

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: NEO-RAY

Report Number: P331996-935

Luminaire Tested: **S123DIP-S775D1195U935-4F0-1E-UDD-D4**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P331996-935
REPORT IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-1807-864-17,
Test Lab: INNOVATION CENTER
Issue Date: 3/3/2020
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: NEO-RAY
Catalog Number: S123DIP-S775D1195U935-4F0-1E-UDD-D4
Description: DEFINE 3 DIRECT-INDIRECT PENDANT LED LUMINAIRE
DOWNLIGHT 775 LUMENS PER FOOT, DROP SATIN WHITE DIFFUSER
UPLIGHT 1195 LUMENS PER FOOT, BATWING OPTIC
Light Source: -
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 6502.9 lumens
Efficiency: N/A
Efficacy: 114.3 lumens/watt
Spacing Criteria (0/90/45): 1.2 / 1.26 / 1.37
Luminous Opening: Rectangular w/ Sides (W: 0.25' x L: 4' x H: 0.08')
CIE Type: Semi-Indirect

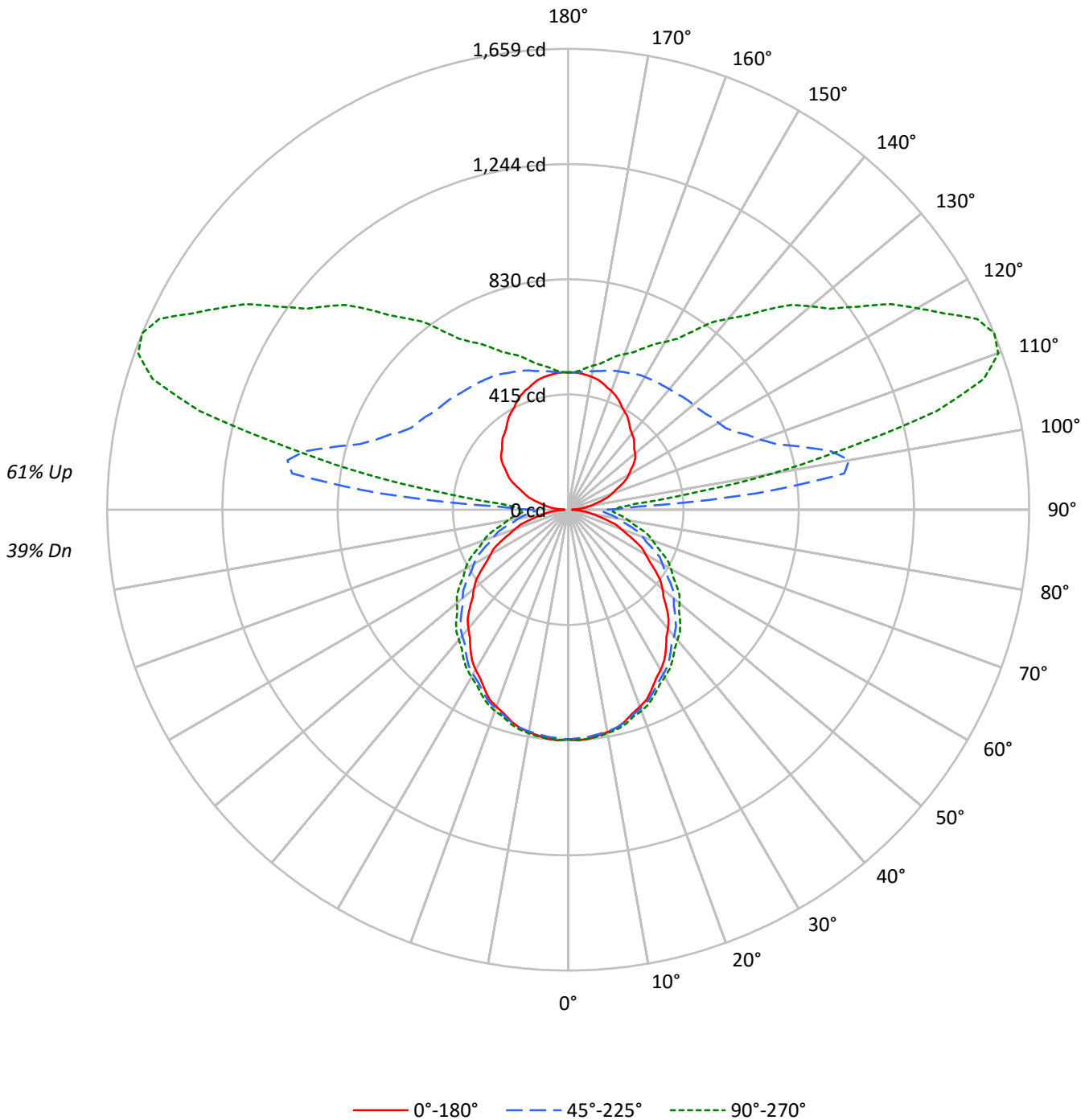
Input Watts (W): 56.9
Input Voltage (V): 120
Input Current (A_{in}): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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Luminous Intensity Polar Plot





