

Scaled data based on original data using
LM-79-2019 Approved Method: Electrical and Photometric Measurements of Solid-
State Lighting Products

Test Report Prepared for

Cooper Lighting Solutions

(formerly Eaton)

Brand: EPHESUS

Report Number: P628563

Luminaire Tested: **EPH-VN-04-E-735-U-LAM**

Issue Date: 01/11/2023

Test Information

Test Method: LM-79-2019
Report Number: P628563
Test Lab: INNOVATION CENTER(G2)
Issue Date: 01/11/2023
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: EPHESUS
Catalog Number: EPH-VN-04-E-735-U-LAM
Description: EPHESUS LUMAVISION FLOOD – Middle Tier Light Square Luminaire w/
LAMBERTIAN distribution lens
Light Source: (64) 3500K CCT, 70 CRI LEDS
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp:	N/A	NEMA Type:	7H x 7V
Luminaire Lumens:	35501.8 lumens	Max Intensity:	11572.2 candela
Efficiency:	N/A	Max Intensity Angle:	20°H x 10°V
Efficacy:	116.9 lumens/watt		
Luminous Opening:	Rectangular (W 2' x L: 0.5' x H: 0')		

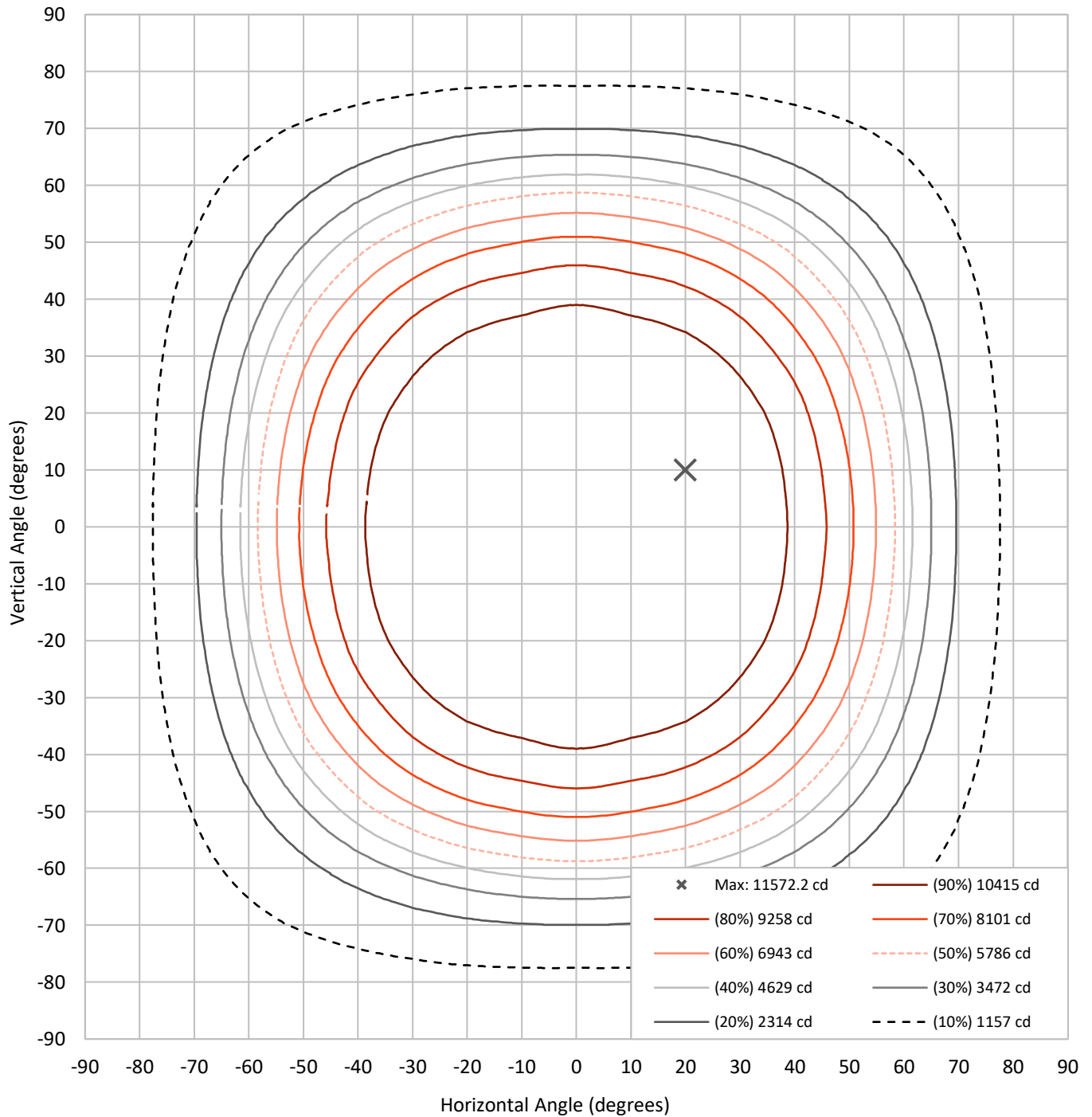
Beam Angle (50%):	115.7°H x 112.9°V	Field Angle (10%):	154.7°H x 154°V
Beam Lumens:	21784.6 lumens	Field Lumens:	26116.1 lumens
Beam Efficiency:	61.4%	Field Efficiency:	73.6%

