

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: P239158

Luminaire Tested: **ARCH-AF16-50-D-U-T2U-8027**

Issue Date: 3/3/2020

**Test Information**

Test Method: LM-79-08  
Report Number: P239158  
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-AF16-50-D-U-T2U-8027  
Description: ARCHEON ROADWAY AND AREA LUMINAIRE  
(1) 80 CRI, 2700K, 980mA LIGHT ENGINE WITH 16 LEDS AND TYPE II U OPTICS  
Light Source: -  
Ballast/Driver: ELECTRONIC DRIVER

**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 4642 lumens  
Efficiency: N/A  
Efficacy: 87.6 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

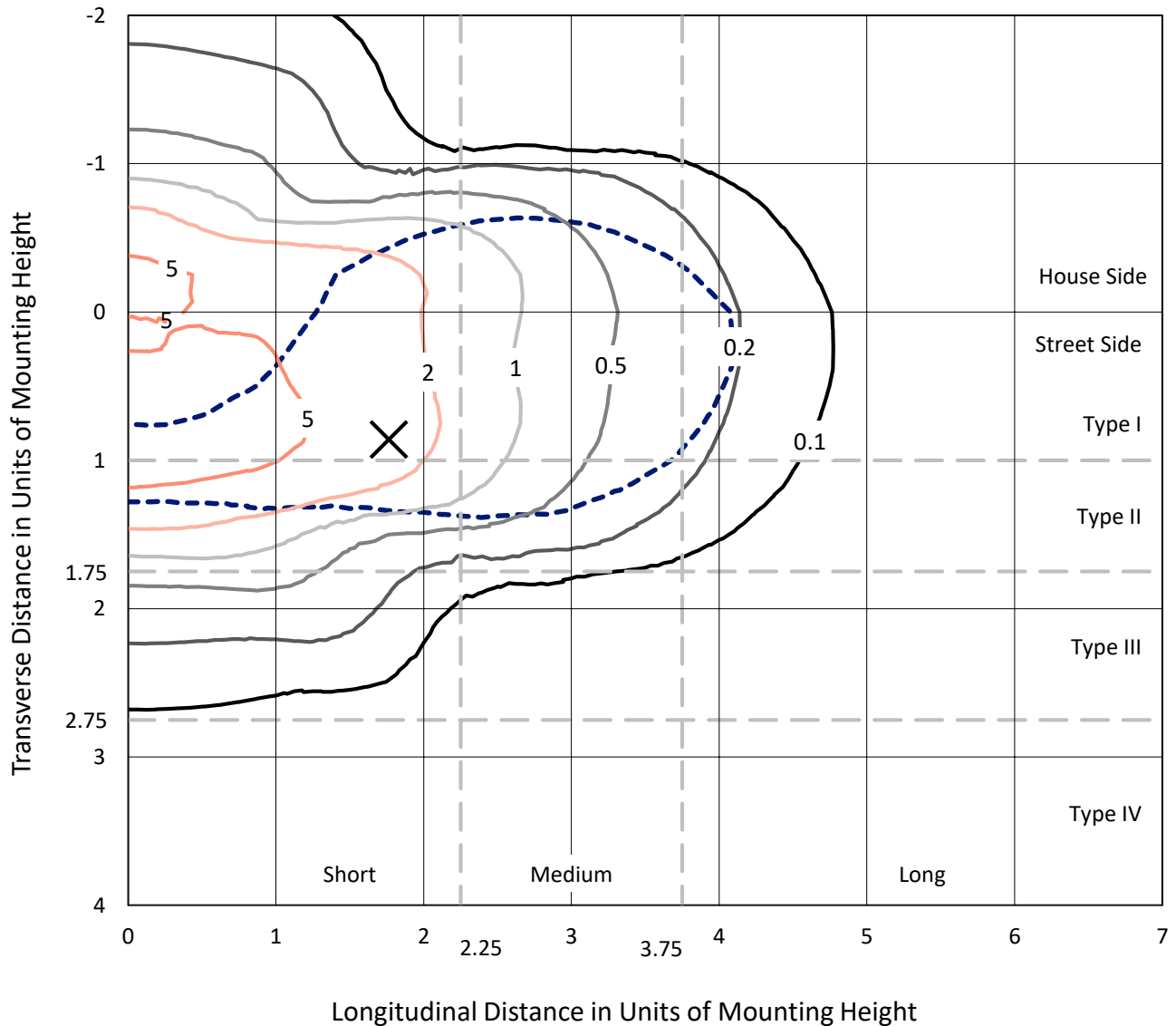
Input Watts (W): 53  
Input Voltage (V): NR  
Input Current (Ain): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 28.75 FT



