

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: P265790

Luminaire Tested: **ARCH-M-AF48-80-D-U-T2U-7027**

Issue Date: 3/3/2020

**Test Information**

Test Method: LM-79-08  
Report Number: P265790  
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-M-AF48-80-D-U-T2U-7027  
Description: ARCHEON-M ROADWAY AND AREA LUMINAIRE  
(2) 70 CRI, 2700K, 535mA LIGHT ENGINES WITH 24 LEDS AND TYPE II U OPTICS  
Light Source: -  
Ballast/Driver: ELECTRONIC DRIVER

**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 9604.8 lumens  
Efficiency: N/A  
Efficacy: 115.7 lumens/watt  
Luminous Opening: Rectangular (W 0.75' x L: 1' x H: 0')  
IES Classification: Type II - Short - Semi-Cutoff  
BUG Rating: B2 - U0 - G2

Input Watts (W): 83  
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

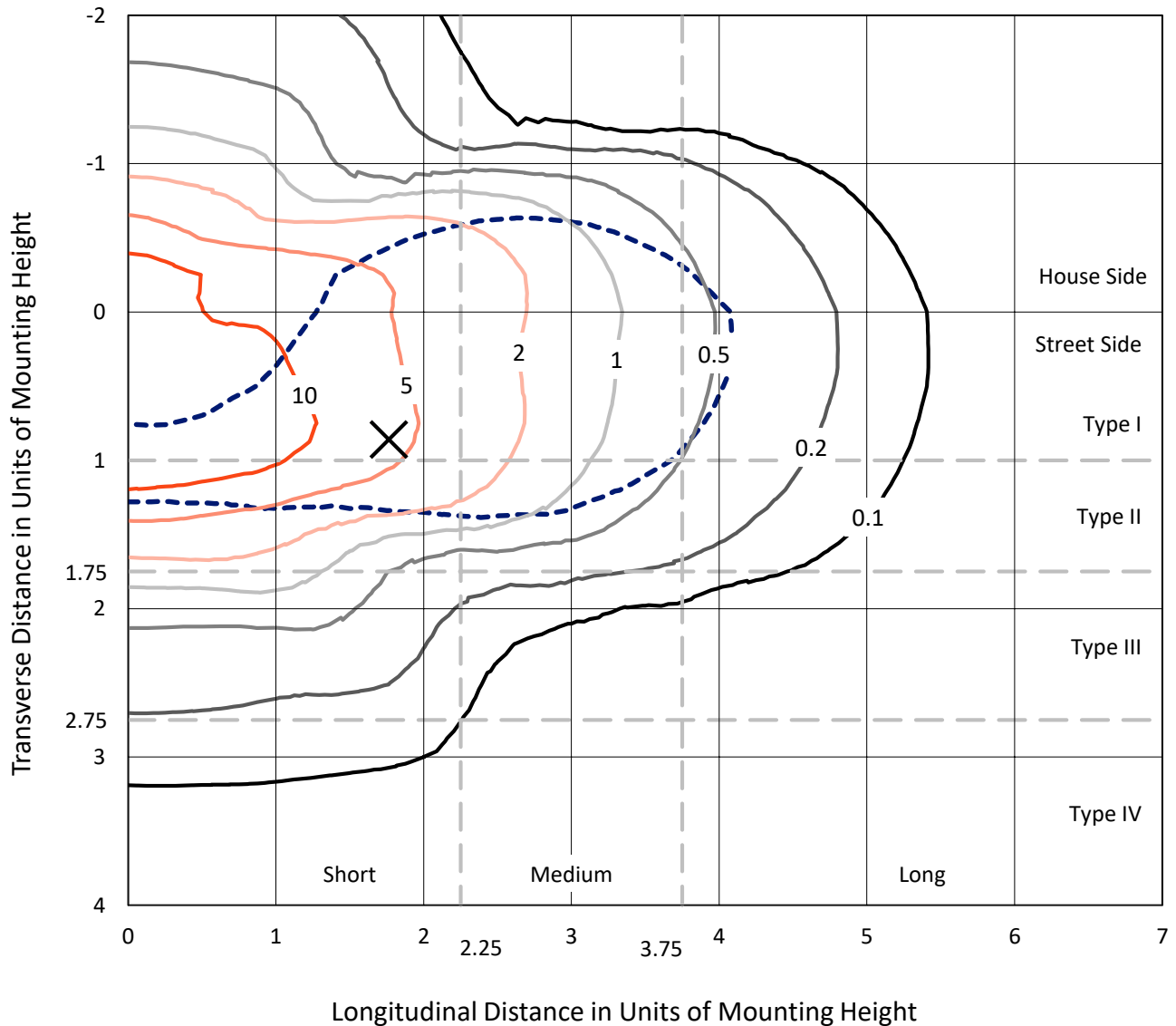


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### Iso-Footcandle Lines of Horizontal Illumination