Input Watts (W): 303.8
Input Voltage (V): 120
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: 25 FT



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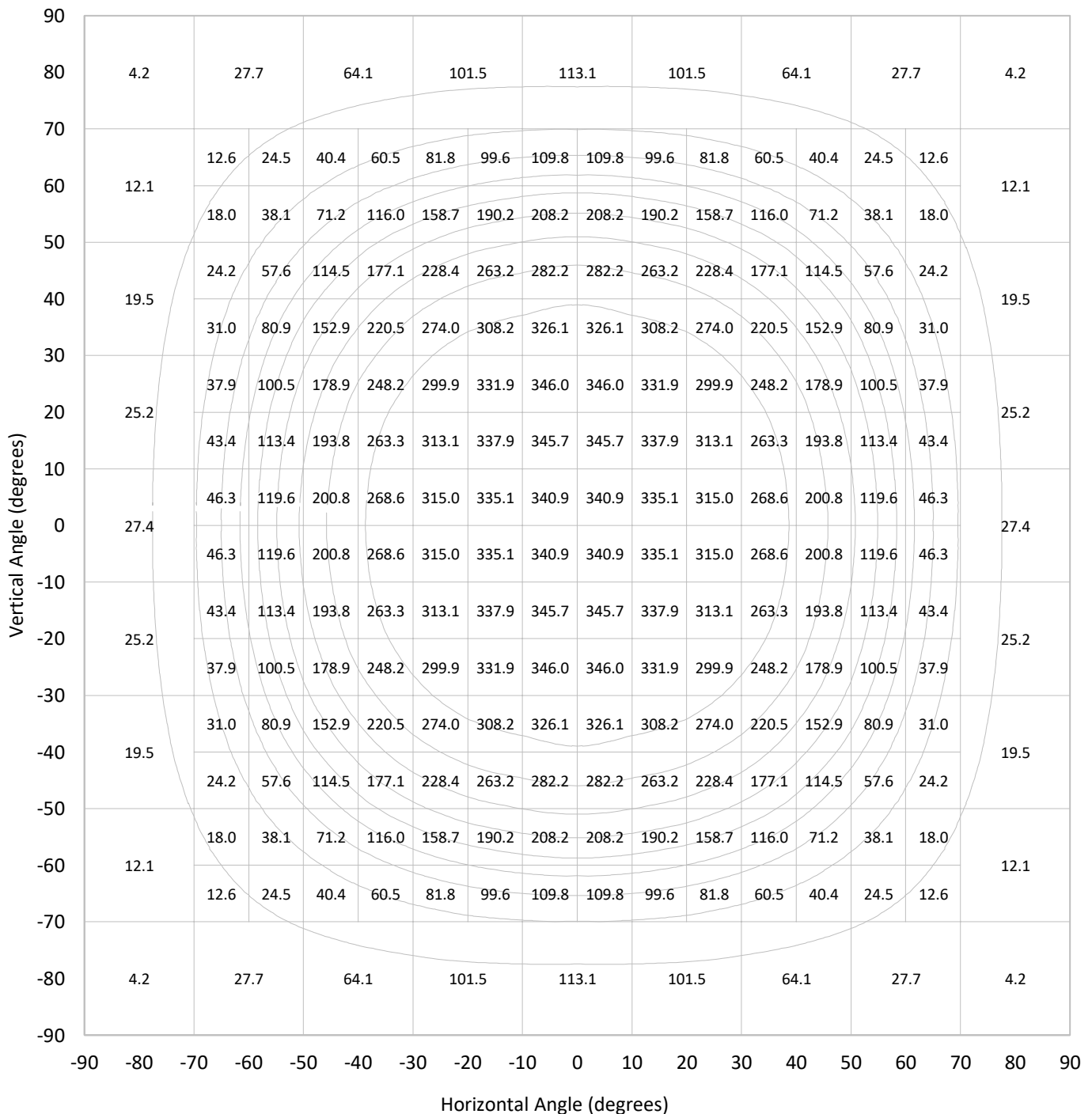
Iso-Candela Plot





