

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: P239156

Luminaire Tested: **ARCH-AF16-30-D-U-T2U-8027**

Issue Date: 3/3/2020

**Test Information**

Test Method: LM-79-08  
Report Number: P239156  
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-AF16-30-D-U-T2U-8027  
Description: ARCHEON ROADWAY AND AREA LUMINAIRE  
(1) 80 CRI, 2700K, 560mA LIGHT ENGINE WITH 16 LEDS AND TYPE II U OPTICS  
Light Source: -  
Ballast/Driver: ELECTRONIC DRIVER

**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 2937 lumens  
Efficiency: N/A  
Efficacy: 91.8 lumens/watt  
Luminous Opening: Rectangular (W 0.5' x L: 0.75' x H: 0')  
IES Classification: Type II - Short - Semi-Cutoff  
BUG Rating: B1 - U0 - G1

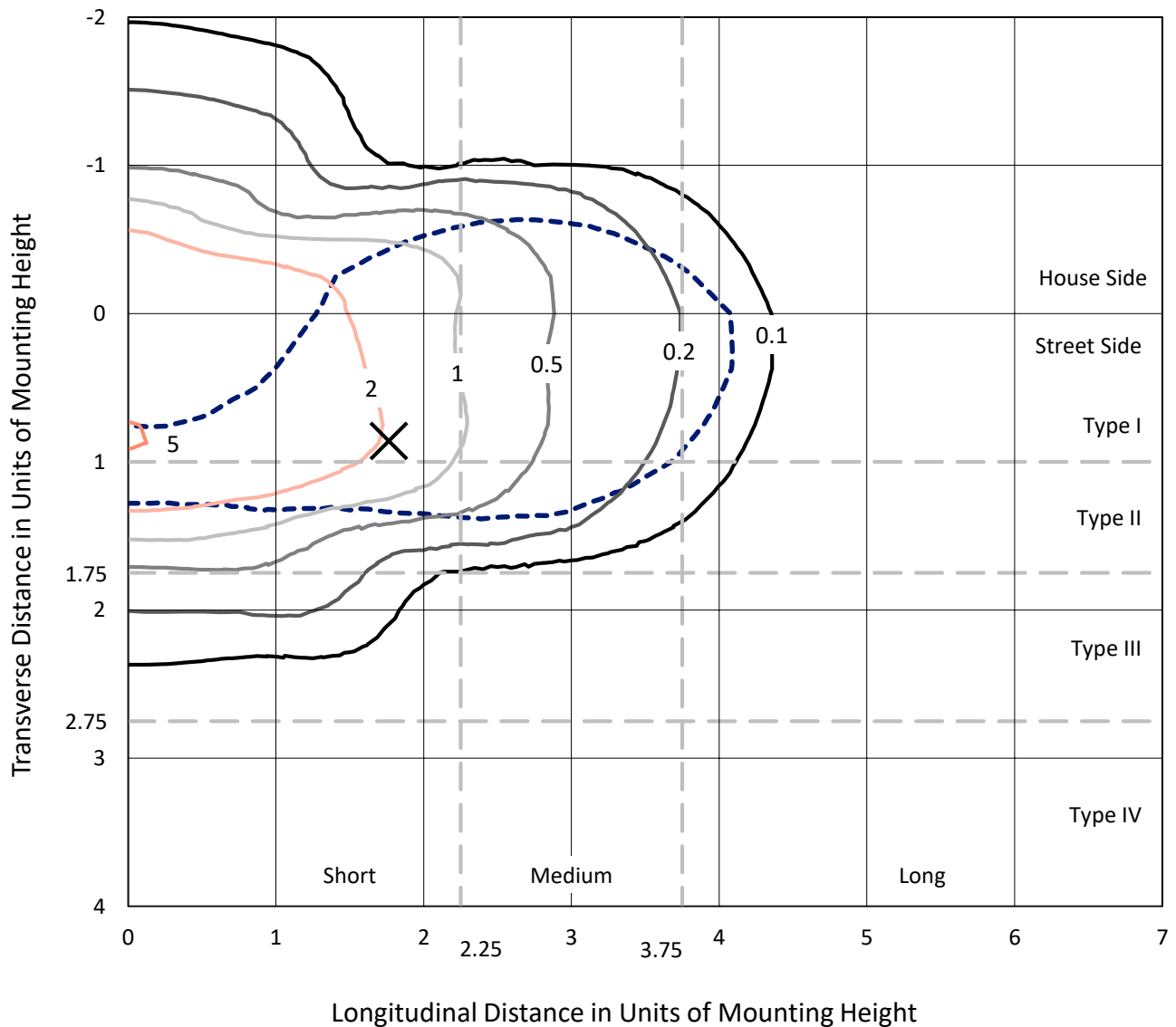
Input Watts (W): 32  
Input Voltage (V): NR  
Input Current (Ain): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 28.75 FT



