

Scaled data based on original data using  
LM-79-08 Approved Method: Electrical and Photometric Measurements of Solid-  
State Lighting Products

Test Report Prepared for  
Cooper Lighting Solutions  
(formerly Eaton)

Brand: STREETWORKS

Report Number: P239139

Luminaire Tested: **ARCH-AF24-90-D-U-T2U-7050**

Issue Date: 3/3/2020

**Test Information**

Test Method: LM-79-08  
Report Number: P239139  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G2-1802-616-1)  
Test Lab: INNOVATION CENTER(G2)  
Issue Date: 3/3/2020  
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)  
Product Line: STREETWORKS  
Catalog Number: ARCH-AF24-90-D-U-T2U-7050  
Description: ARCHEON ROADWAY AND AREA LUMINAIRE  
(1) 70 CRI, 5000K, 1180mA LIGHT ENGINE WITH 24 LEDS AND TYPE II U OPTICS  
Light Source: -  
Ballast/Driver: ELECTRONIC DRIVER

**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 9836 lumens  
Efficiency: N/A  
Efficacy: 104.6 lumens/watt  
Luminous Opening: Rectangular (W 0.5' x L: 0.75' x H: 0')  
IES Classification: Type II - Short - Semi-Cutoff  
BUG Rating: B2 - U0 - G2

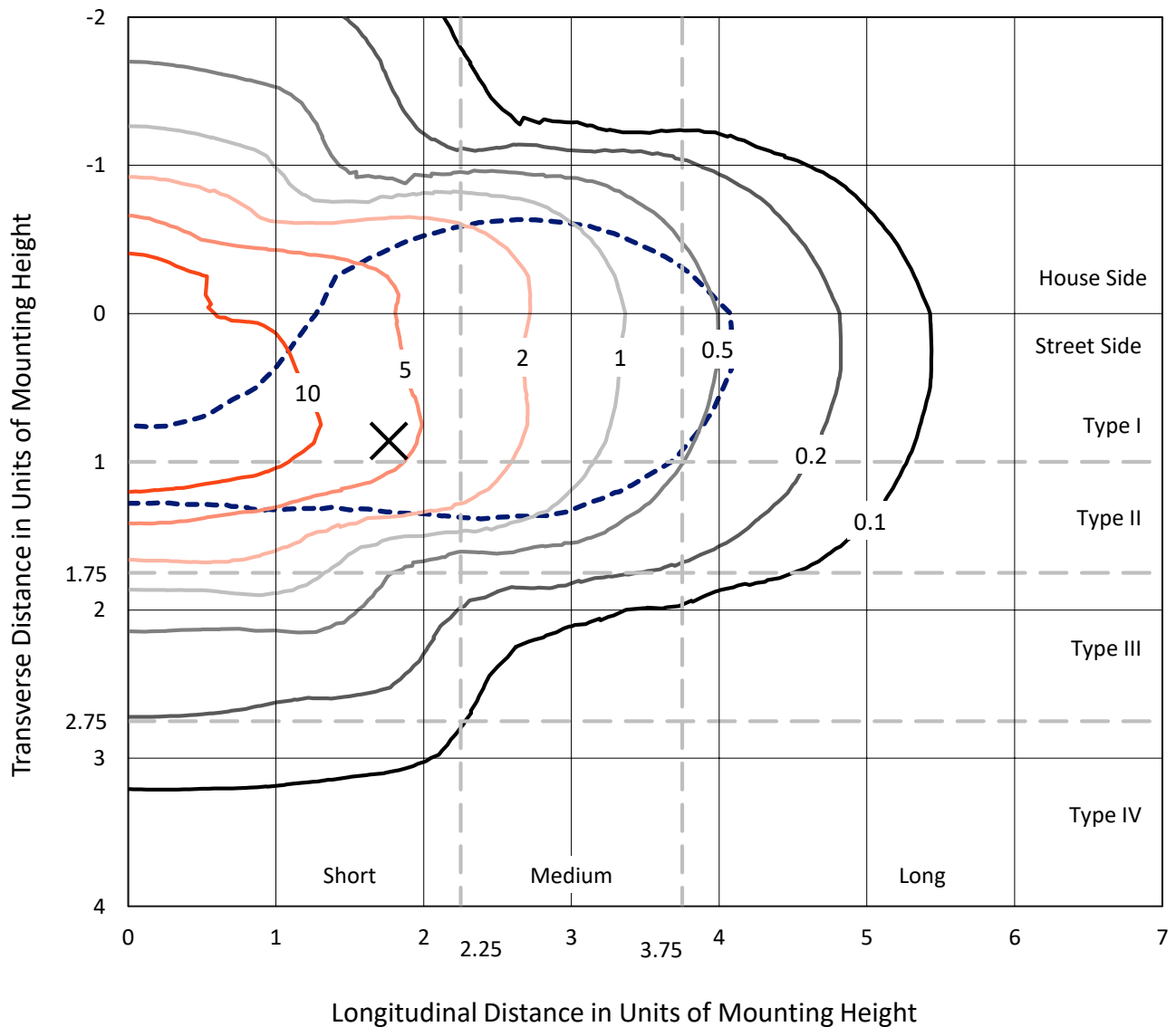
Input Watts (W): 94  
Input Voltage (V): NR  
Input Current (Ain): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 28.75 FT



