

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: P331697

Luminaire Tested: **SA2XXRDIP-C675D925U835-4F0-1E-UDD-F1**

Issue Date: 10/7/2019

**Test Information**

Test Method: LM-79-08  
Report Number: P331697  
REPORT IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-1807-864-8,  
Test Lab: INNOVATION CENTER  
Issue Date: 10/7/2019  
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)  
Product Line: NEO-RAY  
Catalog Number: SA2XXRDIP-C675D925U835-4F0-1E-UDD-F1  
Description: DEFINE 2 DIRECT-INDIRECT PENDANT LED LUMINAIRE  
DOWNLIGHT 675 LUMENS PER FOOT, FLUSH SATIN WHITE DIFFUSER, REGRESSED  
HOUSING  
UPLIGHT 925 LUMENS PER FOOT, FLUSH SATIN WHITE DIFFUSER  
Light Source: -  
Ballast/Driver: ELECTRONIC DRIVER

**Summary**

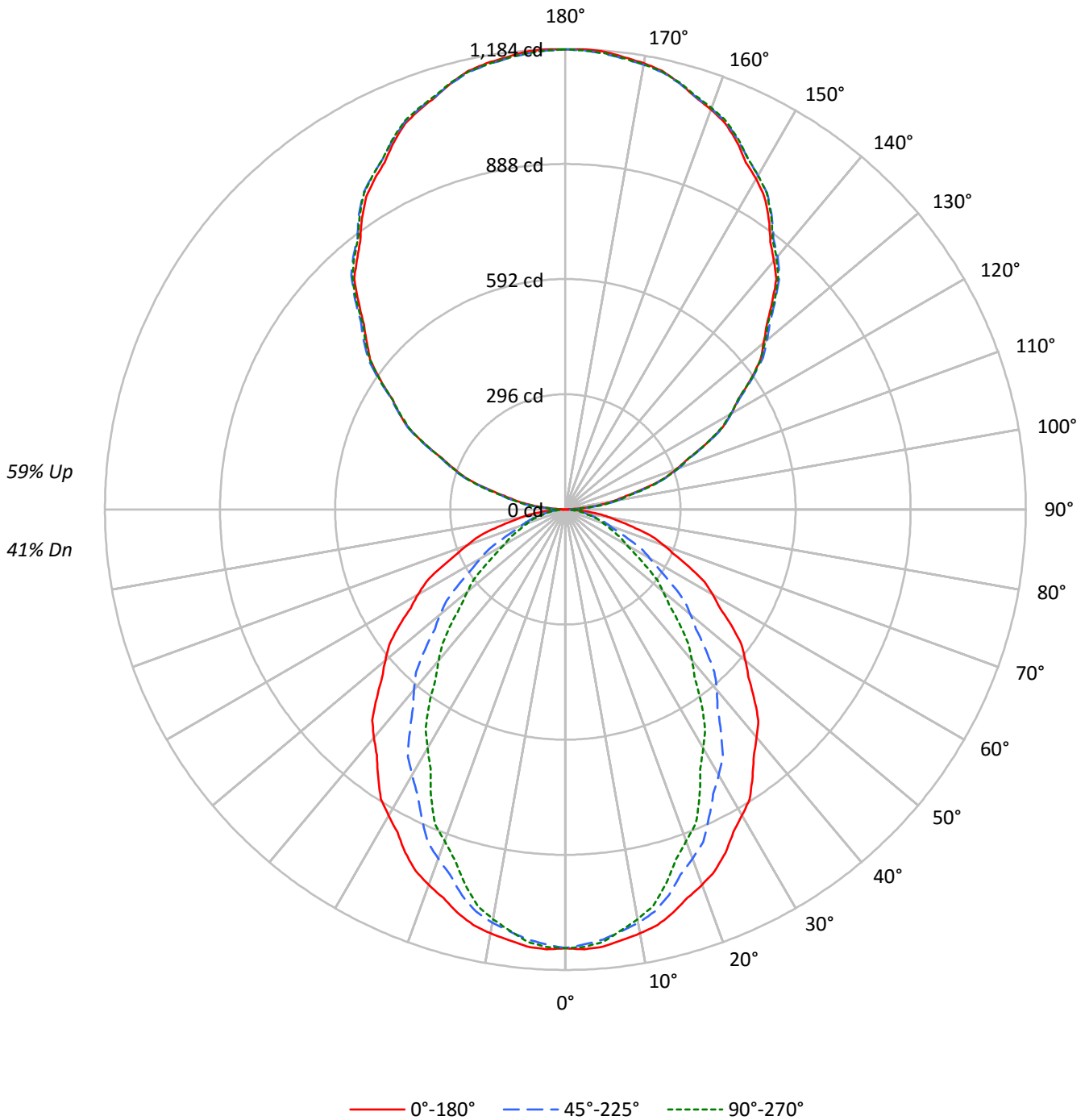
Lumens per Lamp: N/A  
Luminaire Lumens: 5631.5 lumens  
Efficiency: N/A  
Efficacy: 108.3 lumens/watt  
Spacing Criteria (0/90/45): 1.2 / 0.99 / 1.16  
Luminous Opening: Rectangular (W 0.17' x L: 4' x H: 0')  
CIE Type: General Diffuse

