

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: P239155

Luminaire Tested: **ARCH-AF16-20-D-U-T2U-8027**

Issue Date: 3/3/2020

**Test Information**

Test Method: LM-79-08  
Report Number: P239155  
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-AF16-20-D-U-T2U-8027  
Description: ARCHEON ROADWAY AND AREA LUMINAIRE  
(1) 80 CRI, 2700K, 420mA LIGHT ENGINE WITH 16 LEDS AND TYPE II U OPTICS  
Light Source: -  
Ballast/Driver: ELECTRONIC DRIVER

**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 2314 lumens  
Efficiency: N/A  
Efficacy: 96.4 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

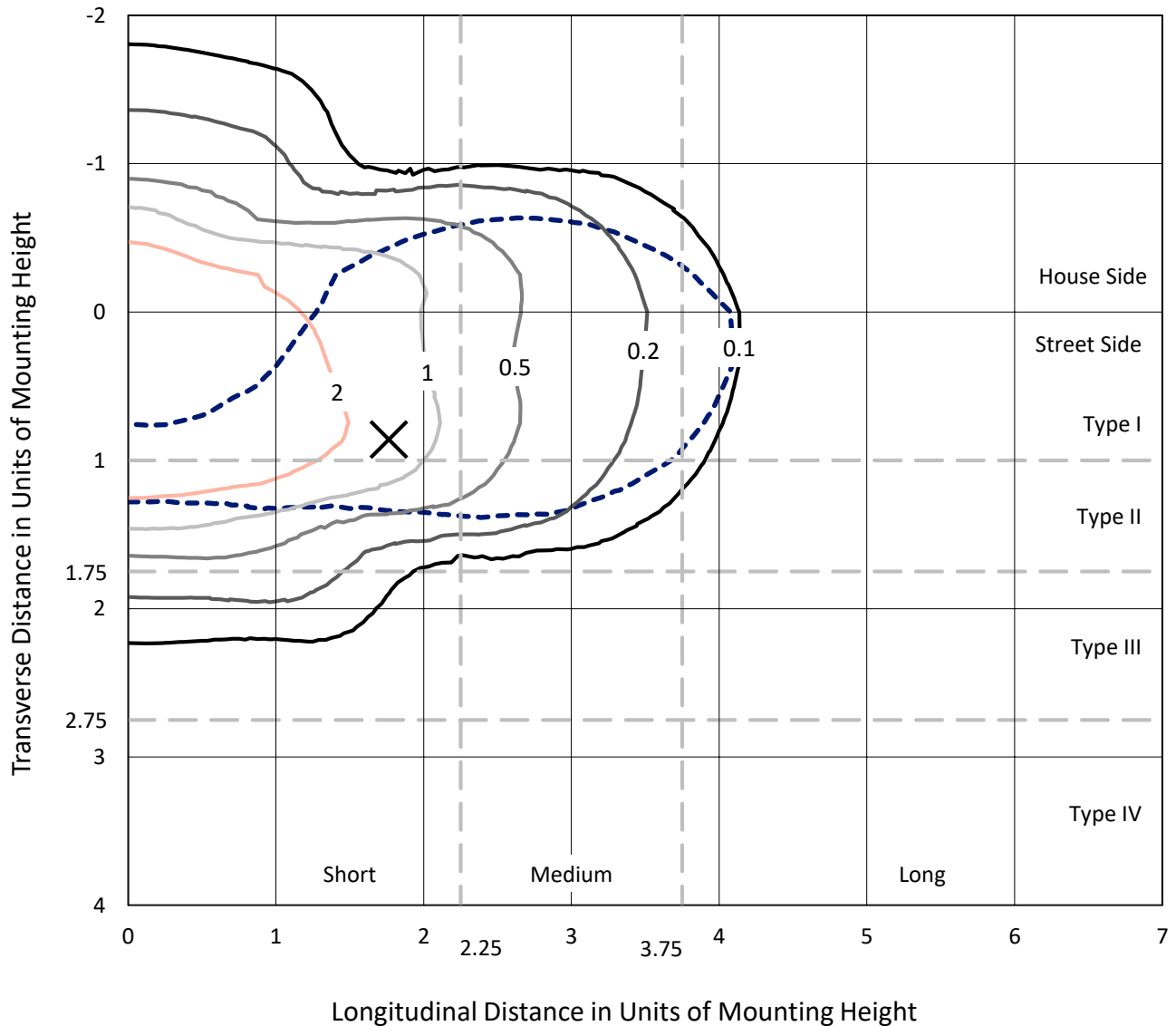
Input Watts (W): 24  
Input Voltage (V): NR  
Input Current (Ain): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 28.75 FT



