

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: P893884

Luminaire Tested: 4MB-7HL-RNDU-UNV-L850

Issue Date: 11/11/2024

Test Information

Test Method: LM-79-2019
Report Number: P893884
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-L850
Description: 7000 Lumen 4FT MICROBAY LINEAR BAY with ROUND FROSTED LENS WITH UPLIGHT, 80CRI, 5
Light Source: -
Ballast/Driver: -

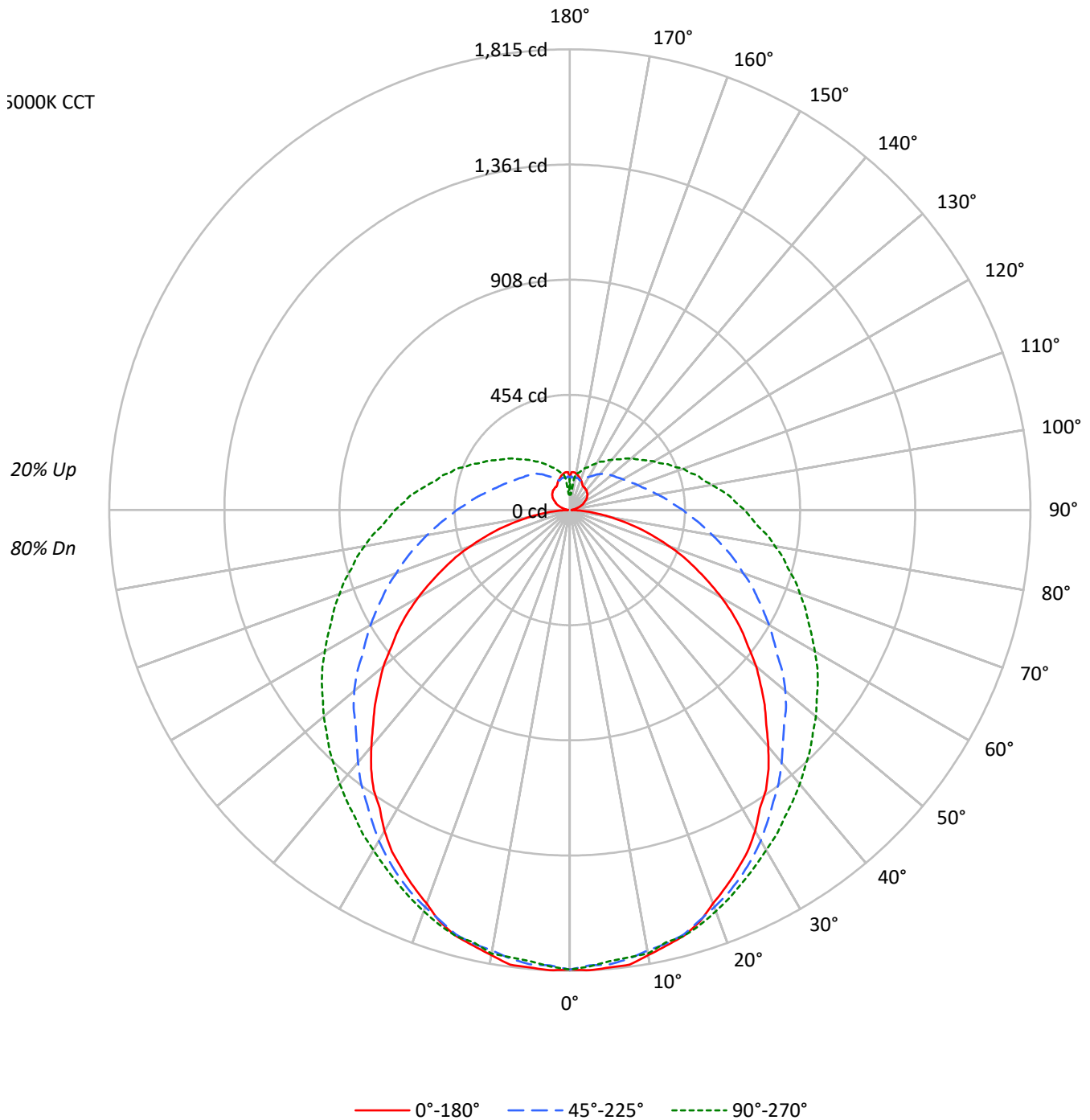
Summary

Lumens per Lamp: N/A
Luminaire Lumens: 7612.0 lumens
Efficiency: N/A
Efficacy: 146.9 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): 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

