

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: P239127

Luminaire Tested: **ARCH-AF16-20-D-U-T2U-7050**

Issue Date: 3/3/2020

**Test Information**

Test Method: LM-79-08  
Report Number: P239127  
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-7050  
Description: ARCHEON ROADWAY AND AREA LUMINAIRE  
(1) 70 CRI, 5000K, 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: 2978 lumens  
Efficiency: N/A  
Efficacy: 124.1 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

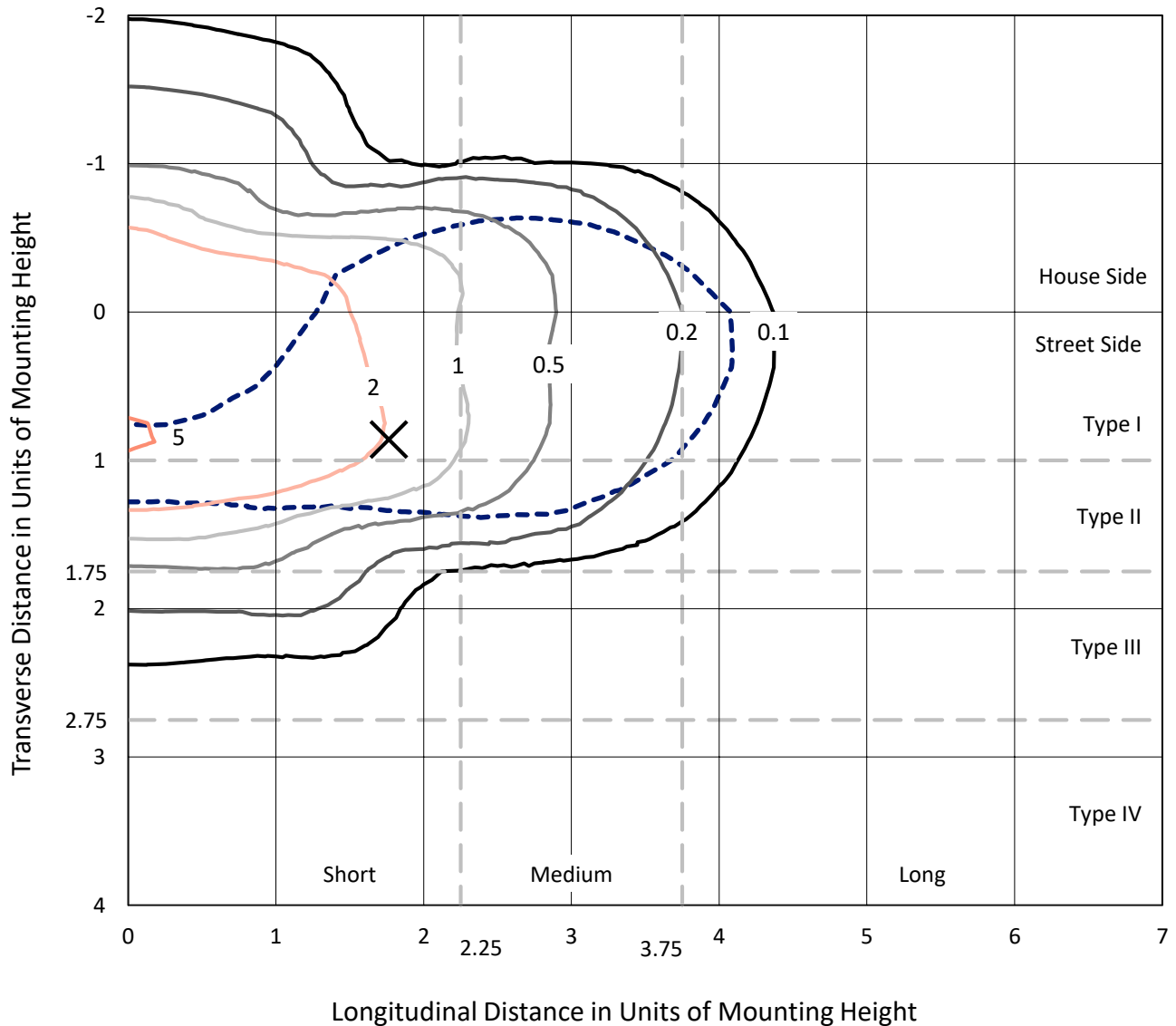
Input Watts (W): 24  
Input Voltage (V): NR  
Input Current (Ain): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 28.75 FT



