

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: P239118

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

Issue Date: 3/3/2020

**Test Information**

Test Method: LM-79-08  
Report Number: P239118  
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  
Description: ARCHEON ROADWAY AND AREA LUMINAIRE  
(1) 70 CRI, 4000K, 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: 2914.4 lumens  
Efficiency: N/A  
Efficacy: 138.8 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): 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

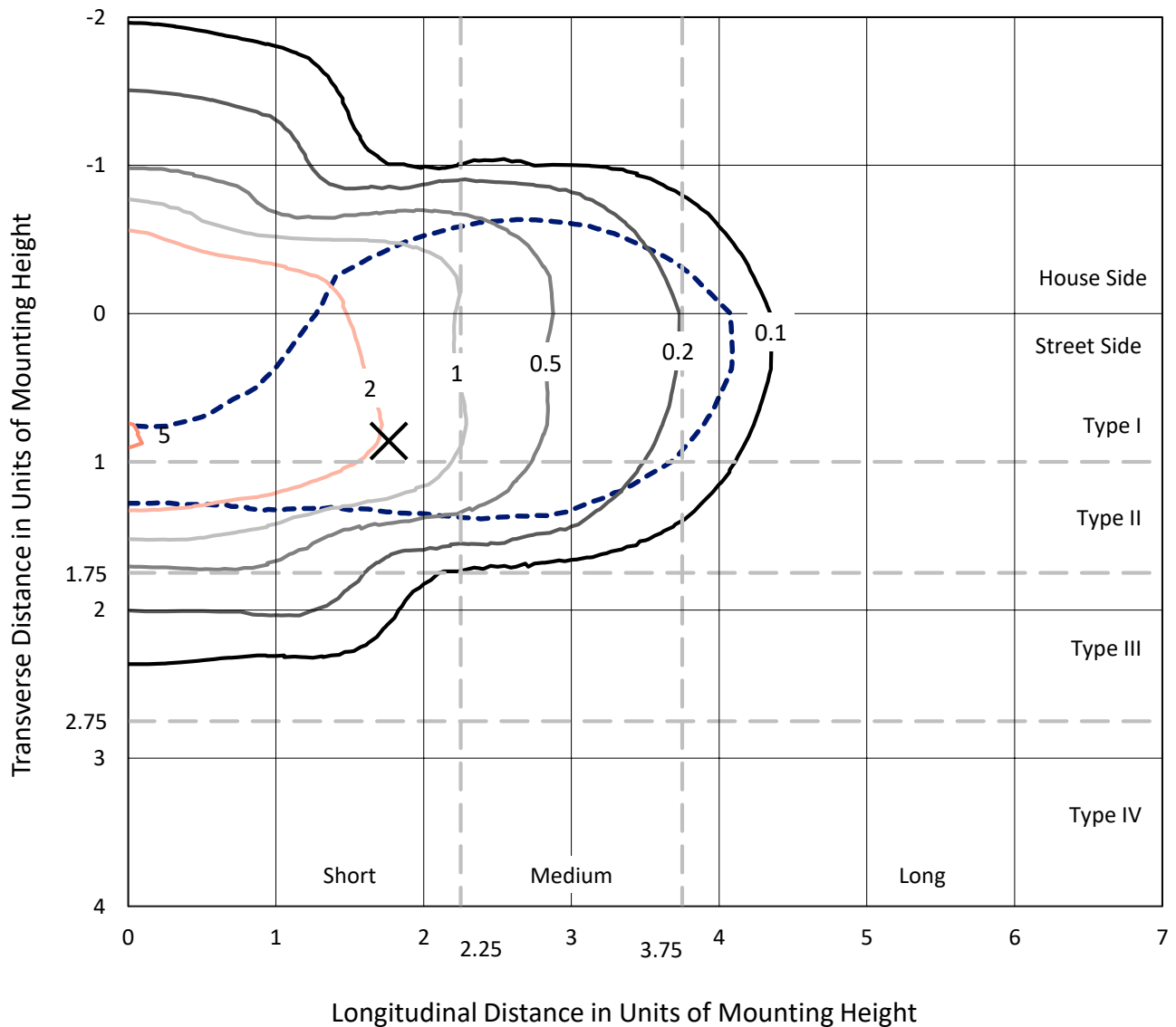


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### Iso-Footcandle Lines of Horizontal Illumination

