

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: P239132

Luminaire Tested: **ARCH-AF24-20-D-U-T2U-7050**

Issue Date: 3/3/2020

**Test Information**

Test Method: LM-79-08  
Report Number: P239132  
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-AF24-20-D-U-T2U-7050  
Description: ARCHEON ROADWAY AND AREA LUMINAIRE  
(1) 70 CRI, 5000K, 260mA LIGHT ENGINE WITH 24 LEDS AND TYPE II U OPTICS  
Light Source: -  
Ballast/Driver: ELECTRONIC DRIVER

**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 2849 lumens  
Efficiency: N/A  
Efficacy: 135.7 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

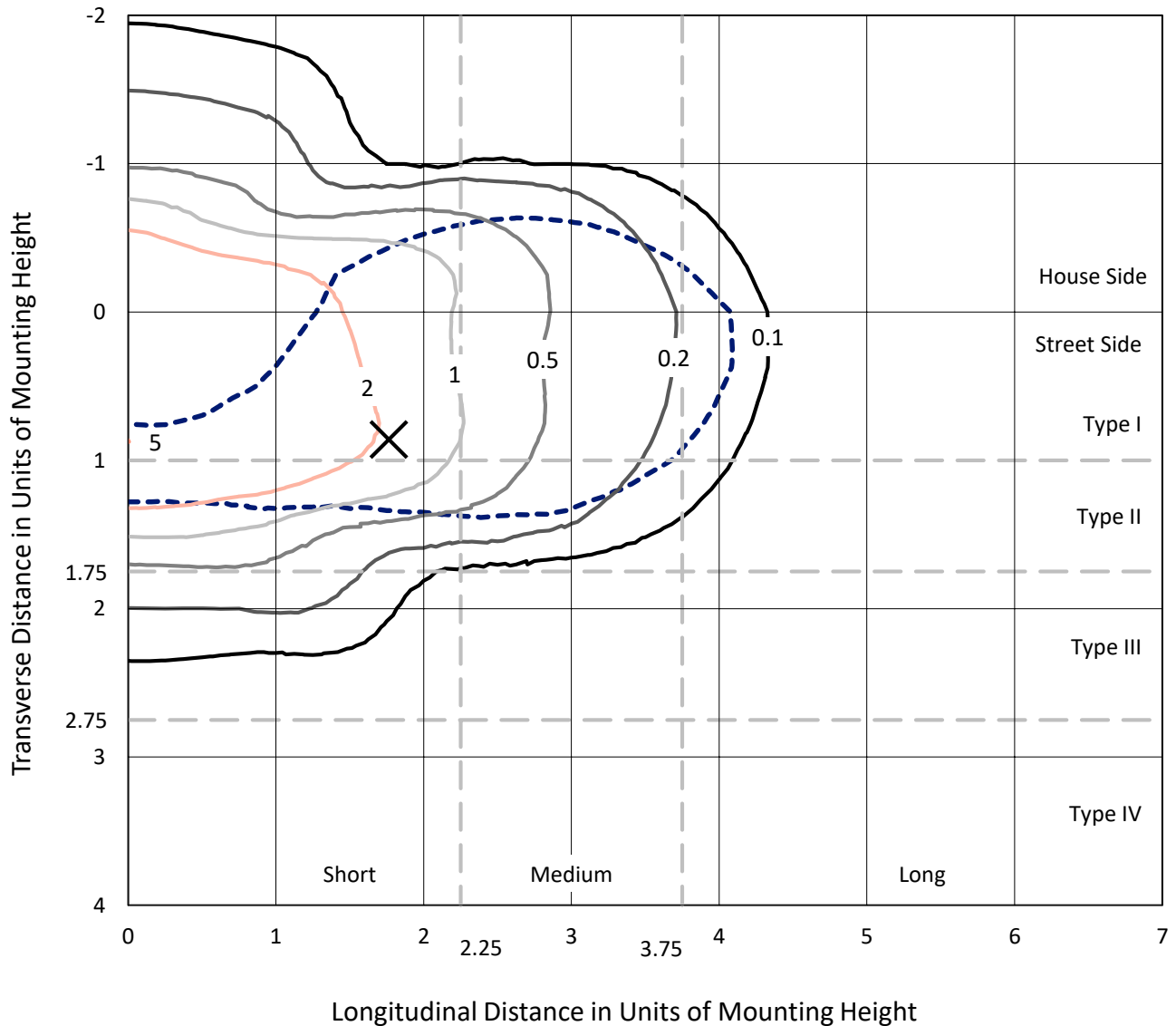
Input Watts (W): 21  
Input Voltage (V): NR  
Input Current (Ain): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 28.75 FT