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### Iso-Footcandle Lines of Horizontal Illumination

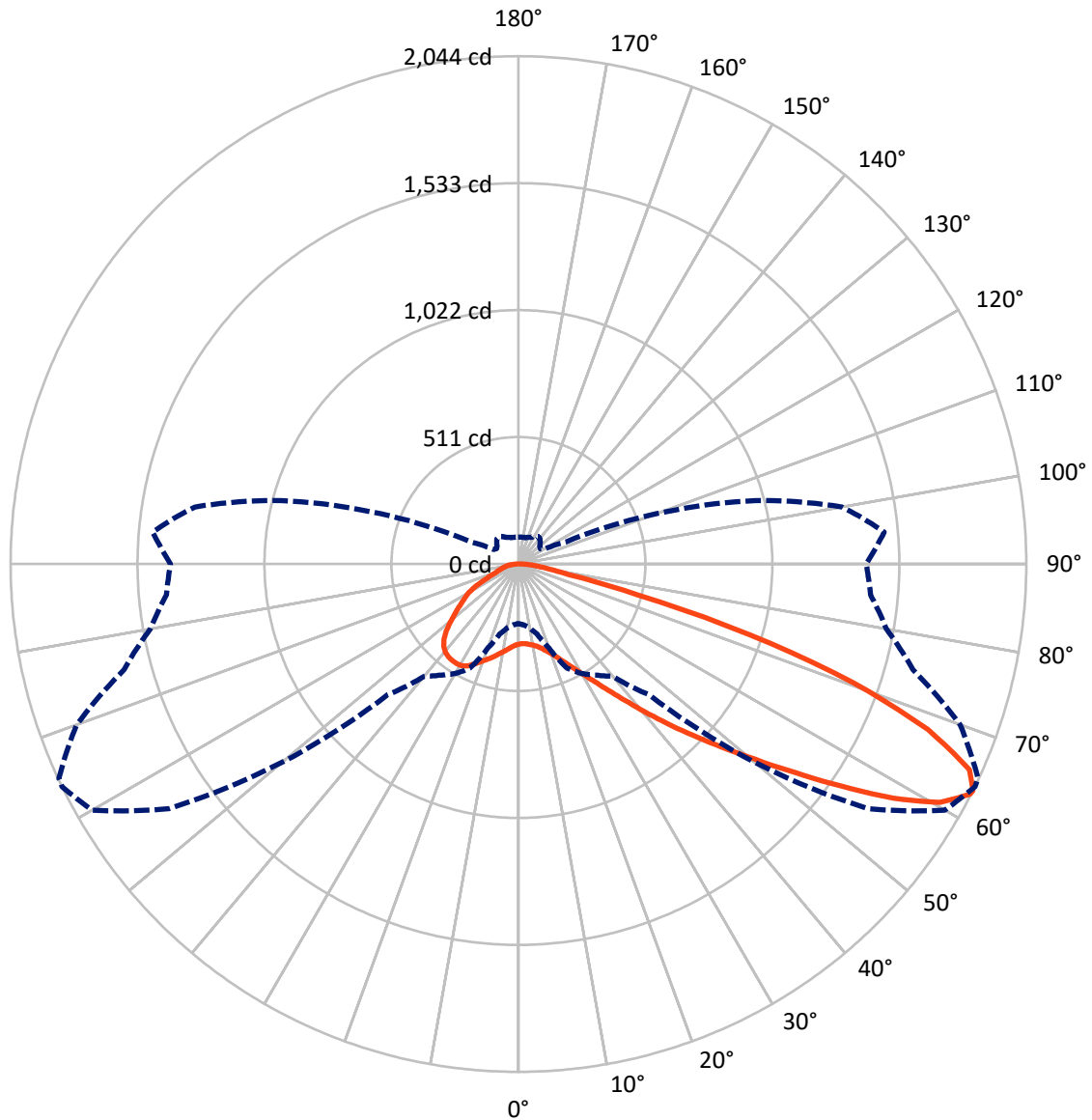
✕ Max cd  
 - - - 1/2 Max cd



Based on 10 foot mounting height. Maximum calculated value = 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	875.4	0.0	875.4
	% Fixture	29.4	0.0	29.4
<b>Street Side</b>	Lumens	2102.6	0.0	2102.6
	% Fixture	70.6	0.0	70.6
<b>Total</b>	Lumens	2978.0	0.0	2978.0
	% Fixture	100.0	0.0	100.0

