

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: P331360

Luminaire Tested: **SA2XXDIP-C675D925U835-4F0-1E-UDD-D**

Issue Date: 10/7/2019

Test Information

Test Method: LM-79-08
Report Number: P331360
REPORT IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-1807-864-2,
Test Lab: INNOVATION CENTER
Issue Date: 10/7/2019
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: NEO-RAY
Catalog Number: SA2XXDIP-C675D925U835-4F0-1E-UDD-D
Description: DEFINE 2 DIRECT-INDIRECT PENDANT LED LUMINAIRE
DOWNLIGHT 675 LUMENS PER FOOT, DROP SATIN WHITE DIFFUSER
UPLIGHT 925 LUMENS PER FOOT, NO LENS
Light Source: -
Ballast/Driver: ELECTRONIC DRIVER

Summary

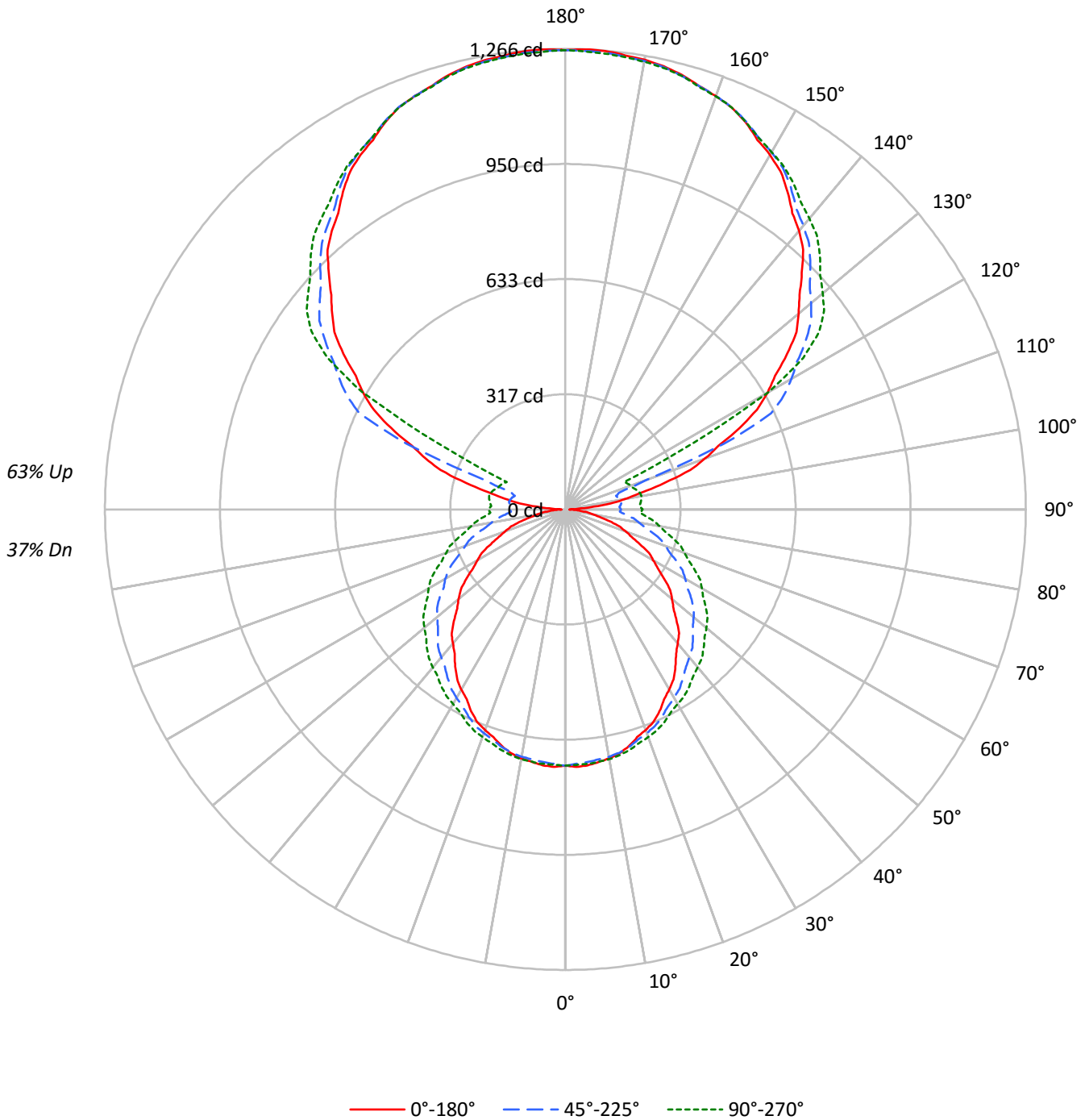
Lumens per Lamp: N/A
Luminaire Lumens: 6389.2 lumens
Efficiency: N/A
Efficacy: 122.9 lumens/watt
Spacing Criteria (0/90/45): 1.21 / 1.32 / 1.42
Luminous Opening: Rectangular w/ Sides (W: 0.17' x L: 4' x H: 0.08')
CIE Type: Semi-Indirect

