

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: P624211

Luminaire Tested: **EPH-VN-04-E-930-U-77**

Issue Date: 11/2/2022

Test Information

Test Method: LM-79-2019
Report Number: P624211
Test Lab: INNOVATION CENTER(G2)
Issue Date: 11/2/2022
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: EPHESUS
Catalog Number: EPH-VN-04-E-930-U-77
Description: EPHESUS LUMAVISION FLOOD – Middle Tier Light Square Luminaire w/
Nema 7 distribution lens
Light Source: (64) 3000K CCT, 90 CRI LEDS
Ballast/Driver: ELECTRONIC DRIVER

Summary

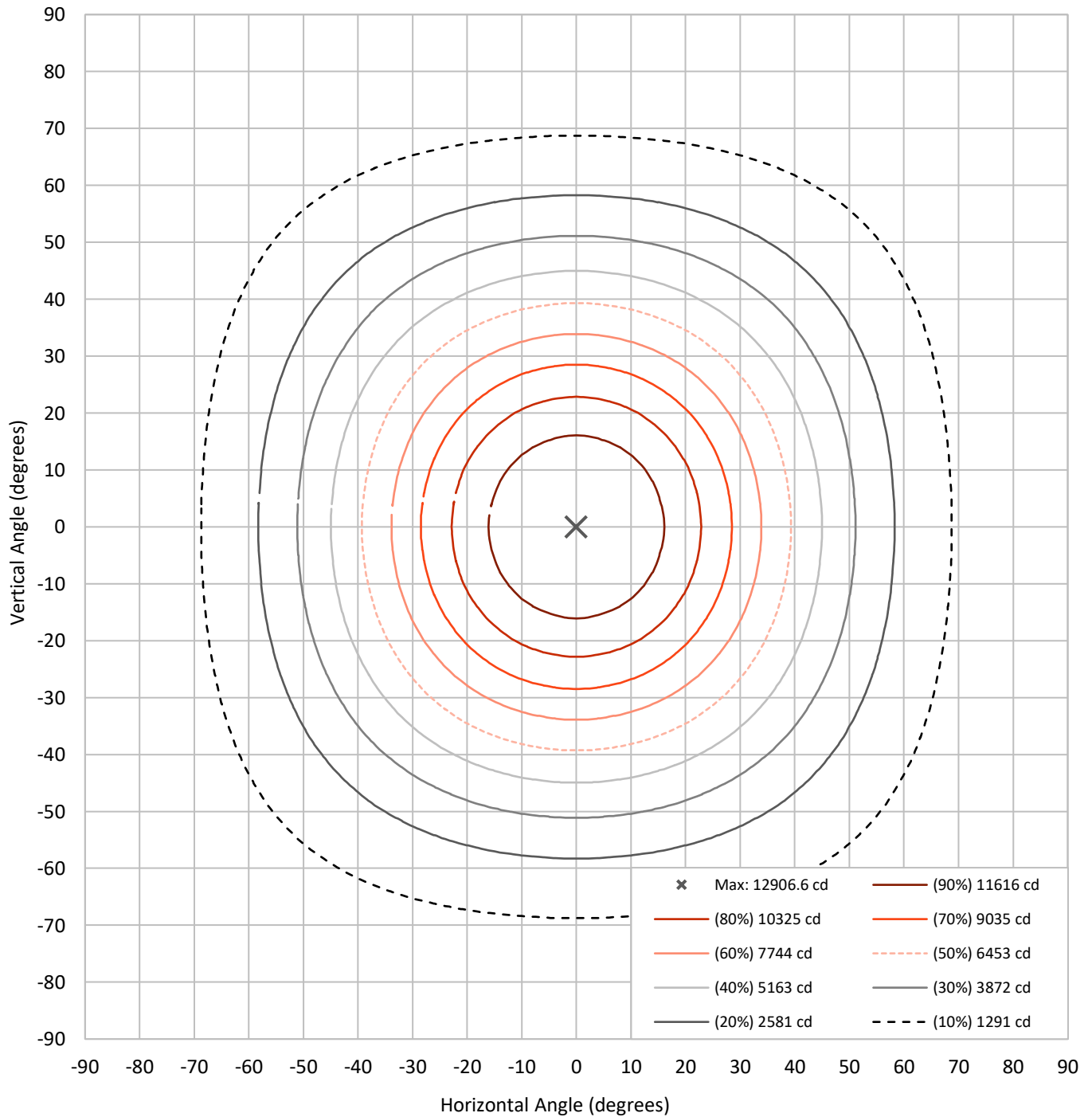
Lumens per Lamp:	N/A	NEMA Type:	7H x 7V
Luminaire Lumens:	23238.6 lumens	Max Intensity:	12906.6 candela
Efficiency:	N/A	Max Intensity Angle:	0°H x 0°V
Efficacy:	76.5 lumens/watt		
Luminous Opening:	Rectangular (W 2' x L: 0.5' x H: 0')		
Beam Angle (50%):	78.6°H x 78.6°V	Field Angle (10%):	137.5°H x 137.5°V
Beam Lumens:	10055.1 lumens	Field Lumens:	16464.9 lumens
Beam Efficiency:	43.3%	Field Efficiency:	70.9%

