

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: P893977

Luminaire Tested: 4MB-8HL-RNDU-UNV-L830

Issue Date: 11/11/2024

**Test Information**

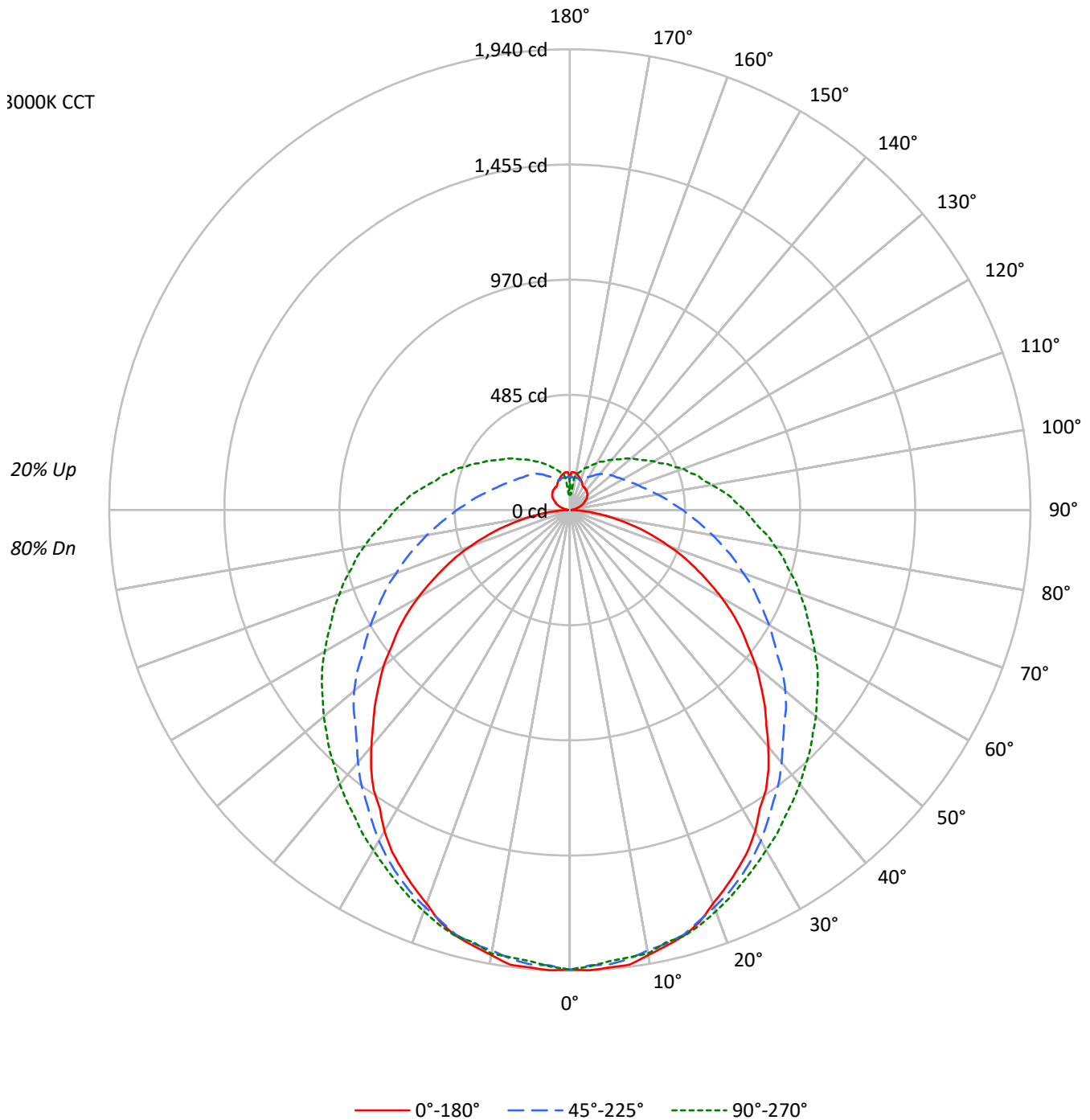
Test Method: LM-79-2019  
Report Number: P893977  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-2403-334-3)  
Test Lab: INNOVATION CENTER  
Issue Date: 11/11/2024  
Manufacturer: COOPER LIGHTING SOLUTIONS  
Product Line: METALUX  
Catalog Number: 4MB-8HL-RNDU-UNV-L830  
Description: 8000 Lumen 4FT MICROBAY LINEAR BAY with ROUND FROSTED LENS WITH UPLIGHT, 80CRI, 5  
Light Source: -  
Ballast/Driver: -