Input Watts (W): 52
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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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	50	30	10	0	
RCR																						
0	104	104	104	104	94	94	94	94	76	76	76	60	60	60	45	45	45	37				
1	94	89	85	81	85	81	77	74	65	63	60	51	49	47	38	36	35	29				
2	85	77	71	65	77	70	64	60	56	52	49	44	41	39	32	31	29	24				
3	77	67	60	54	69	61	55	49	49	45	41	38	35	32	28	26	24	19				
4	70	59	51	45	63	54	47	41	44	38	34	34	30	27	25	23	20	16				
5	64	53	44	38	58	48	41	35	39	33	29	30	26	23	22	20	18	14				
6	59	47	39	33	53	43	36	30	35	29	25	27	23	20	20	18	15	12				
7	55	42	34	29	49	39	31	26	31	26	22	25	21	18	18	16	14	11				
8	51	38	30	25	46	35	28	23	29	23	19	23	19	16	17	14	12	9				
9	47	35	27	22	42	32	25	21	26	21	17	21	17	14	16	13	11	8				
10	44	32	25	20	40	29	23	18	24	19	15	19	15	13	14	12	10	8				

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	11373	11373	11373
5°	11428	10947	10905
10°	11356	10624	10504
15°	11200	10282	10083
20°	11002	9915	9676
25°	10807	9560	9307
30°	10532	9197	8935
35°	10254	8846	8673
40°	9960	8547	8413
45°	9681	8279	8190
50°	9382	8037	7969
55°	9070	7777	7745
60°	8686	7508	7509
65°	8287	7191	7227
70°	7841	6852	6923
75°	7270	6518	6643
80°	6370	6177	6361
85°	5506	5882	6138



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	66.7	1.0
10°-20°	191.4	3.0
20°-30°	290.0	4.5
30°-40°	353.3	5.5
40°-50°	380.0	5.9
50°-60°	369.1	5.8
60°-70°	322.3	5.0
70°-80°	248.1	3.9
80°-90°	169.6	2.7
90°-100°	156.8	2.5
100°-110°	238.2	3.7
110°-120°	468.0	7.3
120°-130°	712.1	11.1
130°-140°	737.5	11.5
140°-150°	675.7	10.6
150°-160°	541.4	8.5
160°-170°	348.9	5.5
170°-180°	120.1	1.9
0°-30°	548.2	8.6
0°-40°	901.4	14.1
0°-60°	1650.6	25.8
0°-90°	2390.5	37.4
90°-120°	863.0	13.5
90°-150°	2988.3	46.8
90°-180°	3999.0	62.6
0°-180°	6389.2	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	704	704	704	704	704	
5°	706	703	697	703	702	67
15°	674	676	676	684	684	190
25°	612	620	629	641	644	281
35°	528	545	564	586	594	330
45°	433	461	496	527	538	334
55°	332	369	422	457	472	297
65°	227	277	337	377	392	225
75°	126	183	248	290	305	133
85°	37	100	165	207	222	40
90°	11	81	153	197	212	10
95°	68	88	153	195	208	79
105°	283	326	144	188	204	302
115°	529	558	625	251	178	521
125°	744	759	806	839	852	664
135°	920	935	953	982	990	710
145°	1066	1066	1080	1092	1094	667
155°	1174	1166	1176	1181	1174	541
165°	1237	1232	1234	1240	1234	349
175°	1265	1259	1260	1266	1258	120
180°	1262	1262	1262	1262	1262	