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### Iso-Footcandle Lines of Horizontal Illumination

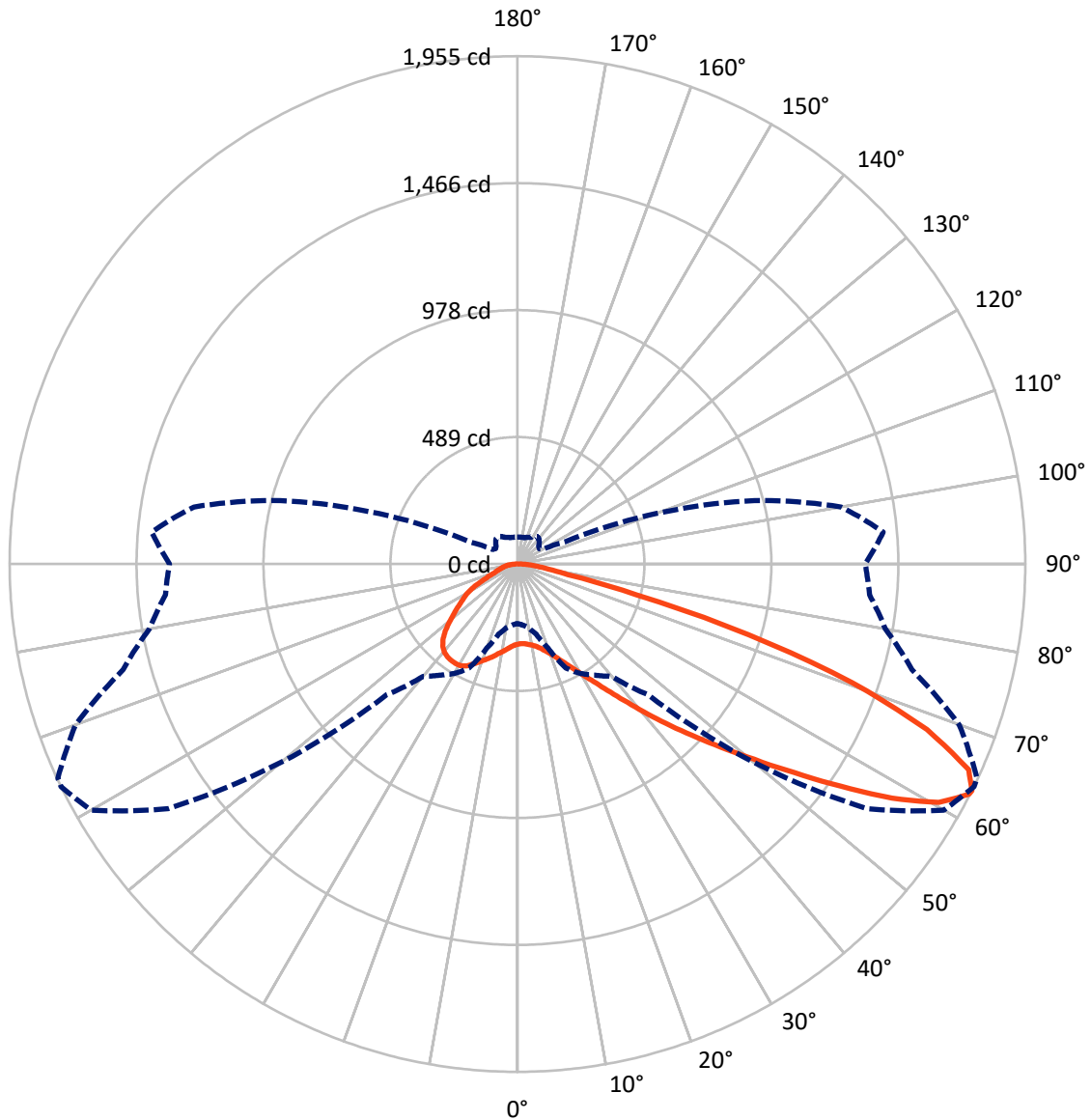
✕ Max cd  
 - - - 1/2 Max cd



Based on 10 foot mounting height. Maximum calculated value = 5 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	837.5	0.0	837.5
	% Fixture	29.4	0.0	29.4
<b>Street Side</b>	Lumens	2011.5	0.0	2011.5
	% Fixture	70.6	0.0	70.6
<b>Total</b>	Lumens	2849.0	0.0	2849.0
	% Fixture	100.0	0.0	100.0