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





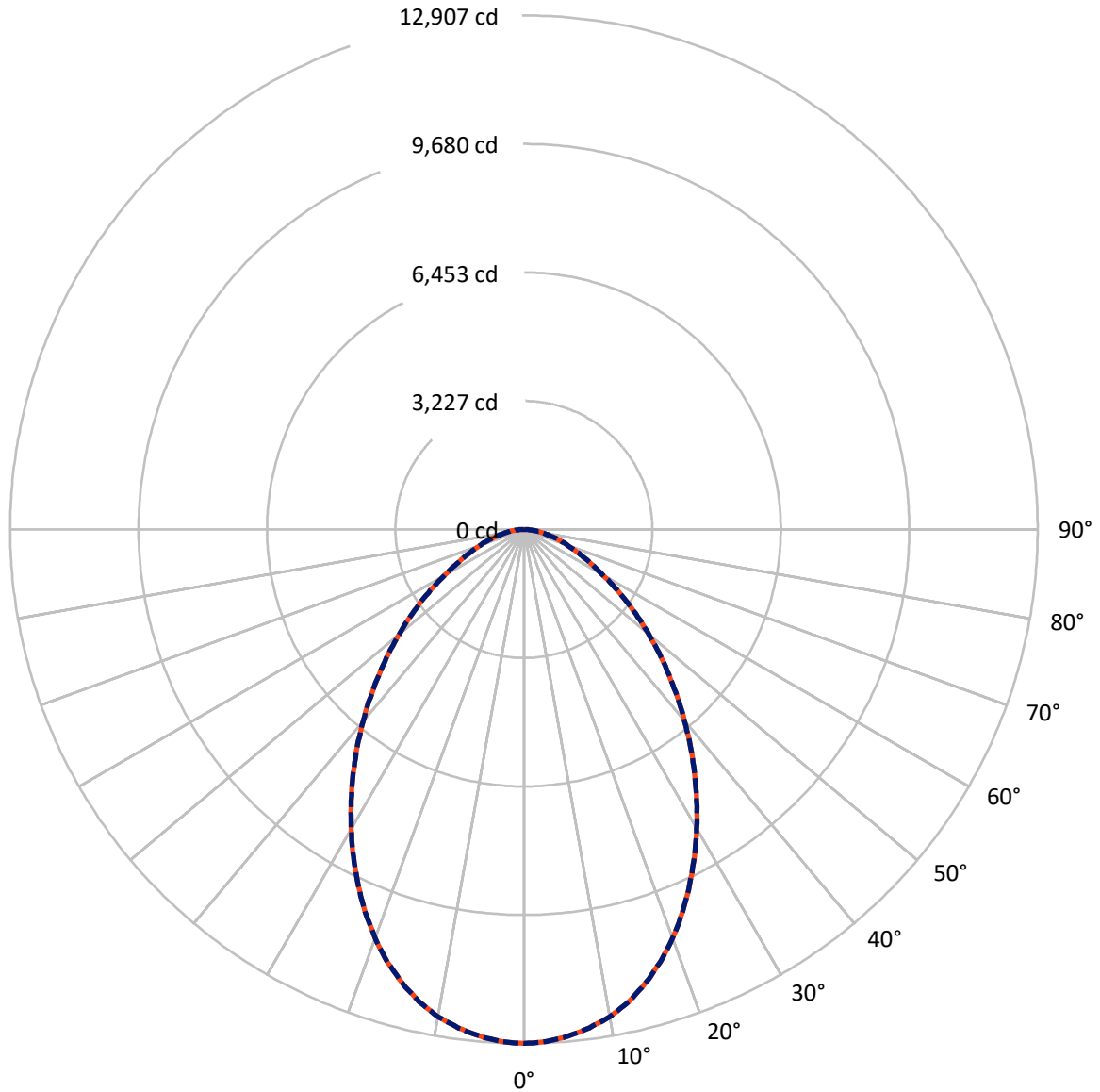
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Lumen Table