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### Iso-Footcandle Lines of Horizontal Illumination

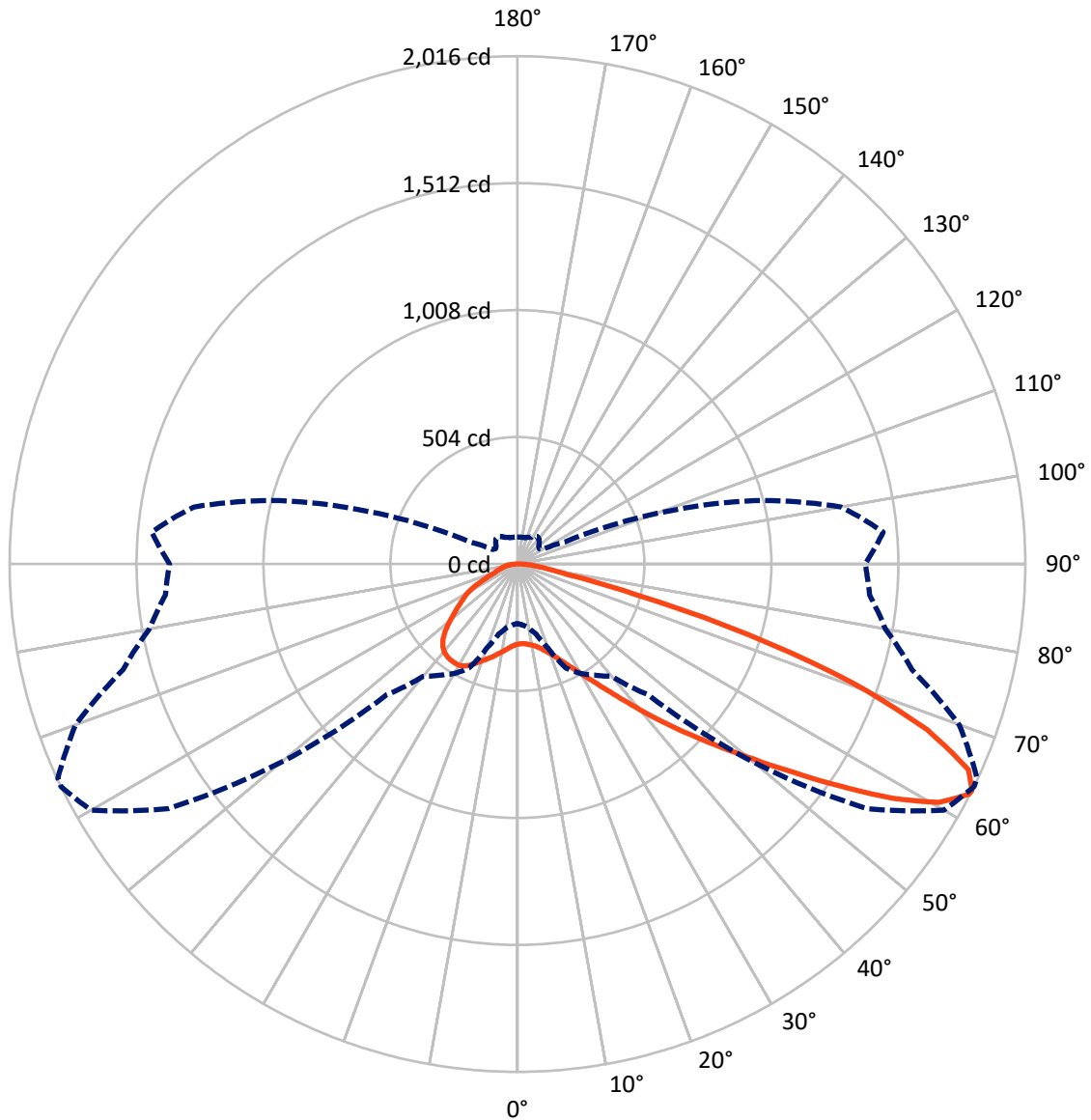
× Max cd  
 - - - 1/2 Max cd



Based on 10 foot mounting height. Maximum calculated value = 5.2 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	863.4	0.0	863.4
	% Fixture	29.4	0.0	29.4
<b>Street Side</b>	Lumens	2073.6	0.0	2073.6
	% Fixture	70.6	0.0	70.6
<b>Total</b>	Lumens	2937.0	0.0	2937.0
	% Fixture	100.0	0.0	100.0