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### Iso-Footcandle Lines of Horizontal Illumination

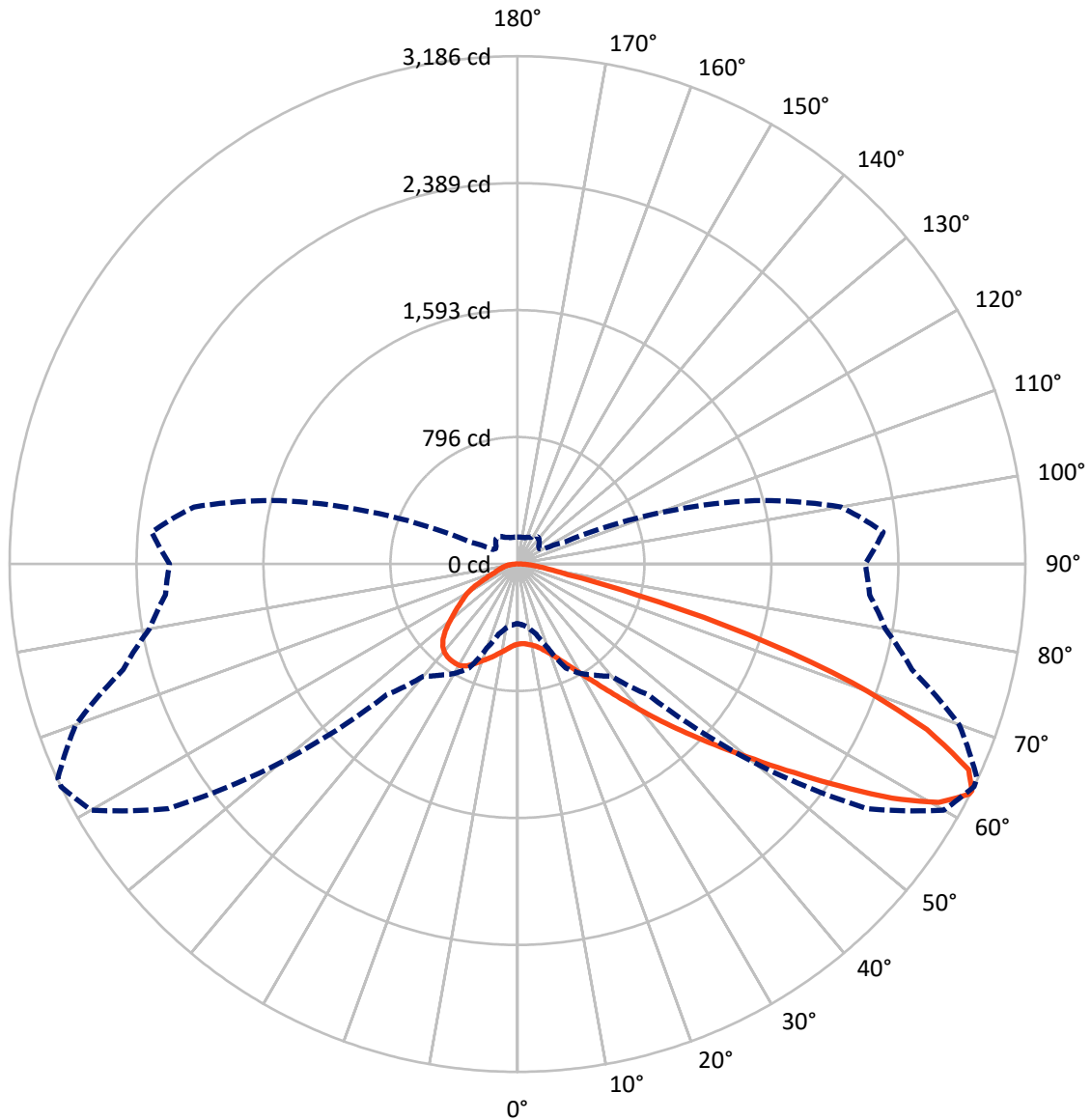
✕ Max cd  
 - - - 1/2 Max cd



Based on 10 foot mounting height. Maximum calculated value = 8.2 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	1364.6	0.0	1364.6
	% Fixture	29.4	0.0	29.4
<b>Street Side</b>	Lumens	3277.4	0.0	3277.4
	% Fixture	70.6	0.0	70.6
<b>Total</b>	Lumens	4642.0	0.0	4642.0
	% Fixture	100.0	0.0	100.0