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	105	105	105	105	96	96	96	96	78	78	78	63	63	63	48	48	48	41				
1	96	92	88	85	88	84	81	78	69	67	65	56	54	53	43	42	41	36				
2	88	81	75	70	80	74	69	65	61	58	55	49	47	45	38	37	35	30				
3	80	71	64	59	73	65	59	55	54	50	46	44	41	38	34	32	31	26				
4	74	63	56	50	67	58	52	47	48	44	40	39	36	33	31	29	27	23				
5	68	57	49	43	62	52	45	40	44	38	34	36	32	29	28	26	23	20				
6	63	51	43	37	57	47	40	35	39	34	30	32	28	25	26	23	21	18				
7	58	46	38	33	53	42	36	31	36	31	27	29	26	23	23	21	19	16				
8	54	42	34	29	49	39	32	27	33	27	24	27	23	20	22	19	17	14				
9	50	38	31	26	46	35	29	24	30	25	21	25	21	18	20	17	15	13				
10	47	35	28	23	43	33	26	22	28	23	19	23	19	17	19	16	14	12				

**AVERAGE LUMINANCE (cd/sqm):**

	0°	45°	90°
0°	18213	18213	18213
5°	18282	17985	18084
10°	18143	17690	17539
15°	17934	17167	16672
20°	17646	16417	15593
25°	17350	15567	14549
30°	16940	14693	13209
35°	16539	13742	12033
40°	16136	12760	10671
45°	15664	11654	9439
50°	15179	10540	8231
55°	14686	9340	7068
60°	14108	8076	5867
65°	13456	6785	5345
70°	12675	5589	4914
75°	11715	5097	4585
80°	10349	4556	4175
85°	8133	3594	3594



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	105.6	1.9
10°-20°	289.9	5.1
20°-30°	407.1	7.2
30°-40°	443.9	7.9
40°-50°	408.2	7.2
50°-60°	320.6	5.7
60°-70°	209.0	3.7
70°-80°	107.8	1.9
80°-90°	32.7	0.6
90°-100°	74.9	1.3
100°-110°	232.7	4.1
110°-120°	397.8	7.1
120°-130°	523.2	9.3
130°-140°	587.2	10.4
140°-150°	575.7	10.2
150°-160°	482.9	8.6
160°-170°	320.3	5.7
170°-180°	111.9	2.0
0°-30°	802.6	14.3
0°-40°	1246.6	22.1
0°-60°	1975.3	35.1
0°-90°	2324.8	41.3
90°-120°	705.5	12.5
90°-150°	2391.6	42.5
90°-180°	3307.0	58.7
0°-180°	5631.5	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	1128	1128	1128	1128	1128	
5°	1128	1122	1110	1118	1116	107
15°	1073	1060	1027	1008	997	302
25°	974	939	874	833	817	448
35°	839	785	697	635	610	525
45°	686	615	510	441	413	529
55°	522	440	332	273	251	466
65°	352	269	178	145	140	349
75°	188	118	82	75	74	199
85°	44	23	19	19	19	52
90°	1	14	35	33	34	5
95°	52	61	64	64	62	60
105°	215	218	220	221	222	227
115°	399	405	403	402	399	395
125°	581	589	587	584	583	519
135°	752	762	764	763	760	580
145°	912	919	925	926	922	570
155°	1043	1046	1049	1053	1051	480
165°	1135	1134	1134	1140	1136	320
175°	1181	1178	1176	1182	1177	112
180°	1183	1183	1183	1183	1183	