**Coefficient of Utilization**

**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	31.8	1.1
10°-20°	105.8	3.6
20°-30°	198.6	6.8
30°-40°	332.8	11.3
40°-50°	558.4	19.0
50°-60°	707.8	24.1
60°-70°	624.4	21.3
70°-80°	322.3	11.0
80°-90°	55.2	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°	2937.0	100.0
0°-180°	2937.0	100.0



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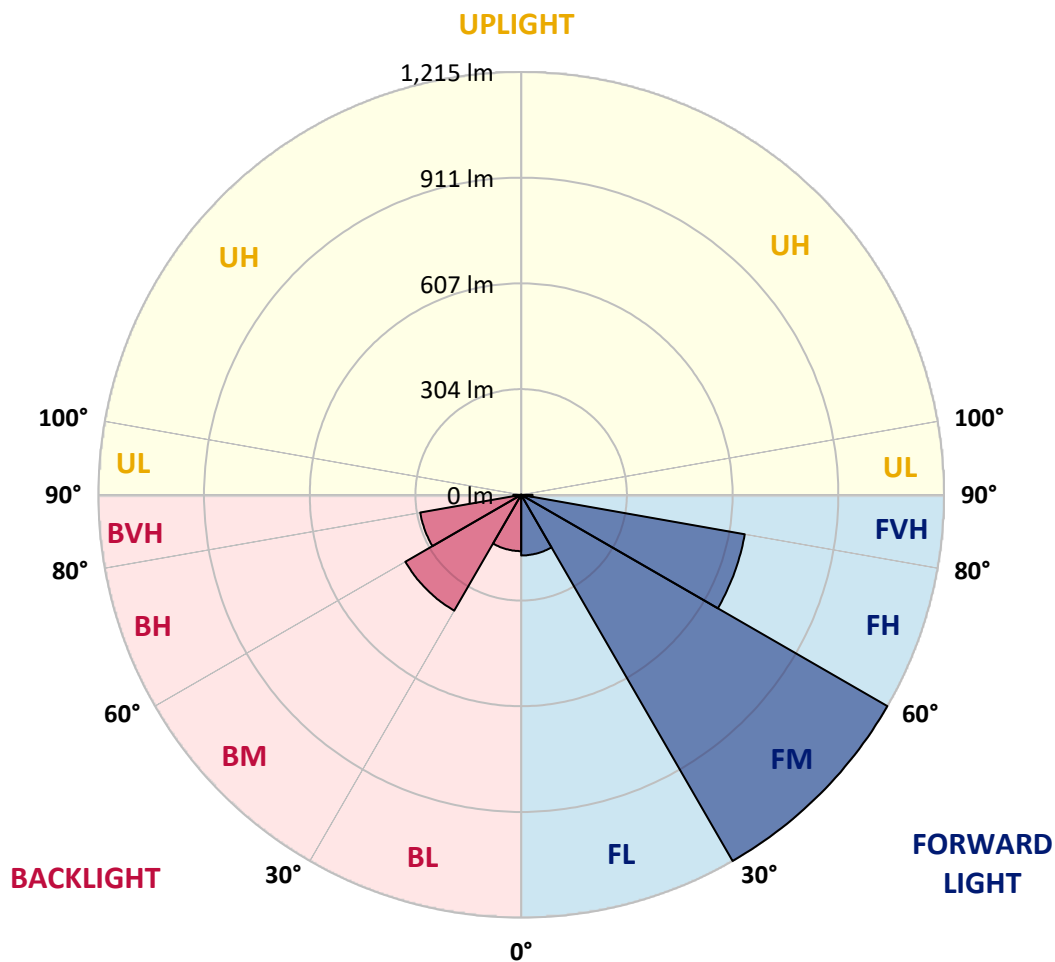
CATALOG NUMBER: ARCH-AF16-30-D-U-T2U-8027