TEST NUMBER: P893884
CATALOG NUMBER: 4MB-7HL-RNDU-UNV-L850

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	114	114	114	114	109	109	109	109	100	100	100	91	91	91	83	83	83	83	83	83	80
1	102	96	91	86	97	92	87	83	84	80	77	76	73	71	69	67	65	65	65	65	61
2	92	82	75	68	87	79	72	66	72	66	61	66	61	57	60	56	53	53	53	53	49
3	83	72	63	56	79	69	61	54	63	56	51	57	52	47	52	48	44	44	44	44	41
4	76	63	54	47	72	60	52	45	55	48	43	51	45	40	46	41	37	37	37	37	34
5	69	56	47	40	66	54	45	39	49	42	37	45	39	34	41	36	32	32	32	32	29
6	64	50	41	35	61	48	40	34	44	37	32	41	35	30	38	32	28	28	28	28	26
7	59	46	37	30	56	44	35	30	40	33	28	37	31	26	34	29	25	25	25	25	23
8	55	41	33	27	52	40	32	26	37	30	25	34	28	24	31	26	22	22	22	22	20
9	51	38	30	24	49	37	29	23	34	27	22	31	25	21	29	24	20	20	20	20	18
10	48	35	27	22	46	34	26	21	31	25	20	29	23	19	27	22	18	18	18	18	16

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	12883	12883	12883
5°	12859	12371	12161
10°	12745	11844	11689
15°	12616	11453	11162
20°	12257	10919	10619
25°	11975	10446	10107
30°	11645	9930	9658
35°	11285	9371	9269
40°	10822	8892	8969
45°	10380	8434	8703
50°	9992	8151	8477
55°	9538	7711	8302
60°	8998	7433	8141
65°	8323	7184	8019
70°	7569	6983	8013
75°	6591	6905	8037
80°	5184	6869	8193
85°	3412	7021	8378

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
 Vertical Angle: 45°
 Luminance: 10380 cd/sqm



TEST NUMBER: P893884
 CATALOG NUMBER: 4MB-7HL-RNDU-UNV-L850

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	171.4	2.3
10°-20°	489.8	6.4
20°-30°	735.5	9.7
30°-40°	883.2	11.6
40°-50°	934.2	12.3
50°-60°	900.3	11.8
60°-70°	798.7	10.5
70°-80°	655.0	8.6
80°-90°	507.0	6.7
90°-100°	395.5	5.2
100°-110°	314.9	4.1
110°-120°	251.6	3.3
120°-130°	198.5	2.6
130°-140°	151.5	2.0
140°-150°	106.5	1.4
150°-160°	68.1	0.9
160°-170°	38.2	0.5
170°-180°	12.1	0.2
0°-30°	1396.7	18.3
0°-40°	2279.9	30.0
0°-60°	4114.4	54.1
0°-90°	6075.2	79.8
90°-120°	962.0	12.6
90°-150°	1418.5	18.6
90°-180°	1537.0	20.2
0°-180°	7612.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1811	1811	1811	1811	1811	
5°	1809	1814	1796	1810	1784	172
15°	1737	1738	1732	1743	1738	488
25°	1563	1588	1594	1621	1616	720
35°	1347	1367	1400	1457	1476	840
45°	1086	1118	1194	1307	1339	837
55°	826	868	998	1134	1193	737
65°	550	626	815	984	1036	547
75°	287	412	649	824	890	303
85°	67	251	503	685	745	75
90°	7	200	446	620	689	7
95°	9	165	394	566	633	9
105°	30	134	315	463	523	32
115°	59	131	261	378	426	57
125°	82	133	225	310	343	72
135°	96	129	202	262	282	75
145°	104	118	166	220	233	65
155°	115	122	137	172	192	53
165°	137	134	129	126	156	38
175°	150	145	129	105	67	14
180°	122	122	122	122	122	



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CATALOG NUMBER: 4MB-7HL-RNDU-UNV-L850

CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1810.7	1810.7	1810.7	1810.7	1810.7
2.5°	1814.8	1820.8	1795.5	1810.7	1799.6
5°	1808.7	1813.8	1796.5	1809.7	1784.4
7.5°	1806.7	1804.6	1783.4	1800.6	1777.3
10°	1780.3	1787.4	1762.1	1785.4	1774.3
12.5°	1758.1	1772.2	1750.0	1768.2	1744.9
15°	1736.8	1737.8	1731.7	1742.9	1737.8
17.5°	1701.3	1710.5	1696.3	1721.6	1712.5
20°	1649.7	1678.1	1664.9	1688.2	1682.1
22.5°	1607.2	1621.3	1632.5	1658.8	1650.7
25°	1562.6	1587.9	1594.0	1621.3	1616.3
27.5°	1517.0	1528.2	1551.5	1580.8	1581.8
30°	1460.3	1472.5	1504.9	1538.3	1547.4
32.5°	1393.5	1432.0	1451.2	1501.8	1516.0
35°	1346.9	1367.2	1399.6	1457.3	1476.5
37.5°	1286.1	1309.4	1353.0	1420.8	1444.1
40°	1216.3	1250.7	1298.3	1382.3	1409.7
42.5°	1146.4	1186.9	1242.6	1340.8	1372.2
45°	1085.6	1118.0	1194.0	1307.4	1338.8
47.5°	1019.8	1059.3	1155.5	1263.9	1299.3
50°	959.0	999.5	1108.9	1223.3	1265.9
52.5°	886.1	932.7	1058.3	1176.8	1226.4
55°	826.4	867.9	998.5	1134.2	1193.0
57.5°	760.5	807.1	951.9	1102.8	1156.5
60°	689.7	748.4	906.4	1063.3	1115.0
62.5°	619.8	689.7	859.8	1024.9	1075.5
65°	549.9	625.9	815.2	984.3	1036.0
67.5°	487.1	569.1	774.7	939.8	1003.6
70°	416.2	514.5	727.1	898.3	965.1
72.5°	349.4	464.8	688.6	864.9	931.7
75°	286.6	412.2	649.1	824.3	890.2
77.5°	223.8	362.5	607.6	787.9	859.8
80°	164.1	322.0	571.2	752.4	821.3
82.5°	113.4	286.6	535.7	723.1	787.9
85°	66.8	251.2	503.3	684.6	745.4
87.5°	30.4	222.8	469.9	655.2	715.0
90°	7.1	199.5	445.6	619.8	688.6
92.5°	7.1	181.3	416.2	593.4	656.2
95°	9.1	165.1	393.9	566.1	632.9
97.5°	12.2	152.9	373.7	540.8	599.5
100°	17.2	144.8	351.4	511.4	569.1
102.5°	23.3	138.7	331.2	485.1	538.8
105°	30.4	133.7	315.0	462.8	522.6
107.5°	37.5	131.7	298.7	441.5	492.2
110°	44.6	130.6	286.6	419.3	476.0