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### Iso-Footcandle Lines of Horizontal Illumination

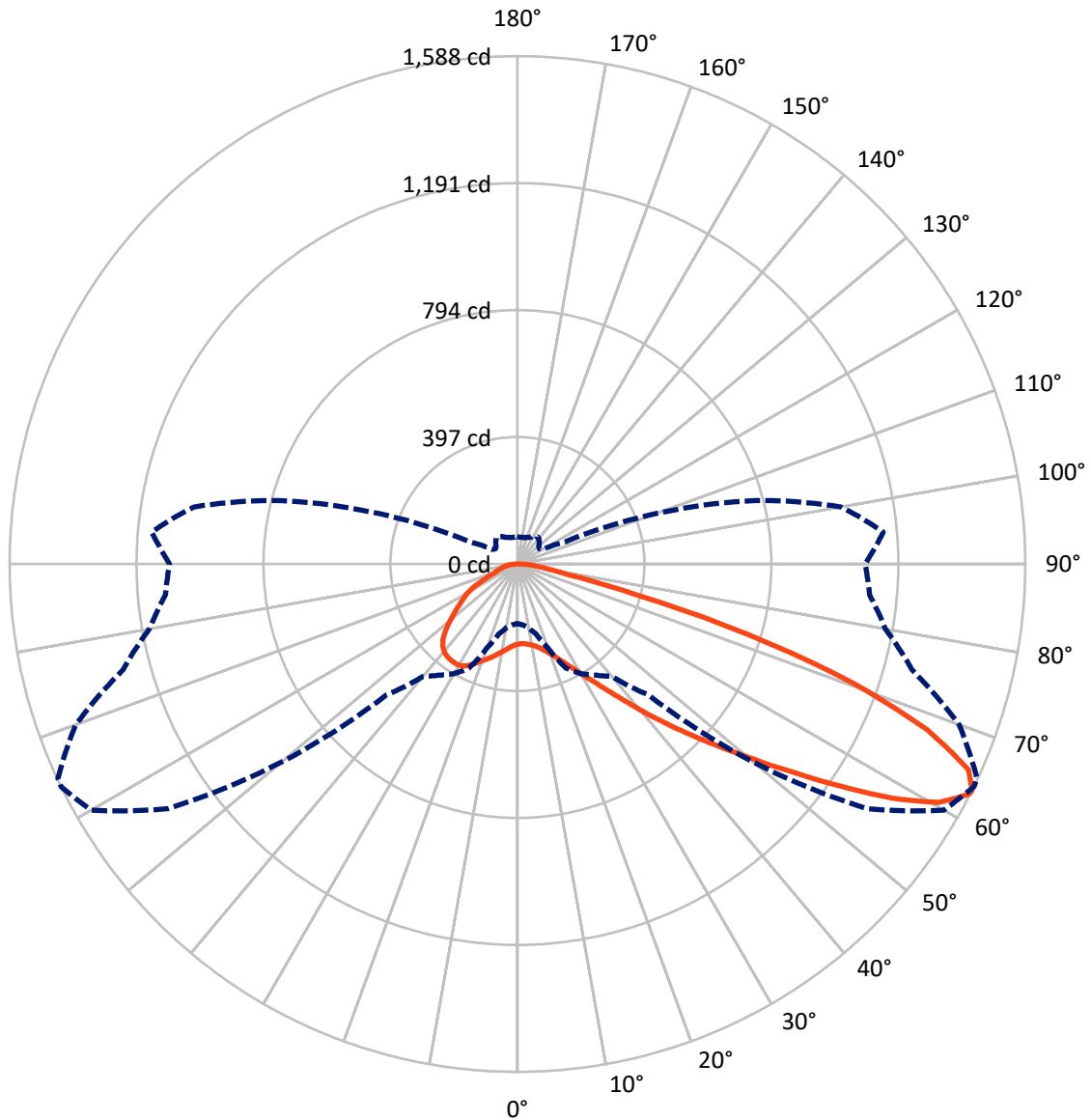
× Max cd  
 - - - 1/2 Max cd



Based on 10 foot mounting height. Maximum calculated value = 4.1 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	680.2	0.0	680.2
	% Fixture	29.4	0.0	29.4
<b>Street Side</b>	Lumens	1633.8	0.0	1633.8
	% Fixture	70.6	0.0	70.6
<b>Total</b>	Lumens	2314.0	0.0	2314.0
	% Fixture	100.0	0.0	100.0