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

Zone		Lumens	% Fixture	Zone Rating/Lumen Limit		
				B	U	G
FL	(0°-30°)	174.3	5.9			
FM	(30°-60°)	1214.7	41.4			
FH	(60°-80°)	652.2	22.2			G0/660
FVH	(80°-90°)	32.5	1.1			G1/100
BL	(0°-30°)	161.8	5.5	B1/500		
BM	(30°-60°)	384.3	13.1	B1/1000		
BH	(60°-80°)	294.6	10.0	B1/500		G1/500
BVH	(80°-90°)	22.7	0.8			G1/100
UL	(90°-100°)	0.0	0.0		U0/0	
UH	(100°-180°)	0.0	0.0		U0/0	

**BUG Rating: B1-U0-G1**

Type II Short





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**CANDELA DISTRIBUTION (FULL):**

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
0°	318.1	318.1	318.1	318.1	318.1	318.1	318.1	318.1	318.1	318.1	318.1
2.5°	316.1	315.6	315.6	315.6	315.6	315.1	315.6	316.6	316.1	315.6	316.6
5°	317.1	316.6	316.6	316.6	317.1	316.6	317.1	318.6	317.6	317.6	318.6
7.5°	319.6	319.1	319.6	319.1	319.1	319.1	319.6	321.0	320.5	321.0	322.5
10°	322.5	322.5	322.5	322.5	322.5	322.5	323.5	324.5	325.0	325.5	327.4
12.5°	331.3	331.3	331.3	330.9	330.9	329.4	331.3	332.3	333.3	334.3	335.8
15°	350.0	350.0	349.5	347.6	347.6	344.6	345.1	345.6	345.6	346.6	347.6
17.5°	374.6	374.1	373.1	371.7	369.7	366.3	365.3	364.3	362.8	362.3	362.3
20°	409.0	408.5	406.6	402.6	400.2	394.8	390.8	386.9	385.4	383.0	382.5
22.5°	458.2	458.2	454.3	448.4	446.4	435.1	423.8	415.4	412.5	409.0	409.0
25°	517.7	517.2	511.8	504.9	496.5	484.7	471.0	459.7	452.3	444.4	441.5
27.5°	589.0	587.5	580.1	571.7	556.0	541.3	525.0	513.2	500.5	490.6	481.8
30°	672.5	671.1	658.3	642.5	626.3	611.6	588.0	573.7	553.6	541.8	531.9
32.5°	769.4	767.9	744.8	729.6	712.4	694.2	666.1	643.5	618.0	601.2	587.5
35°	892.8	886.9	853.9	832.8	805.8	787.6	758.1	727.6	697.6	674.0	653.8
37.5°	1026.0	1019.1	990.1	958.7	932.1	910.0	868.2	829.8	794.5	762.0	736.9
40°	1165.1	1146.9	1116.0	1092.9	1074.7	1053.5	1009.8	969.5	913.9	877.5	839.7
42.5°	1261.5	1243.8	1222.2	1206.9	1198.1	1181.8	1157.3	1122.4	1072.7	1073.7	973.9
45°	1324.9	1298.9	1284.1	1285.1	1288.5	1288.5	1284.1	1278.7	1257.1	1271.8	1188.2
47.5°	1302.3	1285.1	1275.7	1295.4	1320.0	1344.6	1373.1	1404.1	1439.5	1481.2	1378.5
50°	1169.6	1175.9	1180.4	1222.2	1274.8	1330.8	1396.2	1480.7	1579.6	1598.7	1549.1
52.5°	957.7	971.4	986.2	1050.1	1119.4	1216.3	1330.8	1470.4	1603.2	1681.3	1676.4
55°	743.8	761.0	792.5	840.2	895.2	986.7	1128.3	1343.6	1550.6	1674.9	1750.6
57.5°	529.5	554.5	595.8	662.2	710.9	762.5	867.2	1106.1	1332.8	1564.3	1738.4
60°	352.0	363.8	390.8	473.4	555.5	609.6	683.8	770.4	955.7	1274.8	1611.5
62.5°	249.7	257.6	274.3	311.7	385.9	483.8	528.5	568.3	627.8	820.0	1293.9