TEST NUMBER: P893884

CATALOG NUMBER: 4MB-7HL-RNDU-UNV-L850

CANDELA DISTRIBUTION (continued):

	0°	22.5°	45°	67.5°	90°
112.5°	51.6	129.6	273.4	399.0	444.6
115°	58.7	130.6	261.3	377.7	426.3
117.5°	62.8	130.6	250.1	359.5	400.0
120°	68.9	131.7	242.0	340.3	382.8
122.5°	74.9	131.7	233.9	326.1	363.6
125°	82.0	132.7	224.8	309.9	343.3
127.5°	86.1	132.7	219.8	298.7	329.1
130°	90.1	131.7	212.7	284.6	316.0
132.5°	94.2	129.6	208.6	271.4	300.8
135°	96.2	128.6	201.5	262.3	282.5
137.5°	99.2	125.6	194.4	249.1	271.4
140°	102.3	124.6	184.3	239.0	258.2
142.5°	102.3	121.5	177.2	229.9	247.1
145°	104.3	118.5	166.1	219.8	232.9
147.5°	106.3	117.5	158.0	209.6	225.8
150°	106.3	116.5	150.9	198.5	213.7
152.5°	108.4	117.5	143.8	188.4	202.5
155°	115.4	121.5	136.7	172.2	192.4
157.5°	121.5	125.6	129.6	160.0	181.3
160°	126.6	128.6	123.6	147.9	176.2
162.5°	130.6	131.7	124.6	136.7	165.1
165°	136.7	133.7	128.6	125.6	156.0
167.5°	141.8	135.7	130.6	122.5	148.9
170°	145.8	139.8	128.6	115.4	145.8
172.5°	148.9	140.8	129.6	108.4	122.5
175°	149.9	144.8	128.6	105.3	66.8
177.5°	148.9	145.8	132.7	104.3	59.7
180°	122.5	122.5	122.5	122.5	122.5



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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	15.92	17.24	16.56	17.90	18.67	19.33	20.65	19.97	21.31	22.08
	3H	17.38	18.58	18.03	19.25	20.05	22.17	23.37	22.82	24.04	24.84
	4H	17.85	18.99	18.52	19.67	20.48	23.62	24.76	24.29	25.44	26.25
	6H	18.13	19.19	18.81	19.88	20.71	25.18	26.24	25.86	26.94	27.76
	8H	18.18	19.20	18.88	19.92	20.75	25.99	27.02	26.69	27.73	28.56
	12H	18.20	19.18	18.91	19.89	20.75	26.87	27.85	27.58	28.56	29.42
4H	2H	17.06	18.20	17.73	18.89	19.70	19.67	20.81	20.34	21.50	22.31
	3H	18.76	19.74	19.45	20.46	21.29	22.74	23.72	23.43	24.44	25.27
	4H	19.36	20.27	20.07	20.99	21.85	24.38	25.28	25.08	26.00	26.86
	6H	19.77	20.57	20.49	21.32	22.18	26.14	26.93	26.85	27.68	28.55
	8H	19.89	20.64	20.61	21.38	22.26	27.07	27.82	27.79	28.57	29.45
	12H	19.94	20.63	20.69	21.40	22.28	28.08	28.76	28.82	29.53	30.42
8H	4H	20.39	21.15	21.12	21.89	22.77	24.56	25.31	25.28	26.06	26.94
	6H	21.04	21.68	21.79	22.47	23.35	26.50	27.14	27.25	27.92	28.81
	8H	21.27	21.85	22.03	22.63	23.53	27.58	28.16	28.34	28.94	29.84
	12H	21.42	21.93	22.18	22.71	23.66	28.78	29.30	29.55	30.08	31.03
12H	4H	20.72	21.41	21.47	22.18	23.06	24.55	25.24	25.30	26.01	26.89
	6H	21.53	22.11	22.29	22.90	23.79	26.53	27.11	27.29	27.90	28.79
	8H	21.88	22.40	22.65	23.17	24.13	27.68	28.19	28.44	28.97	29.92