90	1.9	13.6	33.8	53.5	61.7	53.5	33.8	13.6	1.9							
80																
70																
60	6.2	6.4	12.8	21.1	30.2	39.2	46.6	50.7	50.7	46.6	39.2	30.2	21.1	12.8	6.4	6.2
50																
40	10.3	9.5	19.7	33.6	51.1	69.8	85.7	94.7	94.7	85.7	69.8	51.1	33.6	19.7	9.5	10.3
30																
20	13.5	12.7	27.4	50.2	80.4	112.2	139.1	154.6	154.6	139.1	112.2	80.4	50.2	27.4	12.7	13.5
10																
0	14.7	15.8	36.0	69.6	113.2	160.0	200.1	223.6	223.6	200.1	160.0	113.2	69.6	36.0	15.8	14.7
-10																
-20	13.5	18.6	44.6	88.0	144.8	207.0	261.5	293.7	293.7	261.5	207.0	144.8	88.0	44.6	18.6	13.5
-30																
-40	10.3	20.8	51.4	102.4	170.1	245.6	312.4	351.0	351.0	312.4	245.6	170.1	102.4	51.4	20.8	10.3
-50																
-60	6.2	21.9	55.1	110.3	184.4	267.5	340.5	380.8	380.8	340.5	267.5	184.4	110.3	55.1	21.9	6.2
-70																
-80	1.9	21.9	55.1	110.3	184.4	267.5	340.5	380.8	380.8	340.5	267.5	184.4	110.3	55.1	21.9	1.9
-90																