× Max cd  
 - - - 1/2 Max cd

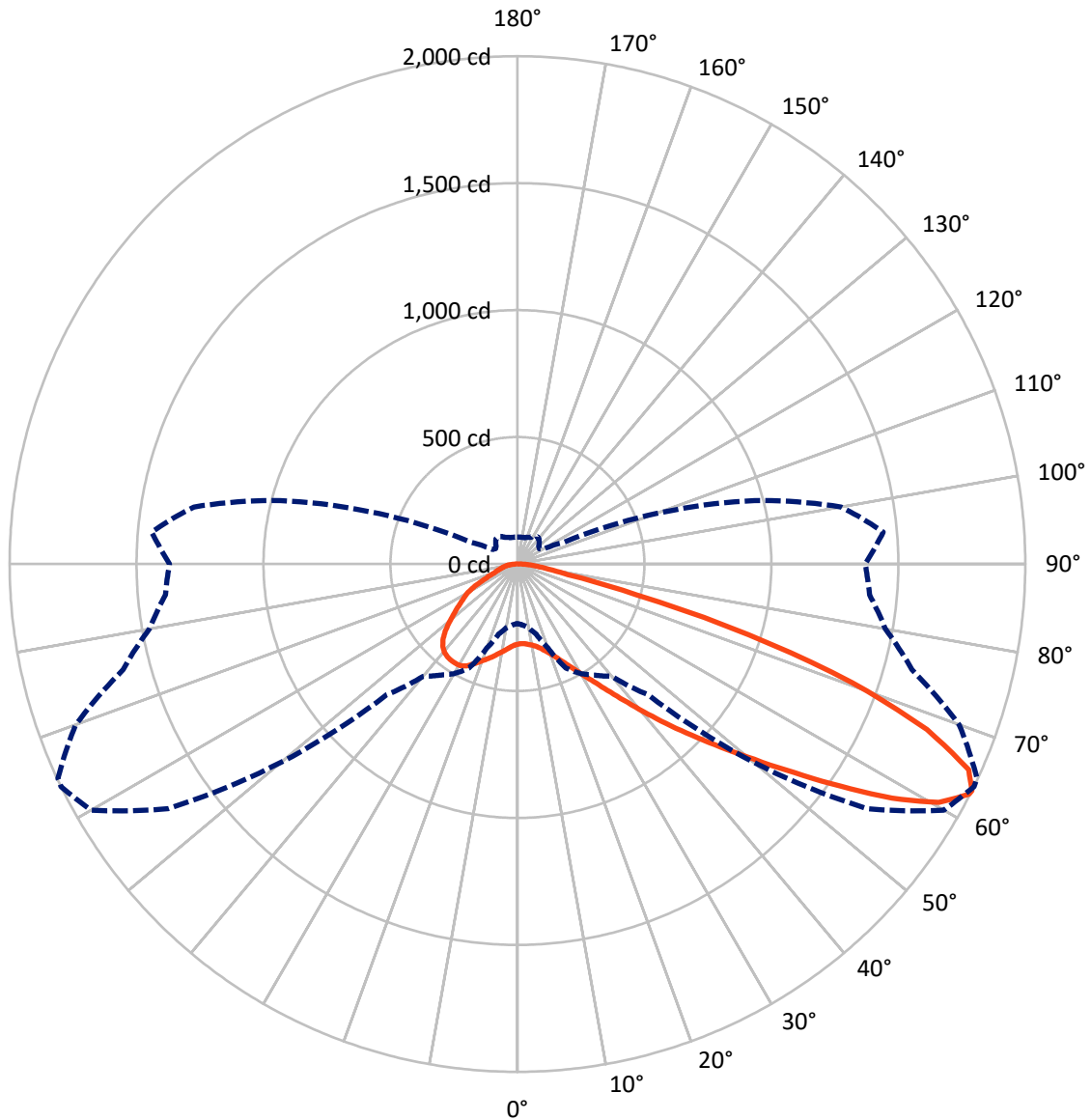


Based on 10 foot mounting height. Maximum calculated value = 5.1 fc  
 Type II - Short - Semi-Cutoff