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### Iso-Footcandle Lines of Horizontal Illumination

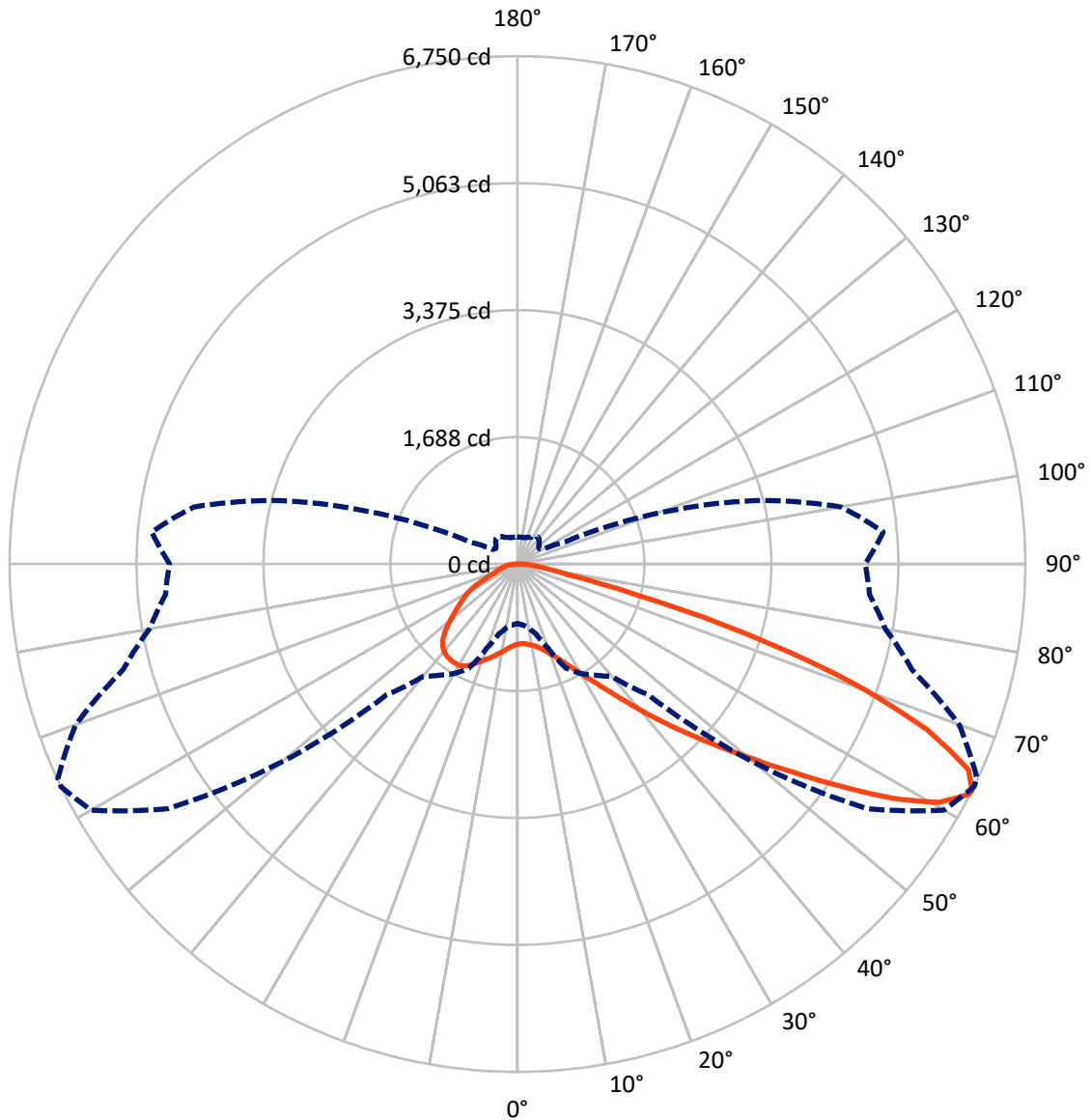
× Max cd  
 - - - 1/2 Max cd



Based on 10 foot mounting height. Maximum calculated value = 17.3 fc  
 Type II - Short - Semi-Cutoff

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### Luminous Intensity Polar Plot



— Vertical Plane Through 64-Deg Lateral    - - - Horizontal Cone Through 63-Deg Vertical



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**FLUX DISTRIBUTION:**

		Downward	Upward	Total
<b>House Side</b>	Lumens	2891.4	0.0	2891.4
	% Fixture	29.4	0.0	29.4
<b>Street Side</b>	Lumens	6944.6	0.0	6944.6