**Coefficient of Utilization**

**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	50.2	1.1
10°-20°	167.2	3.6
20°-30°	313.8	6.8
30°-40°	526.0	11.3
40°-50°	882.5	19.0
50°-60°	1118.8	24.1
60°-70°	986.9	21.3
70°-80°	509.5	11.0
80°-90°	87.2	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°	4642.0	100.0
0°-180°	4642.0	100.0



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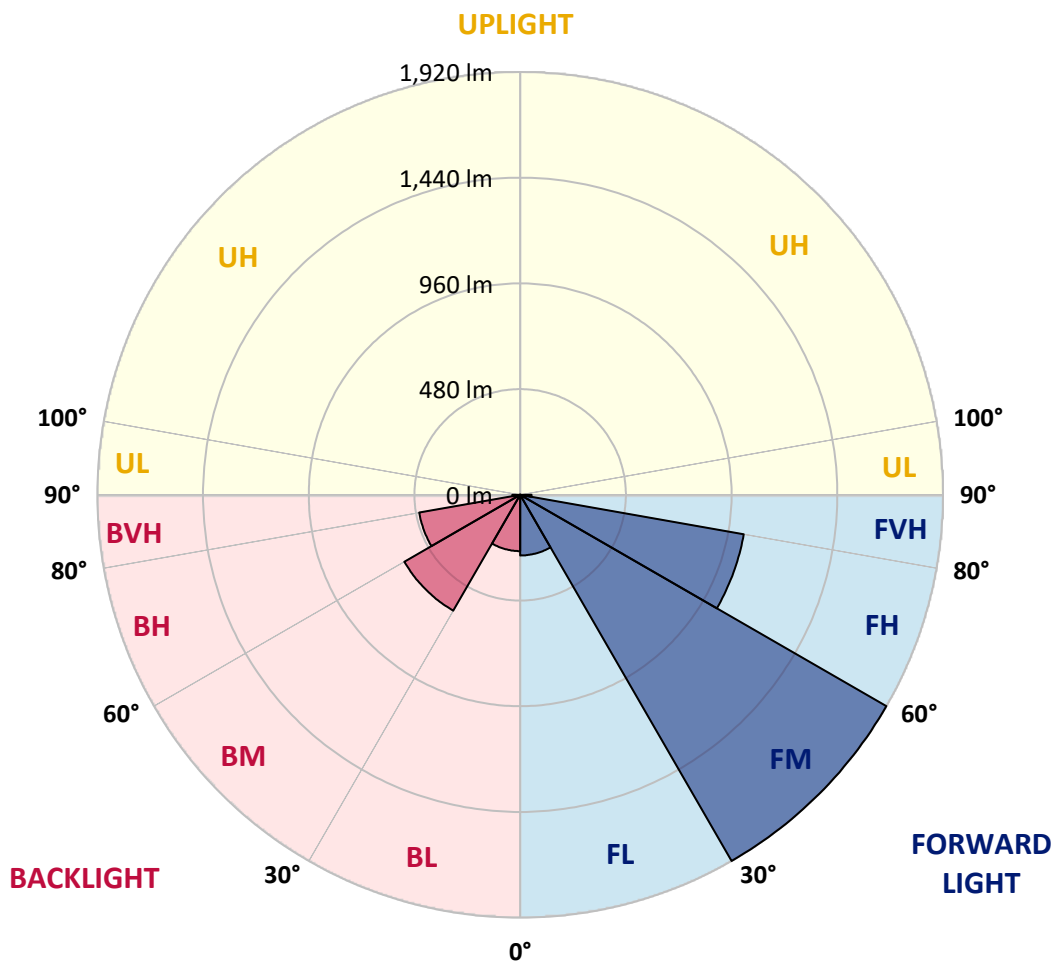
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**LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:**

