

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: P239120

Luminaire Tested: **ARCH-AF24-40-D-U-T2U**

Issue Date: 3/3/2020

**Test Information**

Test Method: LM-79-08  
Report Number: P239120  
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-AF24-40-D-U-T2U  
Description: ARCHEON ROADWAY AND AREA LUMINAIRE  
(1) 70 CRI, 4000K, 500mA LIGHT ENGINE WITH 24 LEDS AND TYPE II U OPTICS  
Light Source: -  
Ballast/Driver: ELECTRONIC DRIVER

**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 5263.1 lumens  
Efficiency: N/A  
Efficacy: 131.6 lumens/watt  
Luminous Opening: Rectangular (W 0.5' x L: 0.75' x H: 0')  
IES Classification: Type II - Short - Semi-Cutoff  
BUG Rating: B2 - U0 - G2

Input Watts (W): 40  
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

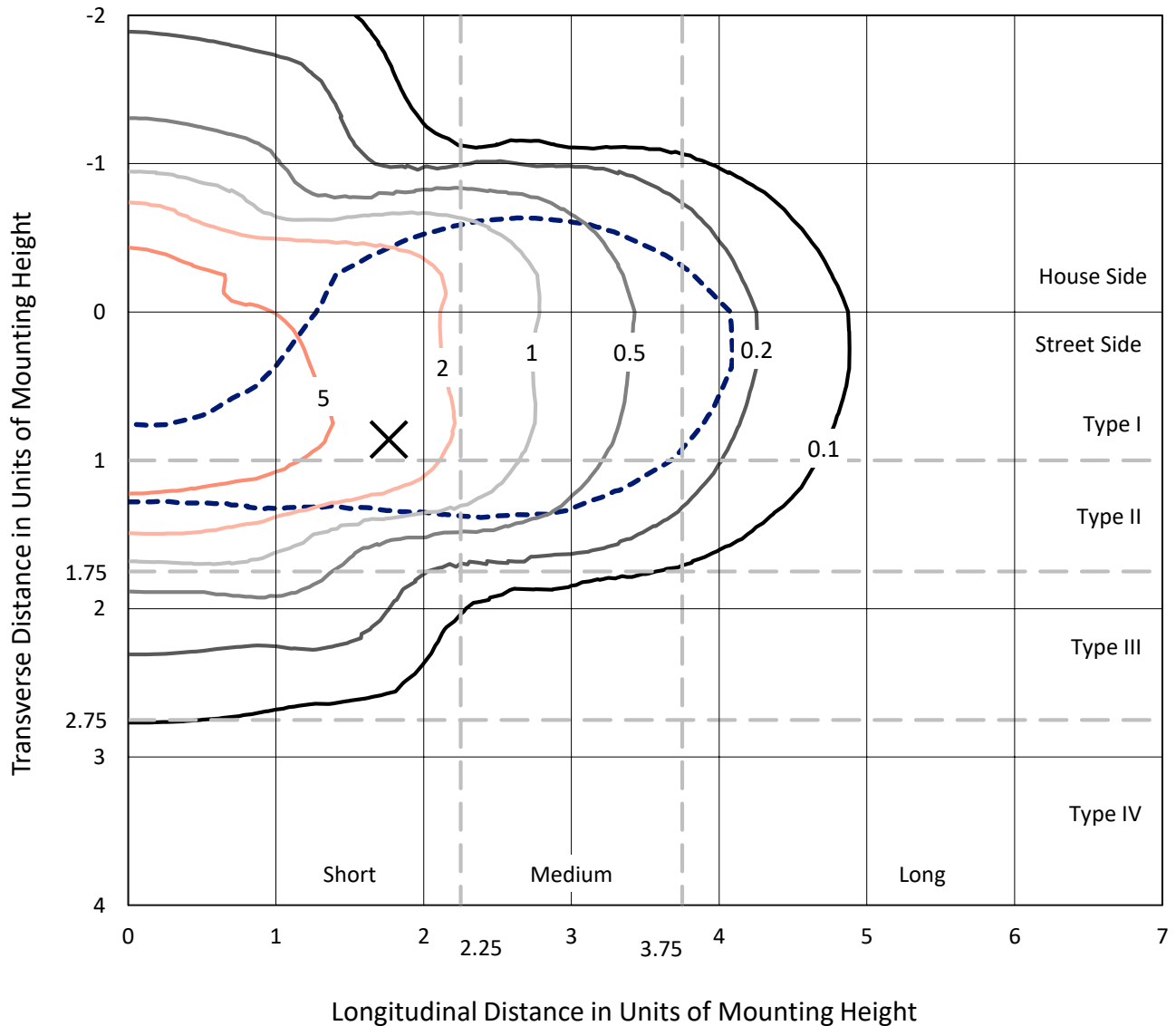


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### Iso-Footcandle Lines of Horizontal Illumination

