

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: P893978

Luminaire Tested: 4MB-8HL-RNDU-UNV-L835

Issue Date: 11/11/2024

Test Information

Test Method: LM-79-2019
Report Number: P893978
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-L835
Description: 8000 Lumen 4FT MICROBAY LINEAR BAY with ROUND FROSTED LENS WITH UPLIGHT, 80CRI, 5
Light Source: -
Ballast/Driver: -

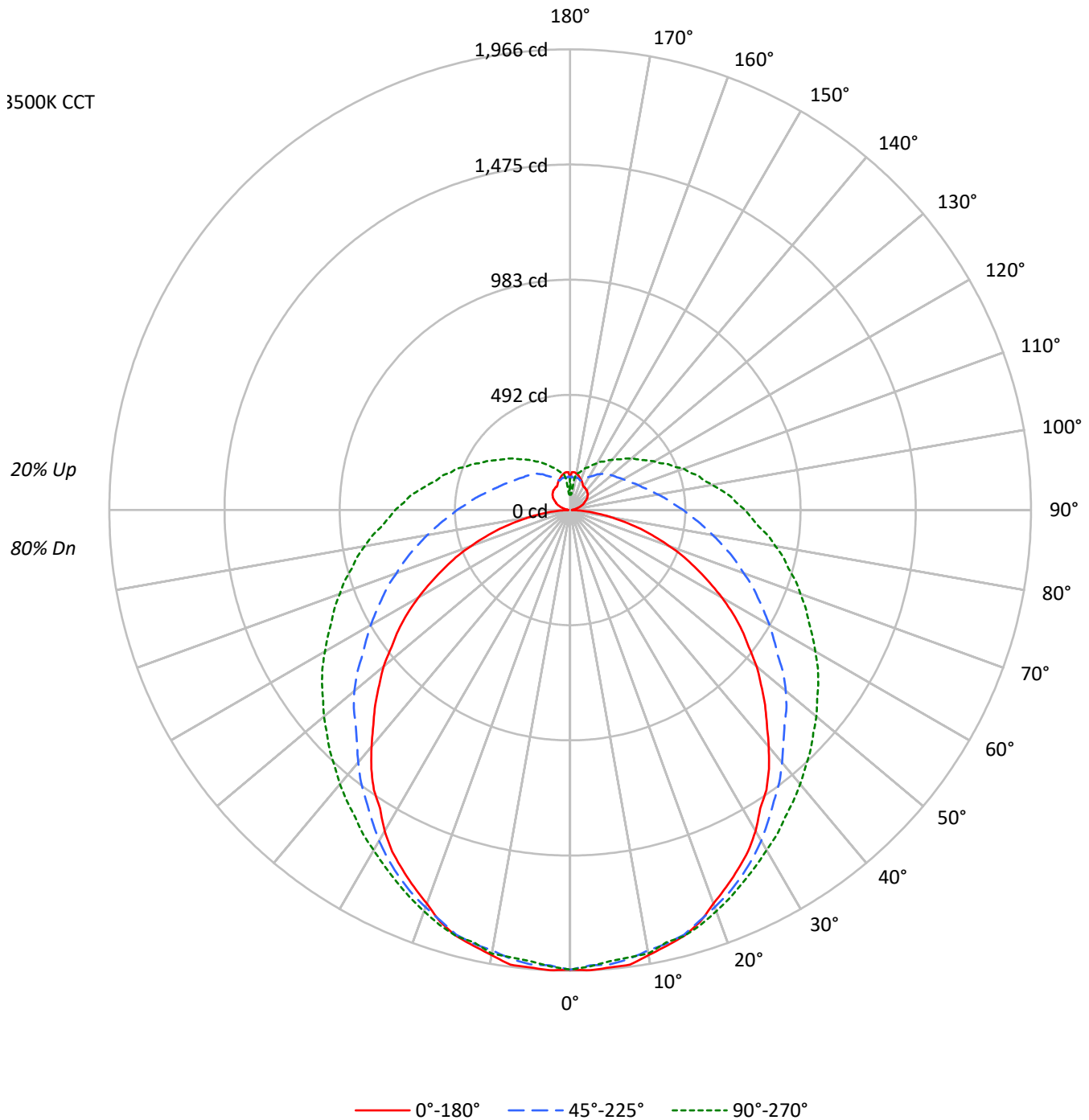
Summary

Lumens per Lamp: N/A
Luminaire Lumens: 8246.0 lumens
Efficiency: N/A
Efficacy: 142.4 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	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°	13956	13956	13956
5°	13930	13402	13174
10°	13806	12831	12663
15°	13667	12407	12091
20°	13278	11829	11503
25°	12973	11316	10948
30°	12616	10757	10462
35°	12225	10151	10041
40°	11723	9632	9716
45°	11244	9136	9427
50°	10824	8830	9183
55°	10332	8354	8993
60°	9747	8052	8819
65°	9017	7783	8687
70°	8200	7564	8681
75°	7140	7481	8706
80°	5614	7440	8875
85°	3698	7606	9075