Zone	Lumens	% Fixture	Zone Rating/Lumen Limit		
			B	U	G
FL (0°-30°)	275.5	5.9			
FM (30°-60°)	1919.8	41.4			
FH (60°-80°)	1030.8	22.2			G1/1800
FVH (80°-90°)	51.3	1.1			G1/100
BL (0°-30°)	255.7	5.5	B1/500		
BM (30°-60°)	607.4	13.1	B1/1000		
BH (60°-80°)	465.6	10.0	B1/500		G1/500
BVH (80°-90°)	35.9	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°	502.7	502.7	502.7	502.7	502.7	502.7	502.7	502.7	502.7	502.7	502.7
2.5°	499.6	498.8	498.8	498.8	498.8	498.1	498.8	500.4	499.6	498.8	500.4
5°	501.2	500.4	500.4	500.4	501.2	500.4	501.2	503.5	501.9	501.9	503.5
7.5°	505.1	504.3	505.1	504.3	504.3	504.3	505.1	507.4	506.6	507.4	509.7
10°	509.7	509.7	509.7	509.7	509.7	509.7	511.3	512.8	513.6	514.4	517.5
12.5°	523.7	523.7	523.7	522.9	522.9	520.6	523.7	525.3	526.8	528.4	530.7
15°	553.2	553.2	552.5	549.3	549.3	544.7	545.5	546.2	546.2	547.8	549.3
17.5°	592.1	591.3	589.8	587.4	584.3	578.9	577.3	575.8	573.4	572.7	572.7
20°	646.5	645.7	642.6	636.4	632.5	623.9	617.7	611.5	609.2	605.3	604.5
22.5°	724.2	724.2	718.0	708.6	705.5	687.7	669.8	656.6	651.9	646.5	646.5
25°	818.2	817.4	808.9	798.0	784.8	766.1	744.4	726.5	714.9	702.4	697.8
27.5°	930.9	928.5	916.9	903.7	878.8	855.5	829.8	811.2	791.0	775.5	761.5
30°	1063.0	1060.6	1040.4	1015.6	989.9	966.6	929.3	906.8	874.9	856.3	840.7
32.5°	1216.0	1213.7	1177.2	1153.1	1125.9	1097.1	1052.9	1017.1	976.7	950.3	928.5
35°	1411.1	1401.7	1349.7	1316.3	1273.5	1244.8	1198.2	1150.0	1102.6	1065.3	1033.4
37.5°	1621.6	1610.7	1564.9	1515.2	1473.2	1438.2	1372.2	1311.6	1255.7	1204.4	1164.7
40°	1841.5	1812.8	1763.8	1727.3	1698.5	1665.1	1596.0	1532.3	1444.5	1387.0	1327.1
42.5°	1993.8	1965.8	1931.7	1907.6	1893.6	1867.9	1829.1	1773.9	1695.4	1697.0	1539.3
45°	2094.0	2052.9	2029.6	2031.1	2036.5	2036.5	2029.6	2021.0	1986.8	2010.1	1878.0
47.5°	2058.3	2031.1	2016.3	2047.4	2086.3	2125.1	2170.2	2219.1	2275.1	2341.1	2178.7
50°	1848.5	1858.6	1865.6	1931.7	2014.8	2103.4	2206.7	2340.4	2496.5	2526.8	2448.4
52.5°	1513.6	1535.4	1558.7	1659.7	1769.3	1922.3	2103.4	2324.0	2533.8	2657.4	2649.6
55°	1175.6	1202.8	1252.5	1327.9	1414.9	1559.5	1783.2	2123.6	2450.7	2647.3	2766.9
57.5°	836.8	876.5	941.7	1046.6	1123.6	1205.1	1370.6	1748.3	2106.5	2472.5	2747.5
60°	556.3	575.0	617.7	748.3	878.0	963.5	1080.8	1217.6	1510.5	2014.8	2547.0
62.5°	394.7	407.2	433.6	492.6	610.0	764.6	835.3	898.2	992.2	1296.1	2045.1
63°	373.0	383.8	405.6	455.3	561.0	721.1	793.3	850.8	919.2	1159.3	1934.8
65°	309.3	313.9	325.6	349.7	406.4	539.2	657.4	692.3	704.0	745.2	1212.1