**Coefficient of Utilization**

**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	25.0	1.1
10°-20°	83.3	3.6
20°-30°	156.4	6.8
30°-40°	262.2	11.3
40°-50°	439.9	19.0
50°-60°	557.7	24.1
60°-70°	492.0	21.3
70°-80°	254.0	11.0
80°-90°	43.5	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°	2314.0	100.0
0°-180°	2314.0	100.0



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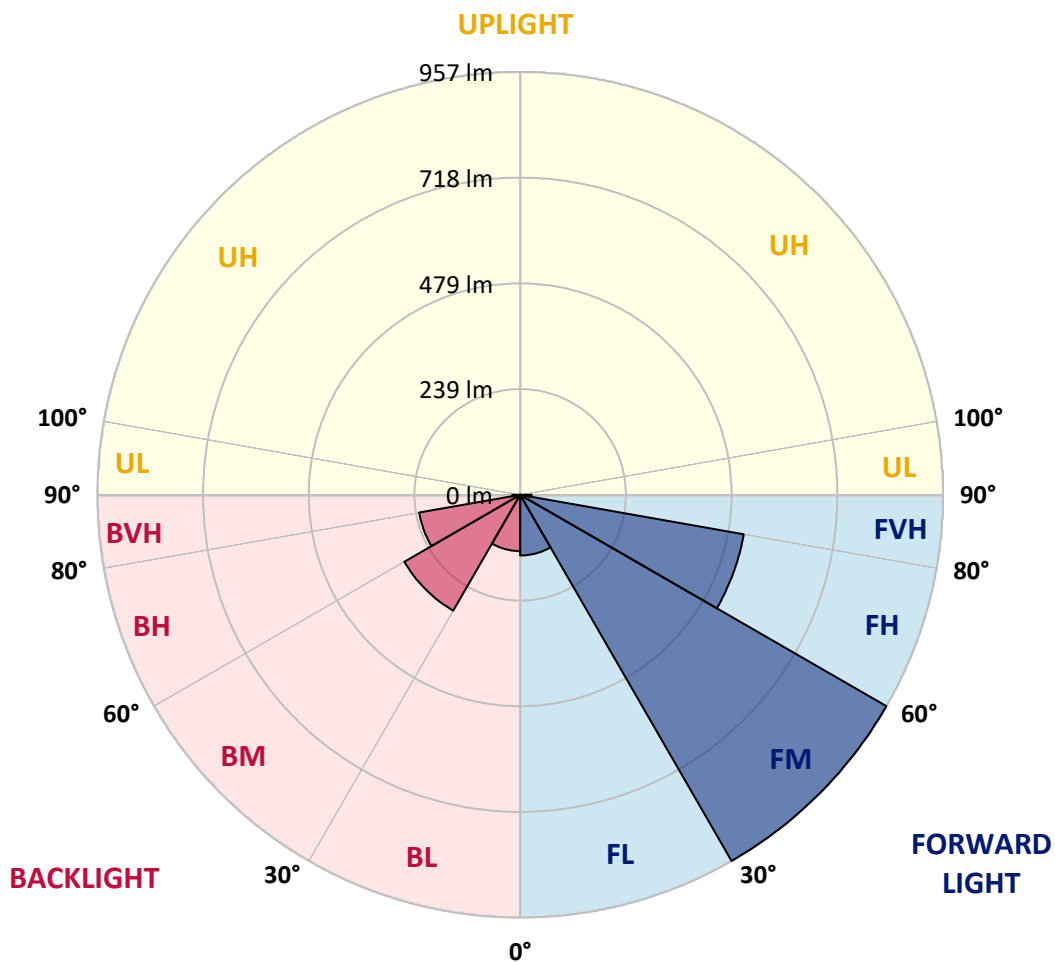
CATALOG NUMBER: ARCH-AF16-20-D-U-T2U-8027