**Coefficient of Utilization**

**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	32.2	1.1
10°-20°	107.3	3.6
20°-30°	201.3	6.8
30°-40°	337.4	11.3
40°-50°	566.2	19.0
50°-60°	717.7	24.1
60°-70°	633.1	21.3
70°-80°	326.8	11.0
80°-90°	55.9	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°	2978.0	100.0
0°-180°	2978.0	100.0



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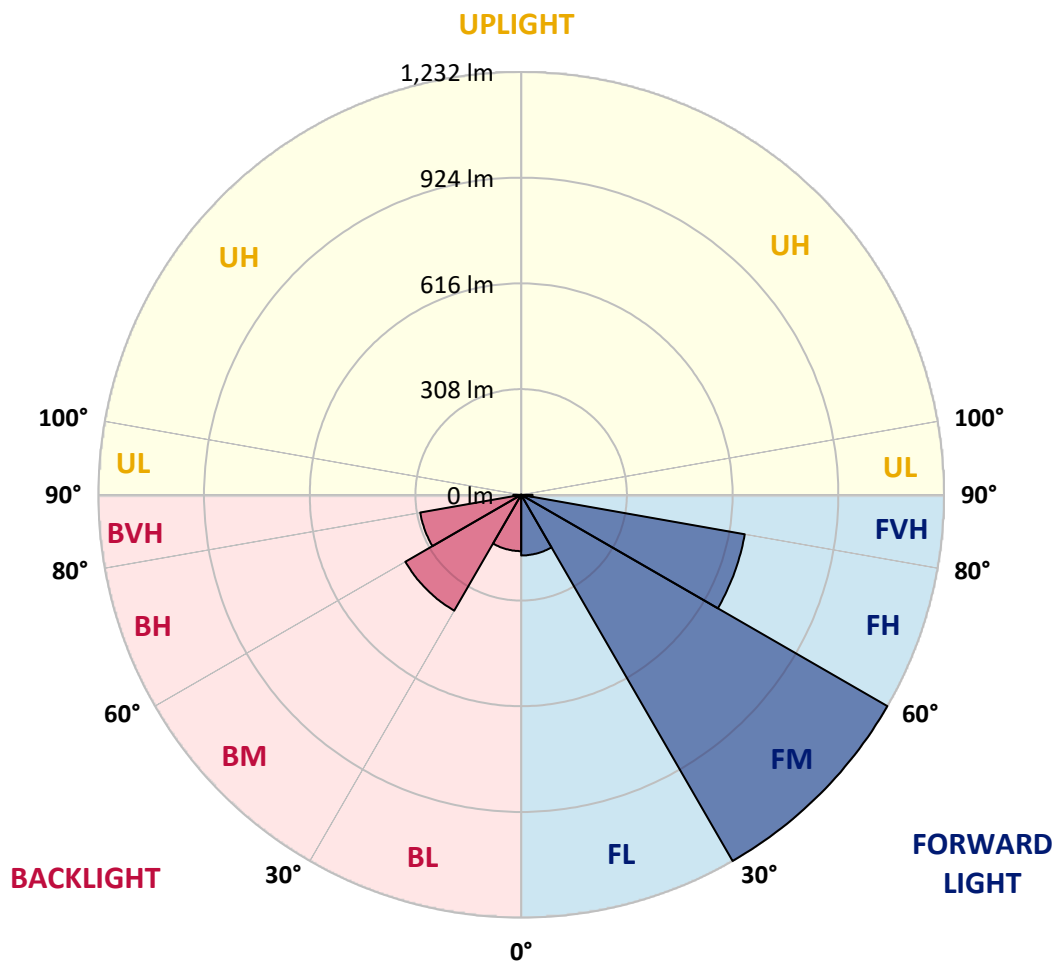
CATALOG NUMBER: ARCH-AF16-20-D-U-T2U-7050