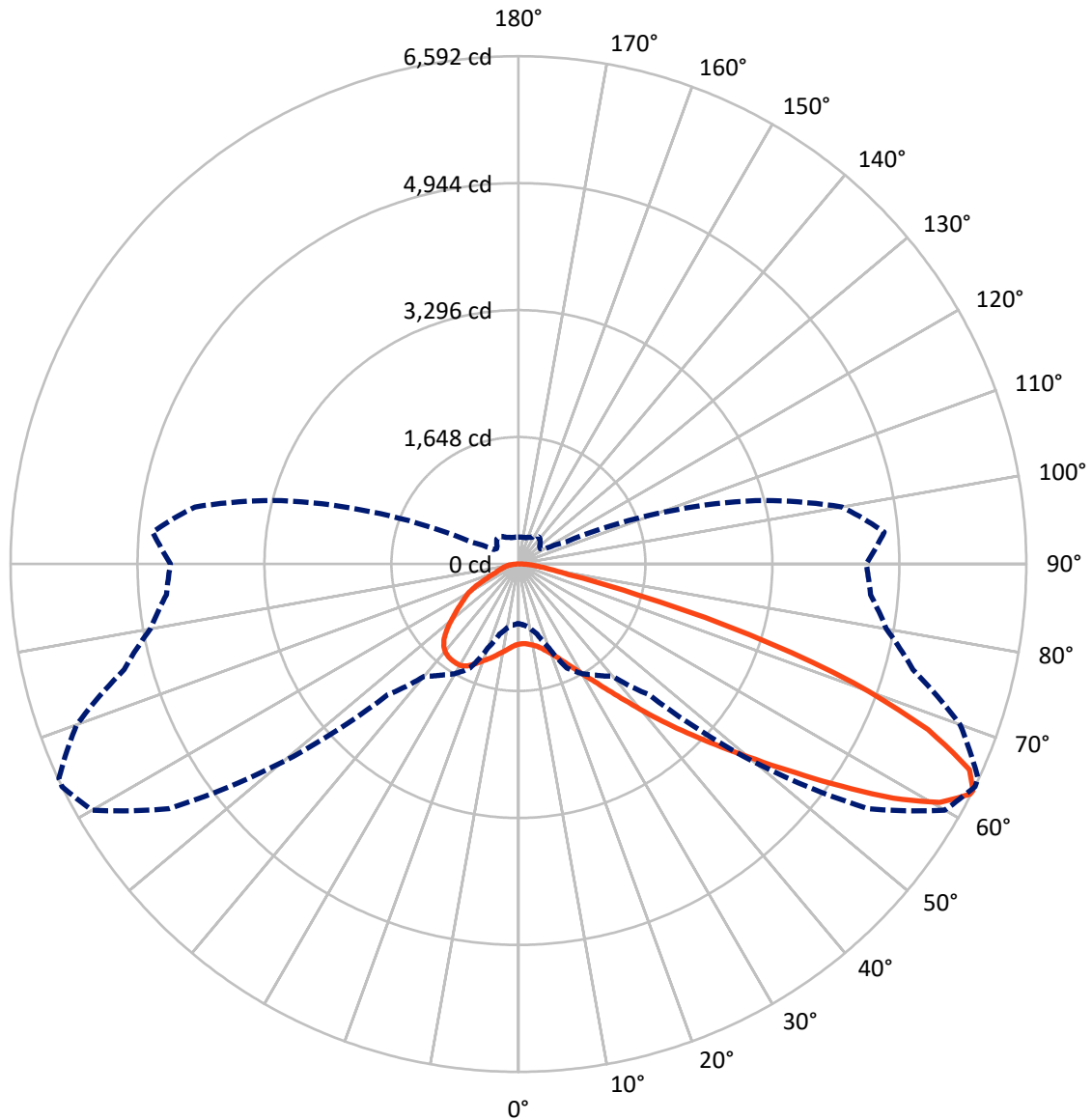
✕ Max cd  
 - - - 1/2 Max cd



Based on 10 foot mounting height. Maximum calculated value = 16.9 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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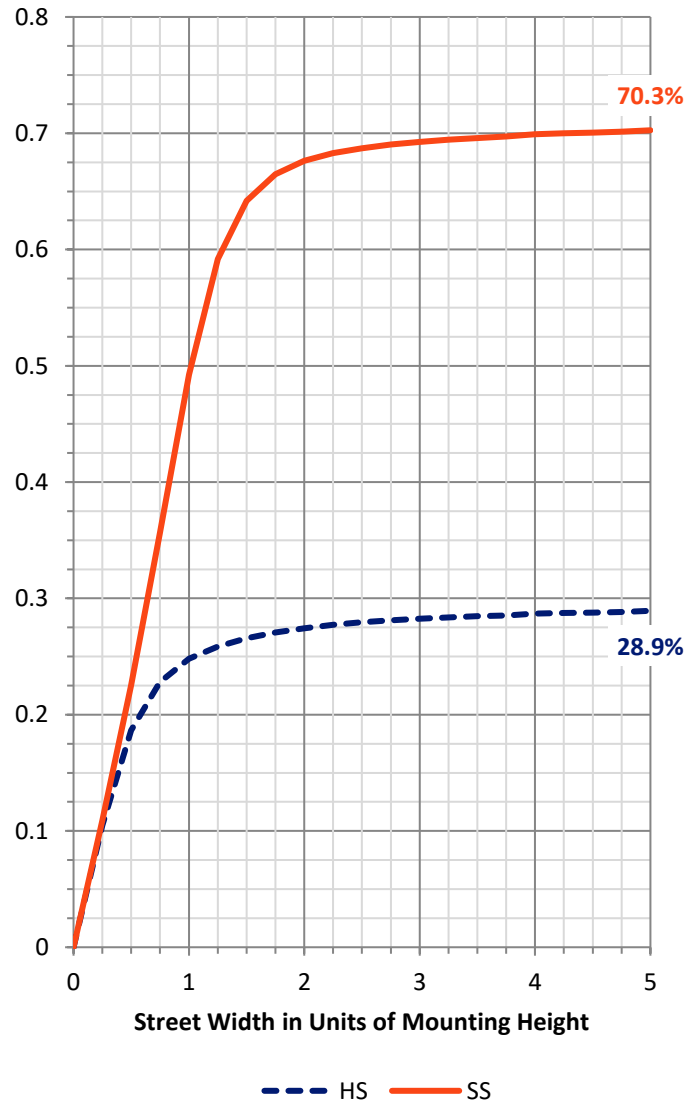
**FLUX DISTRIBUTION:**

		Downward	Upward	Total
<b>House Side</b>	Lumens	2823.5	0.0	2823.5
	% Fixture	29.4	0.0	29.4
<b>Street Side</b>	Lumens	6781.3	0.0	6781.3
	% Fixture	70.6	0.0	70.6
<b>Total</b>	Lumens	9604.8	0.0	9604.8
	% Fixture	100.0	0.0	100.0

**Coefficient of Utilization**

**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	103.9	1.1
10°-20°	345.9	3.6
20°-30°	649.3	6.8
30°-40°	1088.3	11.3
40°-50°	1826.0	19.0
50°-60°	2314.8	24.1
60°-70°	2042.0	21.3
70°-80°	1054.1	11.0
80°-90°	180.4	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°	9604.8	100.0
0°-180°	9604.8	100.0