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### Luminous Intensity Polar Plot



— Vertical Plane Through 64-Deg Lateral    - - - Horizontal Cone Through 63-Deg Vertical



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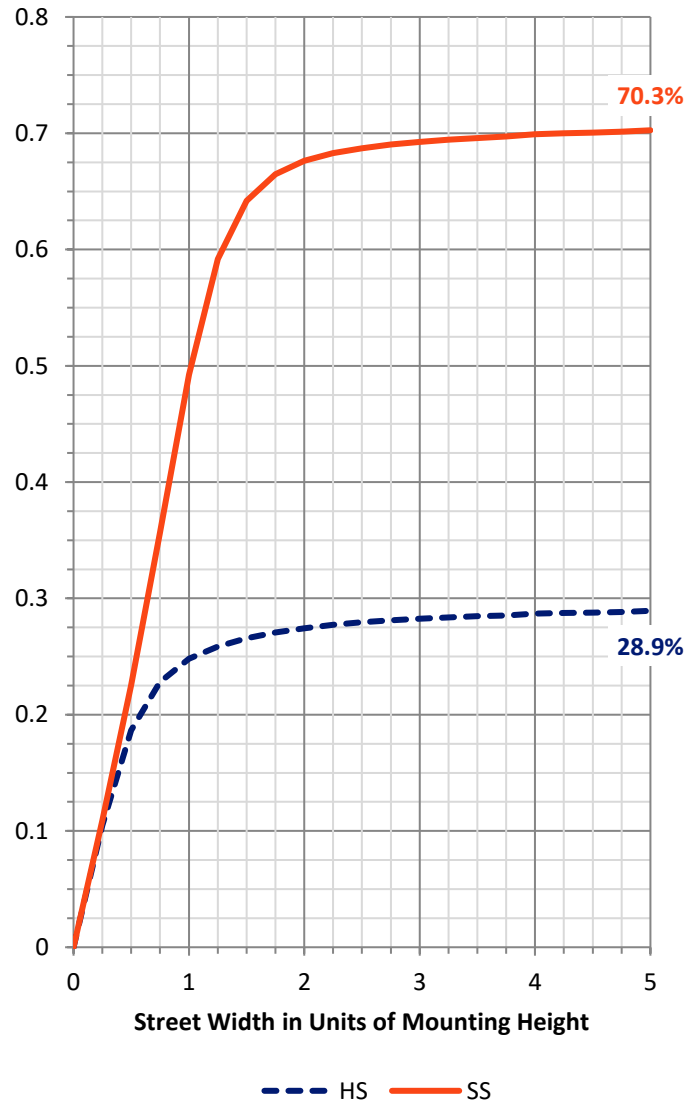
**FLUX DISTRIBUTION:**

		Downward	Upward	Total
<b>House Side</b>	Lumens	856.7	0.0	856.7
	% Fixture	29.4	0.0	29.4
<b>Street Side</b>	Lumens	2057.7	0.0	2057.7
	% Fixture	70.6	0.0	70.6
<b>Total</b>	Lumens	2914.4	0.0	2914.4
	% Fixture	100.0	0.0	100.0

**Coefficient of Utilization**

**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	31.5	1.1
10°-20°	105.0	3.6
20°-30°	197.0	6.8
30°-40°	330.2	11.3
40°-50°	554.1	19.0
50°-60°	702.4	24.1
60°-70°	619.6	21.3
70°-80°	319.9	11.0
80°-90°	54.7	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°	2914.4	100.0
0°-180°	2914.4	100.0