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

Zone	Lumens	% Fixture	Zone Rating/Lumen Limit		
			B	U	G
FL (0°-30°)	176.8	5.9			
FM (30°-60°)	1231.6	41.4			
FH (60°-80°)	661.3	22.2			G1/1800
FVH (80°-90°)	32.9	1.1			G1/100
BL (0°-30°)	164.0	5.5	B1/500		
BM (30°-60°)	389.7	13.1	B1/1000		
BH (60°-80°)	298.7	10.0	B1/500		G1/500
BVH (80°-90°)	23.0	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°	322.5	322.5	322.5	322.5	322.5	322.5	322.5	322.5	322.5	322.5	322.5
2.5°	320.5	320.0	320.0	320.0	320.0	319.5	320.0	321.0	320.5	320.0	321.0
5°	321.5	321.0	321.0	321.0	321.5	321.0	321.5	323.0	322.0	322.0	323.0
7.5°	324.0	323.5	324.0	323.5	323.5	323.5	324.0	325.5	325.0	325.5	327.0
10°	327.0	327.0	327.0	327.0	327.0	327.0	328.0	329.0	329.5	330.0	332.0
12.5°	336.0	336.0	336.0	335.5	335.5	334.0	336.0	337.0	338.0	339.0	340.5
15°	354.9	354.9	354.4	352.4	352.4	349.4	349.9	350.4	350.4	351.4	352.4
17.5°	379.8	379.3	378.3	376.9	374.9	371.4	370.4	369.4	367.9	367.4	367.4
20°	414.7	414.2	412.2	408.3	405.8	400.3	396.3	392.3	390.8	388.3	387.8
22.5°	464.6	464.6	460.6	454.6	452.6	441.2	429.7	421.2	418.2	414.7	414.7
25°	524.9	524.4	518.9	511.9	503.5	491.5	477.5	466.1	458.6	450.6	447.6
27.5°	597.2	595.7	588.2	579.7	563.8	548.8	532.4	520.4	507.5	497.5	488.5
30°	681.9	680.4	667.5	651.5	635.1	620.1	596.2	581.7	561.3	549.3	539.4
32.5°	780.1	778.6	755.2	739.7	722.3	703.9	675.4	652.5	626.6	609.6	595.7
35°	905.2	899.3	865.9	844.4	817.0	798.6	768.7	737.7	707.3	683.4	663.0
37.5°	1040.3	1033.3	1003.9	972.0	945.1	922.7	880.3	841.4	805.5	772.6	747.2
40°	1181.4	1163.0	1131.5	1108.1	1089.7	1068.2	1023.9	983.0	926.7	889.8	851.4
42.5°	1279.1	1261.2	1239.2	1223.8	1214.8	1198.3	1173.4	1138.0	1087.7	1088.7	987.5
45°	1343.4	1317.0	1302.0	1303.0	1306.5	1306.5	1302.0	1296.5	1274.6	1289.6	1204.8
47.5°	1320.5	1303.0	1293.6	1313.5	1338.4	1363.3	1392.3	1423.7	1459.5	1501.9	1397.7
50°	1185.9	1192.4	1196.8	1239.2	1292.6	1349.4	1415.7	1501.4	1601.6	1621.1	1570.7
52.5°	971.0	985.0	999.9	1064.8	1135.0	1233.2	1349.4	1491.0	1625.5	1704.8	1699.8
55°	754.2	771.6	803.5	851.9	907.7	1000.4	1144.0	1362.3	1572.2	1698.3	1775.1
57.5°	536.9	562.3	604.2	671.5	720.8	773.1	879.3	1121.6	1351.4	1586.2	1762.6
60°	356.9	368.9	396.3	480.0	563.3	618.1	693.4	781.1	969.0	1292.6	1634.0
62.5°	253.2	261.2	278.2	316.0	391.3	490.5	535.9	576.2	636.6	831.5	1312.0
63°	239.3	246.2	260.2	292.1	359.9	462.6	508.9	545.8	589.7	743.7	1241.2
65°	198.4	201.4	208.9	224.3	260.7	345.9	421.7	444.1	451.6	478.0	777.6
67.5°	167.5	169.5	172.0	176.5	190.9	230.3	314.5	343.0	334.5	316.5	384.3
70°	145.6	147.1	151.0	156.5	161.5	171.5	216.3	258.7	249.2	224.8	235.3
72.5°	116.1	118.6	123.1	132.6	142.6	155.5	166.5	192.9	186.9	163.5	166.0
75°	91.7	93.2	97.2	104.2	113.7	128.6	150.0	159.0	142.6	120.6	120.6
77.5°	72.8	74.3	77.8	83.2	89.2	99.7	114.7	138.1	128.1	90.7	90.2
80°	54.8	56.3	59.8	64.8	70.8	78.3	87.2	97.7	117.6	84.7	67.8