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CANDELA DISTRIBUTION (FULL):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
0°	704.4	704.4	704.4	704.4	704.4	704.4	704.4	704.4	704.4	704.4	704.4
2.5°	708.5	707.9	707.4	706.8	706.3	705.4	704.1	702.8	701.6	700.3	701.2
5°	706.4	705.7	705.1	704.4	703.7	702.7	701.3	700.0	698.6	697.2	698.6
7.5°	700.1	699.6	699.2	698.7	698.3	697.5	696.5	695.4	694.4	693.4	695.0
10°	695.2	694.7	694.3	693.8	693.4	692.8	692.1	691.5	690.8	690.1	691.9
12.5°	687.0	687.1	687.2	687.3	687.4	687.2	686.7	686.2	685.7	685.2	687.0
15°	673.8	674.2	674.7	675.1	675.6	675.8	675.8	675.8	675.8	675.8	677.8
17.5°	656.6	657.6	658.5	659.5	660.4	661.3	662.0	662.7	663.4	664.2	666.3
20°	645.2	646.3	647.4	648.6	649.7	650.7	651.6	652.6	653.5	654.4	656.9
22.5°	632.9	634.2	635.6	636.9	638.2	639.5	640.8	642.0	643.3	644.6	647.1
25°	612.5	614.1	615.7	617.3	618.9	620.7	622.7	624.8	626.8	628.8	631.6
27.5°	588.0	590.6	593.2	595.8	598.4	600.9	603.3	605.7	608.1	610.5	613.9
30°	571.7	574.6	577.6	580.5	583.5	586.4	589.4	592.3	595.3	598.2	601.8
32.5°	553.7	557.0	560.3	563.6	567.0	570.4	573.9	577.3	580.8	584.3	588.5
35°	527.8	531.6	535.5	539.3	543.2	547.3	551.6	555.9	560.2	564.5	569.5
37.5°	499.6	504.1	508.5	512.9	517.4	522.4	528.0	533.6	539.1	544.7	550.3
40°	480.8	485.8	490.8	495.8	500.8	506.3	512.5	518.6	524.7	530.8	536.7
42.5°	462.9	467.8	472.8	477.8	482.8	488.8	495.9	502.9	509.9	517.0	523.4
45°	432.8	439.0	445.1	451.2	457.3	464.4	472.3	480.3	488.2	496.1	503.2
47.5°	403.2	409.9	416.6	423.2	429.9	437.9	447.2	456.5	465.8	475.1	482.5
50°	382.8	389.9	396.9	403.9	410.9	419.6	429.8	440.0	450.2	460.4	468.1
52.5°	363.2	370.6	378.0	385.4	392.8	401.9	412.6	423.4	434.1	444.9	452.8
55°	331.8	339.9	348.1	356.3	364.4	374.4	386.2	398.0	409.8	421.6	429.8
57.5°	300.7	310.0	319.2	328.4	337.6	348.2	360.2	372.2	384.3	396.3	405.1
60°	278.7	288.4	298.2	308.0	317.7	329.1	342.0	354.9	367.8	380.8	389.4
62.5°	259.1	269.2	279.3	289.4	299.6	311.1	324.0	336.9	349.9	362.8	372.0
65°	226.6	237.7	248.9	260.0	271.1	283.3	296.7	310.1	323.5	336.9	346.2
67.5°	196.8	208.4	220.1	231.7	243.3	255.9	269.6	283.3	297.0	310.7	320.1
70°	175.6	187.4	199.2	211.0	222.8	235.7	249.8	263.8	277.9	292.0	301.7
72.5°	156.0	168.1	180.3	192.5	204.6	217.8	232.1	246.3	260.6	274.8	284.4
75°	125.6	138.3	151.0	163.7	176.4	190.0	204.5	219.0	233.5	248.1	257.8
77.5°	96.2	109.5	122.8	136.0	149.3	163.4	178.1	192.9	207.6	222.3	232.1
80°	76.6	90.4	104.2	118.1	131.9	146.2	161.0	175.7	190.4	205.2	214.7
82.5°	60.2	73.9	87.5	101.2	114.9	129.1	144.1	159.0	173.9	188.9	198.4
85°	36.8	50.8	64.9	78.9	93.0	107.3	121.8	136.3	150.9	165.4	174.9
87.5°	20.2	34.2	48.1	62.1	76.1	90.5	105.3	120.2	135.0	149.8	159.3
90°	11.1	26.5	41.9	57.3	72.7	88.4	104.6	120.7	136.9	153.0	163.1
92.5°	27.8	39.9	51.9	64.0	76.0	89.4	104.2	119.0	133.8	148.6	158.0
95°	67.5	71.5	75.5	79.4	83.4	92.9	107.9	123.0	138.0	153.0	162.7
97.5°	125.0	115.6	106.2	96.8	87.4	90.9	107.2	123.6	139.9	156.3	165.5
100°	168.8	149.4	130.0	110.6	91.2	89.5	105.7	121.8	138.0	154.1	164.2
102.5°	216.2	218.0	219.8	221.6	223.3	216.0	199.4	182.9	166.4	149.9	160.2
105°	282.7	295.4	308.1	320.7	333.4	317.9	274.3	230.7	187.1	143.5	153.7
107.5°	359.8	370.0	380.2	390.3	400.5	378.0	322.9	267.7	212.6	157.4	162.8
110°	408.7	417.5	426.3	435.1	443.9	424.5	377.0	329.4	281.9	234.3	221.3