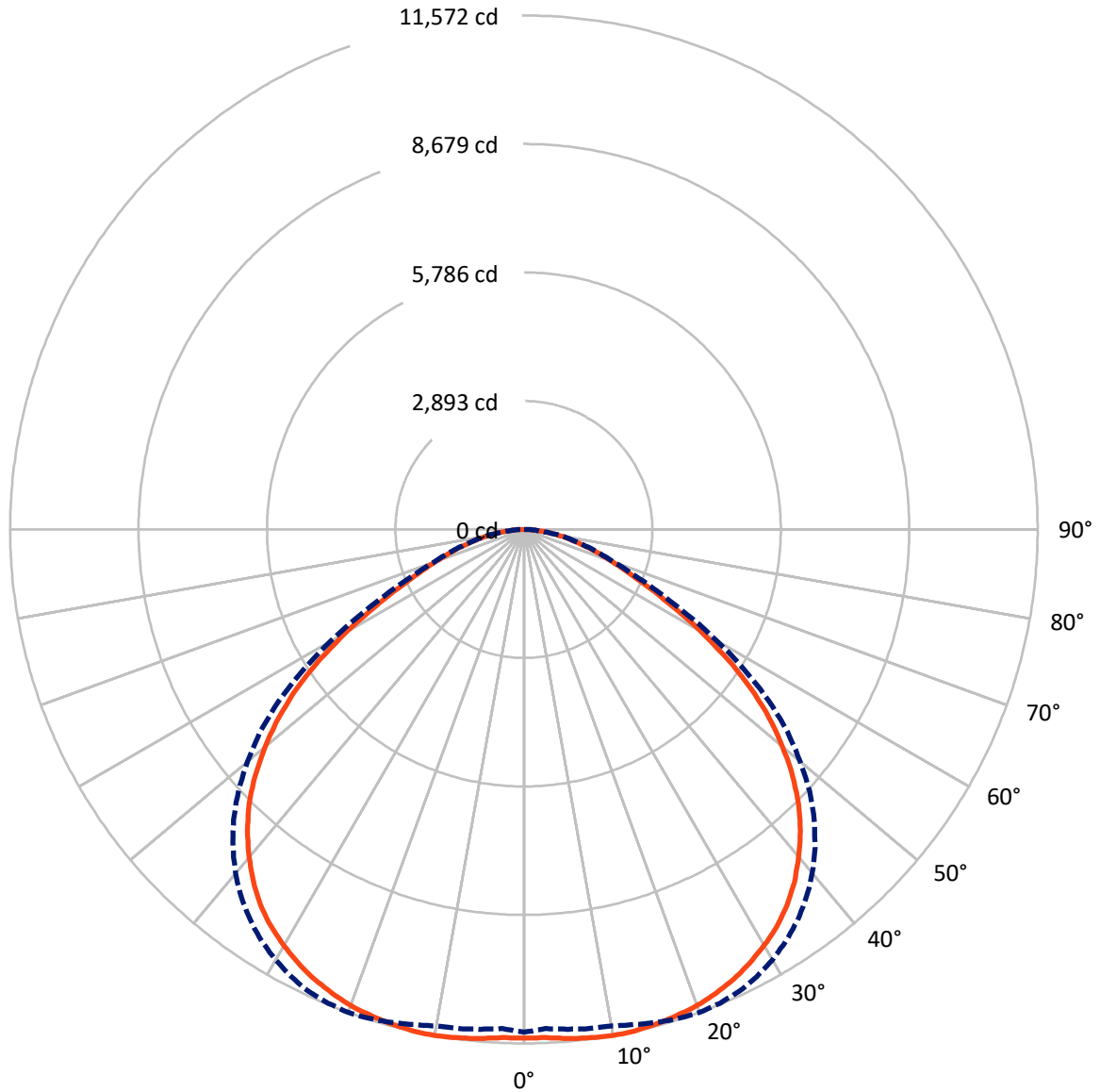
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Lumen Table