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**CANDELA DISTRIBUTION (FULL):**

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
0°	1128.0	1128.0	1128.0	1128.0	1128.0	1128.0	1128.0	1128.0	1128.0	1128.0	1128.0
2.5°	1132.1	1131.2	1130.3	1129.4	1128.5	1127.0	1125.0	1123.0	1121.1	1119.1	1120.9
5°	1128.0	1126.9	1125.8	1124.6	1123.5	1121.5	1118.5	1115.6	1112.6	1109.7	1111.7
7.5°	1116.4	1115.0	1113.6	1112.2	1110.8	1108.3	1104.9	1101.5	1098.0	1094.6	1095.1
10°	1106.6	1105.0	1103.4	1101.8	1100.2	1097.2	1092.6	1088.1	1083.6	1079.0	1078.4
12.5°	1094.3	1092.4	1090.4	1088.5	1086.5	1082.7	1076.9	1071.1	1065.2	1059.4	1058.2
15°	1072.9	1070.4	1067.9	1065.4	1062.9	1057.8	1050.1	1042.4	1034.7	1027.0	1022.7
17.5°	1046.6	1042.8	1039.0	1035.1	1031.3	1024.5	1014.6	1004.7	994.8	984.9	979.8
20°	1027.0	1022.4	1017.9	1013.4	1008.8	1000.9	989.5	978.2	966.9	955.5	949.8
22.5°	1005.7	1000.7	995.6	990.5	985.4	976.5	963.7	950.9	938.1	925.3	918.0
25°	973.9	966.6	959.4	952.1	944.9	933.7	918.8	903.8	888.8	873.8	864.5
27.5°	935.5	927.6	919.7	911.8	903.9	891.5	874.7	857.8	840.9	824.0	813.2
30°	908.6	899.9	891.3	882.7	874.1	860.7	842.5	824.4	806.2	788.1	776.5
32.5°	882.4	872.3	862.3	852.2	842.1	827.8	809.3	790.8	772.3	753.8	740.6
35°	839.1	827.6	816.0	804.4	792.9	777.1	757.1	737.2	717.2	697.2	682.9
37.5°	795.9	783.1	770.4	757.7	745.0	728.0	706.8	685.5	664.2	642.9	627.2
40°	765.6	752.0	738.4	724.8	711.2	693.4	671.4	649.4	627.4	605.4	589.3
42.5°	734.6	720.3	705.9	691.6	677.3	658.7	636.0	613.3	590.5	567.8	551.1
45°	686.0	670.8	655.6	640.4	625.2	605.7	581.9	558.1	534.2	510.4	494.3
47.5°	638.6	622.5	606.4	590.3	574.2	553.9	529.3	504.7	480.1	455.5	439.5
50°	604.3	588.2	572.1	556.0	539.9	519.4	494.4	469.5	444.5	419.6	403.9
52.5°	570.9	554.0	537.2	520.4	503.5	482.9	458.5	434.1	409.7	385.3	370.2
55°	521.7	504.0	486.3	468.6	450.9	429.8	405.3	380.8	356.3	331.8	318.2
57.5°	471.2	453.1	434.9	416.8	398.6	377.8	354.2	330.7	307.1	283.6	271.1
60°	436.9	418.8	400.6	382.5	364.3	343.6	320.2	296.8	273.5	250.1	238.5
62.5°	403.4	385.3	367.1	349.0	330.8	310.6	288.4	266.1	243.8	221.5	210.5
65°	352.2	333.8	315.4	297.1	278.7	259.3	238.9	218.5	198.0	177.6	169.9
67.5°	302.8	284.5	266.3	248.1	229.8	211.5	193.1	174.8	156.4	138.0	134.5
70°	268.5	250.8	233.1	215.4	197.7	181.0	165.4	149.7	134.1	118.4	116.1
72.5°	235.8	218.8	201.9	184.9	167.9	153.2	140.6	128.0	115.5	102.9	101.0
75°	187.8	172.0	156.1	140.2	124.3	112.5	104.8	97.1	89.4	81.7	80.1
77.5°	140.7	126.7	112.8	98.9	85.0	76.1	72.4	68.7	65.0	61.3	60.3
80°	111.3	99.7	88.1	76.6	65.0	58.1	55.8	53.5	51.3	49.0	48.1
82.5°	84.3	75.3	66.3	57.2	48.2	42.9	41.4	39.8	38.3	36.8	36.2
85°	43.9	39.1	34.4	29.6	24.8	22.1	21.4	20.8	20.1	19.4	19.4
87.5°	13.3	12.3	11.4	10.5	9.6	9.6	10.6	11.6	12.5	13.5	13.2
90°	1.0	3.7	6.3	9.0	11.6	15.4	20.3	25.2	30.0	34.9	34.5
92.5°	17.8	19.7	21.7	23.6	25.6	27.1	28.3	29.4	30.6	31.7	31.8
95°	51.9	54.1	56.3	58.5	60.8	62.1	62.5	63.0	63.4	63.9	63.9
97.5°	94.8	96.8	98.7	100.7	102.6	104.0	104.9	105.7	106.5	107.4	107.4
100°	126.7	128.5	130.3	132.1	133.8	135.1	135.7	136.4	137.1	137.7	137.7
102.5°	160.3	161.7	163.1	164.5	165.9	167.1	167.9	168.8	169.6	170.5	170.6
105°	214.6	215.2	215.9	216.6	217.2	217.8	218.2	218.7	219.1	219.5	220.0
107.5°	269.2	270.2	271.2	272.2	273.2	273.6	273.6	273.6	273.6	273.6	273.8
110°	304.4	305.7	307.0	308.4	309.7	310.4	310.4	310.4	310.4	310.4	310.4