63°	236.0	242.9	256.6	288.1	354.9	456.2	501.9	538.3	581.6	733.5	1224.1
65°	195.7	198.6	206.0	221.2	257.1	341.2	415.9	438.0	445.4	471.5	766.9
67.5°	165.2	167.1	169.6	174.0	188.3	227.1	310.2	338.2	329.9	312.2	379.0
70°	143.6	145.0	149.0	154.4	159.3	169.1	213.4	255.1	245.8	221.7	232.0
72.5°	114.5	117.0	121.4	130.8	140.6	153.4	164.2	190.3	184.4	161.3	163.7
75°	90.5	91.9	95.9	102.7	112.1	126.8	148.0	156.8	140.6	119.0	119.0
77.5°	71.8	73.3	76.7	82.1	88.0	98.3	113.1	136.2	126.3	89.5	89.0
80°	54.1	55.6	59.0	63.9	69.8	77.2	86.0	96.4	116.0	83.6	66.9
82.5°	39.8	40.3	46.2	49.7	51.6	57.5	64.9	70.8	79.6	77.2	59.5
85°	30.0	29.5	33.4	35.9	36.4	37.9	42.3	48.2	52.1	50.1	46.2
87.5°	16.7	14.7	17.2	19.7	19.7	20.2	21.1	24.6	28.0	27.0	24.6
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°	318.1	318.1	318.1	318.1	318.1	318.1	318.1	318.1	318.1	318.1	318.1
2.5°	316.6	316.6	316.1	316.1	316.6	316.6	316.1	317.6	318.6	318.6	319.1
5°	318.1	318.6	318.1	318.1	318.6	318.6	319.1	320.5	322.0	323.0	324.5
7.5°	322.5	323.0	322.5	322.5	323.0	323.5	324.5	326.4	327.4	329.4	331.8
10°	327.4	327.9	327.4	327.9	328.4	328.9	330.4	331.8	333.3	335.3	339.2
12.5°	336.3	336.8	335.8	336.3	337.7	337.7	338.7	339.7	342.2	344.6	348.6
15°	348.6	348.6	347.6	348.1	349.5	349.5	350.0	351.0	354.0	356.9	360.8
17.5°	362.8	363.8	363.3	363.8	364.8	365.3	365.3	366.3	368.2	370.2	374.1
20°	382.0	382.5	381.5	382.5	383.5	382.5	381.5	381.0	382.0	383.0	387.4
22.5°	408.0	407.6	405.1	405.1	405.1	403.1	400.7	397.7	397.7	396.2	399.7
25°	439.0	437.5	434.1	434.6	431.1	428.2	423.8	419.3	415.4	413.9	414.4
27.5°	475.4	472.4	469.0	468.0	464.6	459.2	451.8	443.4	437.0	432.1	431.1
30°	521.1	514.7	508.8	507.8	502.4	493.6	481.8	470.5	459.7	451.3	448.4
32.5°	575.2	565.4	556.0	555.0	546.2	534.4	520.1	504.4	488.7	475.4	469.0
35°	638.6	623.9	615.0	612.6	599.8	585.0	569.3	549.1	527.0	508.3	496.5
37.5°	715.8	700.6	685.3	685.8	668.1	650.9	629.8	605.2	577.2	551.1	534.4
40°	811.2	789.5	769.9	765.4	750.2	726.1	703.0	674.5	640.1	605.7	581.6
42.5°	926.7	891.3	864.3	860.3	840.2	810.7	782.7	744.8	709.9	668.1	639.1
45°	1058.0	1001.4	969.0	963.1	930.6	900.6	866.7	826.4	783.6	736.4	702.0
47.5°	1221.2	1140.6	1085.5	1075.7	1030.9	991.6	956.2	911.5	860.3	807.7	769.9
50°	1411.4	1292.5	1218.2	1203.0	1143.0	1096.8	1051.6	995.5	941.0	885.9	842.1
52.5°	1602.2	1474.4	1375.5	1356.9	1268.4	1206.4	1146.9	1090.9	1026.5	971.9	922.3
55°	1755.6	1670.5	1556.0	1529.9	1403.1	1319.0	1240.8	1176.9	1113.0	1069.8	1011.3