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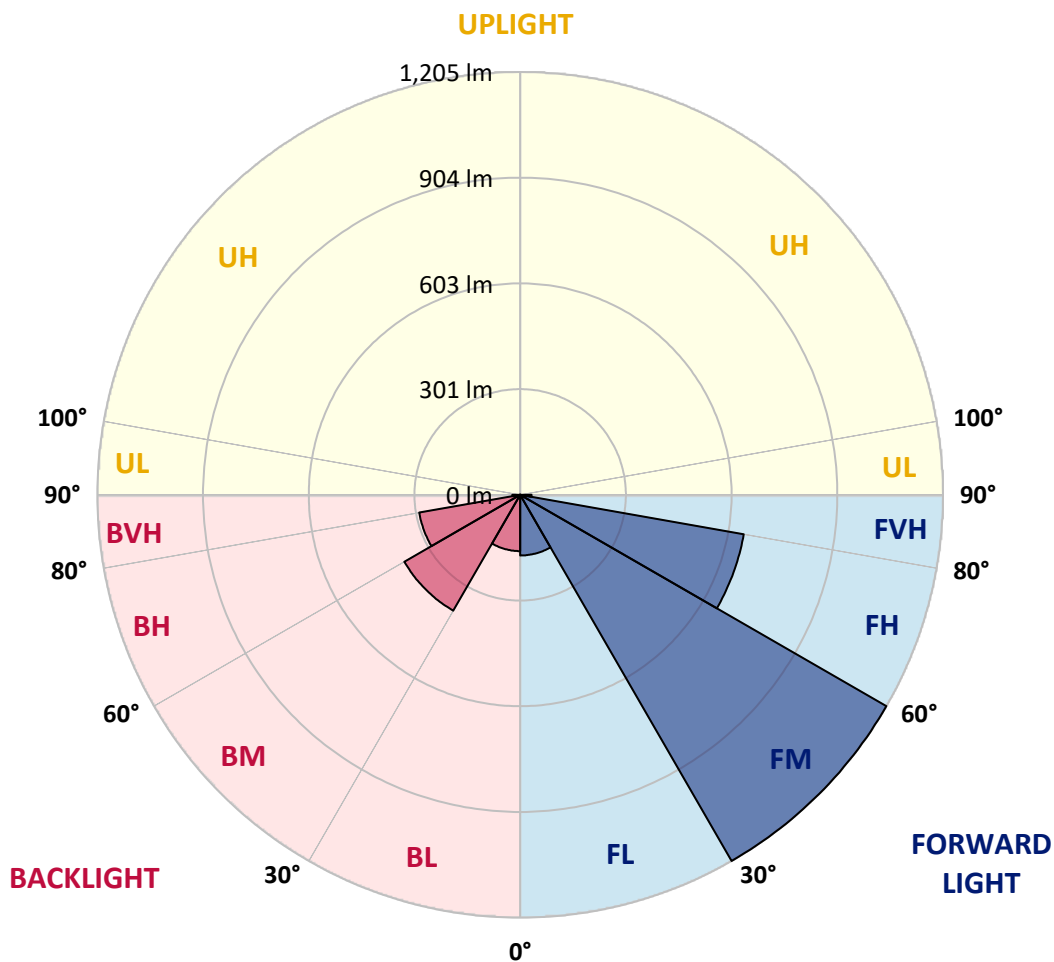
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**LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:**