67.5°	261.1	264.2	268.1	275.1	297.6	359.0	490.3	534.6	521.4	493.4	599.1
70°	226.9	229.2	235.4	244.0	251.8	267.3	337.2	403.3	388.5	350.4	366.7
72.5°	181.0	184.9	191.9	206.7	222.2	242.4	259.5	300.7	291.4	254.9	258.7
75°	143.0	145.3	151.5	162.4	177.2	200.5	233.9	247.9	222.2	188.0	188.0
77.5°	113.4	115.8	121.2	129.8	139.1	155.4	178.7	215.2	199.7	141.4	140.6
80°	85.5	87.8	93.2	101.0	110.3	122.0	136.0	152.3	183.4	132.1	105.7
82.5°	62.9	63.7	73.0	78.5	81.6	90.9	102.6	111.9	125.9	122.0	94.0
85°	47.4	46.6	52.8	56.7	57.5	59.8	66.8	76.1	82.4	79.3	73.0
87.5°	26.4	23.3	27.2	31.1	31.1	31.9	33.4	38.9	44.3	42.7	38.9
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°	502.7	502.7	502.7	502.7	502.7	502.7	502.7	502.7	502.7	502.7	502.7
2.5°	500.4	500.4	499.6	499.6	500.4	500.4	499.6	501.9	503.5	503.5	504.3
5°	502.7	503.5	502.7	502.7	503.5	503.5	504.3	506.6	508.9	510.5	512.8
7.5°	509.7	510.5	509.7	509.7	510.5	511.3	512.8	515.9	517.5	520.6	524.5
10°	517.5	518.3	517.5	518.3	519.0	519.8	522.2	524.5	526.8	529.9	536.1
12.5°	531.5	532.3	530.7	531.5	533.8	533.8	535.4	536.9	540.8	544.7	550.9
15°	550.9	550.9	549.3	550.1	552.5	552.5	553.2	554.8	559.4	564.1	570.3
17.5°	573.4	575.0	574.2	575.0	576.5	577.3	577.3	578.9	582.0	585.1	591.3
20°	603.7	604.5	603.0	604.5	606.1	604.5	603.0	602.2	603.7	605.3	612.3
22.5°	644.9	644.1	640.3	640.3	640.3	637.1	633.3	628.6	628.6	626.3	631.7
25°	693.9	691.5	686.1	686.9	681.4	676.8	669.8	662.8	656.6	654.2	655.0
27.5°	751.4	746.7	741.3	739.7	734.3	725.7	714.1	700.9	690.8	683.0	681.4
30°	823.6	813.5	804.2	802.7	794.1	780.1	761.5	743.6	726.5	713.3	708.6
32.5°	909.1	893.6	878.8	877.2	863.3	844.6	822.1	797.2	772.3	751.4	741.3
35°	1009.3	986.0	972.0	968.2	948.0	924.6	899.8	867.9	833.0	803.4	784.8
37.5°	1131.3	1107.2	1083.2	1083.9	1056.0	1028.8	995.4	956.5	912.2	871.0	844.6
40°	1282.1	1247.9	1216.8	1209.8	1185.7	1147.6	1111.1	1066.1	1011.7	957.3	919.2
42.5°	1464.7	1408.7	1366.0	1359.8	1327.9	1281.3	1237.0	1177.2	1122.0	1056.0	1010.1
45°	1672.1	1582.8	1531.5	1522.2	1470.9	1423.5	1369.9	1306.2	1238.6	1164.0	1109.6
47.5°	1930.1	1802.7	1715.6	1700.1	1629.4	1567.2	1511.3	1440.6	1359.8	1276.6	1216.8
50°	2230.8	2042.8	1925.4	1901.3	1806.6	1733.5	1662.0	1573.4	1487.2	1400.2	1331.0
52.5°	2532.3	2330.3	2174.1	2144.6	2004.7	1906.8	1812.8	1724.2	1622.4	1536.2	1457.7
55°	2774.7	2640.3	2459.2	2418.1	2217.6	2084.7	1961.2	1860.2	1759.2	1690.8	1598.3
57.5°	2920.8	2913.8	2770.8	2714.1	2439.8	2243.2	2105.7	1990.7	1892.8	1864.1	1741.3
60°	2916.9	3097.9	3036.6	2993.8	2664.4	2405.6	2226.9	2102.6	2021.8	2054.4	1885.0
