

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: P893838

Luminaire Tested: 4MB-7HL-FLTU-UNV-L935

Issue Date: 11/11/2024

**Test Information**

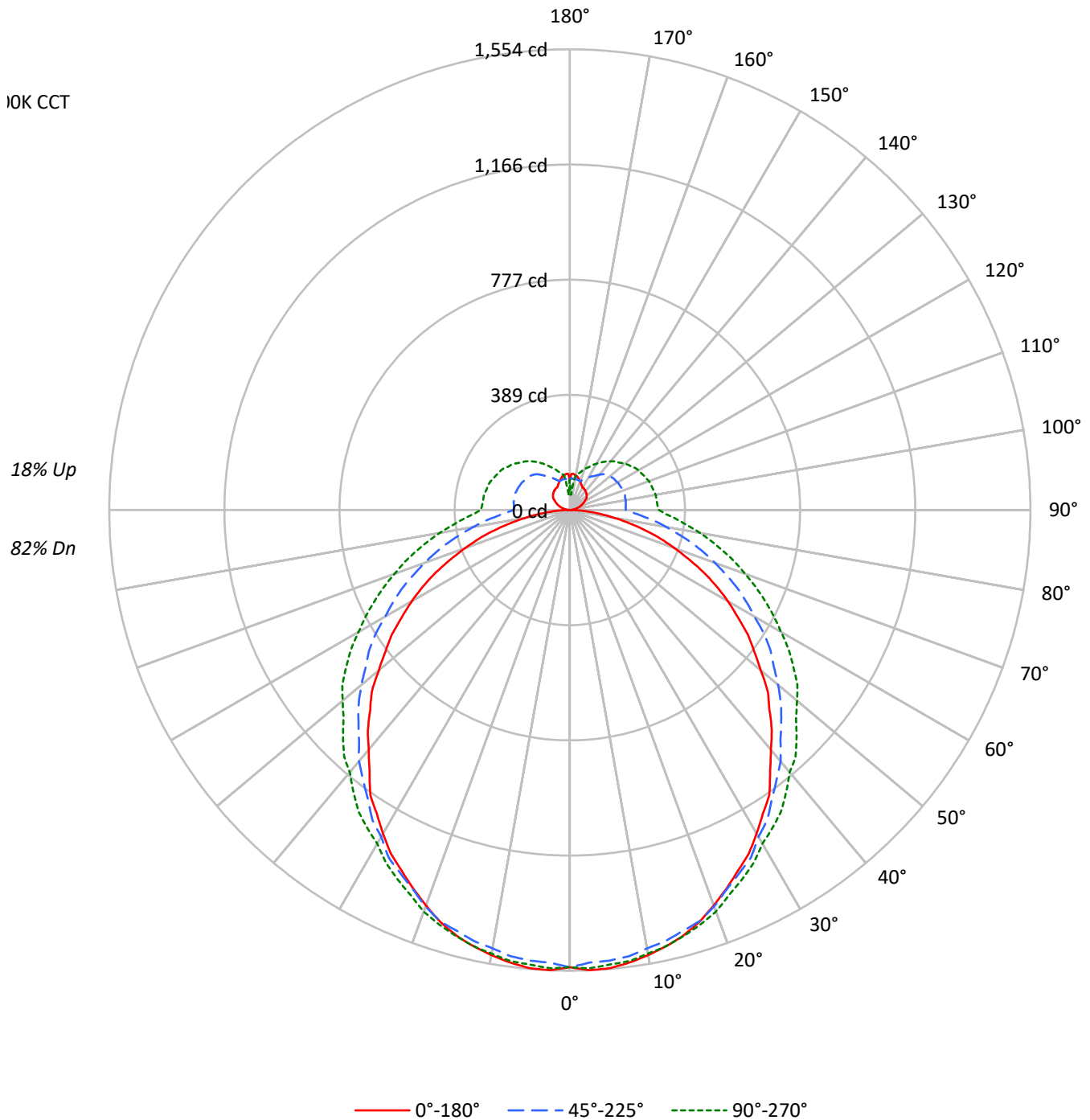
Test Method: LM-79-2019  
Report Number: P893838  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-2403-334-6)  
Test Lab: INNOVATION CENTER  
Issue Date: 11/11/2024  
Manufacturer: COOPER LIGHTING SOLUTIONS  
Product Line: METALUX  
Catalog Number: 4MB-7HL-FLTU-UNV-L935  
Description: 7000 Lumen 4FT MICROBAY LINEAR BAY with FLAT FROSTED LENS WITH UPLIGHT, 90CRI, 350  
Light Source: -  
Ballast/Driver: -