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COEFFICIENT OF UTILIZATION - ZONAL CAVITY METHOD:

RF	20				20				20				20				20	
RC	80				70				50				30				10	0
RW	70	50	30	10	70	50	30	10	50	30	10	50	30	10	50	30	10	0
RCR																		
0	105	105	105	105	95	95	95	95	77	77	77	61	61	61	46	46	46	39
1	95	90	86	82	86	82	78	75	66	64	62	52	51	49	40	38	37	31
2	86	78	72	66	78	71	66	61	58	54	50	46	43	40	34	32	31	26
3	78	68	61	55	70	62	56	50	51	46	42	40	37	34	30	28	26	21
4	71	60	52	46	64	55	48	42	45	40	35	35	32	29	27	24	22	18
5	65	53	45	39	59	49	42	36	40	35	30	32	28	25	24	21	19	16
6	60	48	40	34	54	44	36	31	36	30	26	29	25	21	22	19	17	14
7	55	43	35	29	50	39	32	27	32	27	23	26	22	19	20	17	15	12
8	51	39	31	26	46	36	29	24	29	24	20	24	20	17	18	15	13	11
9	48	35	28	23	43	33	26	21	27	22	18	22	18	15	17	14	12	10
10	44	32	25	20	40	30	23	19	25	20	16	20	16	13	15	13	11	9

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	8908	8908	8908
5°	8936	8684	8689
10°	8856	8484	8441
15°	8741	8257	8171
20°	8579	7997	7875
25°	8377	7698	7561
30°	8171	7430	7245
35°	7939	7146	6992
40°	7720	6888	6722
45°	7475	6640	6505
50°	7232	6394	6267
55°	6967	6143	6052
60°	6707	5889	5832
65°	6441	5617	5571
70°	6040	5312	5303
75°	5534	4961	5030
80°	4951	4618	4718
85°	4409	4384	4537



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	78.5	1.2
10°-20°	223.7	3.4
20°-30°	334.5	5.1
30°-40°	399.5	6.1
40°-50°	418.0	6.4
50°-60°	392.2	6.0
60°-70°	327.6	5.0
70°-80°	234.4	3.6
80°-90°	143.6	2.2
90°-100°	362.7	5.6
100°-110°	843.2	13.0
110°-120°	809.1	12.4
120°-130°	635.6	9.8
130°-140°	492.8	7.6
140°-150°	361.9	5.6
150°-160°	250.6	3.9
160°-170°	147.2	2.3
170°-180°	47.9	0.7
0°-30°	636.6	9.8
0°-40°	1036.1	15.9
0°-60°	1846.2	28.4
0°-90°	2551.8	39.2
90°-120°	2015.0	31.0
90°-150°	3505.3	53.9
90°-180°	3951.0	60.8
0°-180°	6502.9	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	828	828	828	828	828	
5°	828	826	821	828	828	79
15°	789	791	791	799	799	222
25°	712	721	724	735	736	328
35°	613	627	639	652	656	383
45°	501	523	545	562	570	386
55°	382	412	444	468	476	342
65°	264	300	339	365	375	261
75°	143	186	231	260	271	153
85°	44	89	137	166	177	46
90°	14	68	127	159	171	10
95°	44	156	682	289	242	44
105°	123	201	872	1498	1373	131
115°	210	272	663	1418	1624	208
125°	288	341	603	1087	1274	256
135°	336	400	577	883	1021	260
145°	382	437	559	710	784	239
155°	433	467	541	615	641	199
165°	473	487	518	550	559	133
175°	493	494	497	504	503	47
180°	494	494	494	494	494	