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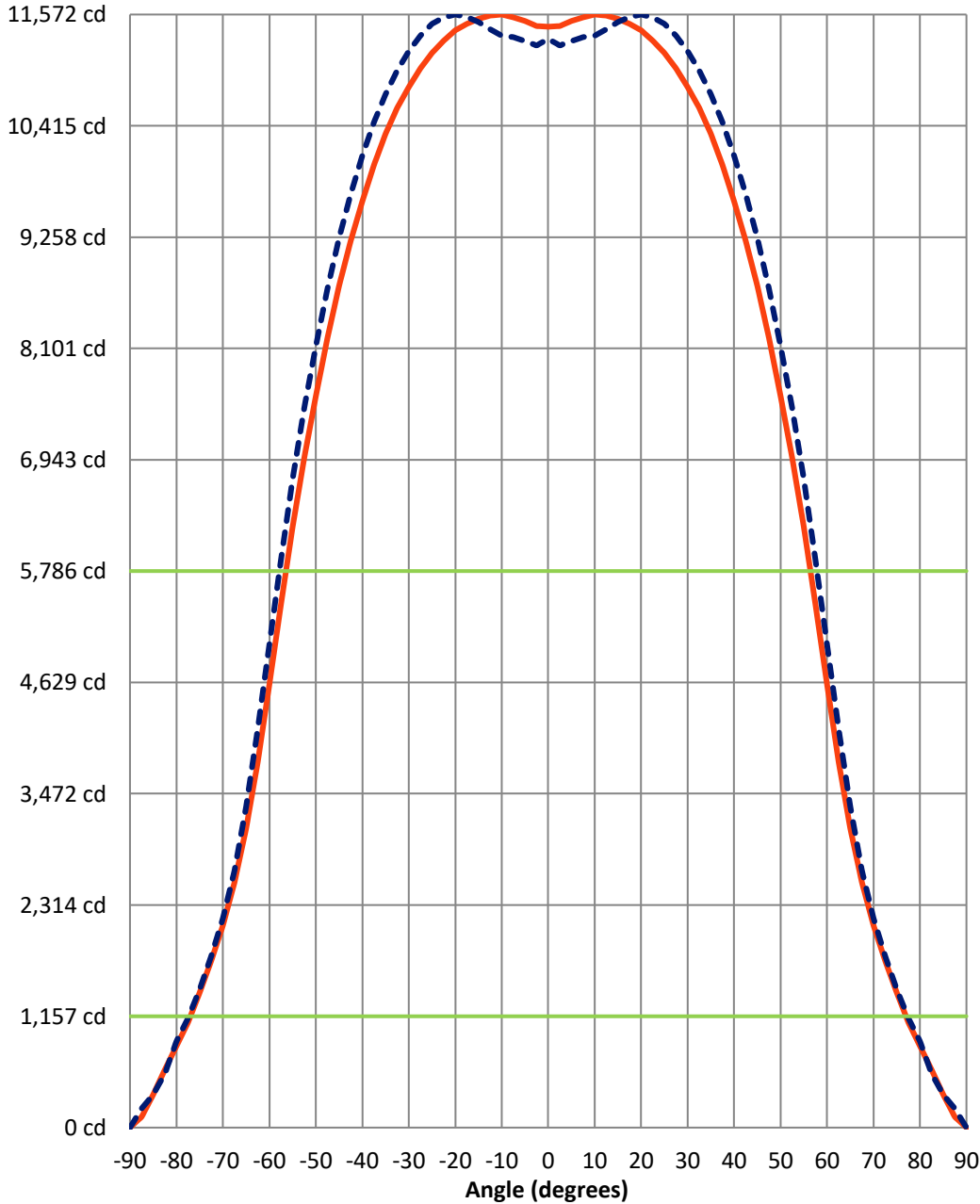
Luminous Intensity Polar Plot



— Vertical Distribution Through 20-Deg - - - Horizontal Distribution Through 10-Deg

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Luminous Intensity Plot



Beam:
 H Angle: 115.7°
 V Angle: 112.9°
 Lumens: 21784.6
 Efficiency: 61.4%

Field:
 H Angle: 154.7°
 V Angle: 154°
 Lumens: 26116.1
 Efficiency: 73.6%

Spill:
 Lumens: 9385.7
 Efficiency: 26.4%

- Vertical Distribution through 20-Deg
- - - Horizontal Distribution through 10-Deg



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FIELD
 BEAM

CANDELA DISTRIBUTION:

	0°	2.5°	5°	7.5°	10°	12.5°	15°	17.5°	20°	22.5°	25°
90°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
87.5°	93.4	100.9	104.6	108.3	112.1	115.8	119.5	115.8	112.1	112.1	108.3
85°	250.3	257.7	261.5	287.6	313.8	328.7	347.4	343.7	343.7	339.9	336.2
82.5°	500.5	523.0	541.6	567.8	582.7	605.1	620.1	608.9	601.4	586.5	575.2
80°	889.0	896.5	900.2	904.0	885.3	881.5	874.1	862.9	847.9	829.3	810.6
77.5°	1131.8	1139.3	1146.8	1139.3	1135.6	1131.8	1120.6	1109.4	1094.5	1079.5	1057.1
75°	1497.9	1497.9	1497.9	1486.7	1479.2	1468.0	1449.3	1430.6	1404.5	1374.6	1341.0
72.5°	1886.4	1882.6	1878.9	1856.5	1837.8	1815.4	1789.2	1766.8	1736.9	1703.3	1658.5
70°	2293.5	2301.0	2304.7	2274.8	2252.4	2222.5	2188.9	2147.8	2103.0	2054.4	1990.9
67.5°	2853.8	2846.3	2838.9	2797.8	2767.9	2726.8	2678.3	2618.5	2551.3	2476.5	2386.9
65°	3548.6	3559.8	3537.4	3496.3	3440.3	3373.0	3298.3	3212.4	3111.6	2999.5	2872.5
62.5°	4389.1	4407.7	4381.6	4329.3	4258.3	4168.7	4064.1	3940.8	3802.6	3645.7	3488.8
60°	5345.3	5341.6	5293.0	5222.0	5128.7	5016.6	4900.8	4766.3	4609.4	4426.4	4235.9
57.5°	6223.1	6215.6	6155.9	6084.9	5991.5	5872.0	5748.7	5606.8	5442.4	5248.2	5027.8
55°	7011.3	7003.8	6944.0	6869.3	6772.2	6652.7	6540.6	6406.1	6245.5	6040.1	5804.8
52.5°	7709.8	7713.5	7661.2	7579.1	7474.5	7358.7	7250.3	7115.9	6962.7	6757.3	6529.4
50°	8352.3	8348.5	8292.5	8217.8	8120.7	8008.6	7900.3	7765.8	7605.2	7407.2	7186.8
47.5°	8949.9	8942.5	8879.0	8796.8	8695.9	8598.8	8497.9	8378.4	8210.3	8012.4	7792.0
45°	9450.5	9435.5	9372.0	9293.6	9196.5	9110.5	9020.9	8931.3	8752.0	8568.9	8359.7
42.5°	9880.0	9876.3	9812.8	9734.4	9637.2	9562.5	9480.3	9368.3	9218.9	9050.8	8845.3
40°	10290.9	10261.0	10197.5	10122.8	10033.2	9969.7	9887.5	9775.4	9629.8	9465.4	9267.4
37.5°	10597.2	10601.0	10533.7	10451.5	10373.1	10313.3	10238.6	10134.0	10007.0	9846.4	9648.4
35°	10888.6	10869.9	10813.9	10742.9	10671.9	10604.7	10526.3	10436.6	10332.0	10182.6	9995.8
32.5°	11079.1	11105.2	11038.0	10963.3	10922.2	10869.9	10787.7	10694.3	10601.0	10451.5	10283.5
30°	11288.3	11265.9	11213.6	11150.1	11120.2	11086.6	11015.6	10925.9	10817.6	10683.1	10526.3
27.5°	11433.9	11422.7	11359.2	11299.5	11284.5	11254.6	11198.6	11120.2	11011.8	10881.1	10735.4
25°	11497.4	11504.9	11445.2	11411.5	11411.5	11392.9	11348.0	11280.8	11172.5	11052.9	10911.0
22.5°	11527.3	11519.9	11478.8	11471.3	11490.0	11475.0	11456.4	11396.6	11299.5	11202.4	11082.8
20°	11546.0	11493.7	11456.4	11486.2	11508.7	11504.9	11490.0	11452.6	11407.8	11325.6	11221.0
17.5°	11504.9	11471.3	11426.5	11471.3	11519.9	11523.6	11508.7	11486.2	11475.0	11422.7	11329.4
15°	11404.1	11377.9	11385.4	11430.2	11486.2	11504.9	11516.1	11542.3	11527.3	11486.2	11404.1
12.5°	11336.8	11303.2	11336.8	11381.6	11411.5	11422.7	11512.4	11560.9	11560.9	11523.6	11471.3
10°	11318.1	11250.9	11295.7	11336.8	11351.8	11419.0	11493.7	11546.0	11572.2	11542.3	11475.0
7.5°	11280.8	11236.0	11254.6	11273.3	11359.2	11407.8	11448.9	11504.9	11542.3	11538.5	11478.8
5°	11262.1	11206.1	11213.6	11292.0	11351.8	11385.4	11400.3	11448.9	11504.9	11516.1	11471.3
2.5°	11213.6	11187.4	11243.4	11250.9	11295.7	11321.9	11336.8	11381.6	11452.6	11478.8	11460.1
0°	11187.4	11150.1	11112.7	11142.6	11217.3	11273.3	11295.7	11363.0	11445.2	11471.3	11430.2