Zone		Lumens	% Fixture	Zone Rating/Lumen Limit		
				B	U	G
FL	(0°-30°)	173.0	5.9			
FM	(30°-60°)	1205.3	41.4			
FH	(60°-80°)	647.2	22.2			G0/660
FVH	(80°-90°)	32.2	1.1			G1/100
BL	(0°-30°)	160.5	5.5	B1/500		
BM	(30°-60°)	381.4	13.1	B1/1000		
BH	(60°-80°)	292.3	10.0	B1/500		G1/500
BVH	(80°-90°)	22.5	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°	315.6	315.6	315.6	315.6	315.6	315.6	315.6	315.6	315.6	315.6	315.6
2.5°	313.6	313.2	313.2	313.2	313.2	312.7	313.2	314.1	313.6	313.2	314.1
5°	314.7	314.1	314.1	314.1	314.7	314.1	314.7	316.1	315.2	315.2	316.1
7.5°	317.1	316.6	317.1	316.6	316.6	316.6	317.1	318.5	318.0	318.5	320.0
10°	320.0	320.0	320.0	320.0	320.0	320.0	321.0	321.9	322.4	322.9	324.9
12.5°	328.8	328.8	328.8	328.3	328.3	326.8	328.8	329.8	330.7	331.7	333.2
15°	347.3	347.3	346.9	344.9	344.9	342.0	342.5	343.0	343.0	343.9	344.9
17.5°	371.7	371.2	370.3	368.8	366.8	363.5	362.4	361.5	360.0	359.6	359.6
20°	405.9	405.4	403.5	399.6	397.1	391.7	387.8	383.9	382.5	380.0	379.5
22.5°	454.7	454.7	450.7	444.9	442.9	431.7	420.5	412.2	409.3	405.9	405.9
25°	513.7	513.2	507.8	501.0	492.8	481.0	467.4	456.1	448.8	441.0	438.0
27.5°	584.4	583.0	575.6	567.3	551.8	537.2	521.0	509.3	496.6	486.8	478.0
30°	667.4	665.8	653.3	637.6	621.5	606.8	583.5	569.3	549.3	537.6	527.8
32.5°	763.4	762.0	739.1	723.9	706.9	688.9	661.0	638.5	613.2	596.6	583.0
35°	885.9	880.0	847.4	826.3	799.5	781.5	752.3	722.0	692.2	668.8	648.9
37.5°	1018.1	1011.3	982.4	951.2	925.0	903.0	861.5	823.5	788.3	756.2	731.3
40°	1156.1	1138.1	1107.3	1084.4	1066.4	1045.5	1002.0	962.0	906.8	870.7	833.2
42.5°	1251.8	1234.2	1212.7	1197.7	1188.9	1172.7	1148.4	1113.7	1064.5	1065.4	966.4
45°	1314.7	1288.8	1274.2	1275.2	1278.6	1278.6	1274.2	1268.9	1247.4	1262.0	1179.1
47.5°	1292.3	1275.2	1265.9	1285.4	1309.8	1334.2	1362.5	1393.3	1428.3	1469.9	1367.9
50°	1160.5	1166.9	1171.3	1212.7	1265.0	1320.5	1385.5	1469.4	1567.4	1586.4	1537.2
52.5°	950.3	963.9	978.6	1042.0	1110.8	1206.9	1320.5	1459.1	1590.8	1668.4	1663.5
55°	738.1	755.1	786.3	833.7	888.3	979.1	1119.6	1333.2	1538.6	1662.1	1737.2
57.5°	525.4	550.2	591.3	657.1	705.4	756.7	860.5	1097.6	1322.5	1552.3	1725.0
60°	349.3	361.0	387.8	469.7	551.3	604.9	678.5	764.5	948.4	1265.0	1599.1
62.5°	247.9	255.6	272.2	309.2	383.0	480.1	524.5	564.0	623.0	813.7	1284.0
63°	234.2	241.0	254.6	285.9	352.2	452.8	498.1	534.2	577.1	727.8	1214.7
65°	194.2	197.1	204.4	219.5	255.1	338.6	412.7	434.7	442.0	467.8	761.0
67.5°	163.9	165.8	168.3	172.7	186.8	225.4	307.8	335.6	327.3	309.7	376.1
70°	142.5	143.9	147.8	153.1	158.0	167.8	211.8	253.2	243.9	220.0	230.3
72.5°	113.6	116.1	120.5	129.8	139.5	152.2	163.0	188.8	182.9	160.0	162.4
75°	89.7	91.2	95.1	102.0	111.2	125.8	146.8	155.6	139.5	118.0	118.0
77.5°	71.2	72.7	76.1	81.4	87.4	97.6	112.2	135.1	125.4	88.8	88.3
80°	53.7	55.1	58.5	63.4	69.3	76.6	85.4	95.6	115.1	83.0	66.4