62.5°	2739.0	3105.7	3179.5	3167.9	2903.7	2536.2	2326.4	2198.2	2155.4	2252.6	2034.2
63°	2674.5	3087.8	3185.7	3181.1	2949.5	2561.0	2343.5	2216.8	2181.8	2303.1	2061.4
65°	2260.3	2931.7	3110.4	3131.4	3048.2	2646.5	2383.1	2264.2	2260.3	2415.7	2125.9
67.5°	1377.6	2477.1	2770.8	2811.2	2909.1	2673.7	2360.6	2247.9	2303.8	2432.0	2106.5
70°	589.0	1634.8	2226.9	2292.2	2531.5	2538.5	2296.1	2181.1	2293.7	2304.6	1968.2
72.5°	348.9	770.8	1516.0	1658.1	2003.1	2184.2	2148.4	2064.5	2160.9	2024.1	1676.0
75°	247.1	360.5	770.0	921.5	1394.7	1667.5	1805.0	1843.8	1840.0	1605.3	1258.0
77.5°	177.2	231.5	324.8	383.1	778.6	1070.7	1238.6	1352.0	1315.5	1074.6	775.5
80°	123.5	160.1	198.9	211.3	361.3	550.1	652.7	702.4	680.7	536.9	347.3
82.5°	89.4	104.9	128.2	136.0	181.8	254.1	302.3	266.5	255.6	198.1	150.0
85°	69.2	67.6	80.0	83.1	106.5	132.9	136.0	105.7	92.5	82.4	83.9
87.5°	49.0	42.0	42.7	44.3	55.2	70.7	69.2	43.5	37.3	39.6	45.1
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°	502.7	502.7	502.7	502.7	502.7	502.7	502.7	502.7	502.7	502.7	502.7
2.5°	505.8	506.6	508.2	508.9	510.5	510.5	512.1	512.8	514.4	515.9	516.7
5°	515.2	517.5	520.6	522.2	525.3	527.6	530.7	532.3	535.4	537.7	540.8
7.5°	529.1	533.0	536.9	541.6	546.2	550.1	553.2	557.1	562.6	566.4	568.8
10°	542.4	547.8	554.8	560.2	567.2	572.7	577.3	584.3	590.5	596.0	599.1
12.5°	559.4	566.4	573.4	582.0	591.3	598.3	605.3	614.6	623.2	629.4	632.5
15°	579.7	588.2	596.0	606.1	616.9	626.3	636.4	646.5	652.7	652.7	651.1
17.5°	600.6	607.6	616.9	628.6	643.4	655.0	660.5	662.0	659.7	654.2	650.4
20°	621.6	627.8	637.9	651.9	667.5	669.8	664.3	657.4	650.4	641.0	634.8
22.5°	638.7	647.3	662.8	679.1	679.9	666.7	651.9	640.3	629.4	618.5	606.8
25°	658.9	670.6	691.5	697.8	677.6	652.7	631.7	614.6	596.7	578.9	565.7
27.5°	683.8	700.9	721.8	704.0	664.3	629.4	600.6	575.0	551.7	526.8	512.1
30°	710.2	736.6	741.3	694.6	641.8	596.7	557.9	519.0	489.5	467.0	458.4
32.5°	742.0	776.2	748.3	678.3	611.5	552.5	500.4	453.8	428.9	414.9	411.0
35°	790.2	818.2	752.1	661.2	576.5	499.6	434.3	397.1	381.5	372.2	367.5
37.5°	859.4	858.6	751.4	640.3	536.1	442.1	381.5	355.1	342.7	334.9	326.3
40°	940.2	889.7	746.7	610.0	481.7	387.0	345.0	320.1	308.5	299.1	289.0
42.5°	1020.2	910.7	733.5	564.9	414.1	347.3	318.6	296.0	283.6	273.5	259.5
45°	1089.4	919.2	707.9	502.7	353.5	316.2	301.5	282.1	267.3	251.8	240.9
47.5°	1143.8	917.7	666.7	429.7	313.1	294.5	287.5	274.3	256.4	237.0	223.0
50°	1189.6	906.0	610.7	365.2	285.9	275.1	272.7	268.8	240.1	223.8	215.2