**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 5798.0 lumens  
Efficiency: N/A  
Efficacy: 111.9 lumens/watt  
Spacing Criteria (0/90/45): 1.22 / 1.26 / 1.36  
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<sub>in</sub>): 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: P893838  
CATALOG NUMBER: 4MB-7HL-FLTU-UNV-L935

### Luminous Intensity Polar Plot





TEST NUMBER: P893838

CATALOG NUMBER: 4MB-7HL-FLTU-UNV-L935

**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	115	115	115	115	110	110	110	110	101	101	101	93	93	93	86	86	86	86	86	86	82
1	103	98	93	89	99	94	90	86	87	83	80	80	77	74	73	71	69	69	69	69	66
2	93	85	77	71	89	81	75	69	75	70	65	69	65	61	63	60	57	57	57	57	54
3	85	74	66	59	81	71	63	57	66	59	54	60	55	51	56	51	48	48	48	48	45
4	78	65	56	49	74	63	55	48	58	51	46	54	48	43	50	45	41	41	41	41	38
5	71	58	49	42	68	56	48	41	52	45	39	48	42	37	44	39	35	35	35	35	33
6	66	52	43	37	63	50	42	36	47	40	34	43	37	33	40	35	31	31	31	31	28
7	61	47	38	32	58	46	37	32	42	35	30	39	33	29	37	31	27	27	27	27	25
8	56	43	34	29	54	42	34	28	39	32	27	36	30	26	34	28	24	24	24	24	22
9	53	39	31	26	50	38	30	25	36	29	24	33	27	23	31	26	22	22	22	22	20
10	49	36	28	23	47	35	28	23	33	26	22	31	25	21	29	24	20	20	20	20	18

**AVERAGE LUMINANCE (cd/sqm):**

	0°	45°	90°
0°	10973	10973	10973
5°	11028	10507	10488
10°	10911	10091	10009
15°	10786	9723	9553
20°	10545	9335	9099
25°	10287	8861	8598
30°	10050	8397	8112
35°	9832	7956	7798
40°	9391	7577	7346
45°	9104	7126	7031
50°	8769	6746	6700
55°	8465	6385	6404
60°	8039	5894	6007
65°	7553	5496	5633
70°	6825	5005	5225
75°	6048	4516	4838
80°	4789	3982	4447
85°	3304	3464	4080