**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 8137.0 lumens  
Efficiency: N/A  
Efficacy: 140.5 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<sub>in</sub>): 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	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°	13772	13772	13772
5°	13746	13225	13000
10°	13624	12661	12495
15°	13486	12243	11932
20°	13103	11672	11351
25°	12801	11166	10804
30°	12448	10615	10324
35°	12064	10017	9908
40°	11567	9505	9588
45°	11096	9015	9303
50°	10681	8713	9061
55°	10196	8243	8874
60°	9618	7946	8702
65°	8897	7681	8572
70°	8091	7465	8566
75°	7046	7382	8591
80°	5541	7343	8757
85°	3647	7505	8956

**MAXIMUM LUMINANCE 45°-90°:**

Horizontal Angle: 0°  
 Vertical Angle: 45°  
 Luminance: 11096 cd/sqm



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	183.2	2.3
10°-20°	523.6	6.4
20°-30°	786.2	9.7
30°-40°	944.1	11.6
40°-50°	998.6	12.3
50°-60°	962.4	11.8
60°-70°	853.8	10.5
70°-80°	700.2	8.6
80°-90°	542.0	6.7
90°-100°	422.8	5.2
100°-110°	336.6	4.1
110°-120°	269.0	3.3
120°-130°	212.2	2.6
130°-140°	161.9	2.0
140°-150°	113.8	1.4
150°-160°	72.8	0.9
160°-170°	40.8	0.5
170°-180°	12.9	0.2
0°-30°	1493.1	18.3
0°-40°	2437.2	30.0
0°-60°	4398.2	54.1
0°-90°	6494.2	79.8
90°-120°	1028.4	12.6
90°-150°	1516.3	18.6
90°-180°	1643.0	20.2
0°-180°	8137.0	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	1936	1936	1936	1936	1936	
5°	1933	1939	1920	1934	1908	184
15°	1857	1858	1851	1863	1858	522
25°	1670	1697	1704	1733	1728	769
35°	1440	1461	1496	1558	1578	898
45°	1160	1195	1276	1398	1431	895
55°	883	928	1067	1212	1275	788
65°	588	669	872	1052	1108	584
75°	306	441	694	881	952	324
85°	71	268	538	732	797	81
90°	8	213	476	662	736	8
95°	10	176	421	605	677	10
105°	32	143	337	495	559	34
115°	63	140	279	404	456	61
125°	88	142	240	331	367	77
135°	103	138	215	280	302	80
145°	112	127	178	235	249	70
155°	123	130	146	184	206	57
165°	146	143	138	134	167	41
175°	160	155	138	113	71	15
180°	131	131	131	131	131	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	1935.6	1935.6	1935.6	1935.6	1935.6
2.5°	1939.9	1946.4	1919.4	1935.6	1923.7
5°	1933.4	1938.9	1920.4	1934.5	1907.5
7.5°	1931.3	1929.1	1906.4	1924.8	1899.9
10°	1903.1	1910.7	1883.6	1908.5	1896.6
12.5°	1879.3	1894.5	1870.6	1890.1	1865.2
15°	1856.6	1857.7	1851.2	1863.1	1857.7
17.5°	1818.7	1828.4	1813.3	1840.3	1830.6
20°	1763.5	1793.8	1779.7	1804.6	1798.1
22.5°	1718.0	1733.2	1745.1	1773.2	1764.6
25°	1670.4	1697.4	1703.9	1733.2	1727.8
27.5°	1621.7	1633.6	1658.5	1689.9	1690.9
30°	1561.0	1574.0	1608.7	1644.4	1654.1
32.5°	1489.6	1530.7	1551.3	1605.4	1620.6
35°	1439.8	1461.4	1496.1	1557.8	1578.4
37.5°	1374.8	1399.7	1446.3	1518.8	1543.7
40°	1300.1	1337.0	1387.8	1477.7	1506.9
42.5°	1225.4	1268.8	1328.3	1433.3	1466.9
45°	1160.5	1195.1	1276.3	1397.6	1431.1
47.5°	1090.1	1132.3	1235.2	1351.0	1388.9
50°	1025.2	1068.5	1185.4	1307.7	1353.2
52.5°	947.2	997.0	1131.3	1257.9	1311.0
55°	883.4	927.7	1067.4	1212.5	1275.2
57.5°	813.0	862.8	1017.6	1178.9	1236.3
60°	737.2	800.0	968.9	1136.7	1191.9
62.5°	662.5	737.2	919.1	1095.5	1149.7
65°	587.8	669.0	871.5	1052.2	1107.5
67.5°	520.7	608.4	828.2	1004.6	1072.8
70°	444.9	549.9	777.3	960.2	1031.7
72.5°	373.5	496.9	736.1	924.5	995.9
75°	306.4	440.6	693.9	881.2	951.6
77.5°	239.2	387.6	649.5	842.2	919.1
80°	175.4	344.3	610.6	804.3	877.9
82.5°	121.2	306.4	572.7	772.9	842.2
85°	71.4	268.5	538.0	731.8	796.8
87.5°	32.5	238.2	502.3	700.4	764.3
90°	7.6	213.3	476.3	662.5	736.1
92.5°	7.6	193.8	444.9	634.4	701.5
95°	9.7	176.5	421.1	605.1	676.6
97.5°	13.0	163.5	399.5	578.1	640.9
100°	18.4	154.8	375.6	546.7	608.4
102.5°	24.9	148.3	354.0	518.5	575.9
105°	32.5	142.9	336.7	494.7	558.6
107.5°	40.1	140.7	319.4	472.0	526.1
110°	47.6	139.6	306.4	448.2	508.8