**Coefficient of Utilization**

**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	30.8	1.1
10°-20°	102.6	3.6
20°-30°	192.6	6.8
30°-40°	322.8	11.3
40°-50°	541.6	19.0
50°-60°	686.6	24.1
60°-70°	605.7	21.3
70°-80°	312.7	11.0
80°-90°	53.5	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°	2849.0	100.0
0°-180°	2849.0	100.0



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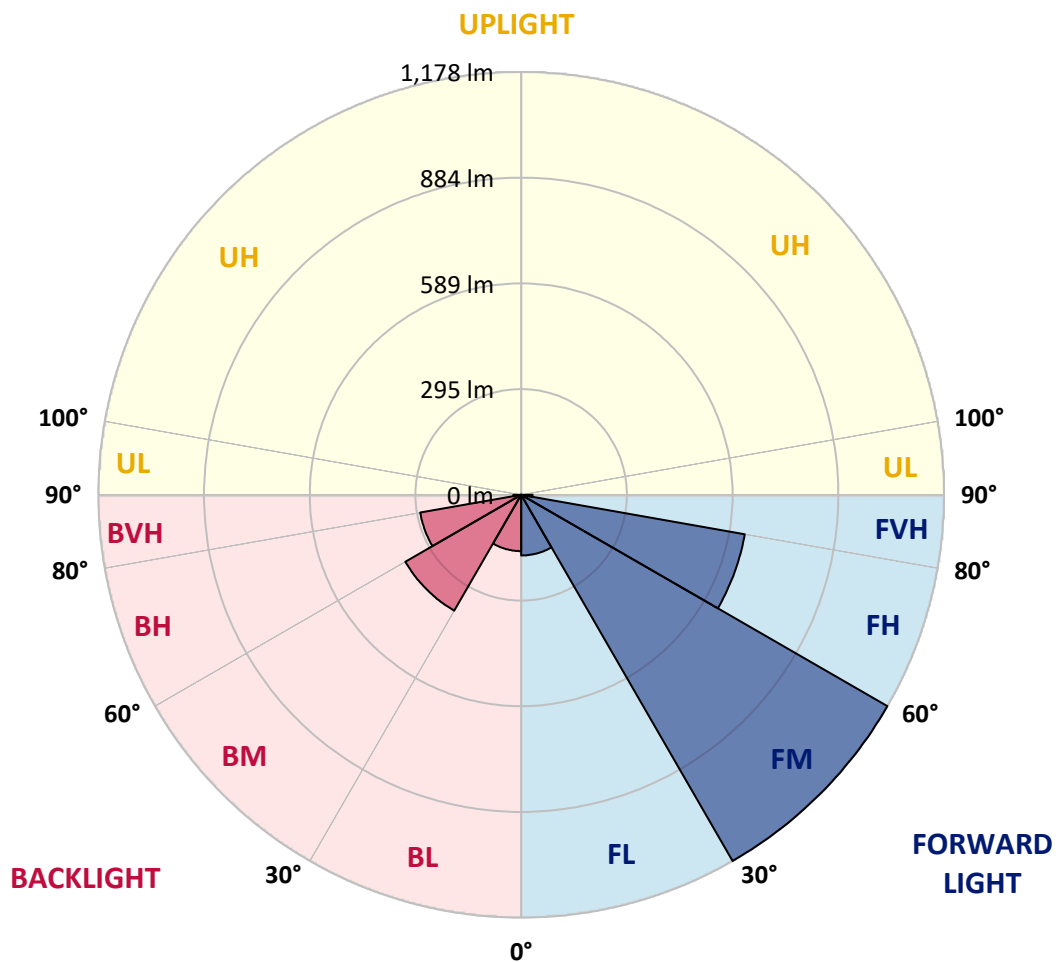
CATALOG NUMBER: ARCH-AF24-20-D-U-T2U-7050