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**CANDELA DISTRIBUTION (continued):**

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
112.5°	342.7	344.0	345.4	346.7	348.0	348.6	348.4	348.2	348.1	347.9	347.4
115°	399.2	400.5	401.8	403.2	404.5	404.9	404.5	404.1	403.6	403.2	403.0
117.5°	455.5	457.2	459.0	460.8	462.6	462.8	461.6	460.3	459.1	457.9	457.3
120°	493.0	494.8	496.5	498.3	500.1	500.1	498.3	496.5	494.8	493.0	493.0
122.5°	527.3	529.4	531.6	533.7	535.8	536.3	535.0	533.8	532.6	531.3	530.8
125°	580.8	582.8	584.8	586.8	588.8	589.5	588.8	588.1	587.5	586.8	586.1
127.5°	632.9	635.4	638.0	640.5	643.0	643.9	643.1	642.3	641.5	640.7	639.9
130°	665.6	668.5	671.4	674.3	677.2	678.4	677.9	677.5	677.1	676.6	676.2
132.5°	702.4	704.7	707.1	709.4	711.8	713.0	713.1	713.2	713.2	713.3	712.4
135°	751.5	753.9	756.3	758.8	761.2	762.7	763.1	763.5	764.0	764.4	764.2
137.5°	803.2	805.1	807.1	809.1	811.1	812.4	813.0	813.6	814.2	814.7	814.6
140°	834.3	836.3	838.3	840.3	842.3	843.8	844.9	846.0	847.2	848.3	848.3
142.5°	866.2	868.2	870.2	872.2	874.2	875.6	876.3	877.1	877.8	878.6	878.8
145°	912.1	913.7	915.2	916.8	918.3	919.8	921.1	922.4	923.8	925.1	925.3
147.5°	953.0	954.9	956.8	958.6	960.5	961.9	962.8	963.6	964.5	965.4	965.9
150°	981.0	982.3	983.6	985.0	986.3	987.4	988.3	989.2	990.1	991.0	991.6
152.5°	1005.7	1007.1	1008.4	1009.7	1011.1	1012.3	1013.3	1014.4	1015.4	1016.5	1017.4
155°	1042.9	1043.5	1044.2	1044.9	1045.5	1046.2	1046.9	1047.5	1048.2	1048.8	1050.0
157.5°	1074.6	1075.0	1075.5	1075.9	1076.4	1076.8	1077.2	1077.6	1078.0	1078.4	1079.9
160°	1093.8	1094.2	1094.6	1095.1	1095.5	1095.9	1096.1	1096.3	1096.5	1096.7	1098.1
162.5°	1111.3	1111.4	1111.5	1111.6	1111.7	1111.8	1112.1	1112.3	1112.5	1112.7	1114.2
165°	1134.7	1134.5	1134.2	1134.0	1133.8	1133.7	1133.7	1133.7	1133.7	1133.7	1135.2
167.5°	1154.2	1153.6	1152.9	1152.2	1151.6	1151.2	1151.2	1151.1	1151.1	1151.0	1152.6
170°	1164.6	1163.9	1163.3	1162.6	1161.9	1161.5	1161.3	1161.1	1160.8	1160.6	1162.2
172.5°	1171.8	1171.1	1170.5	1169.8	1169.1	1168.7	1168.5	1168.2	1168.0	1167.8	1169.4
175°	1180.6	1179.9	1179.2	1178.6	1177.9	1177.4	1176.9	1176.5	1176.0	1175.6	1177.1
177.5°	1184.2	1183.6	1183.1	1182.6	1182.0	1181.6	1181.2	1180.9	1180.5	1180.2	1181.2
180°	1182.6	1182.6	1182.6	1182.6	1182.6	1182.6	1182.6	1182.6	1182.6	1182.6	1182.6