× Max cd  
 - - - 1/2 Max cd

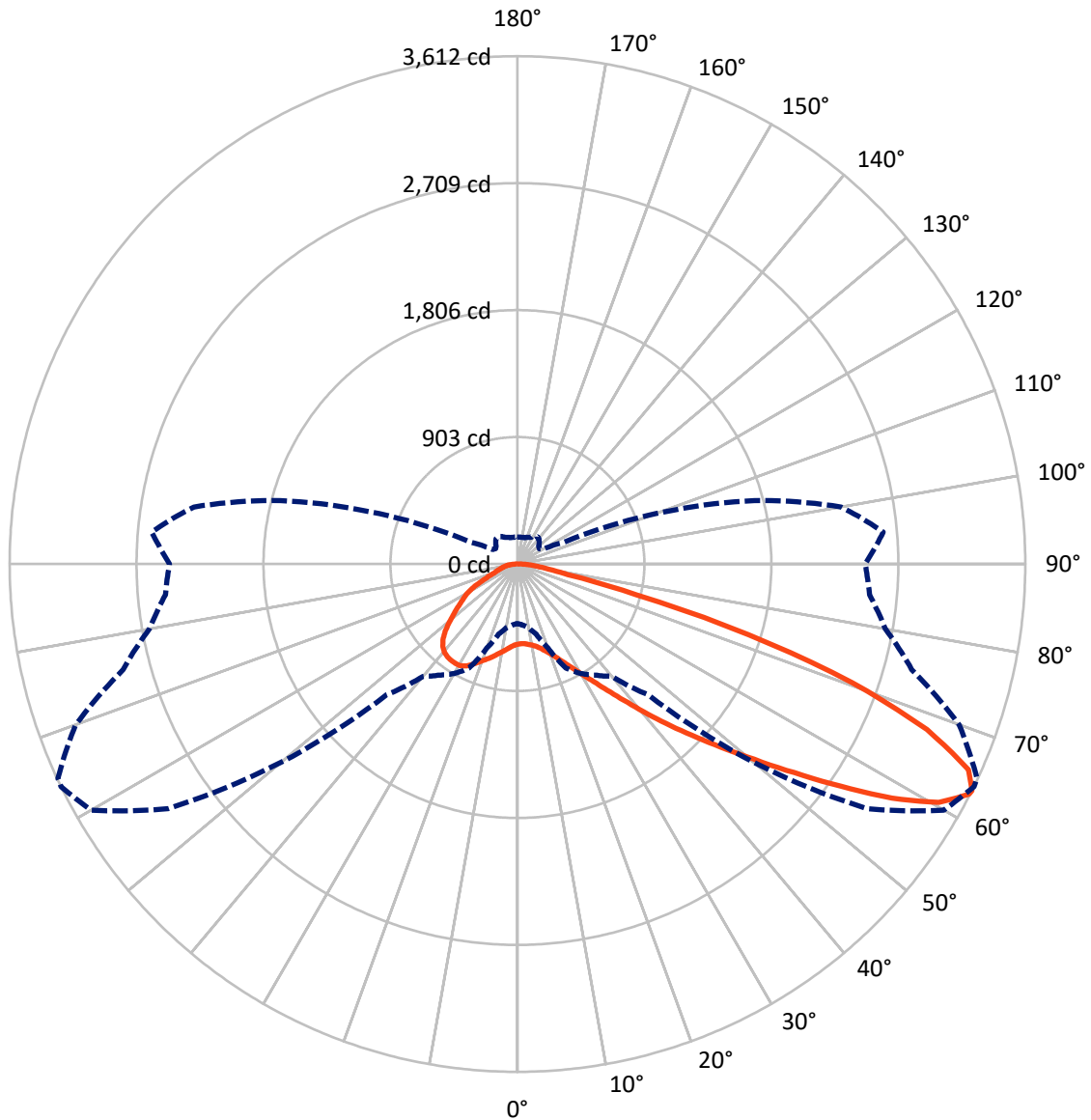


Based on 10 foot mounting height. Maximum calculated value = 9.2 fc  
 Type II - Short - Semi-Cutoff