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**CANDELA DISTRIBUTION (continued):**

	0°	22.5°	45°	67.5°	90°
112.5°	55.2	138.6	292.3	426.5	475.2
115°	62.8	139.6	279.3	403.8	455.8
117.5°	67.1	139.6	267.4	384.3	427.6
120°	73.6	140.7	258.7	363.7	409.2
122.5°	80.1	140.7	250.1	348.6	388.6
125°	87.7	141.8	240.3	331.3	367.0
127.5°	92.0	141.8	234.9	319.4	351.8
130°	96.3	140.7	227.3	304.2	337.8
132.5°	100.7	138.6	223.0	290.1	321.5
135°	102.8	137.5	215.4	280.4	302.0
137.5°	106.1	134.2	207.8	266.3	290.1
140°	109.3	133.2	197.0	255.5	276.1
142.5°	109.3	129.9	189.4	245.7	264.1
145°	111.5	126.7	177.5	234.9	249.0
147.5°	113.7	125.6	168.9	224.1	241.4
150°	113.7	124.5	161.3	212.2	228.4
152.5°	115.8	125.6	153.7	201.4	216.5
155°	123.4	129.9	146.1	184.0	205.7
157.5°	129.9	134.2	138.6	171.0	193.8
160°	135.3	137.5	132.1	158.1	188.4
162.5°	139.6	140.7	133.2	146.1	176.5
165°	146.1	142.9	137.5	134.2	166.7
167.5°	151.6	145.1	139.6	131.0	159.1
170°	155.9	149.4	137.5	123.4	155.9
172.5°	159.1	150.5	138.6	115.8	131.0
175°	160.2	154.8	137.5	112.6	71.4
177.5°	159.1	155.9	141.8	111.5	63.9
180°	131.0	131.0	131.0	131.0	131.0



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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	16.16	17.47	16.80	18.13	18.90	19.56	20.88	20.20	21.54	22.31
	3H	17.61	18.81	18.26	19.48	20.28	22.40	23.60	23.05	24.27	25.07
	4H	18.08	19.22	18.75	19.90	20.72	23.85	24.99	24.52	25.68	26.49
	6H	18.36	19.42	19.04	20.12	20.94	25.41	26.47	26.09	27.17	27.99
	8H	18.42	19.44	19.11	20.15	20.98	26.23	27.25	26.92	27.96	28.79
	12H	18.44	19.41	19.14	20.12	20.98	27.11	28.08	27.81	28.79	29.65
4H	2H	17.29	18.43	17.97	19.12	19.93	19.90	21.05	20.58	21.73	22.54
	3H	19.00	19.98	19.68	20.70	21.53	22.97	23.95	23.66	24.67	25.50
	4H	19.60	20.50	20.30	21.22	22.08	24.61	25.51	25.31	26.23	27.09
	6H	20.00	20.80	20.72	21.55	22.42	26.37	27.17	27.09	27.91	28.78
	8H	20.12	20.87	20.84	21.62	22.50	27.30	28.05	28.02	28.80	29.68
	12H	20.17	20.86	20.92	21.63	22.51	28.31	29.00	29.05	29.76	30.65
8H	4H	20.63	21.38	21.35	22.12	23.00	24.79	25.54	25.51	26.29	27.17
	6H	21.27	21.91	22.02	22.70	23.58	26.73	27.37	27.48	28.16	29.04
	8H	21.50	22.08	22.26	22.86	23.76	27.81	28.39	28.57	29.18	30.07
	12H	21.65	22.17	22.42	22.94	23.90	29.01	29.53	29.78	30.31	31.26
12H	4H	20.95	21.64	21.70	22.41	23.30	24.78	25.47	25.53	26.24	27.13
	6H	21.76	22.34	22.52	23.13	24.02	26.76	27.34	27.53	28.13	29.02
	8H	22.11	22.63	22.88	23.41	24.36	27.91	28.43	28.67	29.20	30.16