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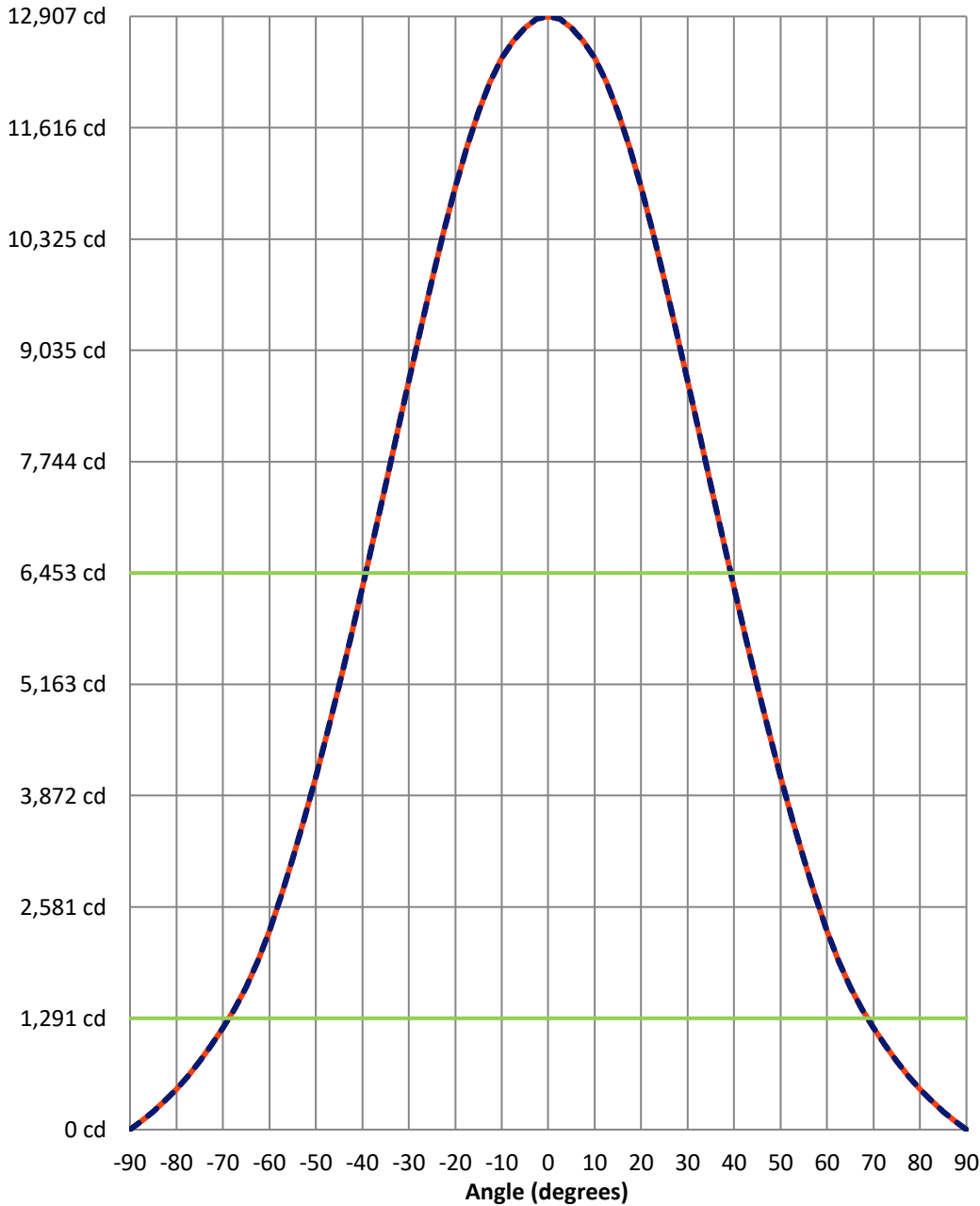
Luminous Intensity Polar Plot



— Vertical Distribution Through 0-Deg - - - Horizontal Distribution Through 0-Deg