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

Zone	Lumens	% Fixture	Zone Rating/Lumen Limit		
			B	U	G
FL (0°-30°)	169.1	5.9			
FM (30°-60°)	1178.3	41.4			
FH (60°-80°)	632.6	22.2			G0/660
FVH (80°-90°)	31.5	1.1			G1/100
BL (0°-30°)	156.9	5.5	B1/500		
BM (30°-60°)	372.8	13.1	B1/1000		
BH (60°-80°)	285.8	10.0	B1/500		G1/500
BVH (80°-90°)	22.0	0.8			G1/100
UL (90°-100°)	0.0	0.0		U0/0	
UH (100°-180°)	0.0	0.0		U0/0	

**BUG Rating: 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°	308.5	308.5	308.5	308.5	308.5	308.5	308.5	308.5	308.5	308.5	308.5
2.5°	306.6	306.2	306.2	306.2	306.2	305.7	306.2	307.1	306.6	306.2	307.1
5°	307.6	307.1	307.1	307.1	307.6	307.1	307.6	309.0	308.1	308.1	309.0
7.5°	310.0	309.5	310.0	309.5	309.5	309.5	310.0	311.4	310.9	311.4	312.8
10°	312.8	312.8	312.8	312.8	312.8	312.8	313.8	314.7	315.2	315.7	317.6
12.5°	321.4	321.4	321.4	320.9	320.9	319.5	321.4	322.4	323.3	324.3	325.7
15°	339.5	339.5	339.1	337.2	337.2	334.3	334.8	335.3	335.3	336.2	337.2
17.5°	363.4	362.9	362.0	360.5	358.6	355.3	354.3	353.4	351.9	351.5	351.5
20°	396.8	396.3	394.4	390.6	388.2	382.9	379.1	375.3	373.9	371.5	371.0
22.5°	444.5	444.5	440.6	434.9	433.0	422.0	411.1	403.0	400.1	396.8	396.8
25°	502.2	501.7	496.4	489.8	481.7	470.2	456.9	445.9	438.7	431.1	428.2
27.5°	571.3	569.9	562.7	554.6	539.4	525.1	509.3	497.9	485.5	475.9	467.3
30°	652.4	650.9	638.6	623.3	607.6	593.2	570.4	556.5	537.0	525.5	516.0
32.5°	746.3	744.9	722.5	707.7	691.0	673.4	646.2	624.2	599.4	583.2	569.9
35°	866.0	860.3	828.4	807.8	781.6	764.0	735.4	705.8	676.7	653.8	634.3
37.5°	995.3	988.6	960.4	929.9	904.2	882.7	842.2	805.0	770.6	739.2	714.9
40°	1130.2	1112.6	1082.5	1060.1	1042.5	1022.0	979.5	940.4	886.5	851.2	814.5
42.5°	1223.7	1206.5	1185.5	1170.8	1162.2	1146.4	1122.6	1088.7	1040.6	1041.5	944.7
45°	1285.2	1259.9	1245.6	1246.6	1249.9	1249.9	1245.6	1240.4	1219.4	1233.7	1152.6
47.5°	1263.3	1246.6	1237.5	1256.6	1280.4	1304.3	1331.9	1362.0	1396.3	1436.9	1337.2
50°	1134.5	1140.7	1145.0	1185.5	1236.6	1290.9	1354.4	1436.4	1532.2	1550.8	1502.7
52.5°	929.0	942.3	956.6	1018.6	1085.9	1179.8	1290.9	1426.4	1555.1	1631.0	1626.2
55°	721.5	738.2	768.7	815.0	868.4	957.1	1094.5	1303.3	1504.1	1624.8	1698.2
57.5°	513.6	537.9	578.0	642.4	689.6	739.7	841.2	1073.0	1292.8	1517.5	1686.3
60°	341.5	352.9	379.1	459.2	538.9	591.3	663.3	747.3	927.1	1236.6	1563.2
62.5°	242.3	249.9	266.1	302.3	374.4	469.3	512.7	551.3	609.0	795.4	1255.2
63°	228.9	235.6	248.9	279.5	344.3	442.6	486.9	522.2	564.2	711.5	1187.4