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

Zone		Lumens	% Fixture	Zone Rating/Lumen Limit		
				B	U	G
FL	(0°-30°)	137.3	5.9			
FM	(30°-60°)	957.0	41.4			
FH	(60°-80°)	513.8	22.2			G0/660
FVH	(80°-90°)	25.6	1.1			G1/100
BL	(0°-30°)	127.5	5.5	B1/500		
BM	(30°-60°)	302.8	13.1	B1/1000		
BH	(60°-80°)	232.1	10.0	B1/500		G1/500
BVH	(80°-90°)	17.9	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°	250.6	250.6	250.6	250.6	250.6	250.6	250.6	250.6	250.6	250.6	250.6
2.5°	249.1	248.7	248.7	248.7	248.7	248.3	248.7	249.4	249.1	248.7	249.4
5°	249.8	249.4	249.4	249.4	249.8	249.4	249.8	251.0	250.2	250.2	251.0
7.5°	251.8	251.4	251.8	251.4	251.4	251.4	251.8	252.9	252.5	252.9	254.1
10°	254.1	254.1	254.1	254.1	254.1	254.1	254.9	255.6	256.0	256.4	258.0
12.5°	261.1	261.1	261.1	260.7	260.7	259.5	261.1	261.8	262.6	263.4	264.5
15°	275.8	275.8	275.4	273.8	273.8	271.5	271.9	272.3	272.3	273.1	273.8
17.5°	295.1	294.8	294.0	292.8	291.3	288.6	287.8	287.0	285.9	285.5	285.5
20°	322.3	321.9	320.3	317.2	315.3	311.0	307.9	304.8	303.7	301.7	301.3
22.5°	361.0	361.0	357.9	353.2	351.7	342.8	333.9	327.3	325.0	322.3	322.3
25°	407.9	407.5	403.2	397.8	391.2	381.9	371.1	362.2	356.3	350.2	347.8
27.5°	464.0	462.9	457.1	450.5	438.1	426.5	413.7	404.4	394.3	386.6	379.6
30°	529.9	528.7	518.6	506.2	493.5	481.8	463.3	452.0	436.1	426.8	419.1
32.5°	606.2	605.0	586.8	574.8	561.2	546.9	524.8	507.0	486.9	473.7	462.9
35°	703.4	698.8	672.8	656.1	634.8	620.5	597.3	573.3	549.6	531.0	515.2
37.5°	808.4	802.9	780.1	755.3	734.4	717.0	684.0	653.8	625.9	600.4	580.6
40°	918.0	903.7	879.2	861.0	846.7	830.1	795.6	763.8	720.1	691.4	661.6
42.5°	993.9	980.0	962.9	950.9	943.9	931.2	911.8	884.3	845.2	845.9	767.3
45°	1043.9	1023.3	1011.7	1012.5	1015.2	1015.2	1011.7	1007.5	990.4	1002.0	936.2
47.5°	1026.0	1012.5	1005.1	1020.6	1040.0	1059.4	1081.8	1106.2	1134.1	1167.0	1086.1
50°	921.5	926.5	930.0	962.9	1004.4	1048.5	1100.0	1166.7	1244.5	1259.6	1220.5
52.5°	754.5	765.4	777.0	827.3	882.0	958.3	1048.5	1158.5	1263.1	1324.7	1320.8
55°	586.0	599.6	624.4	662.0	705.3	777.4	888.9	1058.6	1221.7	1319.6	1379.3
57.5°	417.2	436.9	469.4	521.7	560.1	600.8	683.3	871.5	1050.1	1232.5	1369.6
60°	277.3	286.6	307.9	373.0	437.7	480.3	538.8	607.0	753.0	1004.4	1269.7
62.5°	196.8	203.0	216.1	245.6	304.1	381.1	416.4	447.8	494.6	646.1	1019.5
63°	185.9	191.3	202.2	227.0	279.7	359.4	395.5	424.1	458.2	577.9	964.5
65°	154.2	156.5	162.3	174.3	202.6	268.8	327.7	345.1	350.9	371.5	604.2