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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	1547.2	0.0	1547.2
	% Fixture	29.4	0.0	29.4
<b>Street Side</b>	Lumens	3715.9	0.0	3715.9
	% Fixture	70.6	0.0	70.6
<b>Total</b>	Lumens	5263.1	0.0	5263.1
	% Fixture	100.0	0.0	100.0

**Coefficient of Utilization**

**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	56.9	1.1
10°-20°	189.6	3.6
20°-30°	355.8	6.8
30°-40°	596.4	11.3
40°-50°	1000.6	19.0
50°-60°	1268.4	24.1
60°-70°	1119.0	21.3
70°-80°	577.6	11.0
80°-90°	98.8	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°	5263.1	100.0
0°-180°	5263.1	100.0



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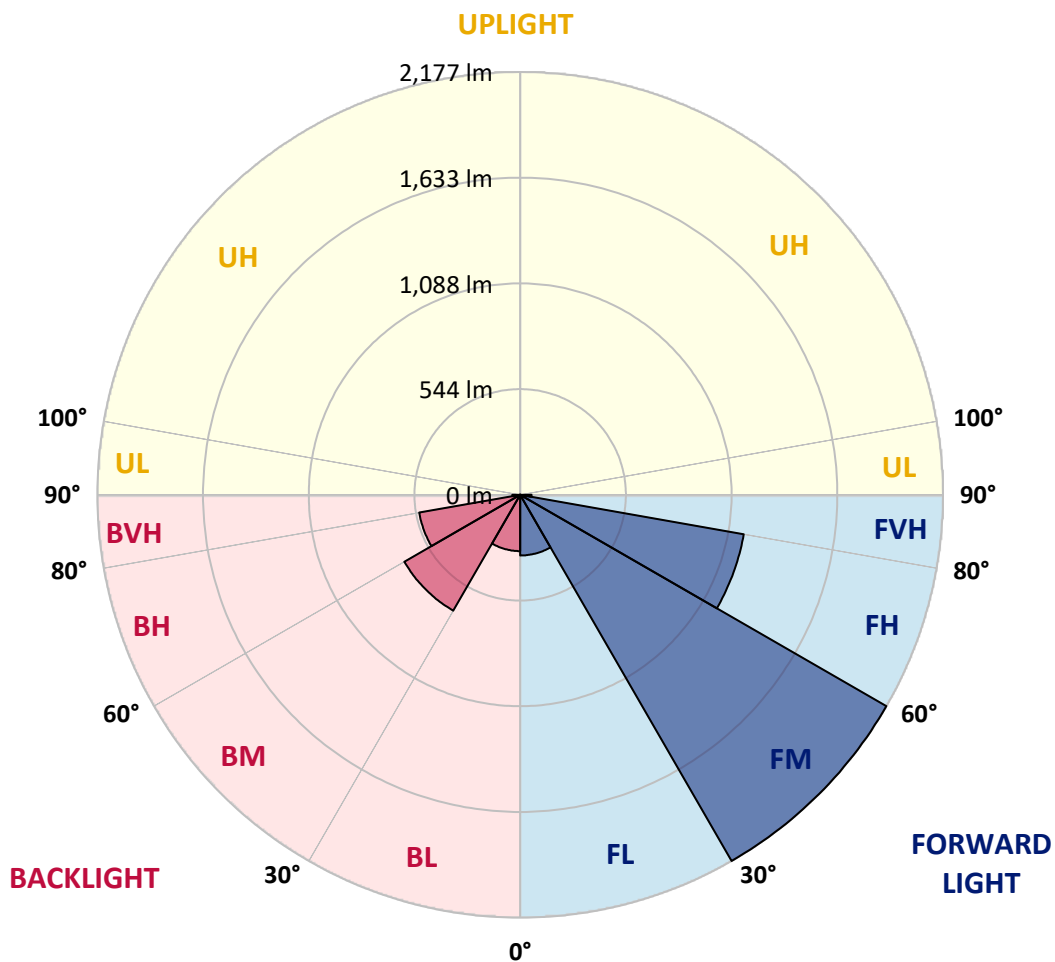
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**LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:**