65°	189.8	192.7	199.8	214.6	249.4	331.0	403.4	424.9	432.1	457.3	743.9
67.5°	160.2	162.1	164.5	168.8	182.6	220.3	300.9	328.1	320.0	302.8	367.7
70°	139.3	140.7	144.5	149.7	154.5	164.0	207.0	247.5	238.4	215.1	225.1
72.5°	111.1	113.5	117.8	126.9	136.4	148.8	159.3	184.6	178.8	156.4	158.8
75°	87.7	89.2	93.0	99.7	108.7	123.0	143.5	152.1	136.4	115.4	115.4
77.5°	69.6	71.1	74.4	79.6	85.4	95.4	109.7	132.1	122.6	86.8	86.3
80°	52.5	53.9	57.2	62.0	67.7	74.9	83.5	93.5	112.5	81.1	64.9
82.5°	38.6	39.1	44.8	48.2	50.1	55.8	62.9	68.7	77.3	74.9	57.7
85°	29.1	28.6	32.4	34.8	35.3	36.7	41.0	46.7	50.5	48.6	44.8
87.5°	16.2	14.3	16.7	19.1	19.1	19.6	20.5	23.8	27.2	26.2	23.8
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°	308.5	308.5	308.5	308.5	308.5	308.5	308.5	308.5	308.5	308.5	308.5
2.5°	307.1	307.1	306.6	306.6	307.1	307.1	306.6	308.1	309.0	309.0	309.5
5°	308.5	309.0	308.5	308.5	309.0	309.0	309.5	310.9	312.4	313.3	314.7
7.5°	312.8	313.3	312.8	312.8	313.3	313.8	314.7	316.7	317.6	319.5	321.9
10°	317.6	318.1	317.6	318.1	318.6	319.0	320.5	321.9	323.3	325.2	329.1
12.5°	326.2	326.7	325.7	326.2	327.6	327.6	328.6	329.5	331.9	334.3	338.1
15°	338.1	338.1	337.2	337.6	339.1	339.1	339.5	340.5	343.4	346.2	350.0
17.5°	351.9	352.9	352.4	352.9	353.8	354.3	354.3	355.3	357.2	359.1	362.9
20°	370.5	371.0	370.1	371.0	372.0	371.0	370.1	369.6	370.5	371.5	375.8
22.5°	395.8	395.3	393.0	393.0	393.0	391.0	388.7	385.8	385.8	384.4	387.7
25°	425.9	424.4	421.1	421.6	418.2	415.4	411.1	406.8	403.0	401.5	402.0
27.5°	461.1	458.3	454.9	454.0	450.7	445.4	438.3	430.2	424.0	419.2	418.2
30°	505.5	499.3	493.6	492.6	487.4	478.8	467.3	456.4	445.9	437.8	434.9
32.5°	558.0	548.4	539.4	538.4	529.8	518.4	504.5	489.3	474.0	461.1	454.9
35°	619.5	605.2	596.6	594.2	581.8	567.5	552.2	532.7	511.2	493.1	481.7
37.5°	694.3	679.6	664.8	665.3	648.1	631.4	610.9	587.0	559.9	534.6	518.4
40°	786.9	765.9	746.8	742.5	727.7	704.4	681.9	654.3	620.9	587.5	564.2
42.5°	898.9	864.6	838.4	834.6	815.0	786.4	759.2	722.5	688.6	648.1	620.0
45°	1026.3	971.4	939.9	934.2	902.7	873.7	840.8	801.6	760.2	714.4	681.0
47.5°	1184.6	1106.4	1053.0	1043.4	1000.0	961.9	927.5	884.1	834.6	783.5	746.8
50°	1369.1	1253.7	1181.7	1166.9	1108.8	1063.9	1020.1	965.7	912.8	859.3	816.9
52.5°	1554.2	1430.2	1334.3	1316.2	1230.4	1170.3	1112.6	1058.2	995.7	942.8	894.6
55°	1703.0	1620.5	1509.3	1484.1	1361.0	1279.5	1203.7	1141.7	1079.7	1037.7	981.0
57.5°	1792.6	1788.3	1700.6	1665.8	1497.4	1376.8	1292.4	1221.8	1161.7	1144.1	1068.7