**MAXIMUM LUMINANCE 45°-90°:**

Horizontal Angle: 0°  
 Vertical Angle: 45°  
 Luminance: 9104 cd/sqm



TEST NUMBER: P893838  
 CATALOG NUMBER: 4MB-7HL-FLTU-UNV-L935

**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	146.1	2.5
10°-20°	417.2	7.2
20°-30°	626.6	10.8
30°-40°	751.0	13.0
40°-50°	787.4	13.6
50°-60°	738.6	12.7
60°-70°	613.5	10.6
70°-80°	438.7	7.6
80°-90°	260.2	4.5
90°-100°	190.8	3.3
100°-110°	188.0	3.2
110°-120°	175.4	3.0
120°-130°	153.9	2.7
130°-140°	123.9	2.1
140°-150°	88.9	1.5
150°-160°	56.5	1.0
160°-170°	31.3	0.5
170°-180°	9.9	0.2
0°-30°	1189.9	20.5
0°-40°	1940.9	33.5
0°-60°	3466.9	59.8
0°-90°	4779.2	82.4
90°-120°	554.3	9.6
90°-150°	921.0	15.9
90°-180°	1019.0	17.6
0°-180°	5798.0	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	1542	1542	1542	1542	1542	
5°	1551	1548	1526	1533	1539	147
15°	1485	1476	1470	1481	1487	418
25°	1342	1355	1352	1368	1375	619
35°	1174	1178	1188	1223	1242	728
45°	952	979	1009	1075	1082	737
55°	733	757	827	894	920	652
65°	499	537	624	707	728	492
75°	263	324	424	512	536	278
85°	65	142	248	332	363	71
90°	2	86	189	270	300	5
95°	7	90	189	267	295	8
105°	26	99	193	264	288	28
115°	48	107	188	251	275	47
125°	68	111	183	233	254	60
135°	79	106	170	211	228	61
145°	85	98	139	185	198	54
155°	93	98	114	143	162	43
165°	111	108	105	104	130	31
175°	123	118	106	88	53	11
180°	102	102	102	102	102	



TEST NUMBER: P893838

CATALOG NUMBER: 4MB-7HL-FLTU-UNV-L935

**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	1542.2	1542.2	1542.2	1542.2	1542.2
2.5°	1553.7	1541.4	1528.3	1548.0	1547.1
5°	1551.2	1548.0	1525.8	1533.2	1538.9
7.5°	1539.8	1531.6	1518.5	1536.5	1534.8
10°	1524.2	1514.4	1501.2	1511.9	1519.3
12.5°	1507.0	1498.8	1489.8	1501.2	1506.2
15°	1484.9	1475.8	1470.1	1480.8	1487.3
17.5°	1456.2	1453.7	1454.5	1455.4	1466.0
20°	1419.3	1420.9	1423.4	1438.1	1441.4
22.5°	1381.6	1390.6	1384.1	1407.0	1405.4
25°	1342.3	1354.6	1352.1	1367.7	1375.0
27.5°	1307.0	1307.9	1322.6	1344.7	1342.3
30°	1260.3	1274.3	1272.6	1299.7	1299.7
32.5°	1212.8	1233.3	1239.8	1263.6	1271.8
35°	1173.5	1177.6	1188.2	1222.6	1242.3
37.5°	1109.5	1129.2	1146.4	1191.5	1198.9
40°	1055.5	1075.1	1106.3	1158.7	1154.6
42.5°	1008.8	1029.2	1052.2	1112.8	1127.6
45°	952.2	979.3	1008.8	1075.1	1081.7
47.5°	906.3	927.6	966.1	1026.8	1035.0
50°	841.6	876.0	917.8	988.3	1000.6
52.5°	784.2	813.7	867.0	939.9	967.8
55°	733.4	757.2	826.8	894.0	920.2
57.5°	671.1	703.9	776.8	851.4	875.2
60°	616.2	648.2	718.7	803.9	822.7
62.5°	558.0	595.7	672.0	754.7	776.0
65°	499.0	536.7	623.6	707.2	727.7
67.5°	435.1	481.8	570.3	657.2	678.5
70°	375.3	426.1	521.2	608.0	629.3
72.5°	321.2	376.1	472.8	562.1	585.1
75°	263.0	323.7	424.5	512.2	535.9
77.5°	206.5	272.1	374.5	463.0	490.9
80°	151.6	223.7	331.1	416.3	445.8
82.5°	106.5	180.3	290.9	374.5	401.5
85°	64.7	141.8	248.3	331.9	363.0
87.5°	28.7	109.8	214.7	297.5	325.3
90°	2.5	86.0	189.3	270.4	299.9
92.5°	4.9	87.7	188.5	267.1	296.6
95°	7.4	90.1	189.3	267.1	295.0
97.5°	10.7	93.4	190.9	267.1	294.2
100°	15.6	95.1	191.8	267.1	294.2
102.5°	20.5	97.5	190.9	263.0	290.9
105°	26.2	99.2	192.6	263.9	288.4
107.5°	32.0	100.8	192.6	259.8	287.6
110°	37.7	103.3	190.9	257.3	284.4