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CANDELA DISTRIBUTION (continued):

	27.5°	30°	32.5°	35°	37.5°	40°	42.5°	45°	47.5°	50°	52.5°
90°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
87.5°	104.6	100.9	97.1	93.4	97.1	97.1	97.1	93.4	97.1	93.4	93.4
85°	325.0	310.0	298.8	283.9	268.9	257.7	242.8	227.9	224.1	220.4	212.9
82.5°	560.3	541.6	523.0	500.5	478.1	452.0	425.8	395.9	388.5	381.0	369.8
80°	788.2	762.0	735.9	709.7	687.3	661.2	631.3	597.7	575.2	556.6	534.2
77.5°	1027.2	989.9	952.5	907.7	881.5	855.4	825.5	791.9	758.3	728.4	694.8
75°	1299.9	1258.8	1221.5	1176.6	1128.1	1079.5	1031.0	986.1	937.6	892.8	847.9
72.5°	1602.5	1542.7	1482.9	1426.9	1367.1	1307.4	1243.9	1184.1	1124.3	1064.6	1001.1
70°	1920.0	1845.3	1770.6	1695.9	1617.4	1539.0	1464.3	1389.6	1314.8	1236.4	1165.4
67.5°	2293.5	2207.6	2110.5	2005.9	1890.1	1789.2	1692.1	1602.5	1512.8	1423.2	1333.5
65°	2760.4	2640.9	2510.2	2368.2	2233.7	2099.3	1957.3	1822.9	1718.3	1613.7	1512.8
62.5°	3335.7	3167.6	2984.6	2801.5	2637.2	2461.6	2297.2	2121.7	1957.3	1807.9	1684.6
60°	4023.0	3795.1	3571.0	3335.7	3107.8	2868.8	2659.6	2442.9	2237.5	2054.4	1875.2
57.5°	4781.3	4516.1	4247.1	3959.5	3649.4	3369.3	3085.4	2801.5	2558.7	2315.9	2114.2
55°	5550.7	5270.6	4968.0	4643.1	4303.1	3944.5	3559.8	3242.3	2909.8	2626.0	2364.5
52.5°	6282.9	5991.5	5677.8	5378.9	4971.8	4560.9	4138.8	3720.4	3331.9	2969.6	2652.1
50°	6936.6	6652.7	6350.1	6002.7	5625.5	5188.4	4717.8	4247.1	3787.7	3361.8	2965.9
47.5°	7534.2	7257.8	6955.2	6607.9	6264.2	5778.6	5304.2	4785.0	4273.3	3783.9	3320.7
45°	8094.5	7814.4	7500.6	7168.2	6772.2	6338.9	5849.6	5326.6	4777.5	4228.4	3694.3
42.5°	8602.5	8322.4	8004.9	7661.2	7269.0	6839.4	6365.1	5838.4	5285.5	4687.9	4101.4
40°	9047.0	8774.4	8468.1	8109.5	7743.4	7291.4	6824.5	6324.0	5752.5	5151.1	4504.8
37.5°	9435.5	9181.5	8879.0	8524.1	8135.6	7732.2	7250.3	6749.8	6234.3	5580.6	4919.5
35°	9779.2	9543.9	9233.8	8897.6	8516.6	8090.8	7638.8	7149.5	6592.9	5980.3	5337.8
32.5°	10078.0	9838.9	9555.1	9218.9	8849.1	8449.4	7986.2	7493.1	6966.5	6342.6	5644.1
30°	10332.0	10100.4	9831.5	9514.0	9159.1	8763.2	8311.2	7814.4	7276.5	6656.4	5965.4
27.5°	10552.4	10332.0	10070.5	9775.4	9435.5	9054.5	8598.8	8098.3	7549.2	6951.5	6260.5
25°	10742.9	10530.0	10287.2	10007.0	9670.9	9297.3	8867.8	8344.8	7795.7	7194.3	6510.7
22.5°	10914.7	10709.3	10466.5	10193.8	9887.5	9514.0	9080.7	8561.5	8004.9	7411.0	6738.6
20°	11067.9	10877.4	10638.3	10358.2	10051.9	9674.6	9245.0	8752.0	8191.6	7608.9	6944.0
17.5°	11191.1	11023.1	10784.0	10488.9	10182.6	9816.5	9398.2	8946.2	8352.3	7777.0	7115.9
15°	11277.1	11112.7	10896.1	10597.2	10298.4	9936.1	9517.7	9050.8	8497.9	7911.5	7257.8
12.5°	11336.8	11161.3	10959.6	10683.1	10384.3	10025.7	9618.6	9159.1	8621.2	8031.0	7381.1
10°	11351.8	11191.1	10989.4	10742.9	10451.5	10104.2	9704.5	9248.8	8722.1	8124.4	7481.9
7.5°	11359.2	11206.1	11023.1	10787.7	10500.1	10163.9	9768.0	9319.7	8796.8	8202.9	7556.6
5°	11355.5	11209.8	11045.5	10817.6	10530.0	10197.5	9809.1	9368.3	8849.1	8255.2	7612.7
2.5°	11344.3	11213.6	11060.4	10840.0	10563.6	10234.9	9850.2	9424.3	8905.1	8300.0	7657.5
0°	11374.2	11262.1	11067.9	10832.6	10571.1	10234.9	9846.4	9431.8	8912.6	8296.2	7653.8