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
 Vertical Angle: 45°
 Luminance: 11244 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	185.7	2.3
10°-20°	530.6	6.4
20°-30°	796.8	9.7
30°-40°	956.8	11.6
40°-50°	1012.0	12.3
50°-60°	975.3	11.8
60°-70°	865.3	10.5
70°-80°	709.6	8.6
80°-90°	549.2	6.7
90°-100°	428.5	5.2
100°-110°	341.1	4.1
110°-120°	272.6	3.3
120°-130°	215.0	2.6
130°-140°	164.1	2.0
140°-150°	115.4	1.4
150°-160°	73.8	0.9
160°-170°	41.3	0.5
170°-180°	13.1	0.2
0°-30°	1513.1	18.3
0°-40°	2469.8	30.0
0°-60°	4457.1	54.1
0°-90°	6581.2	79.8
90°-120°	1042.2	12.6
90°-150°	1536.6	18.6
90°-180°	1665.0	20.2
0°-180°	8246.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1962	1962	1962	1962	1962	
5°	1959	1965	1946	1960	1933	186
15°	1881	1882	1876	1888	1882	529
25°	1693	1720	1727	1756	1751	780
35°	1459	1481	1516	1579	1600	910
45°	1176	1211	1293	1416	1450	907
55°	895	940	1082	1229	1292	799
65°	596	678	883	1066	1122	592
75°	310	446	703	893	964	328
85°	72	272	545	742	807	82
90°	8	216	483	671	746	8
95°	10	179	427	613	686	10
105°	33	145	341	501	566	35
115°	64	142	283	409	462	62
125°	89	144	244	336	372	78
135°	104	139	218	284	306	81
145°	113	128	180	238	252	71
155°	125	132	148	186	208	58
165°	148	145	139	136	169	42
175°	162	157	139	114	72	15
180°	133	133	133	133	133	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1961.5	1961.5	1961.5	1961.5	1961.5
2.5°	1965.9	1972.5	1945.1	1961.5	1949.5
5°	1959.3	1964.8	1946.2	1960.4	1933.0
7.5°	1957.1	1954.9	1931.9	1950.6	1925.3
10°	1928.6	1936.3	1908.9	1934.1	1922.0
12.5°	1904.5	1919.8	1895.7	1915.5	1890.2
15°	1881.4	1882.5	1876.0	1888.0	1882.5
17.5°	1843.0	1852.9	1837.6	1865.0	1855.1
20°	1787.1	1817.8	1803.6	1828.8	1822.2
22.5°	1741.0	1756.4	1768.4	1797.0	1788.2
25°	1692.8	1720.2	1726.8	1756.4	1750.9
27.5°	1643.4	1655.5	1680.7	1712.5	1713.6
30°	1582.0	1595.1	1630.2	1666.4	1676.3
32.5°	1509.5	1551.2	1572.1	1626.9	1642.3
35°	1459.1	1481.0	1516.1	1578.7	1599.5
37.5°	1393.3	1418.5	1465.7	1539.2	1564.4
40°	1317.6	1354.9	1406.4	1497.5	1527.1
42.5°	1241.9	1285.7	1346.1	1452.5	1486.5
45°	1176.0	1211.1	1293.4	1416.3	1450.3
47.5°	1104.7	1147.5	1251.7	1369.1	1407.5
50°	1038.9	1082.8	1201.3	1325.2	1371.3
52.5°	959.9	1010.4	1146.4	1274.8	1328.5
55°	895.2	940.2	1081.7	1228.7	1292.3
57.5°	823.9	874.4	1031.2	1194.7	1252.8
60°	747.1	810.7	981.9	1151.9	1207.9
62.5°	671.4	747.1	931.4	1110.2	1165.1
65°	595.7	678.0	883.1	1066.3	1122.3
67.5°	527.7	616.5	839.2	1018.1	1087.2
70°	450.9	557.3	787.7	973.1	1045.5
72.5°	378.5	503.5	746.0	936.9	1009.3
75°	310.5	446.5	703.2	893.0	964.3
77.5°	242.4	392.7	658.2	853.5	931.4
80°	177.7	348.9	618.7	815.1	889.7
82.5°	122.9	310.5	580.3	783.3	853.5
85°	72.4	272.1	545.2	741.6	807.4
87.5°	32.9	241.4	509.0	709.8	774.5
90°	7.7	216.1	482.7	671.4	746.0
92.5°	7.7	196.4	450.9	642.9	710.9
95°	9.9	178.8	426.8	613.3	685.7
97.5°	13.2	165.7	404.8	585.8	649.5
100°	18.6	156.9	380.7	554.0	616.5
102.5°	25.2	150.3	358.7	525.5	583.6
105°	32.9	144.8	341.2	501.4	566.1
107.5°	40.6	142.6	323.6	478.3	533.2
110°	48.3	141.5	310.5	454.2	515.6