Zone		Lumens	% Fixture	Zone Rating/Lumen Limit		
				B	U	G
FL	(0°-30°)	312.4	5.9			
FM	(30°-60°)	2176.7	41.4			
FH	(60°-80°)	1168.7	22.2			G1/1800
FVH	(80°-90°)	58.2	1.1			G1/100
BL	(0°-30°)	289.9	5.5	B1/500		
BM	(30°-60°)	688.7	13.1	B1/1000		
BH	(60°-80°)	527.9	10.0	B2/1000		G2/1000
BVH	(80°-90°)	40.7	0.8			G1/100
UL	(90°-100°)	0.0	0.0		U0/0	
UH	(100°-180°)	0.0	0.0		U0/0	

**BUG Rating: B2-U0-G2**

Type II Short





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**CANDELA DISTRIBUTION (FULL):**

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
0°	570.0	570.0	570.0	570.0	570.0	570.0	570.0	570.0	570.0	570.0	570.0
2.5°	566.5	565.6	565.6	565.6	565.6	564.7	565.6	567.3	566.5	565.6	567.3
5°	568.2	567.3	567.3	567.3	568.2	567.3	568.2	570.9	569.1	569.1	570.9
7.5°	572.6	571.7	572.6	571.7	571.7	571.7	572.6	575.3	574.4	575.3	578.0
10°	578.0	578.0	578.0	578.0	578.0	578.0	579.7	581.4	582.4	583.2	586.8
12.5°	593.8	593.8	593.8	592.9	592.9	590.2	593.8	595.6	597.3	599.0	601.7
15°	627.3	627.3	626.4	622.9	622.9	617.6	618.5	619.3	619.3	621.1	622.9
17.5°	671.3	670.4	668.7	666.0	662.5	656.3	654.6	652.8	650.2	649.3	649.3
20°	732.9	732.1	728.5	721.5	717.1	707.4	700.4	693.4	690.7	686.3	685.4
22.5°	821.0	821.0	814.1	803.4	799.9	779.7	759.4	744.4	739.2	732.9	732.9
25°	927.7	926.8	917.1	904.8	889.8	868.7	843.9	823.7	810.5	796.4	791.2
27.5°	1055.4	1052.7	1039.5	1024.6	996.4	970.0	940.9	919.7	896.8	879.2	863.4
30°	1205.1	1202.5	1179.7	1151.4	1122.4	1095.9	1053.6	1028.1	992.0	970.9	953.2
32.5°	1378.7	1376.1	1334.6	1307.3	1276.5	1243.9	1193.7	1153.2	1107.3	1077.5	1052.7
35°	1599.9	1589.3	1530.2	1492.4	1443.9	1411.4	1358.5	1303.9	1250.1	1207.8	1171.7
37.5°	1838.5	1826.3	1774.3	1717.9	1670.3	1630.7	1555.8	1487.1	1423.6	1365.5	1320.6
40°	2087.9	2055.3	1999.8	1958.4	1925.8	1888.0	1809.5	1737.3	1637.7	1572.6	1504.7
42.5°	2260.6	2228.9	2190.1	2162.8	2147.0	2117.8	2073.8	2011.2	1922.3	1924.1	1745.3
45°	2374.3	2327.5	2301.1	2302.9	2309.0	2309.0	2301.1	2291.4	2252.6	2279.0	2129.3
47.5°	2333.7	2302.9	2286.1	2321.4	2365.4	2409.5	2460.6	2516.0	2579.5	2654.4	2470.2
50°	2095.8	2107.3	2115.3	2190.1	2284.4	2384.8	2501.9	2653.5	2830.6	2864.9	2776.0
52.5°	1716.1	1740.8	1767.2	1881.7	2006.0	2179.5	2384.8	2635.0	2872.9	3012.9	3004.1
55°	1332.9	1363.7	1420.2	1505.6	1604.3	1768.1	2021.9	2407.7	2778.5	3001.4	3137.2
57.5°	948.8	993.7	1067.8	1186.6	1273.9	1366.4	1554.1	1982.2	2388.3	2803.3	3115.1
60°	630.8	651.9	700.4	848.3	995.5	1092.4	1225.4	1380.5	1712.6	2284.4	2887.8
62.5°	447.5	461.7	491.6	558.5	691.5	866.8	947.0	1018.4	1125.0	1469.5	2318.7
63°	422.9	435.2	459.9	516.3	636.1	817.5	899.5	964.6	1042.2	1314.4	2193.6
65°	350.7	355.9	369.1	396.4	460.7	611.4	745.3	784.9	798.2	844.9	1374.3
67.5°	296.0	299.5	303.9	311.9	337.4	407.0	555.9	606.1	591.2	559.5	679.2
70°	257.3	259.9	266.9	276.6	285.4	303.1	382.4	457.3	440.5	397.3	415.8
72.5°	205.3	209.7	217.6	234.4	252.0	274.9	294.2	340.9	330.4	289.0	293.4
75°	162.1	164.7	171.8	184.1	200.9	227.3	265.1	281.0	252.0	213.2	213.2
77.5°	128.6	131.2	137.4	147.1	157.7	176.2	202.6	244.1	226.4	160.3	159.5
80°	96.9	99.5	105.7	114.6	125.1	138.3	154.2	172.7	207.9	149.8	119.8
82.5°	71.4	72.2	82.9	89.0	92.5	103.1	116.3	126.8	142.7	138.3	106.6
85°	53.7	52.9	59.9	64.3	65.2	67.8	75.8	86.3	93.4	89.8	82.9
87.5°	30.0	26.4	30.8	35.2	35.2	36.1	37.8	44.1	50.2	48.5	44.1
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):**