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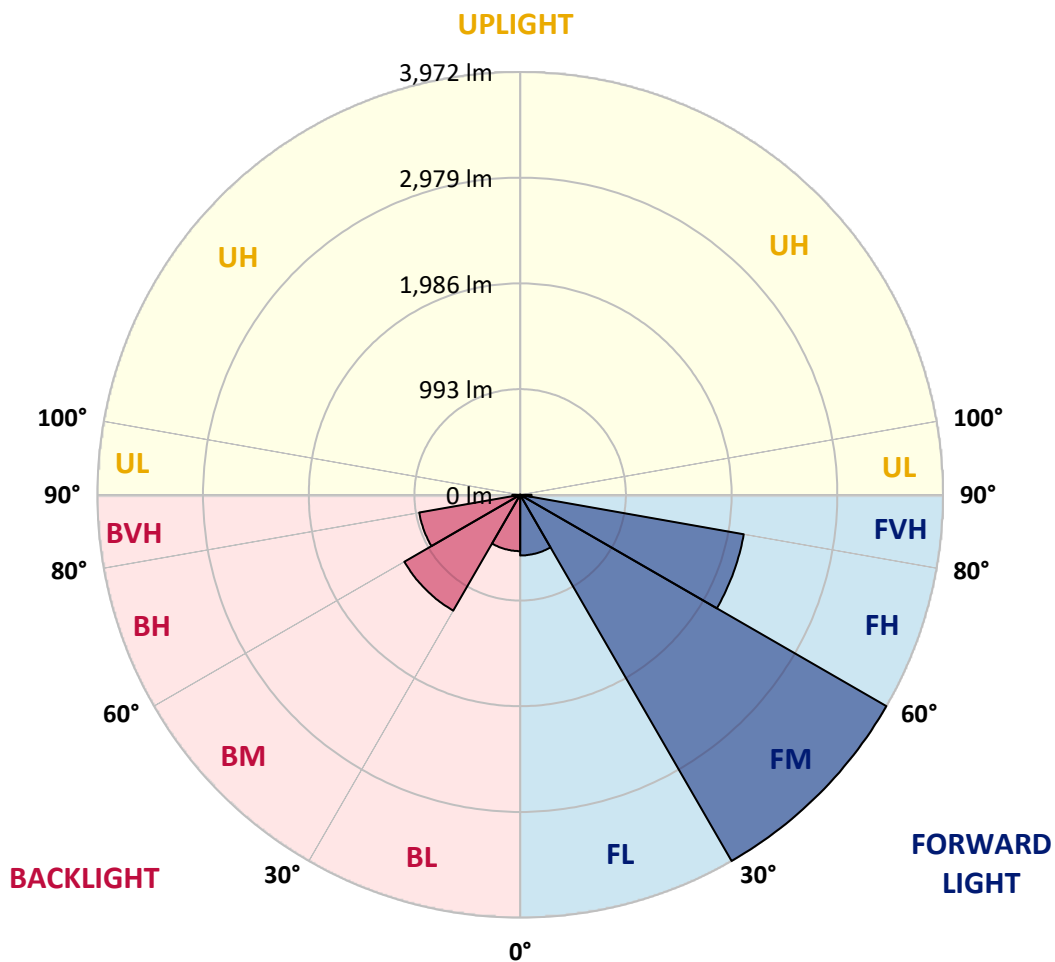
CATALOG NUMBER: ARCH-M-AF48-80-D-U-T2U-7027