82.5°	39.5	40.0	45.8	49.3	51.2	57.1	64.3	70.3	79.1	76.6	59.0
85°	29.8	29.3	33.1	35.6	36.1	37.5	41.9	47.8	51.7	49.7	45.8
87.5°	16.6	14.6	17.1	19.5	19.5	20.0	21.0	24.3	27.8	26.8	24.3
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°	315.6	315.6	315.6	315.6	315.6	315.6	315.6	315.6	315.6	315.6	315.6
2.5°	314.1	314.1	313.6	313.6	314.1	314.1	313.6	315.2	316.1	316.1	316.6
5°	315.6	316.1	315.6	315.6	316.1	316.1	316.6	318.0	319.6	320.5	321.9
7.5°	320.0	320.5	320.0	320.0	320.5	321.0	321.9	324.0	324.9	326.8	329.3
10°	324.9	325.4	324.9	325.4	325.9	326.3	327.9	329.3	330.7	332.7	336.7
12.5°	333.7	334.2	333.2	333.7	335.1	335.1	336.1	337.1	339.5	342.0	345.9
15°	345.9	345.9	344.9	345.3	346.9	346.9	347.3	348.3	351.3	354.1	358.0
17.5°	360.0	361.0	360.5	361.0	361.9	362.4	362.4	363.5	365.4	367.3	371.2
20°	379.0	379.5	378.6	379.5	380.5	379.5	378.6	378.1	379.0	380.0	384.4
22.5°	404.9	404.4	402.0	402.0	402.0	400.0	397.6	394.7	394.7	393.2	396.6
25°	435.7	434.1	430.8	431.3	427.8	424.9	420.5	416.1	412.2	410.7	411.2
27.5°	471.7	468.8	465.3	464.4	461.0	455.6	448.4	440.1	433.7	428.8	427.8
30°	517.1	510.8	504.9	503.9	498.6	489.8	478.0	466.9	456.1	447.8	444.9
32.5°	570.8	561.0	551.8	550.8	542.0	530.3	516.1	500.5	484.9	471.7	465.3
35°	633.7	619.1	610.3	607.8	595.2	580.5	564.9	544.9	522.9	504.4	492.8
37.5°	710.2	695.2	680.1	680.6	663.0	645.9	624.9	600.5	572.8	546.9	530.3
40°	805.0	783.5	763.9	759.5	744.4	720.6	697.6	669.3	635.2	601.0	577.1
42.5°	919.5	884.4	857.6	853.8	833.7	804.4	776.6	739.1	704.4	663.0	634.2
45°	1049.9	993.7	961.5	955.6	923.4	893.8	860.1	820.0	777.6	730.8	696.6
47.5°	1211.8	1131.8	1077.2	1067.3	1023.0	984.0	948.8	904.4	853.8	801.5	763.9
50°	1400.5	1282.5	1208.8	1193.7	1134.2	1088.3	1043.5	987.9	933.7	879.0	835.6
52.5°	1589.9	1463.0	1364.9	1346.4	1258.6	1197.2	1138.1	1082.5	1018.6	964.4	915.1
55°	1742.1	1657.7	1543.9	1518.2	1392.2	1308.9	1231.3	1167.9	1104.5	1061.5	1003.5
57.5°	1833.7	1829.3	1739.6	1704.0	1531.8	1408.4	1322.1	1249.8	1188.4	1170.4	1093.2
60°	1831.3	1944.9	1906.5	1879.6	1672.7	1510.3	1398.2	1320.1	1269.4	1289.8	1183.5
62.5°	1719.6	1949.8	1996.2	1988.9	1823.0	1592.3	1460.6	1380.1	1353.3	1414.2	1277.2
63°	1679.1	1938.6	2000.1	1997.2	1851.8	1607.9	1471.3	1391.8	1369.8	1445.9	1294.2
65°	1419.1	1840.6	1952.8	1966.0	1913.7	1661.6	1496.2	1421.5	1419.1	1516.6	1334.7
67.5°	864.9	1555.2	1739.6	1765.0	1826.5	1678.7	1482.1	1411.3	1446.5	1527.0	1322.5
70°	369.8	1026.4	1398.2	1439.1	1589.4	1593.8	1441.5	1369.3	1440.1	1446.9	1235.7
72.5°	219.0	484.0	951.8	1041.1	1257.6	1371.3	1348.9	1296.2	1356.6	1270.8	1052.2
75°	155.1	226.4	483.4	578.6	875.6	1046.9	1133.2	1157.7	1155.2	1007.8	789.8
77.5°	111.2	145.4	203.9	240.5	488.8	672.2	777.6	848.8	825.9	674.6	486.8
80°	77.5	100.5	124.9	132.7	226.9	345.3	409.8	441.0	427.4	337.1	218.1
82.5°	56.1	65.9	80.5	85.4	114.2	159.5	189.8	167.4	160.5	124.4	94.1