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CANDELA DISTRIBUTION (continued):

	55°	57.5°	60°	62.5°	65°	67.5°	70°	72.5°	75°	77.5°	80°
90°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
87.5°	93.4	89.6	89.6	85.9	82.2	78.4	71.0	67.2	59.8	48.6	37.4
85°	201.7	190.5	179.3	171.8	164.4	156.9	145.7	134.5	119.5	97.1	74.7
82.5°	354.9	332.4	310.0	283.9	261.5	239.1	220.4	201.7	179.3	145.7	112.1
80°	508.0	474.4	440.8	403.4	369.8	332.4	298.8	268.9	239.1	194.2	149.4
77.5°	661.2	616.3	567.8	523.0	474.4	425.8	377.3	336.2	291.4	239.1	186.8
75°	803.1	750.8	706.0	642.5	582.7	519.2	455.7	399.7	343.7	280.2	224.1
72.5°	945.0	877.8	814.3	754.5	687.3	608.9	537.9	466.9	395.9	321.2	254.0
70°	1087.0	1004.8	926.4	855.4	780.7	702.2	616.3	534.2	448.2	358.6	280.2
67.5°	1232.7	1139.3	1049.6	960.0	874.1	784.4	694.8	601.4	500.5	395.9	310.0
65°	1393.3	1277.5	1169.2	1068.3	967.5	870.3	769.5	668.6	556.6	437.0	336.2
62.5°	1553.9	1426.9	1299.9	1172.9	1060.8	952.5	844.2	732.1	608.9	481.9	362.3
60°	1725.7	1580.1	1434.4	1292.4	1154.2	1034.7	915.2	795.6	664.9	523.0	388.5
57.5°	1916.2	1740.7	1576.3	1415.7	1258.8	1116.9	986.1	859.1	713.5	564.0	418.4
55°	2132.9	1916.2	1722.0	1542.7	1370.9	1199.1	1057.1	926.4	769.5	605.1	452.0
52.5°	2360.7	2110.5	1875.2	1673.4	1490.4	1296.2	1124.3	978.7	825.5	646.2	481.9
50°	2626.0	2308.5	2047.0	1800.4	1595.0	1393.3	1195.3	1038.4	881.5	694.8	511.7
47.5°	2898.6	2547.5	2218.8	1949.9	1707.1	1486.7	1277.5	1090.7	933.8	739.6	541.6
45°	3216.1	2775.4	2413.0	2095.5	1815.4	1583.8	1359.7	1146.8	978.7	784.4	571.5
42.5°	3522.4	3044.3	2614.8	2256.2	1938.7	1677.2	1434.4	1206.5	1023.5	829.3	597.7
40°	3884.8	3313.3	2809.0	2409.3	2061.9	1766.8	1509.1	1270.0	1064.6	870.3	623.8
37.5°	4232.2	3585.9	3044.3	2577.4	2181.5	1856.5	1583.8	1329.8	1101.9	911.4	657.4
35°	4575.8	3888.5	3268.4	2734.3	2304.7	1957.3	1658.5	1385.8	1139.3	945.0	687.3
32.5°	4904.5	4172.4	3496.3	2909.8	2439.2	2050.7	1725.7	1438.1	1176.6	974.9	717.2
30°	5210.8	4441.3	3720.4	3089.1	2562.5	2136.6	1789.2	1490.4	1221.5	1001.1	747.1
27.5°	5491.0	4702.8	3944.5	3257.2	2678.3	2215.1	1856.5	1539.0	1258.8	1027.2	773.2
25°	5745.0	4938.1	4150.0	3410.4	2782.8	2301.0	1920.0	1587.5	1292.4	1049.6	795.6
22.5°	5984.1	5154.8	4336.8	3563.5	2909.8	2386.9	1979.7	1632.4	1326.1	1072.0	818.0
20°	6193.2	5352.8	4516.1	3716.7	3021.9	2465.3	2032.0	1673.4	1355.9	1087.0	840.5
17.5°	6361.3	5528.3	4676.7	3851.2	3119.0	2532.6	2076.9	1710.8	1382.1	1105.7	855.4
15°	6510.7	5677.8	4811.1	3967.0	3204.9	2588.6	2118.0	1740.7	1404.5	1116.9	874.1
12.5°	6637.7	5804.8	4926.9	4067.8	3279.6	2637.2	2151.6	1763.1	1423.2	1128.1	885.3
10°	6742.3	5905.6	5024.1	4146.3	3339.4	2674.5	2177.7	1785.5	1438.1	1139.3	896.5
7.5°	6820.8	5980.3	5095.0	4213.5	3388.0	2700.7	2200.1	1800.4	1453.1	1146.8	915.2
5°	6880.5	6043.8	5151.1	4258.3	3425.3	2738.0	2226.3	1819.1	1468.0	1154.2	915.2
2.5°	6925.4	6096.1	5195.9	4295.7	3455.2	2730.5	2226.3	1815.4	1468.0	1154.2	911.4
0°	6917.9	6099.8	5192.2	4295.7	3455.2	2723.1	2226.3	1811.7	1468.0	1154.2	911.4