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CANDELA DISTRIBUTION (FULL):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
0°	827.6	827.6	827.6	827.6	827.6	827.6	827.6	827.6	827.6	827.6	827.6
2.5°	831.2	830.7	830.3	829.7	829.3	828.4	827.2	825.9	824.6	823.3	824.6
5°	828.5	828.1	827.7	827.3	826.9	826.1	824.9	823.7	822.5	821.3	822.9
7.5°	820.4	820.4	820.5	820.6	820.7	820.2	819.0	817.9	816.7	815.5	817.5
10°	813.2	813.6	814.0	814.4	814.8	814.5	813.5	812.5	811.5	810.5	812.5
12.5°	804.5	805.1	805.6	806.2	806.8	806.8	806.1	805.4	804.7	804.0	805.8
15°	788.8	789.5	790.1	790.7	791.3	791.4	791.3	791.1	790.8	790.7	792.6
17.5°	769.0	770.3	771.5	772.6	773.8	774.4	774.3	774.2	774.1	774.0	775.8
20°	754.6	755.8	757.0	758.2	759.4	760.2	760.6	761.0	761.4	761.8	763.6
22.5°	739.4	740.6	741.8	743.0	744.2	745.1	745.7	746.2	746.8	747.3	749.7
25°	712.2	714.2	716.2	718.2	720.2	721.5	722.1	722.7	723.3	723.9	726.5
27.5°	684.8	687.1	689.4	691.6	694.0	695.7	697.0	698.3	699.6	700.9	703.1
30°	665.3	668.0	670.5	673.1	675.7	677.9	679.4	681.1	682.7	684.2	686.6
32.5°	643.7	646.6	649.5	652.5	655.4	657.9	660.0	662.1	664.2	666.2	668.8
35°	613.0	616.2	619.5	622.7	625.9	628.8	631.4	634.0	636.6	639.2	642.2
37.5°	580.6	584.2	587.8	591.4	595.0	598.4	601.7	604.9	608.0	611.2	614.7
40°	559.0	562.6	566.2	569.8	573.3	577.2	581.2	585.2	589.2	593.2	596.6
42.5°	535.1	539.6	544.0	548.4	552.8	557.1	561.2	565.4	569.6	573.8	577.5
45°	501.3	506.1	510.8	515.7	520.5	525.4	530.4	535.4	540.4	545.4	549.2
47.5°	465.7	471.2	476.6	482.1	487.5	493.1	498.9	504.5	510.3	516.0	520.3
50°	442.6	448.2	453.8	459.5	465.1	471.0	477.3	483.5	489.7	495.8	500.4
52.5°	418.1	424.0	430.0	435.9	441.9	448.2	455.1	461.9	468.8	475.6	480.4
55°	382.3	388.8	395.5	402.1	408.7	415.6	422.8	430.1	437.2	444.4	449.9
57.5°	347.2	354.1	361.0	367.9	374.9	382.2	390.1	398.0	405.9	413.8	419.2
60°	322.8	329.9	337.2	344.4	351.6	359.3	367.6	375.7	383.9	392.2	397.8
62.5°	299.6	307.0	314.4	321.8	329.2	337.2	345.9	354.6	363.3	372.0	377.5
65°	264.2	272.0	279.7	287.6	295.4	303.7	312.5	321.3	330.2	339.0	345.0
67.5°	228.1	236.3	244.7	253.0	261.2	269.9	278.9	287.8	296.8	305.8	312.4
70°	202.9	211.5	220.1	228.7	237.3	246.4	256.1	265.6	275.3	284.9	291.3
72.5°	179.8	188.4	197.0	205.6	214.2	223.5	233.4	243.4	253.3	263.2	269.8
75°	143.4	152.7	162.2	171.6	181.0	190.7	200.7	210.8	220.8	230.8	237.4
77.5°	111.6	121.1	130.6	140.1	149.6	159.4	169.5	179.6	189.7	199.8	206.7
80°	89.3	99.1	108.9	118.7	128.5	138.6	149.0	159.5	169.9	180.3	187.1
82.5°	69.7	79.7	89.7	99.7	109.7	119.9	130.5	141.1	151.7	162.3	169.1
85°	44.2	54.2	64.2	74.2	84.2	94.5	105.2	115.8	126.4	137.1	143.9
87.5°	24.4	34.8	45.1	55.7	66.1	76.6	87.4	98.2	109.0	119.9	126.5
90°	13.7	25.6	37.4	50.2	62.0	74.0	87.2	100.5	113.7	126.9	132.7
92.5°	23.4	38.2	55.5	72.2	89.5	113.7	150.0	203.0	255.3	249.9	218.8
95°	43.9	54.8	73.5	98.4	132.2	180.0	274.9	433.8	607.6	682.4	576.6
97.5°	66.8	74.9	90.6	112.4	145.1	195.5	286.1	463.6	746.4	1002.1	1072.3
100°	82.1	89.5	103.0	123.4	153.8	200.6	279.8	437.1	709.5	1025.8	1228.6
102.5°	98.2	105.8	117.8	136.7	164.1	207.3	279.2	413.9	657.3	969.4	1232.2
105°	123.3	131.0	141.9	158.7	182.5	220.2	282.8	394.5	592.2	871.9	1164.6
107.5°	149.0	156.1	165.9	181.8	203.7	238.7	294.3	388.1	548.7	785.1	1051.2
110°	167.5	174.1	182.7	197.3	217.9	251.8	304.8	388.8	530.9	735.9	980.2