85°	43.4	42.5	50.2	52.2	66.8	83.4	85.4	66.4	58.0	51.7	52.7
87.5°	30.7	26.4	26.8	27.8	34.7	44.4	43.4	27.3	23.4	24.9	28.3
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°	315.6	315.6	315.6	315.6	315.6	315.6	315.6	315.6	315.6	315.6	315.6
2.5°	317.6	318.0	319.1	319.6	320.5	320.5	321.5	321.9	322.9	324.0	324.4
5°	323.5	324.9	326.8	327.9	329.8	331.2	333.2	334.2	336.1	337.6	339.5
7.5°	332.3	334.6	337.1	340.0	343.0	345.3	347.3	349.7	353.2	355.7	357.1
10°	340.5	343.9	348.3	351.7	356.1	359.6	362.4	366.8	370.7	374.2	376.1
12.5°	351.3	355.7	360.0	365.4	371.2	375.6	380.0	385.9	391.3	395.2	397.1
15°	364.0	369.3	374.2	380.5	387.3	393.2	399.6	405.9	409.8	409.8	408.8
17.5°	377.1	381.5	387.3	394.7	404.0	411.2	414.7	415.6	414.2	410.7	408.4
20°	390.3	394.1	400.5	409.3	419.0	420.5	417.1	412.7	408.4	402.4	398.5
22.5°	401.0	406.3	416.1	426.4	426.9	418.6	409.3	402.0	395.2	388.3	380.9
25°	413.7	421.0	434.1	438.0	425.3	409.8	396.6	385.9	374.6	363.5	355.2
27.5°	429.3	440.1	453.2	442.0	417.1	395.2	377.1	361.0	346.4	330.7	321.5
30°	445.9	462.5	465.3	436.1	402.9	374.6	350.3	325.9	307.3	293.2	287.9
32.5°	465.9	487.3	469.7	425.9	383.9	346.9	314.1	284.9	269.2	260.5	258.1
35°	496.1	513.7	472.2	415.1	361.9	313.6	272.7	249.3	239.6	233.6	230.8
37.5°	539.5	539.1	471.7	402.0	336.7	277.5	239.6	222.9	215.1	210.2	204.9
40°	590.2	558.5	468.8	383.0	302.5	243.0	216.6	201.0	193.6	187.8	181.5
42.5°	640.6	571.7	460.5	354.7	260.0	218.1	200.0	185.9	178.1	171.8	163.0
45°	683.9	577.1	444.4	315.6	222.0	198.6	189.2	177.1	167.8	158.0	151.2
47.5°	718.1	576.1	418.6	269.8	196.6	184.8	180.4	172.2	161.0	148.8	140.0
50°	746.9	568.8	383.4	229.2	179.5	172.7	171.2	168.8	150.8	140.5	135.1
52.5°	773.2	558.1	345.9	201.9	164.9	159.1	161.9	159.5	146.8	138.1	132.7
55°	809.4	550.8	308.8	181.0	147.8	146.4	148.8	152.2	144.4	136.2	130.2
57.5°	851.7	554.6	280.5	157.5	131.8	132.7	141.0	145.9	142.0	133.2	127.4
60°	900.5	566.4	255.6	135.1	118.6	121.0	133.2	140.0	139.5	129.3	122.4
62.5°	955.1	578.6	216.1	118.0	107.3	111.2	123.9	132.7	134.1	125.4	117.1
63°	965.9	579.5	205.8	114.7	105.4	109.8	121.4	130.7	132.7	124.4	116.1
65°	992.3	570.8	165.8	105.4	97.6	102.4	114.2	122.4	126.3	119.1	112.2
67.5°	970.3	499.1	124.9	94.1	91.2	94.6	104.9	112.7	116.1	112.7	105.9
70°	887.4	362.9	97.6	83.9	84.4	86.8	94.6	102.0	105.9	104.9	98.5
72.5°	714.6	205.8	81.4	75.1	76.6	79.5	84.9	91.8	95.1	94.6	90.2
75°	470.8	105.4	68.7	67.3	68.3	70.7	74.7	80.0	83.9	83.4	81.4
77.5°	233.2	73.1	59.0	59.5	60.0	62.0	64.9	69.8	72.2	72.7	72.2
80°	96.1	57.1	50.7	51.2	51.7	53.2	55.1	59.5	61.0	62.0	62.4
82.5°	57.6	43.4	40.5	41.4	41.9	43.4	44.9	48.8	50.2	51.7	51.7
85°	38.1	30.3	29.3	30.3	31.2	32.2	32.7	35.1	37.5	39.5	40.5
87.5°	20.5	18.0	17.6	18.0	18.0	19.0	20.0	22.4	25.4	27.3	28.3
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-AF24-20-D-U-T2U