	55°	60°	64°	65°	70°	75°	80°	85°	90°	95°	100°
0°	570.0	570.0	570.0	570.0	570.0	570.0	570.0	570.0	570.0	570.0	570.0
2.5°	567.3	567.3	566.5	566.5	567.3	567.3	566.5	569.1	570.9	570.9	571.7
5°	570.0	570.9	570.0	570.0	570.9	570.9	571.7	574.4	577.0	578.8	581.4
7.5°	578.0	578.8	578.0	578.0	578.8	579.7	581.4	584.9	586.8	590.2	594.6
10°	586.8	587.6	586.8	587.6	588.5	589.3	592.0	594.6	597.3	600.8	607.8
12.5°	602.6	603.4	601.7	602.6	605.2	605.2	607.0	608.8	613.2	617.6	624.6
15°	624.6	624.6	622.9	623.7	626.4	626.4	627.3	629.0	634.3	639.5	646.6
17.5°	650.2	651.9	651.0	651.9	653.7	654.6	654.6	656.3	659.8	663.4	670.4
20°	684.6	685.4	683.6	685.4	687.1	685.4	683.6	682.7	684.6	686.3	694.2
22.5°	731.2	730.3	725.9	725.9	725.9	722.4	718.0	712.7	712.7	710.0	716.3
25°	786.8	784.1	777.9	778.8	772.6	767.3	759.4	751.5	744.4	741.7	742.7
27.5°	851.9	846.6	840.5	838.7	832.5	822.9	809.6	794.6	783.2	774.4	772.6
30°	933.9	922.4	911.8	910.0	900.4	884.5	863.4	843.1	823.7	808.7	803.4
32.5°	1030.7	1013.1	996.4	994.6	978.8	957.6	932.1	903.9	875.6	851.9	840.5
35°	1144.4	1118.0	1102.1	1097.7	1074.8	1048.3	1020.2	984.1	944.4	910.9	889.8
37.5°	1282.7	1255.4	1228.1	1229.0	1197.3	1166.4	1128.5	1084.4	1034.3	987.6	957.6
40°	1453.6	1414.8	1379.7	1371.7	1344.4	1301.2	1259.8	1208.7	1147.0	1085.4	1042.2
42.5°	1660.7	1597.2	1548.7	1541.7	1505.6	1452.7	1402.5	1334.6	1272.1	1197.3	1145.3
45°	1895.8	1794.6	1736.4	1725.8	1667.7	1613.9	1553.1	1480.9	1404.3	1319.7	1258.0
47.5°	2188.3	2043.9	1945.1	1927.5	1847.4	1777.0	1713.4	1633.3	1541.7	1447.5	1379.7
50°	2529.2	2316.1	2183.1	2155.8	2048.3	1965.5	1884.4	1783.9	1686.2	1587.5	1509.1
52.5°	2871.1	2642.1	2465.0	2431.5	2272.9	2161.9	2055.3	1954.9	1839.5	1741.7	1652.7
55°	3146.0	2993.6	2788.3	2741.6	2514.3	2363.6	2223.6	2109.0	1994.5	1917.0	1812.2
57.5°	3311.6	3303.6	3141.6	3077.2	2766.3	2543.4	2387.5	2257.0	2146.0	2113.4	1974.3
60°	3307.2	3512.4	3442.8	3394.4	3020.9	2727.5	2524.8	2383.9	2292.3	2329.3	2137.3
62.5°	3105.5	3521.2	3605.0	3591.7	3292.2	2875.5	2637.7	2492.3	2443.8	2553.9	2306.3
63°	3032.3	3500.9	3612.0	3606.7	3344.1	2903.6	2657.0	2513.4	2473.8	2611.2	2337.2
65°	2562.8	3323.9	3526.5	3550.4	3456.0	3000.6	2701.9	2567.2	2562.8	2739.0	2410.4
67.5°	1561.9	2808.5	3141.6	3187.3	3298.4	3031.4	2676.3	2548.7	2612.1	2757.5	2388.3
70°	667.8	1853.6	2524.8	2598.9	2870.2	2878.2	2603.3	2472.9	2600.6	2612.9	2231.5