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

Zone		Lumens	% Fixture	Zone Rating/Lumen Limit		
				B	U	G
FL	(0°-30°)	570.1	5.9			
FM	(30°-60°)	3972.3	41.4			
FH	(60°-80°)	2132.8	22.2			G2/5000
FVH	(80°-90°)	106.2	1.1			G2/225
BL	(0°-30°)	529.0	5.5	B2/1000		
BM	(30°-60°)	1256.9	13.1	B2/2500		
BH	(60°-80°)	963.3	10.0	B2/1000		G2/1000
BVH	(80°-90°)	74.2	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°	1040.1	1040.1	1040.1	1040.1	1040.1	1040.1	1040.1	1040.1	1040.1	1040.1	1040.1
2.5°	1033.8	1032.2	1032.2	1032.2	1032.2	1030.5	1032.2	1035.3	1033.8	1032.2	1035.3
5°	1037.0	1035.3	1035.3	1035.3	1037.0	1035.3	1037.0	1041.9	1038.6	1038.6	1041.9
7.5°	1045.0	1043.4	1045.0	1043.4	1043.4	1043.4	1045.0	1049.8	1048.2	1049.8	1054.7
10°	1054.7	1054.7	1054.7	1054.7	1054.7	1054.7	1057.8	1061.1	1062.8	1064.3	1070.7
12.5°	1083.5	1083.5	1083.5	1082.0	1082.0	1077.2	1083.5	1086.8	1090.1	1093.2	1098.1
15°	1144.7	1144.7	1143.2	1136.6	1136.6	1127.1	1128.6	1130.2	1130.2	1133.4	1136.6
17.5°	1225.1	1223.5	1220.3	1215.4	1208.9	1197.7	1194.6	1191.3	1186.5	1184.9	1184.9
20°	1337.7	1336.0	1329.6	1316.7	1308.7	1291.0	1278.2	1265.3	1260.4	1252.3	1250.8
22.5°	1498.5	1498.5	1485.5	1466.3	1459.8	1422.8	1385.8	1358.5	1348.8	1337.7	1337.7
25°	1692.9	1691.2	1673.6	1651.2	1623.7	1585.1	1540.2	1503.3	1479.1	1453.4	1443.8
27.5°	1926.1	1921.3	1897.1	1869.8	1818.3	1770.1	1717.0	1678.5	1636.6	1604.6	1575.5
30°	2199.4	2194.5	2152.8	2101.2	2048.2	1999.9	1922.8	1876.2	1810.3	1771.6	1739.6
32.5°	2516.2	2511.2	2435.7	2385.9	2329.6	2270.0	2178.5	2104.5	2020.8	1966.2	1921.3
35°	2919.6	2900.3	2792.7	2723.5	2635.1	2575.6	2479.1	2379.4	2281.3	2204.3	2138.2
37.5°	3355.3	3332.8	3237.9	3135.1	3048.2	2975.8	2839.3	2713.8	2598.1	2492.0	2410.0
40°	3810.3	3750.9	3649.5	3573.9	3514.4	3445.3	3302.3	3170.4	2988.8	2869.7	2745.9
42.5°	4125.3	4067.5	3996.7	3947.0	3918.0	3865.0	3784.6	3670.5	3508.1	3511.2	3184.9
45°	4332.9	4247.5	4199.3	4202.6	4213.8	4213.8	4199.3	4181.7	4111.0	4159.2	3885.9
47.5°	4258.9	4202.6	4172.0	4236.3	4316.7	4397.2	4490.4	4591.6	4707.4	4844.1	4508.1
50°	3824.8	3845.6	3860.1	3996.7	4168.9	4352.1	4565.9	4842.5	5165.7	5228.2	5065.9
52.5°	3131.9	3176.9	3225.1	3434.1	3660.8	3977.4	4352.1	4808.6	5242.8	5498.3	5482.4
55°	2432.5	2488.8	2591.6	2747.6	2927.7	3226.7	3689.7	4393.9	5070.8	5477.4	5725.1
57.5°	1731.6	1813.5	1948.6	2165.6	2324.8	2493.5	2835.9	3617.4	4358.5	5115.8	5685.0
60°	1151.1	1189.7	1278.2	1548.1	1816.7	1993.6	2236.3	2519.2	3125.5	4168.9	5270.0
62.5°	816.6	842.4	897.0	1019.2	1262.1	1581.9	1728.2	1858.6	2053.0	2681.7	4231.6
63°	771.7	794.2	839.2	942.1	1160.8	1491.9	1641.6	1760.5	1901.9	2398.7	4003.1
65°	639.9	649.6	673.5	723.5	840.9	1115.8	1360.2	1432.4	1456.6	1541.9	2508.1