52.5°	1231.6	888.9	550.9	321.7	262.6	253.3	258.0	254.1	233.9	219.9	211.3
55°	1289.1	877.2	491.8	288.3	235.4	233.1	237.0	242.4	230.0	216.8	207.5
57.5°	1356.7	883.5	446.8	251.0	209.8	211.3	224.6	232.3	226.1	212.1	202.8
60°	1434.4	902.1	407.2	215.2	188.8	192.7	212.1	223.0	222.2	205.9	195.0
62.5°	1521.4	921.5	344.2	188.0	170.9	177.2	197.4	211.3	213.7	199.7	186.5
63°	1538.5	923.1	327.9	182.6	167.8	174.8	193.5	208.2	211.3	198.1	184.9
65°	1580.4	909.1	264.2	167.8	155.4	163.2	181.8	195.0	201.2	189.6	178.7
67.5°	1545.5	794.9	198.9	150.0	145.3	150.7	167.1	179.5	184.9	179.5	168.6
70°	1413.4	578.1	155.4	133.6	134.4	138.3	150.7	162.4	168.6	167.1	157.0
72.5°	1138.3	327.9	129.8	119.7	122.0	126.7	135.2	146.1	151.5	150.7	143.7
75°	749.8	167.8	109.6	107.2	108.8	112.7	118.9	127.4	133.6	132.9	129.8
77.5°	371.4	116.6	94.0	94.8	95.6	98.7	103.3	111.1	115.0	115.8	115.0
80°	153.1	90.9	80.8	81.6	82.4	84.7	87.8	94.8	97.1	98.7	99.5
82.5°	91.7	69.2	64.5	66.0	66.8	69.2	71.5	77.7	80.0	82.4	82.4
85°	60.6	48.2	46.6	48.2	49.7	51.3	52.1	55.9	59.8	62.9	64.5
87.5°	32.6	28.7	28.0	28.7	28.7	30.3	31.9	35.7	40.4	43.5	45.1
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°	502.7	502.7	502.7	502.7	502.7
2.5°	515.2	515.9	515.2	515.9	516.7
5°	540.8	542.4	541.6	541.6	544.7
7.5°	570.3	573.4	573.4	575.0	576.5
10°	602.2	605.3	607.6	607.6	610.0
12.5°	634.0	635.6	637.9	637.9	637.9
15°	650.4	649.6	648.8	648.0	648.0
17.5°	648.0	644.9	643.4	641.8	642.6
20°	630.9	625.5	623.9	621.6	623.2
22.5°	601.4	593.6	590.5	586.6	588.2
25°	557.1	547.8	546.2	541.6	543.9
27.5°	505.8	501.2	500.4	499.6	503.5
30°	457.7	459.2	460.0	461.5	465.4
32.5°	413.4	416.5	417.3	418.0	423.5
35°	369.9	366.0	369.9	368.3	373.0
37.5°	322.5	319.4	316.2	312.4	315.5
40°	282.8	277.4	268.1	263.4	264.2
42.5°	251.8	244.8	237.0	232.3	232.3
45°	231.5	223.0	216.0	212.9	212.9
47.5°	216.0	212.1	208.2	205.9	205.9
50°	209.8	205.1	202.8	201.2	201.2
52.5°	205.1	200.5	198.1	196.6	195.0
55°	201.2	194.3	191.9	191.1	191.1
57.5°	195.8	189.6	186.5	185.7	185.7
60°	187.3	182.6	179.5	178.7	178.7
62.5°	178.7	174.1	170.9	170.9	170.9
63°	177.2	171.7	169.4	169.4	169.4
65°	170.2	164.7	162.4	162.4	161.6
67.5°	160.8	155.4	153.8	153.8	152.3
70°	150.0	145.3	143.7	144.5	141.4
72.5°	139.1	134.4	132.1	132.1	129.0
75°	126.7	122.0	118.9	118.1	115.0
77.5°	112.7	108.8	105.7	102.6	101.0
80°	97.9	94.8	90.9	88.6	86.2
82.5°	82.4	79.3	76.9	80.0	68.4
85°	64.5	61.4	58.3	62.9	49.0
87.5°	47.4	45.8	42.7	37.3	32.6
90°	0.0	0.0	0.0	0.0	0.0

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