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**CANDELA DISTRIBUTION (continued):**

	55°	60°	65°	70°	75°	80°	85°	90°
0°	1128.0	1128.0	1128.0	1128.0	1128.0	1128.0	1128.0	1128.0
2.5°	1122.7	1124.5	1126.3	1127.0	1126.7	1126.3	1126.0	1125.6
5°	1113.7	1115.8	1117.8	1118.5	1117.8	1117.1	1116.5	1115.8
7.5°	1095.7	1096.3	1096.9	1096.6	1095.4	1094.3	1093.1	1091.9
10°	1077.7	1077.0	1076.3	1075.3	1073.9	1072.6	1071.2	1069.8
12.5°	1057.0	1055.8	1054.5	1052.8	1050.5	1048.3	1046.0	1043.7
15°	1018.4	1014.0	1009.7	1006.4	1004.2	1001.9	999.6	997.4
17.5°	974.7	969.5	964.4	959.9	956.0	952.1	948.2	944.3
20°	944.2	938.5	932.8	927.5	922.5	917.5	912.5	907.5
22.5°	910.7	903.4	896.1	890.6	886.8	883.1	879.4	875.7
25°	855.2	845.9	836.6	830.3	826.9	823.5	820.1	816.7
27.5°	802.3	791.5	780.7	772.5	767.1	761.7	756.3	750.9
30°	765.0	753.4	741.8	733.0	726.8	720.7	714.6	708.5
32.5°	727.4	714.2	701.0	691.5	685.7	680.0	674.2	668.5
35°	668.7	654.4	640.1	630.4	625.4	620.4	615.5	610.5
37.5°	611.4	595.7	580.0	569.2	563.5	557.8	552.1	546.4
40°	573.1	557.0	540.9	529.9	524.0	518.1	512.2	506.3
42.5°	534.5	517.8	501.2	490.0	484.3	478.6	472.9	467.1
45°	478.2	462.1	446.0	435.2	429.8	424.3	418.9	413.4
47.5°	423.5	407.5	391.4	381.0	376.0	371.1	366.1	361.2
50°	388.3	372.6	357.0	346.7	342.0	337.2	332.5	327.7
52.5°	355.1	339.9	324.8	315.1	310.7	306.3	301.9	297.5
55°	304.6	290.9	277.3	268.4	264.1	259.7	255.4	251.1
57.5°	258.6	246.2	233.7	225.6	222.0	218.4	214.7	211.1
60°	227.0	215.4	203.8	196.2	192.6	189.0	185.3	181.7
62.5°	199.5	188.4	177.4	170.8	168.6	166.5	164.3	162.1
65°	162.2	154.5	146.8	142.6	141.9	141.2	140.5	139.9
67.5°	130.9	127.4	123.9	121.7	121.0	120.3	119.6	118.8
70°	113.9	111.6	109.3	107.8	106.8	105.9	105.0	104.1
72.5°	99.1	97.2	95.3	94.1	93.5	93.0	92.4	91.9
75°	78.5	76.9	75.3	74.4	74.2	74.0	73.7	73.5
77.5°	59.4	58.5	57.6	57.0	56.6	56.3	55.9	55.5
80°	47.2	46.3	45.4	44.9	44.9	44.9	44.9	44.9
82.5°	35.7	35.1	34.6	34.3	34.3	34.3	34.3	34.3
85°	19.4	19.4	19.4	19.4	19.4	19.4	19.4	19.4
87.5°	13.0	12.7	12.4	12.3	12.4	12.4	12.5	12.5
90°	34.0	33.6	33.2	33.0	33.3	33.5	33.7	33.9
92.5°	31.9	32.0	32.1	32.2	32.2	32.2	32.3	32.3
95°	63.9	63.9	63.9	63.6	63.2	62.8	62.3	61.9
97.5°	107.4	107.4	107.4	107.4	107.3	107.3	107.2	107.2
100°	137.7	137.7	137.7	137.6	137.4	137.2	136.9	136.7
102.5°	170.8	171.0	171.2	171.1	170.9	170.7	170.5	170.3
105°	220.4	220.9	221.3	221.5	221.5	221.5	221.5	221.5
107.5°	274.0	274.2	274.3	273.9	272.9	271.9	270.9	269.8
110°	310.4	310.4	310.4	310.0	309.4	308.7	308.0	307.4