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CANDELA DISTRIBUTION (continued):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
112.5°	185.1	191.1	199.0	213.0	233.0	265.4	315.0	393.1	518.8	701.2	917.3
115°	209.6	216.0	224.4	236.8	256.2	288.0	333.3	401.5	510.7	663.0	840.9
117.5°	234.8	240.9	247.4	258.0	278.5	307.7	352.1	413.3	506.7	637.5	791.9
120°	251.7	255.7	261.7	272.7	292.7	321.5	364.1	422.8	506.4	625.1	765.7
122.5°	266.9	270.4	276.0	287.2	306.0	336.0	377.5	431.8	508.8	615.9	743.6
125°	287.8	289.8	295.8	306.8	325.8	355.8	396.6	446.3	512.2	603.0	714.3
127.5°	304.4	307.2	314.4	325.5	346.2	375.6	414.1	458.6	517.4	594.0	687.9
130°	314.8	317.6	326.4	338.2	359.0	388.0	425.0	467.0	521.0	588.1	672.9
132.5°	322.1	325.9	335.6	350.0	370.9	398.7	434.2	474.6	523.0	583.6	658.7
135°	336.0	339.8	350.5	365.3	386.2	414.1	447.4	483.5	525.8	577.0	639.6
137.5°	349.0	353.0	363.6	379.4	400.1	425.7	456.8	490.3	527.2	570.5	623.1
140°	357.1	362.1	372.0	388.1	408.0	433.3	463.0	493.6	528.2	566.8	612.9
142.5°	366.6	370.7	381.3	395.5	415.4	438.8	467.1	496.5	528.2	562.3	603.2
145°	382.0	384.9	393.6	408.5	425.2	448.2	474.2	501.2	529.2	559.2	592.8
147.5°	396.7	398.6	407.3	420.3	436.8	456.3	480.2	504.4	529.2	555.4	583.3
150°	407.2	408.1	416.1	429.1	443.2	461.2	484.1	505.1	529.2	552.2	577.2
152.5°	417.6	417.8	425.8	437.1	449.5	466.7	486.6	506.8	526.8	548.2	570.8
155°	433.2	433.2	439.2	449.2	460.1	474.2	491.2	507.2	524.2	541.2	561.2
157.5°	445.6	446.3	451.2	459.9	469.3	480.2	493.8	508.2	520.8	535.0	550.4
160°	455.1	455.1	459.2	467.2	474.2	484.1	496.2	508.2	519.2	530.2	543.2
162.5°	462.4	462.4	465.5	472.0	478.2	486.6	497.0	507.4	516.0	525.4	536.0
165°	473.2	472.2	474.2	479.1	483.2	490.2	498.2	505.1	511.2	518.1	526.2
167.5°	481.4	480.2	481.1	485.0	487.8	492.1	498.0	503.6	506.4	511.0	516.8
170°	486.2	484.1	485.2	488.2	490.2	492.1	497.1	501.2	503.2	506.2	511.2
172.5°	489.4	488.2	488.4	490.6	491.8	493.0	497.1	500.4	500.8	502.1	505.6
175°	493.2	492.1	491.2	493.2	493.2	494.2	496.2	498.2	497.1	497.1	499.2
177.5°	495.0	494.2	493.4	494.2	494.2	494.2	495.0	496.5	495.0	494.2	495.0
180°	494.2	494.2	494.2	494.2	494.2	494.2	494.2	494.2	494.2	494.2	494.2