82.5°	40.4	40.9	46.9	50.3	52.3	58.3	65.8	71.8	80.8	78.3	60.3
85°	30.4	29.9	33.9	36.4	36.9	38.4	42.9	48.9	52.8	50.8	46.9
87.5°	16.9	15.0	17.4	19.9	19.9	20.4	21.4	24.9	28.4	27.4	24.9
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°	322.5	322.5	322.5	322.5	322.5	322.5	322.5	322.5	322.5	322.5	322.5
2.5°	321.0	321.0	320.5	320.5	321.0	321.0	320.5	322.0	323.0	323.0	323.5
5°	322.5	323.0	322.5	322.5	323.0	323.0	323.5	325.0	326.5	327.5	329.0
7.5°	327.0	327.5	327.0	327.0	327.5	328.0	329.0	331.0	332.0	334.0	336.5
10°	332.0	332.5	332.0	332.5	333.0	333.5	335.0	336.5	338.0	340.0	344.0
12.5°	341.0	341.5	340.5	341.0	342.5	342.5	343.5	344.4	346.9	349.4	353.4
15°	353.4	353.4	352.4	352.9	354.4	354.4	354.9	355.9	358.9	361.9	365.9
17.5°	367.9	368.9	368.4	368.9	369.9	370.4	370.4	371.4	373.4	375.4	379.3
20°	387.3	387.8	386.8	387.8	388.8	387.8	386.8	386.3	387.3	388.3	392.8
22.5°	413.7	413.2	410.7	410.7	410.7	408.8	406.3	403.3	403.3	401.8	405.3
25°	445.1	443.6	440.2	440.7	437.2	434.2	429.7	425.2	421.2	419.7	420.2
27.5°	482.0	479.0	475.5	474.6	471.1	465.6	458.1	449.6	443.1	438.2	437.2
30°	528.4	521.9	515.9	514.9	509.4	500.5	488.5	477.0	466.1	457.6	454.6
32.5°	583.2	573.3	563.8	562.8	553.8	541.8	527.4	511.4	495.5	482.0	475.5
35°	647.5	632.6	623.6	621.1	608.1	593.2	577.2	556.8	534.4	515.4	503.5
37.5°	725.8	710.3	694.9	695.4	677.4	660.0	638.6	613.6	585.2	558.8	541.8
40°	822.5	800.6	780.6	776.1	760.7	736.3	712.8	683.9	649.0	614.1	589.7
42.5°	939.6	903.7	876.3	872.3	851.9	822.0	793.6	755.2	719.8	677.4	648.0
45°	1072.7	1015.4	982.5	976.5	943.6	913.2	878.8	837.9	794.6	746.7	711.8
47.5°	1238.2	1156.5	1100.6	1090.7	1045.3	1005.4	969.5	924.2	872.3	819.0	780.6
50°	1431.1	1310.5	1235.2	1219.8	1159.0	1112.1	1066.2	1009.4	954.1	898.3	853.9
52.5°	1624.5	1494.9	1394.7	1375.8	1286.1	1223.3	1163.0	1106.1	1040.8	985.5	935.1
55°	1780.1	1693.8	1577.7	1551.3	1422.7	1337.4	1258.2	1193.4	1128.6	1084.7	1025.4
57.5°	1873.8	1869.3	1777.6	1741.2	1565.2	1439.1	1350.9	1277.1	1214.3	1195.9	1117.1
60°	1871.3	1987.4	1948.1	1920.6	1709.3	1543.3	1428.6	1348.9	1297.0	1318.0	1209.3
62.5°	1757.1	1992.4	2039.8	2032.3	1862.8	1627.0	1492.4	1410.2	1382.8	1445.1	1305.0
63°	1715.8	1981.0	2043.8	2040.8	1892.2	1643.0	1503.4	1422.2	1399.7	1477.5	1322.5
65°	1450.1	1880.8	1995.4	2008.9	1955.5	1697.8	1528.8	1452.6	1450.1	1549.8	1363.8
67.5°	883.8	1589.2	1777.6	1803.5	1866.3	1715.3	1514.4	1442.1	1478.0	1560.2	1351.4
70°	377.8	1048.8	1428.6	1470.5	1624.0	1628.5	1473.0	1399.2	1471.5	1478.5	1262.6
72.5°	223.8	494.5	972.5	1063.8	1285.1	1401.2	1378.3	1324.5	1386.3	1298.5	1075.2
75°	158.5	231.3	494.0	591.2	894.8	1069.7	1158.0	1182.9	1180.4	1029.9	807.0
77.5°	113.7	148.5	208.4	245.8	499.5	686.9	794.6	867.4	843.9	689.4	497.5
80°	79.3	102.7	127.6	135.6	231.8	352.9	418.7	450.6	436.7	344.4	222.8
82.5°	57.3	67.3	82.2	87.2	116.6	163.0	193.9	171.0	164.0	127.1	96.2