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CANDELA DISTRIBUTION (continued):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
112.5°	455.4	463.0	470.6	478.2	485.8	487.6	483.7	479.8	475.9	471.9	405.2
115°	529.2	535.2	541.1	547.1	553.0	563.6	578.9	594.2	609.5	624.8	537.6
117.5°	594.1	599.6	605.1	610.6	616.1	625.3	638.2	651.2	664.1	677.0	661.0
120°	642.4	646.3	650.3	654.2	658.2	666.5	679.2	692.0	704.7	717.4	726.2
122.5°	683.3	686.9	690.4	694.0	697.6	705.6	718.1	730.6	743.1	755.6	763.3
125°	744.5	747.2	749.8	752.5	755.1	762.0	773.1	784.2	795.3	806.4	814.0
127.5°	801.0	803.7	806.4	809.1	811.8	817.5	826.2	835.0	843.7	852.4	860.1
130°	836.8	839.8	842.8	845.9	848.9	853.9	860.9	867.9	874.9	881.9	889.5
132.5°	873.3	875.9	878.4	880.9	883.5	887.7	893.6	899.5	905.4	911.3	918.5
135°	919.8	923.0	926.3	929.5	932.8	936.5	940.5	944.6	948.7	952.8	959.6
137.5°	967.8	970.1	972.3	974.5	976.7	979.4	982.5	985.5	988.6	991.7	997.8
140°	999.3	1000.6	1002.0	1003.4	1004.8	1006.9	1009.6	1012.3	1014.9	1017.6	1023.1
142.5°	1025.6	1026.8	1028.0	1029.3	1030.5	1032.4	1035.1	1037.7	1040.4	1043.0	1047.6
145°	1065.8	1065.6	1065.4	1065.2	1065.0	1066.6	1070.1	1073.5	1077.0	1080.4	1083.2
147.5°	1101.8	1101.0	1100.3	1099.5	1098.7	1100.0	1103.4	1106.9	1110.3	1113.7	1114.9
150°	1125.2	1123.8	1122.3	1120.9	1119.5	1120.4	1123.7	1126.9	1130.2	1133.4	1134.6
152.5°	1144.9	1143.3	1141.7	1140.2	1138.6	1139.3	1142.4	1145.5	1148.6	1151.7	1152.9
155°	1173.6	1171.8	1169.9	1168.1	1166.3	1166.6	1169.0	1171.5	1173.9	1176.3	1177.5
157.5°	1196.0	1194.5	1193.0	1191.4	1189.9	1190.0	1191.7	1193.4	1195.1	1196.8	1198.2
160°	1209.2	1208.0	1206.8	1205.5	1204.3	1204.3	1205.5	1206.8	1208.0	1209.2	1210.4
162.5°	1220.9	1219.7	1218.5	1217.2	1216.0	1215.9	1217.0	1218.0	1219.1	1220.2	1221.5
165°	1236.6	1235.4	1234.2	1232.9	1231.7	1231.4	1232.0	1232.6	1233.3	1233.9	1235.3
167.5°	1248.3	1247.1	1245.9	1244.6	1243.4	1243.1	1243.7	1244.2	1244.8	1245.4	1246.8
170°	1254.9	1253.6	1252.4	1251.2	1250.0	1249.6	1250.0	1250.4	1250.8	1251.2	1252.6
172.5°	1259.2	1258.0	1256.8	1255.6	1254.4	1254.0	1254.4	1254.8	1255.2	1255.6	1257.0
175°	1264.9	1263.5	1262.1	1260.6	1259.2	1258.7	1259.1	1259.5	1259.9	1260.3	1261.8
177.5°	1265.8	1264.7	1263.6	1262.4	1261.3	1260.8	1261.0	1261.1	1261.3	1261.4	1262.6
180°	1262.2	1262.2	1262.2	1262.2	1262.2	1262.2	1262.2	1262.2	1262.2	1262.2	1262.2