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CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
0°	827.6	827.6	827.6	827.6	827.6	827.6	827.6	827.6
2.5°	825.9	827.2	828.4	829.0	828.8	828.6	828.5	828.4
5°	824.5	826.1	827.7	828.4	828.2	828.0	827.9	827.6
7.5°	819.5	821.6	823.5	824.4	824.1	824.0	823.7	823.5
10°	814.5	816.5	818.5	819.3	818.9	818.5	818.1	817.7
12.5°	807.7	809.5	811.3	812.1	811.7	811.3	810.9	810.5
15°	794.6	796.7	798.7	799.5	799.4	799.2	798.9	798.7
17.5°	777.7	779.5	781.3	782.0	781.8	781.4	781.2	780.9
20°	765.4	767.2	769.0	770.0	770.3	770.4	770.6	770.9
22.5°	751.9	754.2	756.5	757.6	757.5	757.3	757.2	757.1
25°	729.2	731.8	734.3	735.6	735.6	735.6	735.6	735.6
27.5°	705.3	707.6	709.8	711.0	711.2	711.4	711.5	711.7
30°	689.1	691.5	693.9	695.1	695.1	695.1	695.1	695.1
32.5°	671.3	673.9	676.5	678.0	678.5	679.0	679.4	679.9
35°	645.2	648.2	651.2	653.2	653.9	654.7	655.5	656.3
37.5°	618.0	621.5	624.8	626.9	627.5	628.2	628.8	629.5
40°	600.0	603.4	606.8	608.9	609.8	610.5	611.3	612.2
42.5°	581.2	584.9	588.7	591.1	592.2	593.3	594.4	595.6
45°	553.0	556.8	560.7	563.4	565.0	566.5	568.2	569.8
47.5°	524.6	528.9	533.2	536.0	537.2	538.5	539.7	540.9
50°	505.1	509.6	514.3	517.3	518.7	520.0	521.5	522.9
52.5°	485.2	490.0	494.7	498.0	499.7	501.4	503.2	504.9
55°	455.3	460.7	466.1	469.6	471.2	472.8	474.4	476.0
57.5°	424.7	430.2	435.6	439.3	441.2	443.1	444.9	446.8
60°	403.4	409.0	414.6	418.5	420.7	422.9	425.2	427.3
62.5°	383.2	388.8	394.4	398.2	400.3	402.3	404.4	406.4
65°	351.0	357.0	363.0	367.0	369.0	371.0	373.1	375.1
67.5°	318.9	325.5	332.1	336.2	337.9	339.6	341.3	342.9
70°	297.7	304.1	310.6	314.7	316.8	318.7	320.7	322.8
72.5°	276.4	282.9	289.6	293.9	295.8	297.8	299.8	301.9
75°	244.0	250.6	257.3	261.7	264.2	266.6	269.0	271.4
77.5°	213.7	220.7	227.6	232.0	233.9	235.7	237.6	239.4
80°	193.9	200.7	207.6	212.0	214.0	215.9	218.0	220.0
82.5°	175.9	182.7	189.5	193.9	196.0	197.9	199.9	201.9
85°	150.7	157.5	164.3	168.7	170.7	172.7	174.7	176.7
87.5°	133.5	140.5	147.5	152.3	154.1	156.4	158.5	160.3
90°	140.5	148.4	156.1	162.6	163.5	166.5	169.5	170.6
92.5°	193.6	182.9	181.8	180.8	180.8	179.7	182.5	182.5
95°	461.8	352.0	305.1	273.3	256.2	249.3	244.3	242.3
97.5°	992.4	819.8	696.6	581.0	509.2	466.1	441.2	434.5
100°	1269.5	1194.2	1083.1	944.9	845.8	774.8	737.8	740.8
102.5°	1358.5	1361.5	1298.9	1212.7	1136.1	1080.3	1049.6	1028.6
105°	1379.3	1485.0	1509.6	1487.2	1443.0	1406.8	1376.7	1373.4
107.5°	1293.7	1461.5	1554.5	1593.7	1596.2	1585.2	1576.1	1568.7
110°	1214.5	1403.8	1535.1	1608.4	1638.1	1647.7	1647.3	1646.9