**CANDELA DISTRIBUTION (continued):**

	160°	165°	170°	175°	180°
0°	315.6	315.6	315.6	315.6	315.6
2.5°	323.5	324.0	323.5	324.0	324.4
5°	339.5	340.5	340.0	340.0	342.0
7.5°	358.0	360.0	360.0	361.0	361.9
10°	378.1	380.0	381.5	381.5	383.0
12.5°	398.0	399.1	400.5	400.5	400.5
15°	408.4	407.9	407.3	406.8	406.8
17.5°	406.8	404.9	404.0	402.9	403.5
20°	396.1	392.7	391.7	390.3	391.3
22.5°	377.6	372.7	370.7	368.3	369.3
25°	349.7	343.9	343.0	340.0	341.5
27.5°	317.6	314.7	314.1	313.6	316.1
30°	287.3	288.3	288.8	289.8	292.3
32.5°	259.5	261.5	262.0	262.5	265.9
35°	232.2	229.8	232.2	231.2	234.2
37.5°	202.4	200.5	198.6	196.1	198.0
40°	177.6	174.1	168.3	165.4	165.8
42.5°	158.0	153.6	148.8	145.9	145.9
45°	145.4	140.0	135.6	133.7	133.7
47.5°	135.6	133.2	130.7	129.3	129.3
50°	131.8	128.8	127.4	126.3	126.3
52.5°	128.8	125.8	124.4	123.5	122.4
55°	126.3	121.9	120.5	120.0	120.0
57.5°	123.0	119.1	117.1	116.6	116.6
60°	117.5	114.7	112.7	112.2	112.2
62.5°	112.2	109.3	107.3	107.3	107.3
63°	111.2	107.8	106.4	106.4	106.4
65°	106.8	103.4	102.0	102.0	101.5
67.5°	101.0	97.6	96.6	96.6	95.6
70°	94.1	91.2	90.2	90.7	88.8
72.5°	87.4	84.4	83.0	83.0	81.0
75°	79.5	76.6	74.7	74.2	72.2
77.5°	70.7	68.3	66.4	64.3	63.4
80°	61.5	59.5	57.1	55.6	54.1
82.5°	51.7	49.7	48.3	50.2	43.0
85°	40.5	38.6	36.6	39.5	30.7
87.5°	29.8	28.7	26.8	23.4	20.5
90°	0.0	0.0	0.0	0.0	0.0

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