	% Fixture	70.6	0.0	70.6
<b>Total</b>	Lumens	9836.0	0.0	9836.0
	% Fixture	100.0	0.0	100.0

**Coefficient of Utilization**

**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	106.4	1.1
10°-20°	354.2	3.6
20°-30°	665.0	6.8
30°-40°	1114.5	11.3
40°-50°	1870.0	19.0
50°-60°	2370.5	24.1
60°-70°	2091.2	21.3
70°-80°	1079.5	11.0
80°-90°	184.7	1.9
90°-100°	0.0	0.0
100°-110°	0.0	0.0
110°-120°	0.0	0.0
120°-130°	0.0	0.0
130°-140°	0.0	0.0
140°-150°	0.0	0.0
150°-160°	0.0	0.0
160°-170°	0.0	0.0
170°-180°	0.0	0.0
0°-90°	9836.0	100.0
0°-180°	9836.0	100.0



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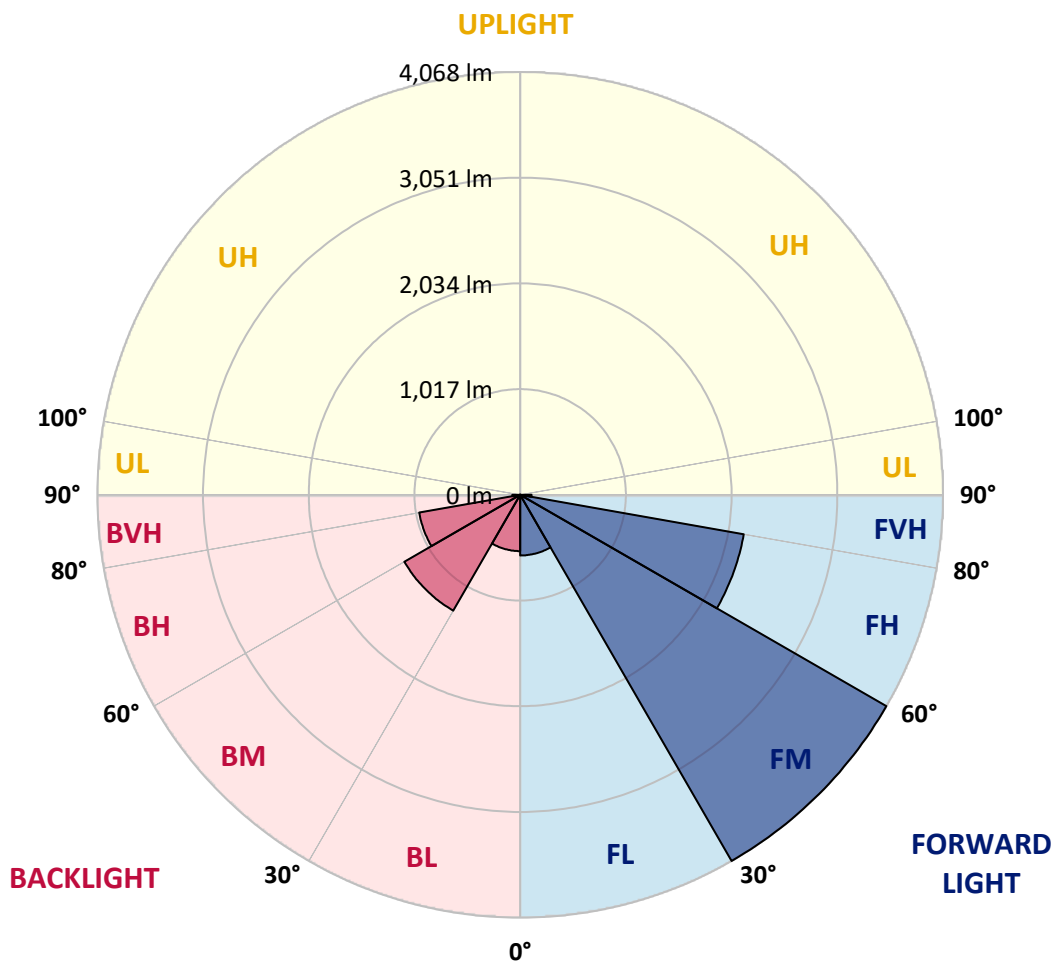
CATALOG NUMBER: ARCH-AF24-90-D-U-T2U-7050

**LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:**

Zone		Lumens	% Fixture	Zone Rating/Lumen Limit		
				B	U	G
FL	(0°-30°)	583.8	5.9			
FM	(30°-60°)	4067.9	41.4			
FH	(60°-80°)	2184.1	22.2			G2/5000
FVH	(80°-90°)	108.7	1.1			G2/225
BL	(0°-30°)	541.8	5.5	B2/1000		
BM	(30°-60°)	1287.1	13.1	B2/2500		
BH	(60°-80°)	986.5	10.0	B2/1000		G2/1000
BVH	(80°-90°)	76.0	0.8			G1/100
UL	(90°-100°)	0.0	0.0		U0/0	
UH	(100°-180°)	0.0	0.0		U0/0	

**BUG Rating: B2-U0-G2**

Type II Short





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**CANDELA DISTRIBUTION (FULL):**

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
0°	1065.2	1065.2	1065.2	1065.2	1065.2	1065.2	1065.2	1065.2	1065.2	1065.2	1065.2
2.5°	1058.6	1057.0	1057.0	1057.0	1057.0	1055.4	1057.0	1060.3	1058.6	1057.0	1060.3
5°	1061.9	1060.3	1060.3	1060.3	1061.9	1060.3	1061.9	1066.9	1063.6	1063.6	1066.9
7.5°	1070.2	1068.5	1070.2	1068.5	1068.5	1068.5	1070.2	1075.1	1073.5	1075.1	1080.1
10°	1080.1	1080.1	1080.1	1080.1	1080.1	1080.1	1083.3	1086.6	1088.3	1089.9	1096.5
12.5°	1109.7	1109.7	1109.7	1108.0	1108.0	1103.1	1109.7	1113.0	1116.3	1119.6	1124.5
15°	1172.3	1172.3	1170.6	1164.0	1164.0	1154.1	1155.8	1157.4	1157.4	1160.7	1164.0
17.5°	1254.6	1252.9	1249.6	1244.7	1238.1	1226.6	1223.3	1220.0	1215.1	1213.4	1213.4
20°	1369.8	1368.2	1361.6	1348.4	1340.2	1322.1	1308.9	1295.7	1290.8	1282.6	1280.9
22.5°	1534.5	1534.5	1521.3	1501.5	1495.0	1457.1	1419.2	1391.2	1381.3	1369.8	1369.8
25°	1733.7	1732.0	1713.9	1690.9	1662.9	1623.4	1577.3	1539.4	1514.7	1488.4	1478.5
27.5°	1972.4	1967.5	1942.8	1914.8	1862.1	1812.7	1758.4	1718.9	1676.1	1643.1	1613.5
30°	2252.3	2247.4	2204.6	2151.9	2097.5	2048.1	1969.1	1921.4	1853.9	1814.4	1781.4
32.5°	2576.6	2571.7	2494.3	2443.3	2385.7	2324.7	2230.9	2155.2	2069.6	2013.6	1967.5
35°	2989.9	2970.1	2859.8	2789.0	2698.5	2637.6	2538.8	2436.7	2336.3	2257.2	2189.7