TEST NUMBER: P331697

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**CANDELA DISTRIBUTION (continued):**

	55°	60°	65°	70°	75°	80°	85°	90°
112.5°	346.8	346.3	345.8	345.2	344.8	344.3	343.8	343.3
115°	402.7	402.5	402.3	401.8	401.2	400.5	399.8	399.2
117.5°	456.8	456.3	455.7	455.1	454.5	453.8	453.1	452.5
120°	493.0	493.0	493.0	492.7	492.0	491.3	490.7	490.0
122.5°	530.2	529.7	529.2	528.7	528.2	527.7	527.2	526.7
125°	585.5	584.8	584.1	583.7	583.5	583.2	583.0	582.8
127.5°	639.1	638.3	637.5	636.7	636.0	635.3	634.6	633.9
130°	675.7	675.3	674.8	674.2	673.3	672.4	671.5	670.6
132.5°	711.4	710.4	709.4	708.6	707.9	707.2	706.5	705.8
135°	764.0	763.8	763.5	763.1	762.4	761.8	761.1	760.4
137.5°	814.4	814.2	814.0	813.5	812.6	811.7	810.8	809.9
140°	848.3	848.3	848.3	847.8	846.9	846.0	845.2	844.3
142.5°	879.0	879.1	879.3	879.0	878.1	877.2	876.3	875.4
145°	925.5	925.8	926.0	925.7	924.8	923.9	923.0	922.1
147.5°	966.4	966.9	967.4	967.2	966.4	965.5	964.7	963.8
150°	992.3	993.0	993.6	993.6	993.0	992.3	991.6	991.0
152.5°	1018.2	1019.0	1019.9	1019.9	1019.0	1018.2	1017.4	1016.5
155°	1051.1	1052.2	1053.3	1053.5	1052.8	1052.2	1051.5	1050.8
157.5°	1081.4	1082.9	1084.4	1084.6	1083.6	1082.5	1081.4	1080.4
160°	1099.4	1100.7	1102.1	1102.3	1101.4	1100.5	1099.6	1098.7
162.5°	1115.7	1117.2	1118.7	1119.0	1117.9	1116.8	1115.8	1114.7
165°	1136.8	1138.3	1139.9	1140.1	1139.0	1137.9	1136.8	1135.7
167.5°	1154.1	1155.7	1157.2	1157.4	1156.3	1155.1	1154.0	1152.8
170°	1163.7	1165.3	1166.8	1166.9	1165.6	1164.3	1162.9	1161.6
172.5°	1170.9	1172.5	1174.0	1174.1	1172.8	1171.5	1170.1	1168.8
175°	1178.7	1180.2	1181.8	1181.9	1180.6	1179.2	1177.9	1176.6
177.5°	1182.3	1183.4	1184.4	1184.4	1183.4	1182.3	1181.2	1180.2
180°	1182.6	1182.6	1182.6	1182.6	1182.6	1182.6	1182.6	1182.6

(END OF REPORT)