	1650.4	1667.6	1645.6
15°	1638.0	1638.9	1633.2	1643.7	1638.9
17.5°	1604.6	1613.2	1599.8	1623.7	1615.1
20°	1555.9	1582.6	1570.2	1592.1	1586.4
22.5°	1515.7	1529.1	1539.6	1564.5	1556.8
25°	1473.7	1497.6	1503.3	1529.1	1524.3
27.5°	1430.7	1441.2	1463.2	1490.9	1491.9
30°	1377.3	1388.7	1419.3	1450.8	1459.4
32.5°	1314.2	1350.5	1368.7	1416.4	1429.8
35°	1270.3	1289.4	1319.9	1374.4	1392.5
37.5°	1213.0	1234.9	1276.0	1340.0	1362.0
40°	1147.1	1179.5	1224.4	1303.7	1329.5
42.5°	1081.2	1119.4	1171.9	1264.6	1294.2
45°	1023.9	1054.4	1126.1	1233.0	1262.6
47.5°	961.8	999.0	1089.8	1192.0	1225.4
50°	904.5	942.7	1045.8	1153.8	1193.9
52.5°	835.7	879.6	998.1	1109.8	1156.6
55°	779.4	818.5	941.7	1069.7	1125.1
57.5°	717.3	761.2	897.8	1040.1	1090.7
60°	650.4	705.8	854.8	1002.9	1051.6
62.5°	584.5	650.4	810.9	966.6	1014.3
65°	518.6	590.3	768.9	928.4	977.1
67.5°	459.4	536.8	730.7	886.3	946.5
70°	392.5	485.2	685.8	847.2	910.2
72.5°	329.5	438.4	649.5	815.7	878.7
75°	270.3	388.7	612.2	777.5	839.5
77.5°	211.1	341.9	573.1	743.1	810.9
80°	154.7	303.7	538.7	709.6	774.6
82.5°	107.0	270.3	505.2	681.9	743.1
85°	63.0	236.9	474.7	645.6	703.0
87.5°	28.7	210.1	443.2	617.9	674.3
90°	6.7	188.2	420.2	584.5	649.5
92.5°	6.7	171.0	392.5	559.7	618.9
95°	8.6	155.7	371.5	533.9	596.9
97.5°	11.5	144.2	352.4	510.0	565.4
100°	16.2	136.6	331.4	482.3	536.8
102.5°	22.0	130.8	312.3	457.5	508.1
105°	28.7	126.1	297.0	436.5	492.8
107.5°	35.3	124.2	281.8	416.4	464.2
110°	42.0	123.2	270.3	395.4	448.9



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CANDELA DISTRIBUTION (continued):

	0°	22.5°	45°	67.5°	90°
112.5°	48.7	122.3	257.9	376.3	419.3
115°	55.4	123.2	246.4	356.3	402.1
117.5°	59.2	123.2	235.9	339.1	377.3
120°	64.9	124.2	228.3	320.9	361.0
122.5°	70.7	124.2	220.6	307.5	342.9
125°	77.4	125.1	212.0	292.3	323.8
127.5°	81.2	125.1	207.3	281.8	310.4
130°	85.0	124.2	200.6	268.4	298.0
132.5°	88.8	122.3	196.8	256.0	283.7
135°	90.7	121.3	190.1	247.4	266.5
137.5°	93.6	118.4	183.4	235.0	256.0
140°	96.5	117.5	173.8	225.4	243.6
142.5°	96.5	114.6	167.1	216.8	233.0
145°	98.4	111.7	156.6	207.3	219.7
147.5°	100.3	110.8	149.0	197.7	213.0
150°	100.3	109.8	142.3	187.2	201.5
152.5°	102.2	110.8	135.6	177.6	191.0
155°	108.9	114.6	128.9	162.4	181.5
157.5°	114.6	118.4	122.3	150.9	171.0
160°	119.4	121.3	116.5	139.4	166.2
162.5°	123.2	124.2	117.5	128.9	155.7
165°	128.9	126.1	121.3	118.4	147.1
167.5°	133.7	128.0	123.2	115.6	140.4
170°	137.5	131.8	121.3	108.9	137.5
172.5°	140.4	132.8	122.3	102.2	115.6
175°	141.4	136.6	121.3	99.3	63.0
177.5°	140.4	137.5	125.1	98.4	56.4
180°	115.6	115.6	115.6	115.6	115.6



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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	15.72	17.03	16.36	17.70	18.46	19.13	20.44	19.77	21.11	21.87
	3H	17.17	18.37	17.82	19.04	19.84	21.96	23.17	22.62	23.84	24.64
	4H	17.64	18.79	18.31	19.47	20.28	23.41	24.56	24.08	25.24	26.05
	6H	17.92	18.99	18.61	19.68	20.51	24.97	26.04	25.66	26.73	27.56
	8H	17.98	19.00	18.68	19.72	20.55	25.79	26.81	26.49	27.53	28.36
	12H	18.00	18.98	18.70	19.69	20.55	26.67	27.65	27.37	28.36	29.22
4H	2H	16.86	18.00	17.53	18.68	19.49	19.47	20.61	20.14	21.29	22.10
	3H	18.56	19.54	19.25	20.26	21.09	22.54	23.52	23.22	24.24	25.07
	4H	19.16	20.06	19.86	20.79	21.64	24.17	25.08	24.87	25.80	26.66
	6H	19.57	20.37	20.29	21.12	21.98	25.93	26.73	26.65	27.48	28.34
	8H	19.68	20.43	20.41	21.18	22.06	26.86	27.62	27.59	28.36	29.24
	12H	19.74	20.43	20.48	21.19	22.08	27.87	28.56	28.62	29.33	30.21
8H	4H	20.19	20.94	20.91	21.69	22.57	24.35	25.11	25.08	25.85	26.73
	6H	20.84	21.48	21.59	22.26	23.15	26.29	26.94	27.05	27.72	28.60
	8H	21.06	21.64	21.83	22.43	23.32	27.38	27.96	28.14	28.74	29.64
	12H	21.21	21.73	21.98	22.51	23.46	28.58	29.10	29.35	29.87	30.83
12H	4H	20.52	21.21	21.27	21.97	22.86	24.35	25.04	25.10	25.80	26.69
	6H	21.33	21.91	22.09	22.69	23.59	26.33	26.91	27.09	27.69	28.59
	8H	21.67	22.19	22.44	22.97	23.92	27.47	27.99	28.24	28.77	29.72