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CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
112.5°	1135.5	1328.5	1474.9	1568.3	1621.3	1647.9	1657.3	1659.4
115°	1030.7	1209.6	1361.5	1473.7	1550.3	1595.9	1617.6	1624.2
117.5°	953.0	1107.9	1244.7	1358.6	1438.4	1490.3	1520.7	1529.0
120°	911.4	1051.0	1175.7	1279.7	1360.1	1417.6	1442.9	1450.4
122.5°	877.9	1004.5	1120.2	1217.0	1288.6	1340.4	1368.2	1377.3
125°	832.5	945.8	1046.0	1128.9	1194.3	1239.7	1266.1	1274.5
127.5°	792.2	893.5	984.0	1059.5	1117.9	1156.9	1180.9	1188.6
130°	766.7	860.6	945.4	1015.9	1070.1	1107.3	1129.5	1138.8
132.5°	742.8	829.2	908.4	975.7	1026.8	1064.2	1084.2	1091.1
135°	710.2	784.9	853.5	912.8	962.9	993.9	1012.9	1020.9
137.5°	680.4	741.8	801.0	852.6	894.8	926.2	942.4	948.0
140°	662.9	716.9	767.9	812.9	852.0	881.0	897.9	897.9
142.5°	645.8	692.2	736.5	775.8	809.2	835.0	850.4	850.4
145°	626.5	661.1	694.7	724.9	750.7	772.5	781.3	784.1
147.5°	610.8	637.5	663.7	684.9	704.7	719.6	728.0	729.4
150°	600.2	623.2	644.2	663.4	678.8	690.3	696.6	697.1
152.5°	591.4	611.2	629.8	645.7	657.5	667.8	671.5	671.6
155°	578.2	594.2	609.2	621.2	630.3	638.3	640.2	641.2
157.5°	564.2	577.6	589.2	598.6	606.4	612.4	614.0	613.8
160°	556.2	567.2	577.2	584.2	591.2	597.2	597.2	596.2
162.5°	546.6	556.0	565.2	571.4	576.0	581.2	581.2	580.2
165°	534.2	540.2	547.2	552.2	556.2	560.2	559.2	559.2
167.5°	523.4	528.0	532.0	535.6	537.4	540.2	539.2	539.2
170°	516.2	519.2	523.1	525.2	526.2	528.2	527.2	527.2
172.5°	509.8	512.0	515.2	516.3	516.6	518.6	516.8	516.0
175°	501.2	502.1	504.2	504.2	504.2	505.1	504.2	503.2
177.5°	495.8	496.5	497.4	497.4	496.5	497.4	495.8	495.8
180°	494.2	494.2	494.2	494.2	494.2	494.2	494.2	494.2

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