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CANDELA DISTRIBUTION (continued):

	0°	22.5°	45°	67.5°	90°
112.5°	55.9	140.4	296.2	432.2	481.6
115°	63.6	141.5	283.0	409.2	461.9
117.5°	68.0	141.5	271.0	389.5	433.3
120°	74.6	142.6	262.2	368.6	414.7
122.5°	81.2	142.6	253.4	353.3	393.8
125°	88.9	143.7	243.5	335.7	371.9
127.5°	93.2	143.7	238.1	323.6	356.5
130°	97.6	142.6	230.4	308.3	342.3
132.5°	102.0	140.4	226.0	294.0	325.8
135°	104.2	139.3	218.3	284.1	306.1
137.5°	107.5	136.0	210.6	269.9	294.0
140°	110.8	134.9	199.7	258.9	279.7
142.5°	110.8	131.6	192.0	249.0	267.7
145°	113.0	128.4	179.9	238.1	252.3
147.5°	115.2	127.3	171.1	227.1	244.6
150°	115.2	126.2	163.5	215.0	231.5
152.5°	117.4	127.3	155.8	204.1	219.4
155°	125.1	131.6	148.1	186.5	208.4
157.5°	131.6	136.0	140.4	173.3	196.4
160°	137.1	139.3	133.8	160.2	190.9
162.5°	141.5	142.6	134.9	148.1	178.8
165°	148.1	144.8	139.3	136.0	168.9
167.5°	153.6	147.0	141.5	132.7	161.3
170°	158.0	151.4	139.3	125.1	158.0
172.5°	161.3	152.5	140.4	117.4	132.7
175°	162.4	156.9	139.3	114.1	72.4
177.5°	161.3	158.0	143.7	113.0	64.7
180°	132.7	132.7	132.7	132.7	132.7



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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	16.20	17.52	16.84	18.18	18.95	19.61	20.92	20.25	21.59	22.35
	3H	17.65	18.85	18.31	19.53	20.33	22.45	23.65	23.10	24.32	25.12
	4H	18.12	19.27	18.80	19.95	20.76	23.90	25.04	24.57	25.72	26.53
	6H	18.40	19.47	19.09	20.16	20.99	25.46	26.52	26.14	27.21	28.04
	8H	18.46	19.48	19.16	20.20	21.03	26.27	27.29	26.97	28.01	28.84
	12H	18.48	19.46	19.18	20.17	21.03	27.15	28.13	27.85	28.84	29.70
4H	2H	17.34	18.48	18.01	19.16	19.98	19.95	21.09	20.62	21.78	22.59
	3H	19.04	20.02	19.73	20.74	21.57	23.02	24.00	23.70	24.72	25.55
	4H	19.64	20.54	20.34	21.27	22.13	24.65	25.56	25.36	26.28	27.14
	6H	20.05	20.85	20.77	21.60	22.46	26.41	27.21	27.13	27.96	28.83
	8H	20.16	20.92	20.89	21.66	22.54	27.35	28.10	28.07	28.84	29.72
	12H	20.22	20.91	20.97	21.67	22.56	28.35	29.04	29.10	29.81	30.70
8H	4H	20.67	21.42	21.40	22.17	23.05	24.84	25.59	25.56	26.33	27.21
	6H	21.32	21.96	22.07	22.74	23.63	26.77	27.42	27.53	28.20	29.08
	8H	21.55	22.13	22.31	22.91	23.81	27.86	28.44	28.62	29.22	30.12
	12H	21.69	22.21	22.46	22.99	23.94	29.06	29.58	29.83	30.36	31.31
12H	4H	21.00	21.69	21.75	22.46	23.34	24.83	25.52	25.58	26.29	27.17
	6H	21.81	22.39	22.57	23.17	24.07	26.81	27.39	27.57	28.17	29.07
	8H	22.16	22.68	22.92	23.45	24.41	27.95	28.47	28.72	29.25	30.20