60°	1790.2	1901.3	1863.7	1837.4	1635.2	1476.4	1366.8	1290.5	1240.9	1260.9	1156.9
62.5°	1681.0	1906.1	1951.4	1944.3	1782.1	1556.6	1427.8	1349.1	1322.9	1382.5	1248.5
63°	1641.4	1895.1	1955.2	1952.4	1810.3	1571.8	1438.3	1360.6	1339.1	1413.5	1265.2
65°	1387.3	1799.3	1909.0	1921.9	1870.8	1624.3	1462.6	1389.6	1387.3	1482.6	1304.8
67.5°	845.5	1520.3	1700.6	1725.4	1785.5	1641.0	1448.8	1379.6	1414.0	1492.7	1292.8
70°	361.5	1003.4	1366.8	1406.8	1553.7	1558.0	1409.2	1338.6	1407.8	1414.4	1208.0
72.5°	214.1	473.1	930.4	1017.7	1229.4	1340.5	1318.6	1267.1	1326.2	1242.3	1028.6
75°	151.6	221.3	472.6	565.6	856.0	1023.4	1107.8	1131.7	1129.3	985.2	772.1
77.5°	108.7	142.1	199.3	235.1	477.8	657.1	760.2	829.8	807.4	659.5	475.9
80°	75.8	98.2	122.1	129.7	221.8	337.6	400.6	431.1	417.8	329.5	213.2
82.5°	54.8	64.4	78.7	83.5	111.6	155.9	185.5	163.6	156.9	121.6	92.0
85°	42.4	41.5	49.1	51.0	65.3	81.5	83.5	64.9	56.7	50.5	51.5
87.5°	30.0	25.8	26.2	27.2	33.9	43.4	42.4	26.7	22.9	24.3	27.7
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°	308.5	308.5	308.5	308.5	308.5	308.5	308.5	308.5	308.5	308.5	308.5
2.5°	310.5	310.9	311.9	312.4	313.3	313.3	314.3	314.7	315.7	316.7	317.1
5°	316.2	317.6	319.5	320.5	322.4	323.8	325.7	326.7	328.6	330.0	331.9
7.5°	324.8	327.1	329.5	332.4	335.3	337.6	339.5	341.9	345.3	347.7	349.1
10°	332.9	336.2	340.5	343.8	348.1	351.5	354.3	358.6	362.4	365.8	367.7
12.5°	343.4	347.7	351.9	357.2	362.9	367.2	371.5	377.2	382.5	386.3	388.2
15°	355.8	361.0	365.8	372.0	378.6	384.4	390.6	396.8	400.6	400.6	399.6
17.5°	368.6	372.9	378.6	385.8	394.9	402.0	405.4	406.3	404.9	401.5	399.2
20°	381.5	385.3	391.5	400.1	409.6	411.1	407.7	403.4	399.2	393.4	389.6
22.5°	392.0	397.2	406.8	416.8	417.3	409.2	400.1	393.0	386.3	379.6	372.4
25°	404.4	411.6	424.4	428.2	415.8	400.6	387.7	377.2	366.2	355.3	347.2
27.5°	419.7	430.2	443.0	432.1	407.7	386.3	368.6	352.9	338.6	323.3	314.3
30°	435.9	452.1	454.9	426.3	393.9	366.2	342.4	318.6	300.4	286.6	281.4
32.5°	455.4	476.4	459.2	416.3	375.3	339.1	307.1	278.5	263.2	254.7	252.3
35°	485.0	502.2	461.6	405.8	353.8	306.6	266.6	243.7	234.2	228.4	225.6
37.5°	527.4	527.0	461.1	393.0	329.1	271.3	234.2	217.9	210.3	205.5	200.3
40°	577.0	546.0	458.3	374.4	295.7	237.5	211.7	196.5	189.3	183.6	177.4
42.5°	626.2	558.9	450.2	346.7	254.2	213.2	195.5	181.7	174.1	167.9	159.3
45°	668.6	564.2	434.4	308.5	217.0	194.1	185.0	173.1	164.0	154.5	147.8
47.5°	702.0	563.2	409.2	263.7	192.2	180.7	176.4	168.3	157.4	145.5	136.9