67.5°	540.2	546.6	554.7	569.2	615.8	742.8	1014.5	1106.2	1078.8	1021.0	1239.5
70°	469.5	474.2	487.2	504.8	520.8	553.0	697.8	834.3	803.9	725.1	758.9
72.5°	374.7	382.7	397.1	427.7	459.8	501.7	536.9	622.2	602.9	527.3	535.4
75°	295.8	300.7	313.5	336.1	366.6	414.7	483.9	512.8	459.8	389.1	389.1
77.5°	234.7	239.6	250.7	268.6	287.7	321.6	369.8	445.3	413.2	292.6	291.1
80°	176.8	181.6	193.0	208.9	228.3	252.5	281.3	315.1	379.4	273.4	218.6
82.5°	130.3	131.8	151.2	162.4	168.8	188.1	212.2	231.6	260.5	252.5	194.6
85°	98.1	96.5	109.4	117.4	118.9	123.7	138.2	157.6	170.4	164.0	151.2
87.5°	54.6	48.1	56.2	64.3	64.3	65.9	69.1	80.4	91.6	88.5	80.4
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°	1040.1	1040.1	1040.1	1040.1	1040.1	1040.1	1040.1	1040.1	1040.1	1040.1	1040.1
2.5°	1035.3	1035.3	1033.8	1033.8	1035.3	1035.3	1033.8	1038.6	1041.9	1041.9	1043.4
5°	1040.1	1041.9	1040.1	1040.1	1041.9	1041.9	1043.4	1048.2	1053.1	1056.2	1061.1
7.5°	1054.7	1056.2	1054.7	1054.7	1056.2	1057.8	1061.1	1067.5	1070.7	1077.2	1085.2
10°	1070.7	1072.3	1070.7	1072.3	1074.0	1075.6	1080.4	1085.2	1090.1	1096.6	1109.3
12.5°	1099.6	1101.3	1098.1	1099.6	1104.5	1104.5	1107.7	1110.9	1119.0	1127.1	1139.9
15°	1139.9	1139.9	1136.6	1138.2	1143.2	1143.2	1144.7	1147.9	1157.6	1167.2	1180.1
17.5°	1186.5	1189.7	1188.1	1189.7	1192.9	1194.6	1194.6	1197.7	1204.2	1210.6	1223.5
20°	1249.3	1250.8	1247.6	1250.8	1254.0	1250.8	1247.6	1245.9	1249.3	1252.3	1266.9
22.5°	1334.4	1332.7	1324.8	1324.8	1324.8	1318.4	1310.3	1300.7	1300.7	1295.8	1307.0
25°	1435.8	1430.9	1419.6	1421.2	1410.0	1400.3	1385.8	1371.4	1358.5	1353.7	1355.4
27.5°	1554.6	1545.1	1533.8	1530.5	1519.4	1501.5	1477.5	1450.1	1429.3	1413.2	1410.0
30°	1704.2	1683.2	1664.0	1660.7	1643.1	1614.2	1575.5	1538.5	1503.3	1475.8	1466.3
32.5°	1881.1	1848.9	1818.3	1815.1	1786.2	1747.7	1701.0	1649.5	1598.1	1554.6	1533.8
35°	2088.4	2040.2	2011.2	2003.2	1961.4	1913.2	1861.7	1795.8	1723.5	1662.4	1623.7
37.5°	2340.9	2290.9	2241.1	2242.8	2184.9	2128.7	2059.5	1979.1	1887.5	1802.3	1747.7
40°	2652.8	2582.0	2517.7	2503.1	2453.5	2374.6	2299.0	2205.8	2093.2	1980.8	1901.9
42.5°	3030.5	2914.8	2826.3	2813.5	2747.6	2651.1	2559.5	2435.7	2321.5	2184.9	2090.0
45°	3459.8	3275.0	3168.9	3149.5	3043.4	2945.4	2834.4	2702.6	2562.8	2408.4	2295.8
47.5°	3993.5	3729.9	3549.8	3517.8	3371.3	3242.8	3127.0	2980.7	2813.5	2641.5	2517.7
50°	4615.8	4226.6	3984.0	3934.0	3737.9	3586.8	3438.9	3255.6	3077.1	2897.2	2754.1
52.5°	5239.5	4821.6	4498.4	4437.3	4148.0	3945.4	3750.9	3567.4	3357.0	3178.5	3016.1
55°	5741.2	5463.0	5088.4	5003.2	4588.5	4313.5	4057.9	3848.9	3639.8	3498.4	3307.1
57.5°	6043.3	6029.0	5733.2	5615.8	5048.3	4641.5	4356.9	4119.0	3916.4	3857.0	3602.9