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Luminous Intensity Plot



Beam:
 H Angle: 78.6°
 V Angle: 78.6°
 Lumens: 10055.1
 Efficiency: 43.3%

Field:
 H Angle: 137.5°
 V Angle: 137.5°
 Lumens: 16464.9
 Efficiency: 70.9%

Spill:
 Lumens: 6773.7
 Efficiency: 29.1%

- Vertical Distribution through 0-Deg
- - - Horizontal Distribution through 0-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°	99.3	99.3	99.3	99.3	99.3	99.3	99.3	94.5	94.5	92.1	89.6
85°	208.4	208.4	208.4	208.4	208.4	203.5	201.1	198.7	196.3	191.4	189.0
82.5°	334.4	334.4	334.4	334.4	329.5	324.7	322.2	317.4	312.5	305.3	298.0
80°	467.6	467.6	467.6	467.6	460.3	455.5	448.2	443.4	436.1	426.4	416.7
77.5°	620.3	620.3	620.3	613.0	608.1	600.9	593.6	583.9	574.2	562.1	547.6
75°	792.3	792.3	792.3	782.6	775.3	768.0	755.9	743.8	729.3	712.3	692.9
72.5°	978.8	978.8	978.8	966.7	959.5	947.3	932.8	915.8	898.9	877.1	852.8
70°	1179.9	1179.9	1179.9	1165.4	1153.3	1141.2	1121.8	1102.4	1078.2	1053.9	1024.9
67.5°	1398.0	1398.0	1398.0	1381.0	1366.5	1349.5	1327.7	1303.5	1274.4	1240.5	1206.6
65°	1652.4	1652.4	1642.7	1628.2	1611.2	1587.0	1560.3	1526.4	1490.1	1446.5	1400.4
62.5°	1952.8	1952.8	1938.3	1921.3	1899.5	1868.0	1831.7	1788.1	1737.2	1681.5	1625.7
60°	2301.7	2301.7	2284.8	2263.0	2231.5	2192.7	2144.2	2088.5	2025.5	1955.3	1887.4
57.5°	2703.9	2703.9	2682.1	2653.0	2614.3	2565.8	2505.2	2435.0	2355.0	2267.8	2183.0
55°	3140.0	3140.0	3113.4	3079.5	3033.4	2975.3	2902.6	2820.2	2723.3	2624.0	2514.9
52.5°	3602.8	3602.8	3571.3	3532.5	3479.2	3411.4	3329.0	3232.1	3120.7	3004.4	2875.9
50°	4089.8	4089.8	4053.5	4009.8	3949.3	3869.3	3774.8	3663.4	3539.8	3404.1	3256.3
47.5°	4610.7	4610.7	4569.5	4518.6	4446.0	4353.9	4242.4	4114.0	3973.5	3820.9	3653.7
45°	5146.2	5146.2	5100.1	5042.0	4962.0	4857.8	4734.3	4610.7	4431.4	4254.6	4060.7
42.5°	5703.4	5703.4	5650.1	5584.7	5492.6	5378.8	5238.2	5078.3	4901.5	4702.8	4492.0
40°	6282.5	6282.5	6221.9	6146.8	6045.0	5914.2	5756.7	5577.4	5378.8	5158.3	4925.7
37.5°	6873.7	6873.7	6805.8	6723.5	6609.6	6464.2	6287.3	6088.7	5865.8	5621.0	5364.2
35°	7469.7	7469.7	7394.6	7304.9	7178.9	7019.0	6827.6	6607.2	6360.0	6093.5	5805.2
32.5°	8077.8	8077.8	7995.5	7893.7	7750.7	7573.9	7363.1	7123.2	6873.7	6563.5	6248.6
30°	8678.7	8678.7	8589.1	8477.6	8325.0	8131.1	7901.0	7636.9	7343.7	7026.3	6687.1
27.5°	9269.9	9245.7	9170.5	9051.8	8884.6	8678.7	8429.1	8143.2	7825.9	7477.0	7113.5
25°	9851.4	9824.7	9742.3	9611.5	9432.2	9206.9	8937.9	8632.7	8291.0	7922.8	7525.4
22.5°	10408.6	10379.6	10292.3	10151.8	9960.4	9715.7	9427.4	9100.3	8736.9	8341.9	7922.8
20°	10924.7	10893.2	10803.6	10655.8	10457.1	10197.8	9892.6	9541.2	9153.6	8736.9	8291.0
17.5°	11389.9	11358.4	11263.9	11111.3	10924.7	10636.4	10321.4	9950.7	9541.2	9100.3	8632.7
15°	11799.4	11765.4	11668.5	11515.9	11302.7	11031.3	10699.4	10321.4	9892.6	9427.4	8937.9
12.5°	12148.2	12114.3	12015.0	11862.3	11641.9	11370.5	11031.3	10636.4	10197.8	9715.7	9206.9
10°	12424.5	12390.5	12296.0	12150.7	11922.9	11641.9	11302.7	10924.7	10457.1	9960.4	9432.2
7.5°	12623.1	12591.6	12504.4	12359.0	12150.7	11862.3	11515.9	11111.3	10655.8	10151.8	9611.5
5°	12773.3	12737.0	12649.8	12504.4	12296.0	12015.0	11668.5	11263.9	10803.6	10292.3	9742.3
2.5°	12877.5	12833.9	12737.0	12591.6	12390.5	12114.3	11765.4	11358.4	10893.2	10379.6	9824.7
0°	12906.6	12877.5	12773.3	12623.1	12424.5	12148.2	11799.4	11389.9	10924.7	10408.6	9851.4