50°	730.1	556.0	374.8	224.1	175.5	168.8	167.4	165.0	147.4	137.3	132.1
52.5°	755.9	545.6	338.1	197.4	161.2	155.5	158.3	155.9	143.5	135.0	129.7
55°	791.2	538.4	301.9	176.9	144.5	143.1	145.5	148.8	141.2	133.1	127.3
57.5°	832.6	542.2	274.2	154.0	128.8	129.7	137.8	142.6	138.8	130.2	124.5
60°	880.3	553.7	249.9	132.1	115.9	118.3	130.2	136.9	136.4	126.4	119.7
62.5°	933.7	565.6	211.3	115.4	104.9	108.7	121.1	129.7	131.1	122.6	114.5
63°	944.2	566.5	201.2	112.1	103.0	107.3	118.7	127.8	129.7	121.6	113.5
65°	970.0	558.0	162.1	103.0	95.4	100.1	111.6	119.7	123.5	116.4	109.7
67.5°	948.5	487.9	122.1	92.0	89.2	92.5	102.5	110.2	113.5	110.2	103.5
70°	867.5	354.8	95.4	82.0	82.5	84.9	92.5	99.7	103.5	102.5	96.3
72.5°	698.6	201.2	79.6	73.4	74.9	77.7	83.0	89.7	93.0	92.5	88.2
75°	460.2	103.0	67.2	65.8	66.8	69.1	73.0	78.2	82.0	81.5	79.6
77.5°	228.0	71.5	57.7	58.2	58.7	60.6	63.4	68.2	70.6	71.1	70.6
80°	93.9	55.8	49.6	50.1	50.5	52.0	53.9	58.2	59.6	60.6	61.0
82.5°	56.3	42.4	39.6	40.5	41.0	42.4	43.9	47.7	49.1	50.5	50.5
85°	37.2	29.6	28.6	29.6	30.5	31.5	32.0	34.3	36.7	38.6	39.6
87.5°	20.0	17.6	17.2	17.6	17.6	18.6	19.6	21.9	24.8	26.7	27.7
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°	308.5	308.5	308.5	308.5	308.5
2.5°	316.2	316.7	316.2	316.7	317.1
5°	331.9	332.9	332.4	332.4	334.3
7.5°	350.0	351.9	351.9	352.9	353.8
10°	369.6	371.5	372.9	372.9	374.4
12.5°	389.1	390.1	391.5	391.5	391.5
15°	399.2	398.7	398.2	397.7	397.7
17.5°	397.7	395.8	394.9	393.9	394.4
20°	387.2	383.9	382.9	381.5	382.5
22.5°	369.1	364.3	362.4	360.0	361.0
25°	341.9	336.2	335.3	332.4	333.8
27.5°	310.5	307.6	307.1	306.6	309.0
30°	280.9	281.8	282.3	283.3	285.7
32.5°	253.7	255.6	256.1	256.6	259.9
35°	227.0	224.6	227.0	226.0	228.9
37.5°	197.9	196.0	194.1	191.7	193.6
40°	173.6	170.2	164.5	161.7	162.1
42.5°	154.5	150.2	145.5	142.6	142.6
45°	142.1	136.9	132.6	130.7	130.7
47.5°	132.6	130.2	127.8	126.4	126.4
50°	128.8	125.9	124.5	123.5	123.5
52.5°	125.9	123.0	121.6	120.7	119.7
55°	123.5	119.2	117.8	117.3	117.3
57.5°	120.2	116.4	114.5	114.0	114.0
60°	114.9	112.1	110.2	109.7	109.7
62.5°	109.7	106.8	104.9	104.9	104.9
63°	108.7	105.4	104.0	104.0	104.0
65°	104.4	101.1	99.7	99.7	99.2
67.5°	98.7	95.4	94.4	94.4	93.5
70°	92.0	89.2	88.2	88.7	86.8
72.5°	85.4	82.5	81.1	81.1	79.2
75°	77.7	74.9	73.0	72.5	70.6
77.5°	69.1	66.8	64.9	62.9	62.0
80°	60.1	58.2	55.8	54.4	52.9
82.5°	50.5	48.6	47.2	49.1	42.0
85°	39.6	37.7	35.8	38.6	30.0
87.5°	29.1	28.1	26.2	22.9	20.0
90°	0.0	0.0	0.0	0.0	0.0

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