37.5°	3436.1	3413.0	3315.9	3210.5	3121.6	3047.5	2907.6	2779.2	2660.6	2552.0	2468.0
40°	3902.0	3841.1	3737.4	3660.0	3599.1	3528.3	3381.7	3246.7	3060.7	2938.9	2812.1
42.5°	4224.7	4165.4	4093.0	4042.0	4012.3	3958.0	3875.7	3758.8	3592.5	3595.8	3261.6
45°	4437.1	4349.8	4300.5	4303.7	4315.3	4315.3	4300.5	4282.3	4209.9	4259.3	3979.4
47.5°	4361.4	4303.7	4272.5	4338.3	4420.6	4503.0	4598.5	4702.2	4820.7	4960.7	4616.6
50°	3916.8	3938.2	3953.1	4093.0	4269.2	4456.9	4675.8	4959.0	5290.0	5354.2	5187.9
52.5°	3207.2	3253.3	3302.7	3516.8	3748.9	4073.2	4456.9	4924.4	5369.0	5630.8	5614.3
55°	2491.0	2548.7	2654.0	2813.7	2998.1	3304.4	3778.5	4499.7	5192.8	5609.4	5862.9
57.5°	1773.2	1857.2	1995.5	2217.7	2380.7	2553.6	2904.3	3704.4	4463.4	5238.9	5821.7
60°	1178.8	1218.4	1308.9	1585.5	1860.5	2041.6	2290.2	2579.9	3200.6	4269.2	5397.0
62.5°	836.4	862.7	918.7	1043.8	1292.4	1620.1	1769.9	1903.3	2102.5	2746.2	4333.4
63°	790.3	813.3	859.4	964.8	1188.7	1527.9	1681.0	1802.8	1947.7	2456.5	4099.6
65°	655.3	665.2	689.9	740.9	861.1	1142.6	1392.9	1467.0	1491.7	1578.9	2568.4
67.5°	553.2	559.8	568.0	582.8	630.6	760.6	1038.9	1132.7	1104.7	1045.5	1269.4
70°	480.8	485.7	498.9	517.0	533.4	566.4	714.5	854.5	823.2	742.5	777.1
72.5°	383.6	391.8	406.7	437.9	470.9	513.7	549.9	637.2	617.4	540.0	548.3
75°	302.9	307.9	321.1	344.1	375.4	424.8	495.6	525.2	470.9	398.4	398.4
77.5°	240.4	245.3	256.8	275.0	294.7	329.3	378.7	456.1	423.1	299.6	298.0
80°	181.1	186.0	197.6	214.0	233.8	258.5	288.1	322.7	388.6	279.9	223.9
82.5°	133.4	135.0	154.8	166.3	172.9	192.6	217.3	237.1	266.7	258.5	199.2
85°	100.4	98.8	112.0	120.2	121.8	126.8	141.6	161.3	174.5	167.9	154.8
87.5°	56.0	49.4	57.6	65.9	65.9	67.5	70.8	82.3	93.8	90.6	82.3
90°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0



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**CANDELA DISTRIBUTION (continued):**