60°	6035.4	6409.9	6282.9	6194.5	5512.9	4977.5	4607.8	4350.5	4183.2	4250.8	3900.4
62.5°	5667.1	6426.0	6578.7	6554.7	6008.0	5247.5	4813.5	4548.2	4459.8	4660.8	4209.0
63°	5533.7	6389.0	6591.7	6582.1	6102.8	5299.0	4849.0	4586.8	4514.5	4765.2	4265.3
65°	4676.8	6066.0	6435.6	6479.0	6307.1	5475.9	4930.8	4684.9	4676.8	4998.3	4398.7
67.5°	2850.5	5125.4	5733.2	5816.7	6019.4	5532.1	4884.3	4651.2	4766.9	5032.1	4358.5
70°	1218.6	3382.7	4607.8	4742.8	5237.9	5252.4	4750.7	4512.8	4745.9	4768.6	4072.3
72.5°	721.9	1594.9	3136.6	3430.8	4144.7	4519.4	4445.4	4271.7	4471.0	4188.1	3467.8
75°	511.2	746.0	1593.2	1906.7	2885.8	3450.2	3734.8	3815.1	3807.0	3321.6	2602.8
77.5°	366.6	479.1	672.0	792.7	1610.9	2215.4	2562.8	2797.4	2721.9	2223.5	1604.6
80°	255.7	331.1	411.6	437.4	747.6	1138.2	1350.5	1453.4	1408.4	1110.9	718.6
82.5°	185.0	217.0	265.3	281.3	376.2	525.7	625.4	551.5	528.9	409.9	310.3
85°	143.1	139.9	165.6	172.0	220.3	274.9	281.3	218.6	191.2	170.4	173.6
87.5°	101.2	86.9	88.5	91.6	114.2	146.3	143.1	90.0	77.2	81.9	93.2
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°	1040.1	1040.1	1040.1	1040.1	1040.1	1040.1	1040.1	1040.1	1040.1	1040.1	1040.1
2.5°	1046.6	1048.2	1051.5	1053.1	1056.2	1056.2	1059.6	1061.1	1064.3	1067.5	1069.2
5°	1065.8	1070.7	1077.2	1080.4	1086.8	1091.6	1098.1	1101.3	1107.7	1112.6	1119.0
7.5°	1094.9	1102.8	1110.9	1120.5	1130.2	1138.2	1144.7	1152.7	1163.9	1172.0	1176.9
10°	1122.3	1133.4	1147.9	1159.2	1173.6	1184.9	1194.6	1208.9	1221.9	1233.2	1239.5
12.5°	1157.6	1172.0	1186.5	1204.2	1223.5	1238.0	1252.3	1271.7	1289.3	1302.3	1308.7
15°	1199.3	1217.1	1233.2	1254.0	1276.5	1295.8	1316.7	1337.7	1350.5	1350.5	1347.3
17.5°	1242.7	1257.3	1276.5	1300.7	1331.2	1355.4	1366.5	1369.7	1365.0	1353.7	1345.7
20°	1286.2	1298.9	1319.9	1348.8	1381.1	1385.8	1374.5	1360.2	1345.7	1326.3	1313.5
22.5°	1321.5	1339.3	1371.4	1405.2	1406.7	1379.3	1348.8	1324.8	1302.3	1279.7	1255.7
25°	1363.4	1387.4	1430.9	1443.8	1402.0	1350.5	1307.0	1271.7	1234.7	1197.7	1170.4
27.5°	1414.8	1450.1	1493.6	1456.6	1374.5	1302.3	1242.7	1189.7	1141.4	1090.1	1059.6
30°	1469.4	1524.2	1533.8	1437.3	1328.0	1234.7	1154.3	1074.0	1012.8	966.2	948.6
32.5°	1535.4	1606.1	1548.1	1403.5	1265.3	1143.2	1035.3	938.9	887.4	858.5	850.4
35°	1635.1	1692.9	1556.3	1368.2	1192.9	1033.8	898.8	821.5	789.4	770.0	760.4
37.5°	1778.1	1776.5	1554.6	1324.8	1109.3	914.8	789.4	734.8	709.0	693.0	675.3
40°	1945.3	1840.8	1545.1	1262.1	996.8	800.6	713.9	662.4	638.2	619.0	598.1
42.5°	2110.9	1884.3	1517.6	1168.9	857.0	718.6	659.1	612.6	586.9	565.9	536.9
45°	2253.9	1901.9	1464.6	1040.1	731.5	654.3	623.9	583.5	553.0	520.8	498.4
47.5°	2366.6	1898.7	1379.3	889.1	647.9	609.3	594.9	567.5	530.5	490.4	461.4