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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°	87.2	87.2	84.8	82.4	80.0	75.1	72.7	70.3	67.8	63.0	60.6
85°	184.1	179.3	174.4	169.6	162.3	157.5	150.2	145.4	138.1	130.8	123.6
82.5°	290.7	283.5	273.8	266.5	256.8	244.7	235.0	222.9	210.8	201.1	189.0
80°	407.0	394.9	382.8	370.7	356.2	341.6	327.1	312.5	295.6	278.6	261.7
77.5°	533.0	516.1	499.1	479.7	462.8	443.4	424.0	404.6	382.8	361.0	339.2
75°	673.6	651.8	627.5	603.3	581.5	554.8	528.2	501.5	472.5	445.8	416.7
72.5°	826.2	799.5	770.5	741.4	709.9	676.0	642.1	605.7	571.8	537.9	501.5
70°	991.0	959.5	923.1	886.8	848.0	806.8	765.6	722.0	678.4	634.8	591.2
67.5°	1167.8	1129.1	1085.4	1041.8	993.4	944.9	896.5	845.6	792.3	739.0	688.1
65°	1356.8	1308.3	1257.5	1201.7	1146.0	1090.3	1032.1	971.6	911.0	848.0	792.3
62.5°	1567.6	1507.0	1441.6	1373.8	1310.8	1242.9	1179.9	1104.8	1032.1	961.9	891.6
60°	1812.3	1732.3	1652.4	1567.6	1487.6	1400.4	1322.9	1240.5	1158.1	1078.2	995.8
57.5°	2086.1	1984.3	1887.4	1785.7	1679.0	1582.1	1482.8	1383.5	1291.4	1196.9	1107.2
55°	2396.2	2272.6	2151.5	2025.5	1901.9	1780.8	1654.8	1543.4	1429.5	1322.9	1218.7
52.5°	2735.4	2594.9	2444.7	2301.7	2144.2	1994.0	1853.5	1713.0	1579.7	1451.3	1332.6
50°	3098.8	2934.1	2762.1	2587.6	2408.3	2231.5	2061.9	1897.1	1742.0	1591.8	1451.3
47.5°	3476.8	3290.3	3094.0	2895.3	2703.9	2488.3	2284.8	2098.2	1911.6	1742.0	1579.7
45°	3864.5	3653.7	3438.0	3212.7	2987.4	2754.8	2529.5	2301.7	2098.2	1897.1	1713.0
42.5°	4264.2	4026.8	3786.9	3537.4	3287.8	3033.4	2779.0	2529.5	2284.8	2061.9	1853.5
40°	4676.1	4414.5	4140.7	3869.3	3602.8	3312.1	3033.4	2754.8	2488.3	2231.5	1994.0
37.5°	5088.0	4802.1	4506.5	4201.2	3896.0	3602.8	3287.8	2987.4	2703.9	2408.3	2144.2
35°	5502.3	5187.4	4867.5	4535.6	4201.2	3869.3	3537.4	3212.7	2895.3	2587.6	2301.7
32.5°	5919.1	5575.0	5221.3	4867.5	4506.5	4140.7	3786.9	3438.0	3094.0	2762.1	2444.7
30°	6328.5	5955.4	5575.0	5187.4	4802.1	4414.5	4026.8	3653.7	3290.3	2934.1	2594.9
27.5°	6728.3	6328.5	5919.1	5502.3	5088.0	4676.1	4264.2	3864.5	3476.8	3098.8	2735.4
25°	7113.5	6687.1	6248.6	5805.2	5364.2	4925.7	4492.0	4060.7	3653.7	3256.3	2875.9
22.5°	7477.0	7026.3	6563.5	6093.5	5621.0	5158.3	4702.8	4254.6	3820.9	3404.1	3004.4
20°	7825.9	7343.7	6873.7	6360.0	5865.8	5378.8	4901.5	4431.4	3973.5	3539.8	3120.7
17.5°	8143.2	7636.9	7123.2	6607.2	6088.7	5577.4	5078.3	4610.7	4114.0	3663.4	3232.1
15°	8429.1	7901.0	7363.1	6827.6	6287.3	5756.7	5238.2	4734.3	4242.4	3774.8	3329.0
12.5°	8678.7	8131.1	7573.9	7019.0	6464.2	5914.2	5378.8	4857.8	4353.9	3869.3	3411.4
10°	8884.6	8325.0	7750.7	7178.9	6609.6	6045.0	5492.6	4962.0	4446.0	3949.3	3479.2
7.5°	9051.8	8477.6	7893.7	7304.9	6723.5	6146.8	5584.7	5042.0	4518.6	4009.8	3532.5
5°	9170.5	8589.1	7995.5	7394.6	6805.8	6221.9	5650.1	5100.1	4569.5	4053.5	3571.3
2.5°	9245.7	8678.7	8077.8	7469.7	6873.7	6282.5	5703.4	5146.2	4610.7	4089.8	3602.8
0°	9269.9	8678.7	8077.8	7469.7	6873.7	6282.5	5703.4	5146.2	4610.7	4089.8	3602.8