72.5°	395.6	873.9	1718.8	1880.0	2271.2	2476.5	2435.9	2340.7	2450.0	2294.9	1900.2
75°	280.2	408.8	873.1	1044.8	1581.4	1890.6	2046.5	2090.5	2086.1	1820.1	1426.3
77.5°	200.9	262.5	368.3	434.3	882.7	1213.9	1404.3	1532.9	1491.5	1218.4	879.2
80°	140.0	181.5	225.6	239.6	409.7	623.7	740.0	796.4	771.7	608.8	393.8
82.5°	101.3	119.0	145.4	154.2	206.1	288.1	342.7	302.2	289.8	224.6	170.0
85°	78.4	76.6	90.7	94.2	120.7	150.7	154.2	119.8	104.9	93.4	95.1
87.5°	55.5	47.6	48.5	50.2	62.5	80.2	78.4	49.3	42.2	44.9	51.1
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°	570.0	570.0	570.0	570.0	570.0	570.0	570.0	570.0	570.0	570.0	570.0
2.5°	573.5	574.4	576.1	577.0	578.8	578.8	580.5	581.4	583.2	584.9	585.8
5°	584.1	586.8	590.2	592.0	595.6	598.2	601.7	603.4	607.0	609.7	613.2
7.5°	600.0	604.4	608.8	614.1	619.3	623.7	627.3	631.7	637.8	642.2	644.9
10°	614.9	621.1	629.0	635.2	643.1	649.3	654.6	662.5	669.5	675.7	679.2
12.5°	634.3	642.2	650.2	659.8	670.4	678.3	686.3	696.8	706.6	713.6	717.1
15°	657.2	666.9	675.7	687.1	699.5	710.0	721.5	732.9	740.0	740.0	738.3
17.5°	681.0	689.0	699.5	712.7	729.5	742.7	748.8	750.5	748.0	741.7	737.3
20°	704.8	711.9	723.3	739.2	756.8	759.4	753.2	745.3	737.3	726.8	719.7
22.5°	724.1	733.9	751.5	770.0	770.9	755.9	739.2	725.9	713.6	701.2	688.0
25°	747.1	760.3	784.1	791.2	768.2	740.0	716.3	696.8	676.6	656.3	641.4
27.5°	775.3	794.6	818.5	798.2	753.2	713.6	681.0	651.9	625.5	597.3	580.5
30°	805.2	835.1	840.5	787.6	727.7	676.6	632.5	588.5	555.1	529.5	519.8
32.5°	841.4	880.0	848.3	769.1	693.4	626.4	567.3	514.4	486.3	470.5	466.1
35°	895.9	927.7	852.7	749.7	653.7	566.5	492.4	450.2	432.6	422.0	416.8
37.5°	974.4	973.4	851.9	725.9	607.8	501.2	432.6	402.6	388.5	379.7	370.0
40°	1066.0	1008.7	846.6	691.5	546.2	438.7	391.2	362.9	349.7	339.2	327.8
42.5°	1156.8	1032.5	831.7	640.5	469.5	393.8	361.2	335.6	321.5	310.1	294.2
45°	1235.1	1042.2	802.6	570.0	400.8	358.5	341.8	319.8	303.1	285.4	273.1
47.5°	1296.8	1040.4	755.9	487.1	355.1	333.9	325.9	311.0	290.7	268.7	252.9
50°	1348.8	1027.2	692.4	414.1	324.2	311.9	309.2	304.8	272.2	253.7	244.1
52.5°	1396.3	1007.8	624.6	364.7	297.8	287.2	292.5	288.1	265.1	249.3	239.6
55°	1461.5	994.6	557.6	326.8	266.9	264.3	268.7	274.9	260.8	245.8	235.2
57.5°	1538.2	1001.7	506.6	284.6	237.8	239.6	254.6	263.4	256.4	240.5	230.0