	55°	60°	64°	65°	70°	75°	80°	85°	90°	95°	100°
0°	1065.2	1065.2	1065.2	1065.2	1065.2	1065.2	1065.2	1065.2	1065.2	1065.2	1065.2
2.5°	1060.3	1060.3	1058.6	1058.6	1060.3	1060.3	1058.6	1063.6	1066.9	1066.9	1068.5
5°	1065.2	1066.9	1065.2	1065.2	1066.9	1066.9	1068.5	1073.5	1078.4	1081.7	1086.6
7.5°	1080.1	1081.7	1080.1	1080.1	1081.7	1083.3	1086.6	1093.2	1096.5	1103.1	1111.3
10°	1096.5	1098.2	1096.5	1098.2	1099.8	1101.5	1106.4	1111.3	1116.3	1122.9	1136.0
12.5°	1126.2	1127.8	1124.5	1126.2	1131.1	1131.1	1134.4	1137.7	1145.9	1154.1	1167.3
15°	1167.3	1167.3	1164.0	1165.7	1170.6	1170.6	1172.3	1175.5	1185.4	1195.3	1208.5
17.5°	1215.1	1218.4	1216.7	1218.4	1221.6	1223.3	1223.3	1226.6	1233.2	1239.8	1252.9
20°	1279.3	1280.9	1277.6	1280.9	1284.2	1280.9	1277.6	1276.0	1279.3	1282.6	1297.4
22.5°	1366.5	1364.9	1356.7	1356.7	1356.7	1350.1	1341.8	1332.0	1332.0	1327.0	1338.5
25°	1470.3	1465.3	1453.8	1455.4	1443.9	1434.0	1419.2	1404.4	1391.2	1386.3	1387.9
27.5°	1592.1	1582.2	1570.7	1567.4	1555.9	1537.8	1513.1	1485.1	1463.7	1447.2	1443.9
30°	1745.2	1723.8	1704.0	1700.8	1682.6	1653.0	1613.5	1575.6	1539.4	1511.4	1501.5
32.5°	1926.3	1893.4	1862.1	1858.8	1829.2	1789.7	1741.9	1689.2	1636.5	1592.1	1570.7
35°	2138.7	2089.3	2059.7	2051.4	2008.6	1959.2	1906.6	1839.1	1765.0	1702.4	1662.9
37.5°	2397.2	2346.2	2295.1	2296.8	2237.5	2179.9	2109.1	2026.7	1932.9	1845.6	1789.7
40°	2716.6	2644.2	2578.3	2563.5	2512.4	2431.8	2354.4	2258.9	2143.6	2028.4	1947.7
42.5°	3103.5	2985.0	2894.4	2881.2	2813.7	2714.9	2621.1	2494.3	2377.4	2237.5	2140.3
45°	3543.1	3353.8	3245.1	3225.3	3116.7	3016.2	2902.6	2767.6	2624.4	2466.3	2351.1
47.5°	4089.7	3819.7	3635.3	3602.4	3452.5	3320.8	3202.3	3052.5	2881.2	2705.1	2578.3
50°	4726.9	4328.4	4079.8	4028.8	3827.9	3673.2	3521.7	3334.0	3151.3	2966.9	2820.3
52.5°	5365.7	4937.6	4606.7	4544.1	4247.8	4040.3	3841.1	3653.4	3437.7	3255.0	3088.7
55°	5879.4	5594.5	5210.9	5123.7	4698.9	4417.3	4155.6	3941.5	3727.5	3582.6	3386.7
57.5°	6188.9	6174.1	5871.1	5751.0	5169.8	4753.2	4461.8	4218.1	4010.7	3949.8	3689.6
60°	6180.7	6564.3	6434.2	6343.7	5645.6	5097.3	4718.6	4455.2	4284.0	4353.1	3994.2
62.5°	5803.6	6580.7	6737.2	6712.5	6152.7	5373.9	4929.4	4657.7	4567.2	4773.0	4310.3
63°	5667.0	6542.9	6750.3	6740.4	6249.8	5426.6	4965.6	4697.2	4623.2	4880.0	4368.0
65°	4789.4	6211.9	6590.6	6635.1	6458.9	5607.7	5049.6	4797.7	4789.4	5118.7	4504.6
67.5°	2919.1	5248.8	5871.1	5956.8	6164.2	5665.3	5001.8	4763.1	4881.6	5153.3	4463.4
70°	1248.0	3464.1	4718.6	4856.9	5364.0	5378.9	4865.2	4621.5	4860.2	4883.3	4170.4
72.5°	739.2	1633.3	3212.2	3513.5	4244.5	4628.1	4552.4	4374.5	4578.7	4288.9	3551.3
75°	523.6	763.9	1631.6	1952.7	2955.3	3533.2	3824.6	3907.0	3898.7	3401.5	2665.6
77.5°	375.4	490.6	688.2	811.7	1649.7	2268.8	2624.4	2864.8	2787.4	2277.0	1643.1
80°	261.8	339.2	421.5	447.8	765.6	1165.7	1383.0	1488.4	1442.3	1137.7	736.0
82.5°	189.3	222.3	271.7	288.1	385.3	538.4	640.5	564.7	541.7	419.8	317.8
85°	146.5	143.2	169.6	176.2	225.6	281.5	288.1	223.9	195.9	174.5	177.8
87.5°	103.7	88.9	90.6	93.8	116.9	149.8	146.5	92.2	79.0	84.0	95.5
90°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0