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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°	58.1	53.3	48.5	46.0	41.2	38.8	33.9	29.1	26.7	21.8	17.0
85°	116.3	106.6	99.3	92.1	84.8	75.1	67.8	60.6	50.9	43.6	33.9
82.5°	176.9	164.8	152.6	140.5	128.4	116.3	101.8	89.6	77.5	65.4	50.9
80°	244.7	225.3	208.4	191.4	174.4	157.5	138.1	121.1	101.8	84.8	67.8
77.5°	315.0	293.2	268.9	244.7	220.5	198.7	174.4	152.6	130.8	106.6	84.8
75°	390.1	361.0	334.4	302.9	273.8	242.3	213.2	184.1	157.5	130.8	101.8
72.5°	467.6	431.3	394.9	361.0	324.7	288.3	254.4	218.1	184.1	152.6	121.1
70°	547.6	504.0	460.3	419.2	378.0	334.4	295.6	254.4	213.2	174.4	138.1
67.5°	632.4	581.5	530.6	477.3	431.3	382.8	334.4	288.3	242.3	198.7	157.5
65°	724.4	663.9	600.9	545.1	484.6	431.3	378.0	324.7	273.8	220.5	174.4
62.5°	818.9	748.7	678.4	608.1	545.1	477.3	419.2	361.0	302.9	244.7	191.4
60°	915.8	835.9	755.9	678.4	600.9	530.6	460.3	394.9	334.4	268.9	208.4
57.5°	1015.2	925.5	835.9	748.7	663.9	581.5	504.0	431.3	361.0	293.2	225.3
55°	1116.9	1015.2	915.8	818.9	724.4	632.4	547.6	467.6	390.1	315.0	244.7
52.5°	1218.7	1107.2	995.8	891.6	792.3	688.1	591.2	501.5	416.7	339.2	261.7
50°	1322.9	1196.9	1078.2	961.9	848.0	739.0	634.8	537.9	445.8	361.0	278.6
47.5°	1429.5	1291.4	1158.1	1032.1	911.0	792.3	678.4	571.8	472.5	382.8	295.6
45°	1543.4	1383.5	1240.5	1104.8	971.6	845.6	722.0	605.7	501.5	404.6	312.5
42.5°	1654.8	1482.8	1322.9	1179.9	1032.1	896.5	765.6	642.1	528.2	424.0	327.1
40°	1780.8	1582.1	1400.4	1242.9	1090.3	944.9	806.8	676.0	554.8	443.4	341.6
37.5°	1901.9	1679.0	1487.6	1310.8	1146.0	993.4	848.0	709.9	581.5	462.8	356.2
35°	2025.5	1785.7	1567.6	1373.8	1201.7	1041.8	886.8	741.4	603.3	479.7	370.7
32.5°	2151.5	1887.4	1652.4	1441.6	1257.5	1085.4	923.1	770.5	627.5	499.1	382.8
30°	2272.6	1984.3	1732.3	1507.0	1308.3	1129.1	959.5	799.5	651.8	516.1	394.9
27.5°	2396.2	2086.1	1812.3	1567.6	1356.8	1167.8	991.0	826.2	673.6	533.0	407.0
25°	2514.9	2183.0	1887.4	1625.7	1400.4	1206.6	1024.9	852.8	692.9	547.6	416.7
22.5°	2624.0	2267.8	1955.3	1681.5	1446.5	1240.5	1053.9	877.1	712.3	562.1	426.4
20°	2723.3	2355.0	2025.5	1737.2	1490.1	1274.4	1078.2	898.9	729.3	574.2	436.1
17.5°	2820.2	2435.0	2088.5	1788.1	1526.4	1303.5	1102.4	915.8	743.8	583.9	443.4
15°	2902.6	2505.2	2144.2	1831.7	1560.3	1327.7	1121.8	932.8	755.9	593.6	448.2
12.5°	2975.3	2565.8	2192.7	1868.0	1587.0	1349.5	1141.2	947.3	768.0	600.9	455.5
10°	3033.4	2614.3	2231.5	1899.5	1611.2	1366.5	1153.3	959.5	775.3	608.1	460.3
7.5°	3079.5	2653.0	2263.0	1921.3	1628.2	1381.0	1165.4	966.7	782.6	613.0	467.6
5°	3113.4	2682.1	2284.8	1938.3	1642.7	1398.0	1179.9	978.8	792.3	620.3	467.6
2.5°	3140.0	2703.9	2301.7	1952.8	1652.4	1398.0	1179.9	978.8	792.3	620.3	467.6
0°	3140.0	2703.9	2301.7	1952.8	1652.4	1398.0	1179.9	978.8	792.3	620.3	467.6