85°	44.4	43.4	51.3	53.3	68.3	85.2	87.2	67.8	59.3	52.8	53.8
87.5°	31.4	26.9	27.4	28.4	35.4	45.4	44.4	27.9	23.9	25.4	28.9
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°	322.5	322.5	322.5	322.5	322.5	322.5	322.5	322.5	322.5	322.5	322.5
2.5°	324.5	325.0	326.0	326.5	327.5	327.5	328.5	329.0	330.0	331.0	331.5
5°	330.5	332.0	334.0	335.0	337.0	338.5	340.5	341.5	343.5	344.9	346.9
7.5°	339.5	342.0	344.4	347.4	350.4	352.9	354.9	357.4	360.9	363.4	364.9
10°	347.9	351.4	355.9	359.4	363.9	367.4	370.4	374.9	378.8	382.3	384.3
12.5°	358.9	363.4	367.9	373.4	379.3	383.8	388.3	394.3	399.8	403.8	405.8
15°	371.9	377.3	382.3	388.8	395.8	401.8	408.3	414.7	418.7	418.7	417.7
17.5°	385.3	389.8	395.8	403.3	412.7	420.2	423.7	424.7	423.2	419.7	417.2
20°	398.8	402.8	409.3	418.2	428.2	429.7	426.2	421.7	417.2	411.2	407.3
22.5°	409.8	415.2	425.2	435.7	436.2	427.7	418.2	410.7	403.8	396.8	389.3
25°	422.7	430.2	443.6	447.6	434.7	418.7	405.3	394.3	382.8	371.4	362.9
27.5°	438.7	449.6	463.1	451.6	426.2	403.8	385.3	368.9	353.9	338.0	328.5
30°	455.6	472.6	475.5	445.6	411.7	382.8	357.9	333.0	314.0	299.6	294.1
32.5°	476.0	498.0	480.0	435.2	392.3	354.4	321.0	291.1	275.2	266.2	263.7
35°	507.0	524.9	482.5	424.2	369.9	320.5	278.6	254.7	244.8	238.8	235.8
37.5°	551.3	550.8	482.0	410.7	344.0	283.6	244.8	227.8	219.8	214.8	209.4
40°	603.2	570.8	479.0	391.3	309.1	248.2	221.3	205.4	197.9	191.9	185.4
42.5°	654.5	584.2	470.6	362.4	265.7	222.8	204.4	189.9	181.9	175.5	166.5
45°	698.9	589.7	454.1	322.5	226.8	202.9	193.4	180.9	171.5	161.5	154.5
47.5°	733.8	588.7	427.7	275.7	200.9	188.9	184.4	176.0	164.5	152.0	143.1
50°	763.2	581.2	391.8	234.3	183.4	176.5	175.0	172.5	154.0	143.6	138.1
52.5°	790.1	570.3	353.4	206.4	168.5	162.5	165.5	163.0	150.0	141.1	135.6
55°	827.0	562.8	315.5	184.9	151.0	149.5	152.0	155.5	147.5	139.1	133.1
57.5°	870.3	566.8	286.6	161.0	134.6	135.6	144.1	149.0	145.1	136.1	130.1
60°	920.2	578.7	261.2	138.1	121.1	123.6	136.1	143.1	142.6	132.1	125.1
62.5°	976.0	591.2	220.8	120.6	109.7	113.7	126.6	135.6	137.1	128.1	119.6
63°	987.0	592.2	210.4	117.1	107.7	112.2	124.1	133.6	135.6	127.1	118.6
65°	1013.9	583.2	169.5	107.7	99.7	104.7	116.6	125.1	129.1	121.6	114.7
67.5°	991.5	509.9	127.6	96.2	93.2	96.7	107.2	115.1	118.6	115.1	108.2
70°	906.7	370.9	99.7	85.7	86.2	88.7	96.7	104.2	108.2	107.2	100.7
72.5°	730.3	210.4	83.2	76.8	78.3	81.3	86.7	93.7	97.2	96.7	92.2
75°	481.0	107.7	70.3	68.8	69.8	72.3	76.3	81.8	85.7	85.2	83.2
77.5°	238.3	74.8	60.3	60.8	61.3	63.3	66.3	71.3	73.8	74.3	73.8
80°	98.2	58.3	51.8	52.3	52.8	54.3	56.3	60.8	62.3	63.3	63.8
82.5°	58.8	44.4	41.4	42.4	42.9	44.4	45.9	49.8	51.3	52.8	52.8
85°	38.9	30.9	29.9	30.9	31.9	32.9	33.4	35.9	38.4	40.4	41.4
87.5°	20.9	18.4	17.9	18.4	18.4	19.4	20.4	22.9	25.9	27.9	28.9
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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CATALOG NUMBER: ARCH-AF16-20-D-U-T2U-7050