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CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
0°	704.4	704.4	704.4	704.4	704.4	704.4	704.4	704.4
2.5°	702.1	703.0	703.9	704.2	703.8	703.5	703.1	702.8
5°	700.0	701.3	702.7	703.3	703.0	702.8	702.6	702.3
7.5°	696.6	698.3	699.9	700.6	700.4	700.1	699.9	699.7
10°	693.7	695.5	697.4	698.1	697.9	697.7	697.5	697.2
12.5°	688.8	690.6	692.5	693.2	693.0	692.8	692.6	692.3
15°	679.9	681.9	684.0	684.9	684.7	684.4	684.2	684.0
17.5°	668.4	670.6	672.7	673.8	673.8	673.8	673.8	673.8
20°	659.4	661.9	664.3	665.6	665.6	665.6	665.6	665.6
22.5°	649.6	652.1	654.5	656.0	656.3	656.7	657.1	657.4
25°	634.3	637.0	639.7	641.4	642.1	642.8	643.5	644.2
27.5°	617.4	620.8	624.3	626.2	626.7	627.2	627.7	628.2
30°	605.5	609.1	612.7	614.9	615.6	616.3	616.9	617.6
32.5°	592.7	596.9	601.0	603.7	605.0	606.2	607.4	608.6
35°	574.5	579.5	584.5	587.8	589.4	591.0	592.5	594.1
37.5°	555.8	561.3	566.9	570.5	572.2	573.8	575.5	577.2
40°	542.6	548.5	554.4	558.4	560.4	562.5	564.5	566.6
42.5°	529.8	536.3	542.7	547.0	549.0	551.1	553.1	555.1
45°	510.2	517.2	524.3	528.9	531.2	533.5	535.7	538.0
47.5°	489.8	497.2	504.5	509.4	511.9	514.4	516.9	519.4
50°	475.8	483.5	491.3	496.4	498.9	501.4	503.8	506.3
52.5°	460.7	468.6	476.5	481.8	484.4	487.1	489.8	492.5
55°	437.9	446.1	454.3	459.8	462.8	465.7	468.7	471.6
57.5°	413.9	422.7	431.5	437.4	440.4	443.4	446.4	449.4
60°	398.0	406.6	415.3	421.2	424.3	427.5	430.7	433.9
62.5°	381.1	390.3	399.5	405.6	408.5	411.5	414.5	417.5
65°	355.5	364.8	374.1	380.2	383.2	386.1	389.1	392.0
67.5°	329.5	338.9	348.3	354.6	357.6	360.7	363.8	366.9
70°	311.5	321.2	331.0	337.2	339.9	342.7	345.4	348.1
72.5°	294.0	303.5	313.1	319.5	322.8	326.1	329.3	332.6
75°	267.6	277.3	287.1	293.4	296.4	299.3	302.3	305.2
77.5°	241.8	251.5	261.2	267.6	270.8	274.0	277.1	280.3
80°	224.2	233.8	243.3	249.7	252.8	256.0	259.2	262.4
82.5°	207.9	217.4	227.0	233.2	236.2	239.2	242.2	245.2
85°	184.4	194.0	203.5	209.8	213.0	216.2	219.4	222.5
87.5°	168.8	178.2	187.7	193.9	196.9	199.9	202.9	205.8
90°	173.2	183.3	193.4	200.0	203.1	206.2	209.4	212.5
92.5°	167.4	176.9	186.3	192.5	195.4	198.4	201.4	204.3
95°	172.3	181.9	191.6	197.6	200.2	202.7	205.2	207.7
97.5°	174.7	183.9	193.1	199.2	202.1	205.0	207.9	210.9
100°	174.2	184.2	194.2	200.7	203.6	206.5	209.4	212.3
102.5°	170.5	180.9	191.2	197.9	200.9	204.0	207.1	210.1
105°	163.8	174.0	184.2	190.9	194.2	197.5	200.9	204.2
107.5°	168.1	173.5	178.8	183.1	186.5	189.8	193.1	196.4
110°	208.3	195.2	182.2	177.3	180.6	184.0	187.3	190.6