50°	2461.4	1874.7	1263.6	755.7	591.7	569.2	564.3	556.3	496.9	463.0	445.3
52.5°	2548.2	1839.2	1139.9	665.6	543.5	524.2	533.8	525.7	483.9	455.0	437.4
55°	2667.2	1815.1	1017.7	596.5	487.2	482.3	490.4	501.7	475.9	448.6	429.3
57.5°	2807.1	1828.1	924.4	519.3	434.2	437.4	464.7	480.8	467.8	438.9	419.6
60°	2967.8	1866.6	842.4	445.3	390.7	398.7	438.9	461.4	459.8	426.1	403.6
62.5°	3147.9	1906.7	712.3	389.1	353.8	366.6	408.4	437.4	442.1	413.2	385.8
63°	3183.2	1909.9	678.5	377.7	347.3	361.7	400.4	430.8	437.4	409.9	382.7
65°	3270.1	1881.1	546.6	347.3	321.6	337.7	376.2	403.6	416.5	392.3	369.8
67.5°	3197.7	1644.6	411.6	310.3	300.7	311.9	345.7	371.4	382.7	371.4	348.9
70°	2924.4	1196.2	321.6	276.5	278.1	286.2	311.9	336.1	348.9	345.7	324.7
72.5°	2355.3	678.5	268.6	247.7	252.5	262.0	279.7	302.3	313.5	311.9	297.3
75°	1551.5	347.3	226.7	221.9	225.0	233.1	246.0	263.7	276.5	274.9	268.6
77.5°	768.5	241.1	194.6	196.1	197.7	204.2	213.8	229.8	238.0	239.6	238.0
80°	316.7	188.1	167.3	168.8	170.4	175.2	181.6	196.1	201.0	204.2	205.8
82.5°	189.7	143.1	133.5	136.6	138.2	143.1	148.0	160.7	165.6	170.4	170.4
85°	125.5	99.7	96.5	99.7	102.9	106.1	107.6	115.7	123.7	130.3	133.5
87.5°	67.6	59.5	57.9	59.5	59.5	62.7	65.9	74.0	83.6	90.0	93.2
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°	1040.1	1040.1	1040.1	1040.1	1040.1
2.5°	1065.8	1067.5	1065.8	1067.5	1069.2
5°	1119.0	1122.3	1120.5	1120.5	1127.1
7.5°	1180.1	1186.5	1186.5	1189.7	1192.9
10°	1245.9	1252.3	1257.3	1257.3	1262.1
12.5°	1312.0	1315.1	1319.9	1319.9	1319.9
15°	1345.7	1344.0	1342.4	1340.8	1340.8
17.5°	1340.8	1334.4	1331.2	1328.0	1329.6
20°	1305.4	1294.2	1291.0	1286.2	1289.3
22.5°	1244.4	1228.3	1221.9	1213.8	1217.1
25°	1152.7	1133.4	1130.2	1120.5	1125.3
27.5°	1046.6	1037.0	1035.3	1033.8	1041.9
30°	947.0	950.1	951.8	955.0	963.1
32.5°	855.2	861.7	863.4	865.0	876.1
35°	765.3	757.2	765.3	762.0	771.7
37.5°	667.3	660.8	654.3	646.3	652.7
40°	585.2	573.9	554.7	545.0	546.6
42.5°	520.8	506.5	490.4	480.8	480.8
45°	479.1	461.4	446.9	440.4	440.4
47.5°	446.9	438.9	430.8	426.1	426.1
50°	434.2	424.4	419.6	416.5	416.5
52.5°	424.4	414.7	409.9	406.8	403.6
55°	416.5	401.9	397.1	395.6	395.6
57.5°	405.1	392.3	385.8	384.2	384.2
60°	387.4	377.7	371.4	369.8	369.8
62.5°	369.8	360.1	353.8	353.8	353.8
63°	366.6	355.3	350.5	350.5	350.5
65°	352.0	340.8	336.1	336.1	334.3
67.5°	332.8	321.6	318.3	318.3	315.1
70°	310.3	300.7	297.3	299.0	292.6
72.5°	287.7	278.1	273.4	273.4	266.8
75°	262.0	252.5	246.0	244.3	238.0
77.5°	233.1	225.0	218.6	212.2	208.9
80°	202.6	196.1	188.1	183.3	178.5
82.5°	170.4	164.0	159.2	165.6	141.5
85°	133.5	127.0	120.6	130.3	101.2
87.5°	98.1	94.9	88.5	77.2	67.6
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)