60°	1626.3	1022.8	461.7	244.1	214.1	218.5	240.5	252.9	252.0	233.4	221.2
62.5°	1724.9	1044.8	390.3	213.2	193.8	200.9	223.7	239.6	242.2	226.4	211.4
63°	1744.3	1046.6	371.7	207.0	190.3	198.2	219.3	236.1	239.6	224.6	209.7
65°	1791.9	1030.7	299.5	190.3	176.2	185.1	206.1	221.2	228.2	214.9	202.6
67.5°	1752.2	901.2	225.6	170.0	164.7	170.9	189.5	203.5	209.7	203.5	191.2
70°	1602.5	655.4	176.2	151.5	152.4	156.8	170.9	184.1	191.2	189.5	178.0
72.5°	1290.7	371.7	147.1	135.6	138.3	143.6	153.3	165.6	171.8	170.9	163.0
75°	850.2	190.3	124.2	121.5	123.4	127.8	134.8	144.4	151.5	150.7	147.1
77.5°	421.1	132.2	106.6	107.5	108.3	111.9	117.1	126.0	130.4	131.2	130.4
80°	173.6	103.1	91.7	92.5	93.4	96.1	99.5	107.5	110.2	111.9	112.7
82.5°	103.9	78.4	73.1	74.9	75.8	78.4	81.0	88.1	90.7	93.4	93.4
85°	68.7	54.6	52.9	54.6	56.4	58.1	59.0	63.4	67.8	71.4	73.1
87.5°	37.0	32.6	31.7	32.6	32.6	34.4	36.1	40.5	45.8	49.3	51.1
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°	570.0	570.0	570.0	570.0	570.0
2.5°	584.1	584.9	584.1	584.9	585.8
5°	613.2	614.9	614.1	614.1	617.6
7.5°	646.6	650.2	650.2	651.9	653.7
10°	682.7	686.3	689.0	689.0	691.5
12.5°	718.8	720.7	723.3	723.3	723.3
15°	737.3	736.5	735.6	734.7	734.7
17.5°	734.7	731.2	729.5	727.7	728.5
20°	715.3	709.2	707.4	704.8	706.6
22.5°	681.9	673.1	669.5	665.1	666.9
25°	631.7	621.1	619.3	614.1	616.6
27.5°	573.5	568.2	567.3	566.5	570.9
30°	518.9	520.7	521.5	523.3	527.7
32.5°	468.7	472.2	473.1	473.9	480.2
35°	419.3	414.9	419.3	417.6	422.9
37.5°	365.6	362.1	358.5	354.1	357.7
40°	320.7	314.6	303.9	298.6	299.5
42.5°	285.4	277.5	268.7	263.4	263.4
45°	262.5	252.9	244.9	241.4	241.4
47.5°	244.9	240.5	236.1	233.4	233.4
50°	237.8	232.6	230.0	228.2	228.2
52.5°	232.6	227.3	224.6	222.9	221.2
55°	228.2	220.2	217.6	216.8	216.8
57.5°	222.0	214.9	211.4	210.5	210.5
60°	212.4	207.0	203.5	202.6	202.6
62.5°	202.6	197.3	193.8	193.8	193.8
63°	200.9	194.7	192.0	192.0	192.0
65°	192.9	186.8	184.1	184.1	183.2
67.5°	182.4	176.2	174.4	174.4	172.7
70°	170.0	164.7	163.0	163.9	160.3
72.5°	157.7	152.4	149.8	149.8	146.3
75°	143.6	138.3	134.8	133.9	130.4
77.5°	127.8	123.4	119.8	116.3	114.6
80°	111.0	107.5	103.1	100.5	97.8
82.5°	93.4	89.8	87.3	90.7	77.5
85°	73.1	69.6	66.1	71.4	55.5
87.5°	53.7	52.0	48.5	42.2	37.0
90°	0.0	0.0	0.0	0.0	0.0

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