**CANDELA DISTRIBUTION (continued):**

	160°	165°	170°	175°	180°
0°	322.5	322.5	322.5	322.5	322.5
2.5°	330.5	331.0	330.5	331.0	331.5
5°	346.9	347.9	347.4	347.4	349.4
7.5°	365.9	367.9	367.9	368.9	369.9
10°	386.3	388.3	389.8	389.8	391.3
12.5°	406.8	407.8	409.3	409.3	409.3
15°	417.2	416.7	416.2	415.7	415.7
17.5°	415.7	413.7	412.7	411.7	412.2
20°	404.8	401.3	400.3	398.8	399.8
22.5°	385.8	380.8	378.8	376.4	377.3
25°	357.4	351.4	350.4	347.4	348.9
27.5°	324.5	321.5	321.0	320.5	323.0
30°	293.6	294.6	295.1	296.1	298.6
32.5°	265.2	267.2	267.7	268.2	271.7
35°	237.3	234.8	237.3	236.3	239.3
37.5°	206.9	204.9	202.9	200.4	202.4
40°	181.4	178.0	172.0	169.0	169.5
42.5°	161.5	157.0	152.0	149.0	149.0
45°	148.5	143.1	138.6	136.6	136.6
47.5°	138.6	136.1	133.6	132.1	132.1
50°	134.6	131.6	130.1	129.1	129.1
52.5°	131.6	128.6	127.1	126.1	125.1
55°	129.1	124.6	123.1	122.6	122.6
57.5°	125.6	121.6	119.6	119.1	119.1
60°	120.1	117.1	115.1	114.7	114.7
62.5°	114.7	111.7	109.7	109.7	109.7
63°	113.7	110.2	108.7	108.7	108.7
65°	109.2	105.7	104.2	104.2	103.7
67.5°	103.2	99.7	98.7	98.7	97.7
70°	96.2	93.2	92.2	92.7	90.7
72.5°	89.2	86.2	84.7	84.7	82.7
75°	81.3	78.3	76.3	75.8	73.8
77.5°	72.3	69.8	67.8	65.8	64.8
80°	62.8	60.8	58.3	56.8	55.3
82.5°	52.8	50.8	49.3	51.3	43.9
85°	41.4	39.4	37.4	40.4	31.4
87.5°	30.4	29.4	27.4	23.9	20.9
90°	0.0	0.0	0.0	0.0	0.0

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