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**CANDELA DISTRIBUTION (continued):**

	105°	110°	115°	120°	125°	130°	135°	140°	145°	150°	155°
0°	1065.2	1065.2	1065.2	1065.2	1065.2	1065.2	1065.2	1065.2	1065.2	1065.2	1065.2
2.5°	1071.8	1073.5	1076.8	1078.4	1081.7	1081.7	1085.0	1086.6	1089.9	1093.2	1094.9
5°	1091.6	1096.5	1103.1	1106.4	1113.0	1117.9	1124.5	1127.8	1134.4	1139.3	1145.9
7.5°	1121.2	1129.4	1137.7	1147.6	1157.4	1165.7	1172.3	1180.5	1192.0	1200.2	1205.2
10°	1149.2	1160.7	1175.5	1187.1	1201.9	1213.4	1223.3	1238.1	1251.3	1262.8	1269.4
12.5°	1185.4	1200.2	1215.1	1233.2	1252.9	1267.7	1282.6	1302.3	1320.4	1333.6	1340.2
15°	1228.2	1246.3	1262.8	1284.2	1307.3	1327.0	1348.4	1369.8	1383.0	1383.0	1379.7
17.5°	1272.7	1287.5	1307.3	1332.0	1363.2	1387.9	1399.5	1402.8	1397.8	1386.3	1378.1
20°	1317.1	1330.3	1351.7	1381.3	1414.3	1419.2	1407.7	1392.9	1378.1	1358.3	1345.1
22.5°	1353.4	1371.5	1404.4	1439.0	1440.6	1412.6	1381.3	1356.7	1333.6	1310.6	1285.9
25°	1396.2	1420.9	1465.3	1478.5	1435.7	1383.0	1338.5	1302.3	1264.5	1226.6	1198.6
27.5°	1448.9	1485.1	1529.5	1491.7	1407.7	1333.6	1272.7	1218.4	1169.0	1116.3	1085.0
30°	1504.8	1560.8	1570.7	1471.9	1359.9	1264.5	1182.1	1099.8	1037.2	989.5	971.4
32.5°	1572.3	1644.8	1585.5	1437.3	1295.7	1170.6	1060.3	961.5	908.8	879.2	871.0
35°	1674.4	1733.7	1593.7	1401.1	1221.6	1058.6	920.3	841.3	808.4	788.6	778.8
37.5°	1820.9	1819.3	1592.1	1356.7	1136.0	936.8	808.4	752.4	726.1	709.6	691.5
40°	1992.2	1885.2	1582.2	1292.4	1020.8	819.9	731.0	678.3	653.6	633.9	612.5
42.5°	2161.8	1929.6	1554.2	1196.9	877.5	736.0	675.0	627.3	600.9	579.5	549.9
45°	2308.3	1947.7	1499.9	1065.2	749.1	670.1	638.8	597.7	566.4	533.4	510.4
47.5°	2423.5	1944.4	1412.6	910.5	663.5	624.0	609.2	581.2	543.3	502.2	472.5
50°	2520.7	1919.7	1294.1	773.8	605.9	582.8	577.9	569.7	508.7	474.2	456.1
52.5°	2609.6	1883.5	1167.3	681.6	556.5	536.7	546.6	538.4	495.6	465.9	447.8
55°	2731.4	1858.8	1042.2	610.8	498.9	493.9	502.2	513.7	487.3	459.4	439.6
57.5°	2874.7	1872.0	946.7	531.8	444.5	447.8	475.8	492.3	479.1	449.5	429.7
60°	3039.3	1911.5	862.7	456.1	400.1	408.3	449.5	472.5	470.9	436.3	413.3
62.5°	3223.7	1952.7	729.4	398.4	362.2	375.4	418.2	447.8	452.8	423.1	395.1
63°	3259.9	1955.9	694.8	386.9	355.6	370.4	410.0	441.2	447.8	419.8	391.8
65°	3348.8	1926.3	559.8	355.6	329.3	345.7	385.3	413.3	426.4	401.7	378.7
67.5°	3274.7	1684.3	421.5	317.8	307.9	319.4	354.0	380.3	391.8	380.3	357.3
70°	2994.8	1224.9	329.3	283.2	284.8	293.1	319.4	344.1	357.3	354.0	332.6
72.5°	2412.0	694.8	275.0	253.5	258.5	268.4	286.5	309.5	321.1	319.4	304.6
75°	1588.8	355.6	232.1	227.2	230.5	238.7	251.9	270.0	283.2	281.5	275.0
77.5°	787.0	247.0	199.2	200.9	202.5	209.1	219.0	235.4	243.7	245.3	243.7
80°	324.3	192.6	171.2	172.9	174.5	179.5	186.0	200.9	205.8	209.1	210.7
82.5°	194.3	146.5	136.7	139.9	141.6	146.5	151.5	164.6	169.6	174.5	174.5
85°	128.4	102.1	98.8	102.1	105.4	108.7	110.3	118.5	126.8	133.4	136.7
87.5°	69.1	60.9	59.3	60.9	60.9	64.2	67.5	75.7	85.6	92.2	95.5
90°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0