67.5°	130.1	131.7	133.6	137.1	148.3	178.9	244.4	266.5	259.9	246.0	298.6
70°	113.1	114.3	117.4	121.6	125.5	133.2	168.1	201.0	193.7	174.7	182.8
72.5°	90.2	92.2	95.7	103.0	110.8	120.8	129.4	149.9	145.3	127.0	129.0
75°	71.3	72.4	75.5	81.0	88.3	99.9	116.6	123.6	110.8	93.7	93.7
77.5°	56.6	57.7	60.4	64.7	69.3	77.5	89.1	107.3	99.5	70.5	70.1
80°	42.6	43.8	46.5	50.4	55.0	60.8	67.8	75.9	91.4	65.8	52.7
82.5°	31.4	31.8	36.4	39.1	40.7	45.3	51.1	55.8	62.7	60.8	46.9
85°	23.6	23.2	26.3	28.3	28.7	29.8	33.3	38.0	41.1	39.5	36.4
87.5°	13.2	11.6	13.6	15.5	15.5	15.9	16.7	19.4	22.1	21.3	19.4
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°	250.6	250.6	250.6	250.6	250.6	250.6	250.6	250.6	250.6	250.6	250.6
2.5°	249.4	249.4	249.1	249.1	249.4	249.4	249.1	250.2	251.0	251.0	251.4
5°	250.6	251.0	250.6	250.6	251.0	251.0	251.4	252.5	253.7	254.5	255.6
7.5°	254.1	254.5	254.1	254.1	254.5	254.9	255.6	257.2	258.0	259.5	261.5
10°	258.0	258.4	258.0	258.4	258.7	259.1	260.3	261.5	262.6	264.2	267.3
12.5°	264.9	265.3	264.5	264.9	266.1	266.1	266.9	267.6	269.6	271.5	274.6
15°	274.6	274.6	273.8	274.2	275.4	275.4	275.8	276.6	278.9	281.2	284.3
17.5°	285.9	286.6	286.2	286.6	287.4	287.8	287.8	288.6	290.1	291.7	294.8
20°	301.0	301.3	300.6	301.3	302.1	301.3	300.6	300.2	301.0	301.7	305.2
22.5°	321.5	321.1	319.2	319.2	319.2	317.6	315.7	313.4	313.4	312.2	314.9
25°	345.9	344.7	342.0	342.4	339.7	337.4	333.9	330.4	327.3	326.1	326.5
27.5°	374.6	372.2	369.5	368.7	366.0	361.8	356.0	349.4	344.3	340.5	339.7
30°	410.6	405.5	400.9	400.1	395.9	388.9	379.6	370.7	362.2	355.6	353.2
32.5°	453.2	445.4	438.1	437.3	430.3	421.0	409.8	397.4	385.0	374.6	369.5
35°	503.1	491.5	484.6	482.6	472.5	460.9	448.5	432.7	415.2	400.5	391.2
37.5°	564.0	552.0	539.9	540.3	526.4	512.8	496.2	476.8	454.7	434.2	421.0
40°	639.1	622.1	606.6	603.1	591.1	572.1	553.9	531.4	504.3	477.2	458.2
42.5°	730.1	702.2	680.9	677.8	662.0	638.7	616.6	586.8	559.3	526.4	503.5
45°	833.5	789.0	763.4	758.8	733.2	709.6	682.9	651.1	617.4	580.2	553.1
47.5°	962.1	898.6	855.2	847.5	812.2	781.3	753.4	718.1	677.8	636.4	606.6
50°	1112.0	1018.3	959.8	947.8	900.6	864.1	828.5	784.4	741.4	698.0	663.5
52.5°	1262.3	1161.6	1083.8	1069.0	999.3	950.5	903.7	859.5	808.8	765.8	726.6
55°	1383.2	1316.2	1225.9	1205.4	1105.5	1039.2	977.6	927.3	876.9	842.8	796.7
57.5°	1456.0	1452.5	1381.2	1353.0	1216.2	1118.2	1049.7	992.4	943.5	929.2	868.0
60°	1454.1	1544.3	1513.7	1492.4	1328.2	1199.2	1110.1	1048.1	1007.8	1024.1	939.7