57.5°	1848.0	1843.6	1753.1	1717.2	1543.7	1419.3	1332.3	1259.5	1197.6	1179.4	1101.7
60°	1845.5	1960.1	1921.2	1894.2	1685.8	1522.0	1409.0	1330.3	1279.2	1299.8	1192.7
62.5°	1732.9	1965.0	2011.7	2004.3	1837.2	1604.6	1471.9	1390.8	1363.7	1425.2	1287.1
63°	1692.1	1953.7	2015.6	2012.7	1866.2	1620.4	1482.7	1402.6	1380.5	1457.2	1304.3
65°	1430.1	1854.9	1967.9	1981.2	1928.6	1674.4	1507.8	1432.6	1430.1	1528.4	1345.1
67.5°	871.6	1567.3	1753.1	1778.7	1840.6	1691.7	1493.5	1422.2	1457.6	1538.8	1332.8
70°	372.6	1034.4	1409.0	1450.3	1601.7	1606.1	1452.7	1380.0	1451.3	1458.1	1245.3
72.5°	220.7	487.7	959.1	1049.1	1267.4	1381.9	1359.3	1306.2	1367.2	1280.7	1060.4
75°	156.3	228.1	487.2	583.1	882.5	1055.0	1142.0	1166.6	1164.1	1015.7	795.9
77.5°	112.1	146.5	205.5	242.4	492.6	677.4	783.6	855.4	832.3	679.9	490.6
80°	78.2	101.3	125.9	133.7	228.6	348.1	413.0	444.4	430.7	339.7	219.8
82.5°	56.5	66.4	81.1	86.0	115.0	160.8	191.2	168.6	161.7	125.4	94.9
85°	43.8	42.8	50.6	52.6	67.4	84.1	86.0	66.9	58.5	52.1	53.1
87.5°	31.0	26.5	27.0	28.0	34.9	44.7	43.8	27.5	23.6	25.1	28.5
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°	318.1	318.1	318.1	318.1	318.1	318.1	318.1	318.1	318.1	318.1	318.1
2.5°	320.0	320.5	321.5	322.0	323.0	323.0	324.0	324.5	325.5	326.4	326.9
5°	325.9	327.4	329.4	330.4	332.3	333.8	335.8	336.8	338.7	340.2	342.2
7.5°	334.8	337.2	339.7	342.7	345.6	348.1	350.0	352.5	355.9	358.4	359.9
10°	343.1	346.6	351.0	354.5	358.9	362.3	365.3	369.7	373.6	377.1	379.0
12.5°	354.0	358.4	362.8	368.2	374.1	378.5	383.0	388.9	394.3	398.2	400.2
15°	366.7	372.2	377.1	383.5	390.3	396.2	402.6	409.0	413.0	413.0	412.0
17.5°	380.0	384.4	390.3	397.7	407.1	414.4	417.9	418.9	417.4	413.9	411.5
20°	393.3	397.2	403.6	412.5	422.3	423.8	420.3	415.9	411.5	405.6	401.7
22.5°	404.1	409.5	419.3	429.7	430.2	421.8	412.5	405.1	398.2	391.3	384.0
25°	416.9	424.3	437.5	441.5	428.7	413.0	399.7	388.9	377.6	366.3	357.9
27.5°	432.6	443.4	456.7	445.4	420.3	398.2	380.0	363.8	349.0	333.3	324.0
30°	449.3	466.1	469.0	439.5	406.1	377.6	353.0	328.4	309.7	295.5	290.1
32.5°	469.5	491.1	473.4	429.2	386.9	349.5	316.6	287.1	271.4	262.5	260.1
35°	500.0	517.7	475.9	418.4	364.8	316.1	274.8	251.2	241.4	235.5	232.5
37.5°	543.7	543.2	475.4	405.1	339.2	279.7	241.4	224.7	216.8	211.9	206.5
40°	594.9	562.9	472.4	385.9	304.8	244.8	218.3	202.5	195.2	189.3	182.9
42.5°	645.5	576.2	464.1	357.4	262.0	219.8	201.6	187.3	179.4	173.0	164.2
45°	689.2	581.6	447.9	318.1	223.7	200.1	190.7	178.5	169.1	159.3	152.4
47.5°	723.7	580.6	421.8	271.9	198.1	186.3	181.9	173.5	162.2	149.9	141.1