TEST NUMBER: P331360

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CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
112.5°	338.4	271.6	204.8	173.0	176.1	179.3	182.4	185.6
115°	450.4	363.3	276.1	226.5	214.3	202.2	190.1	178.0
117.5°	645.0	629.0	613.0	582.1	536.4	490.7	445.0	399.3
120°	735.0	743.8	752.6	744.5	719.6	694.7	669.8	644.9
122.5°	770.9	778.5	786.2	788.4	785.2	782.0	778.8	775.6
125°	821.5	829.1	836.6	841.7	844.4	847.0	849.7	852.3
127.5°	867.8	875.5	883.2	888.1	890.2	892.4	894.5	896.6
130°	897.2	904.9	912.6	917.2	918.8	920.4	922.1	923.7
132.5°	925.6	932.8	940.0	944.4	946.0	947.6	949.2	950.8
135°	966.4	973.2	980.0	984.1	985.5	986.9	988.3	989.7
137.5°	1004.0	1010.2	1016.3	1019.8	1020.7	1021.5	1022.4	1023.2
140°	1028.5	1034.0	1039.4	1042.4	1042.7	1043.0	1043.4	1043.7
142.5°	1052.2	1056.7	1061.3	1063.7	1063.8	1064.0	1064.2	1064.3
145°	1086.0	1088.8	1091.6	1093.0	1093.1	1093.2	1093.4	1093.5
147.5°	1116.1	1117.4	1118.6	1119.1	1118.8	1118.5	1118.2	1117.9
150°	1135.8	1137.1	1138.3	1138.4	1137.4	1136.3	1135.3	1134.3
152.5°	1154.1	1155.3	1156.5	1156.5	1155.1	1153.8	1152.5	1151.1
155°	1178.8	1180.0	1181.2	1181.0	1179.4	1177.7	1176.1	1174.5
157.5°	1199.5	1200.9	1202.3	1202.2	1200.6	1199.0	1197.4	1195.9
160°	1211.6	1212.9	1214.1	1214.0	1212.5	1211.1	1209.7	1208.3
162.5°	1222.9	1224.3	1225.7	1225.5	1223.8	1222.0	1220.3	1218.5
165°	1236.7	1238.1	1239.5	1239.5	1238.1	1236.7	1235.3	1233.9
167.5°	1248.2	1249.6	1251.1	1250.8	1249.0	1247.2	1245.4	1243.5
170°	1254.1	1255.5	1256.9	1256.7	1254.9	1253.0	1251.2	1249.4
172.5°	1258.4	1259.9	1261.3	1261.1	1259.2	1257.4	1255.6	1253.8
175°	1263.2	1264.6	1266.0	1265.7	1263.7	1261.7	1259.6	1257.6
177.5°	1263.7	1264.9	1266.0	1265.8	1264.4	1262.9	1261.4	1260.0
180°	1262.2	1262.2	1262.2	1262.2	1262.2	1262.2	1262.2	1262.2

(END OF REPORT)