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**CANDELA DISTRIBUTION (continued):**

	160°	165°	170°	175°	180°
0°	1065.2	1065.2	1065.2	1065.2	1065.2
2.5°	1091.6	1093.2	1091.6	1093.2	1094.9
5°	1145.9	1149.2	1147.6	1147.6	1154.1
7.5°	1208.5	1215.1	1215.1	1218.4	1221.6
10°	1276.0	1282.6	1287.5	1287.5	1292.4
12.5°	1343.5	1346.8	1351.7	1351.7	1351.7
15°	1378.1	1376.4	1374.8	1373.1	1373.1
17.5°	1373.1	1366.5	1363.2	1359.9	1361.6
20°	1336.9	1325.4	1322.1	1317.1	1320.4
22.5°	1274.3	1257.9	1251.3	1243.0	1246.3
25°	1180.5	1160.7	1157.4	1147.6	1152.5
27.5°	1071.8	1061.9	1060.3	1058.6	1066.9
30°	969.7	973.0	974.7	978.0	986.2
32.5°	875.9	882.5	884.1	885.8	897.3
35°	783.7	775.5	783.7	780.4	790.3
37.5°	683.3	676.7	670.1	661.9	668.4
40°	599.3	587.8	568.0	558.1	559.8
42.5°	533.4	518.6	502.2	492.3	492.3
45°	490.6	472.5	457.7	451.1	451.1
47.5°	457.7	449.5	441.2	436.3	436.3
50°	444.5	434.7	429.7	426.4	426.4
52.5°	434.7	424.8	419.8	416.5	413.3
55°	426.4	411.6	406.7	405.0	405.0
57.5°	414.9	401.7	395.1	393.5	393.5
60°	396.8	386.9	380.3	378.7	378.7
62.5°	378.7	368.8	362.2	362.2	362.2
63°	375.4	363.9	358.9	358.9	358.9
65°	360.6	349.0	344.1	344.1	342.5
67.5°	340.8	329.3	326.0	326.0	322.7
70°	317.8	307.9	304.6	306.2	299.6
72.5°	294.7	284.8	279.9	279.9	273.3
75°	268.4	258.5	251.9	250.3	243.7
77.5°	238.7	230.5	223.9	217.3	214.0
80°	207.4	200.9	192.6	187.7	182.8
82.5°	174.5	167.9	163.0	169.6	144.9
85°	136.7	130.1	123.5	133.4	103.7
87.5°	100.4	97.1	90.6	79.0	69.1
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)