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CANDELA DISTRIBUTION (continued):

	82.5°	85°	87.5°	90°
90°	0.0	0.0	0.0	0.0
87.5°	26.1	18.7	7.5	0.0
85°	56.0	37.4	18.7	0.0
82.5°	82.2	52.3	26.1	0.0
80°	108.3	71.0	33.6	0.0
77.5°	138.2	89.6	44.8	0.0
75°	164.4	104.6	52.3	0.0
72.5°	190.5	123.3	59.8	0.0
70°	212.9	138.2	67.2	0.0
67.5°	235.3	156.9	78.4	0.0
65°	254.0	171.8	85.9	0.0
62.5°	268.9	190.5	93.4	0.0
60°	287.6	205.4	100.9	0.0
57.5°	302.6	216.7	108.3	0.0
55°	317.5	224.1	115.8	0.0
52.5°	332.4	235.3	123.3	0.0
50°	347.4	246.5	130.7	0.0
47.5°	362.3	254.0	134.5	0.0
45°	384.7	265.2	141.9	0.0
42.5°	403.4	272.7	149.4	0.0
40°	422.1	280.2	153.1	0.0
37.5°	440.8	287.6	160.6	0.0
35°	459.4	295.1	164.4	0.0
32.5°	474.4	302.6	168.1	0.0
30°	489.3	310.0	171.8	0.0
27.5°	504.3	313.8	175.6	0.0
25°	515.5	321.2	179.3	0.0
22.5°	526.7	325.0	183.0	0.0
20°	534.2	328.7	186.8	0.0
17.5°	545.4	332.4	190.5	0.0
15°	549.1	336.2	198.0	0.0
12.5°	556.6	339.9	198.0	0.0
10°	560.3	343.7	198.0	0.0
7.5°	567.8	343.7	198.0	0.0
5°	564.0	343.7	198.0	0.0
2.5°	564.0	343.7	198.0	0.0
0°	560.3	343.7	198.0	0.0

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