62.5°	1365.4	1548.2	1585.0	1579.2	1447.5	1264.3	1159.7	1095.8	1074.5	1122.9	1014.0
63°	1333.2	1539.3	1588.1	1585.7	1470.3	1276.7	1168.2	1105.1	1087.6	1148.1	1027.6
65°	1126.8	1461.4	1550.5	1561.0	1519.5	1319.3	1188.0	1128.7	1126.8	1204.2	1059.7
67.5°	686.7	1234.8	1381.2	1401.4	1450.2	1332.8	1176.7	1120.6	1148.4	1212.4	1050.1
70°	293.6	815.0	1110.1	1142.6	1261.9	1265.4	1144.6	1087.2	1143.4	1148.8	981.1
72.5°	173.9	384.2	755.7	826.6	998.5	1088.8	1071.0	1029.1	1077.2	1009.0	835.5
75°	123.2	179.7	383.8	459.4	695.3	831.2	899.8	919.1	917.2	800.2	627.1
77.5°	88.3	115.4	161.9	191.0	388.1	533.7	617.4	674.0	655.8	535.7	386.6
80°	61.6	79.8	99.2	105.4	180.1	274.2	325.4	350.2	339.3	267.6	173.1
82.5°	44.5	52.3	63.9	67.8	90.6	126.7	150.7	132.9	127.4	98.8	74.8
85°	34.5	33.7	39.9	41.4	53.1	66.2	67.8	52.7	46.1	41.1	41.8
87.5°	24.4	20.9	21.3	22.1	27.5	35.2	34.5	21.7	18.6	19.8	22.5
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°	250.6	250.6	250.6	250.6	250.6	250.6	250.6	250.6	250.6	250.6	250.6
2.5°	252.2	252.5	253.3	253.7	254.5	254.5	255.3	255.6	256.4	257.2	257.6
5°	256.8	258.0	259.5	260.3	261.8	263.0	264.5	265.3	266.9	268.0	269.6
7.5°	263.8	265.7	267.6	270.0	272.3	274.2	275.8	277.7	280.4	282.4	283.5
10°	270.4	273.1	276.6	279.3	282.8	285.5	287.8	291.3	294.4	297.1	298.6
12.5°	278.9	282.4	285.9	290.1	294.8	298.2	301.7	306.4	310.6	313.7	315.3
15°	289.0	293.2	297.1	302.1	307.5	312.2	317.2	322.3	325.4	325.4	324.6
17.5°	299.4	302.9	307.5	313.4	320.7	326.5	329.2	330.0	328.8	326.1	324.2
20°	309.9	313.0	318.0	325.0	332.7	333.9	331.2	327.7	324.2	319.6	316.5
22.5°	318.4	322.6	330.4	338.5	338.9	332.3	325.0	319.2	313.7	308.3	302.5
25°	328.5	334.3	344.7	347.8	337.8	325.4	314.9	306.4	297.5	288.6	282.0
27.5°	340.9	349.4	359.8	350.9	331.2	313.7	299.4	286.6	275.0	262.6	255.3
30°	354.0	367.2	369.5	346.3	319.9	297.5	278.1	258.7	244.0	232.8	228.5
32.5°	369.9	386.9	373.0	338.1	304.8	275.4	249.4	226.2	213.8	206.8	204.9
35°	393.9	407.9	374.9	329.6	287.4	249.1	216.5	197.9	190.2	185.5	183.2
37.5°	428.4	428.0	374.6	319.2	267.3	220.4	190.2	177.0	170.8	166.9	162.7
40°	468.7	443.5	372.2	304.1	240.1	192.9	172.0	159.6	153.8	149.1	144.1
42.5°	508.6	454.0	365.6	281.6	206.4	173.1	158.8	147.6	141.4	136.3	129.4
45°	543.0	458.2	352.9	250.6	176.2	157.6	150.3	140.6	133.2	125.5	120.1
47.5°	570.2	457.4	332.3	214.2	156.1	146.8	143.3	136.7	127.8	118.1	111.2