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CANDELA DISTRIBUTION (continued):

	82.5°	85°	87.5°	90°
90°	0.0	0.0	0.0	0.0
87.5°	12.1	9.7	4.8	0.0
85°	26.7	17.0	9.7	0.0
82.5°	38.8	26.7	12.1	0.0
80°	50.9	33.9	17.0	0.0
77.5°	65.4	43.6	21.8	0.0
75°	77.5	50.9	26.7	0.0
72.5°	89.6	60.6	29.1	0.0
70°	101.8	67.8	33.9	0.0
67.5°	116.3	75.1	38.8	0.0
65°	128.4	84.8	41.2	0.0
62.5°	140.5	92.1	46.0	0.0
60°	152.6	99.3	48.5	0.0
57.5°	164.8	106.6	53.3	0.0
55°	176.9	116.3	58.1	0.0
52.5°	189.0	123.6	60.6	0.0
50°	201.1	130.8	63.0	0.0
47.5°	210.8	138.1	67.8	0.0
45°	222.9	145.4	70.3	0.0
42.5°	235.0	150.2	72.7	0.0
40°	244.7	157.5	75.1	0.0
37.5°	256.8	162.3	80.0	0.0
35°	266.5	169.6	82.4	0.0
32.5°	273.8	174.4	84.8	0.0
30°	283.5	179.3	87.2	0.0
27.5°	290.7	184.1	87.2	0.0
25°	298.0	189.0	89.6	0.0
22.5°	305.3	191.4	92.1	0.0
20°	312.5	196.3	94.5	0.0
17.5°	317.4	198.7	94.5	0.0
15°	322.2	201.1	99.3	0.0
12.5°	324.7	203.5	99.3	0.0
10°	329.5	208.4	99.3	0.0
7.5°	334.4	208.4	99.3	0.0
5°	334.4	208.4	99.3	0.0
2.5°	334.4	208.4	99.3	0.0
0°	334.4	208.4	99.3	0.0

(END OF REPORT)