TEST NUMBER: P893838

CATALOG NUMBER: 4MB-7HL-FLTU-UNV-L935

**CANDELA DISTRIBUTION (continued):**

	0°	22.5°	45°	67.5°	90°
112.5°	42.6	105.7	190.1	252.4	278.6
115°	47.5	107.3	188.5	250.8	275.3
117.5°	52.4	108.2	187.7	246.7	270.4
120°	56.5	109.8	186.0	241.7	268.0
122.5°	61.5	110.6	183.6	236.8	263.0
125°	68.0	110.6	182.7	232.7	254.0
127.5°	71.3	111.4	179.5	227.8	249.9
130°	74.6	109.0	177.8	222.1	243.4
132.5°	77.0	108.2	173.7	216.3	235.2
135°	78.7	106.5	169.6	210.6	227.8
137.5°	81.1	104.1	163.9	206.5	222.9
140°	82.8	102.4	155.7	198.3	214.7
142.5°	84.4	100.0	147.5	190.9	206.5
145°	85.2	98.3	139.3	185.2	198.3
147.5°	87.7	95.9	134.4	177.8	189.3
150°	86.9	94.2	127.0	168.8	180.3
152.5°	89.3	96.7	120.5	156.5	172.9
155°	93.4	98.3	113.9	143.4	162.3
157.5°	97.5	101.6	109.0	131.9	154.1
160°	103.3	103.3	103.3	122.9	147.5
162.5°	106.5	106.5	104.1	112.3	138.5
165°	111.4	108.2	104.9	104.1	130.3
167.5°	116.4	109.8	106.5	100.8	124.6
170°	117.2	112.3	105.7	95.1	120.5
172.5°	120.5	114.7	104.9	90.1	93.4
175°	122.9	118.0	105.7	87.7	53.3
177.5°	122.1	118.0	108.2	87.7	51.6
180°	101.6	101.6	101.6	101.6	101.6



TEST NUMBER: P893838  
 CATALOG NUMBER: 4MB-7HL-FLTU-UNV-L935

**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	16.05	17.37	16.66	18.00	18.71	18.56	19.88	19.17	20.51	21.23
	3H	17.48	18.68	18.10	19.32	20.07	20.92	22.13	21.55	22.77	23.52
	4H	17.94	19.09	18.59	19.74	20.50	22.04	23.18	22.68	23.83	24.59
	6H	18.21	19.27	18.87	19.93	20.71	23.15	24.21	23.81	24.88	25.65
	8H	18.26	19.28	18.93	19.96	20.74	23.70	24.72	24.37	25.40	26.18
	12H	18.28	19.25	18.95	19.93	20.74	24.29	25.26	24.96	25.93	26.75
4H	2H	16.92	18.06	17.56	18.71	19.47	18.90	20.05	19.55	20.70	21.46
	3H	18.57	19.54	19.23	20.23	21.01	21.48	22.45	22.14	23.14	23.92
	4H	19.16	20.04	19.83	20.74	21.55	22.76	23.65	23.44	24.34	25.15
	6H	19.53	20.31	20.22	21.03	21.85	24.05	24.83	24.74	25.55	26.37
	8H	19.62	20.36	20.32	21.07	21.90	24.69	25.43	25.39	26.14	26.97
	12H	19.66	20.33	20.38	21.07	21.91	25.38	26.05	26.10	26.79	27.63
8H	4H	19.78	20.51	20.48	21.23	22.06	22.91	23.65	23.61	24.36	25.20
	6H	20.31	20.93	21.04	21.69	22.53	24.35	24.97	25.08	25.72	26.56
	8H	20.48	21.04	21.22	21.80	22.65	25.12	25.67	25.86	26.43	27.28
	12H	20.59	21.08	21.33	21.83	22.74	25.97	26.46	26.71	27.21	28.12
12H	4H	19.94	20.60	20.66	21.34	22.18	22.91	23.57	23.63	24.31	25.15
	6H	20.56	21.12	21.30	21.88	22.73	24.37	24.93	25.11	25.68	26.53
	8H	20.81	21.30	21.55	22.05	22.96	25.19	25.68	25.93	26.43	27.34