50°	593.0	451.6	304.4	182.0	142.5	137.1	136.0	134.0	119.7	111.6	107.3
52.5°	613.9	443.1	274.6	160.4	130.9	126.3	128.6	126.7	116.6	109.6	105.4
55°	642.6	437.3	245.2	143.7	117.4	116.2	118.1	120.8	114.7	108.1	103.4
57.5°	676.3	440.4	222.7	125.1	104.6	105.4	111.9	115.8	112.7	105.7	101.1
60°	715.0	449.7	203.0	107.3	94.1	96.1	105.7	111.2	110.8	102.6	97.2
62.5°	758.4	459.4	171.6	93.7	85.2	88.3	98.4	105.4	106.5	99.5	93.0
63°	766.9	460.2	163.5	91.0	83.7	87.2	96.4	103.8	105.4	98.8	92.2
65°	787.8	453.2	131.7	83.7	77.5	81.3	90.6	97.2	100.3	94.5	89.1
67.5°	770.4	396.2	99.2	74.8	72.4	75.1	83.3	89.5	92.2	89.5	84.1
70°	704.6	288.2	77.5	66.6	67.0	68.9	75.1	81.0	84.1	83.3	78.2
72.5°	567.4	163.5	64.7	59.6	60.8	63.1	67.4	72.8	75.5	75.1	71.7
75°	373.8	83.7	54.6	53.5	54.2	56.2	59.3	63.5	66.6	66.2	64.7
77.5°	185.1	58.1	46.9	47.3	47.6	49.2	51.5	55.4	57.3	57.7	57.3
80°	76.3	45.3	40.3	40.7	41.1	42.2	43.8	47.3	48.4	49.2	49.6
82.5°	45.7	34.5	32.1	32.9	33.3	34.5	35.6	38.7	39.9	41.1	41.1
85°	30.2	24.0	23.2	24.0	24.8	25.6	26.0	27.9	29.8	31.4	32.1
87.5°	16.3	14.3	13.9	14.3	14.3	15.1	15.9	17.8	20.1	21.7	22.5
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°	250.6	250.6	250.6	250.6	250.6
2.5°	256.8	257.2	256.8	257.2	257.6
5°	269.6	270.4	270.0	270.0	271.5
7.5°	284.3	285.9	285.9	286.6	287.4
10°	300.2	301.7	302.9	302.9	304.1
12.5°	316.1	316.8	318.0	318.0	318.0
15°	324.2	323.8	323.4	323.0	323.0
17.5°	323.0	321.5	320.7	319.9	320.3
20°	314.5	311.8	311.0	309.9	310.6
22.5°	299.8	295.9	294.4	292.4	293.2
25°	277.7	273.1	272.3	270.0	271.1
27.5°	252.2	249.8	249.4	249.1	251.0
30°	228.1	228.9	229.3	230.1	232.0
32.5°	206.1	207.6	208.0	208.4	211.1
35°	184.4	182.4	184.4	183.6	185.9
37.5°	160.7	159.2	157.6	155.7	157.3
40°	141.0	138.3	133.6	131.3	131.7
42.5°	125.5	122.0	118.1	115.8	115.8
45°	115.4	111.2	107.7	106.1	106.1
47.5°	107.7	105.7	103.8	102.6	102.6
50°	104.6	102.3	101.1	100.3	100.3
52.5°	102.3	99.9	98.8	98.0	97.2
55°	100.3	96.8	95.7	95.3	95.3
57.5°	97.6	94.5	93.0	92.6	92.6
60°	93.3	91.0	89.5	89.1	89.1
62.5°	89.1	86.8	85.2	85.2	85.2
63°	88.3	85.6	84.4	84.4	84.4
65°	84.8	82.1	81.0	81.0	80.6
67.5°	80.2	77.5	76.7	76.7	75.9
70°	74.8	72.4	71.7	72.0	70.5
72.5°	69.3	67.0	65.8	65.8	64.3
75°	63.1	60.8	59.3	58.9	57.3
77.5°	56.2	54.2	52.7	51.1	50.4
80°	48.8	47.3	45.3	44.2	43.0
82.5°	41.1	39.5	38.3	39.9	34.1
85°	32.1	30.6	29.1	31.4	24.4
87.5°	23.6	22.9	21.3	18.6	16.3
90°	0.0	0.0	0.0	0.0	0.0

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