50°	752.7	573.2	386.4	231.1	180.9	174.0	172.6	170.1	151.9	141.6	136.2
52.5°	779.2	562.4	348.6	203.5	166.2	160.3	163.2	160.8	148.0	139.1	133.7
55°	815.6	555.0	311.2	182.4	149.0	147.5	149.9	153.4	145.5	137.2	131.3
57.5°	858.4	559.0	282.7	158.8	132.7	133.7	142.1	147.0	143.1	134.2	128.3
60°	907.5	570.8	257.6	136.2	119.5	121.9	134.2	141.1	140.6	130.3	123.4
62.5°	962.6	583.1	217.8	119.0	108.2	112.1	124.9	133.7	135.2	126.3	118.0
63°	973.4	584.0	207.5	115.5	106.2	110.6	122.4	131.8	133.7	125.4	117.0
65°	999.9	575.2	167.1	106.2	98.3	103.2	115.0	123.4	127.3	120.0	113.1
67.5°	977.8	502.9	125.9	94.9	91.9	95.4	105.7	113.6	117.0	113.6	106.7
70°	894.3	365.8	98.3	84.6	85.0	87.5	95.4	102.7	106.7	105.7	99.3
72.5°	720.2	207.5	82.1	75.7	77.2	80.1	85.5	92.4	95.9	95.4	90.9
75°	474.4	106.2	69.3	67.8	68.8	71.3	75.2	80.6	84.6	84.1	82.1
77.5°	235.0	73.7	59.5	60.0	60.5	62.4	65.4	70.3	72.8	73.3	72.8
80°	96.8	57.5	51.1	51.6	52.1	53.6	55.6	60.0	61.5	62.4	62.9
82.5°	58.0	43.8	40.8	41.8	42.3	43.8	45.2	49.2	50.6	52.1	52.1
85°	38.3	30.5	29.5	30.5	31.5	32.4	32.9	35.4	37.9	39.8	40.8
87.5°	20.6	18.2	17.7	18.2	18.2	19.2	20.2	22.6	25.6	27.5	28.5
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°	318.1	318.1	318.1	318.1	318.1
2.5°	325.9	326.4	325.9	326.4	326.9
5°	342.2	343.1	342.7	342.7	344.6
7.5°	360.8	362.8	362.8	363.8	364.8
10°	381.0	383.0	384.4	384.4	385.9
12.5°	401.2	402.1	403.6	403.6	403.6
15°	411.5	411.0	410.5	410.0	410.0
17.5°	410.0	408.0	407.1	406.1	406.6
20°	399.2	395.8	394.8	393.3	394.3
22.5°	380.5	375.6	373.6	371.2	372.2
25°	352.5	346.6	345.6	342.7	344.1
27.5°	320.0	317.1	316.6	316.1	318.6
30°	289.6	290.5	291.0	292.0	294.5
32.5°	261.5	263.5	264.0	264.5	267.9
35°	234.0	231.6	234.0	233.0	236.0
37.5°	204.0	202.1	200.1	197.6	199.6
40°	178.9	175.5	169.6	166.7	167.1
42.5°	159.3	154.9	149.9	147.0	147.0
45°	146.5	141.1	136.7	134.7	134.7
47.5°	136.7	134.2	131.8	130.3	130.3
50°	132.7	129.8	128.3	127.3	127.3
52.5°	129.8	126.8	125.4	124.4	123.4
55°	127.3	122.9	121.4	120.9	120.9
57.5°	123.9	120.0	118.0	117.5	117.5
60°	118.5	115.5	113.6	113.1	113.1
62.5°	113.1	110.1	108.2	108.2	108.2
63°	112.1	108.6	107.2	107.2	107.2
65°	107.7	104.2	102.7	102.7	102.3
67.5°	101.8	98.3	97.3	97.3	96.4
70°	94.9	91.9	90.9	91.4	89.5
72.5°	88.0	85.0	83.6	83.6	81.6
75°	80.1	77.2	75.2	74.7	72.8
77.5°	71.3	68.8	66.9	64.9	63.9
80°	61.9	60.0	57.5	56.0	54.6
82.5°	52.1	50.1	48.7	50.6	43.3
85°	40.8	38.8	36.9	39.8	31.0
87.5°	30.0	29.0	27.0	23.6	20.6
90°	0.0	0.0	0.0	0.0	0.0

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