

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: P331698

Luminaire Tested: **SA2XXRDIP-C675D925U835-4F0-1E-UDD-F4**

Issue Date: 10/7/2019

Test Information

Test Method: LM-79-08
Report Number: P331698
REPORT IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-1807-864-16,
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-F4
Description: DEFINE 2 DIRECT-INDIRECT PENDANT LED LUMINAIRE
DOWNLIGHT 675 LUMENS PER FOOT, FLUSH SATIN WHITE DIFFUSER, REGRESSED
HOUSING
UPLIGHT 925 LUMENS PER FOOT, BATWING OPTIC
Light Source: -
Ballast/Driver: ELECTRONIC DRIVER

Summary

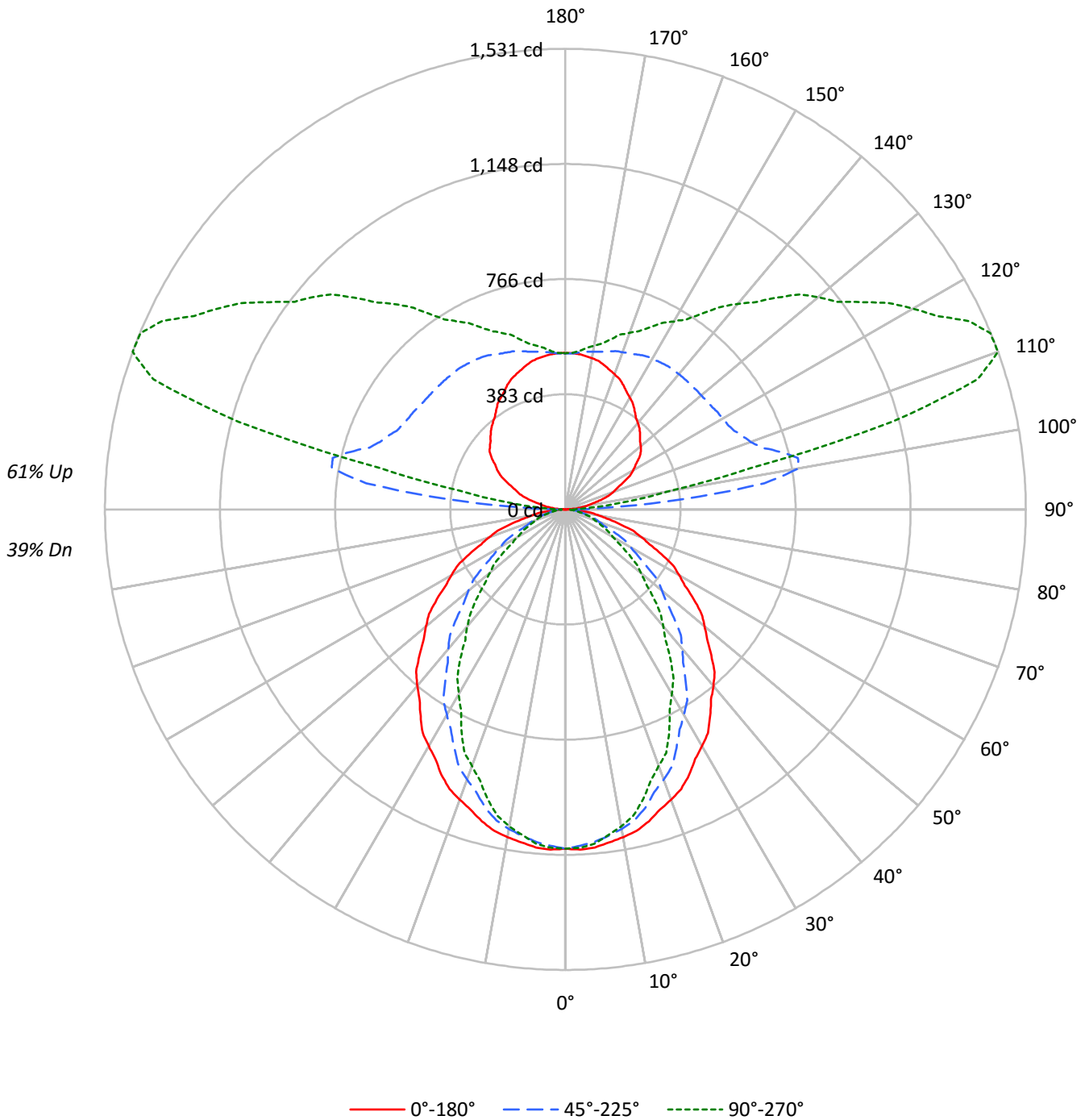
Lumens per Lamp: N/A
Luminaire Lumens: 5936.1 lumens
Efficiency: N/A
Efficacy: 114.2 lumens/watt
Spacing Criteria (0/90/45): 1.2 / 0.99 / 1.16
Luminous Opening: Rectangular (W 0.17' x L: 4' x H: 0')
CIE Type: Semi-Indirect

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	0
RCR																		
0	105	105	105	105	95	95	95	95	77	77	77	61	61	61	46	46	46	39
1	96	92	88	85	87	83	80	78	68	66	64	54	53	51	41	40	40	34
2	87	80	75	70	79	73	68	64	60	57	54	48	46	44	37	35	34	29
3	80	71	64	58	73	65	59	54	53	49	45	43	40	37	33	31	29	25
4	73	63	55	50	66	58	51	46	48	43	39	38	35	32	30	27	26	22
5	67	56	48	43	61	52	45	40	43	38	34	35	31	28	27	24	23	19
6	62	51	43	37	56	46	40	35	39	33	30	31	28	25	25	22	20	17
7	57	46	38	33	52	42	35	30	35	30	26	29	25	22	22	20	18	15
8	53	41	34	29	49	38	32	27	32	27	23	26	22	20	21	18	16	14
9	50	38	31	26	45	35	29	24	29	24	21	24	20	18	19	17	15	12
10	46	35	28	23	42	32	26	22	27	22	19	22	19	16	18	15	13	11

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	1.8
10°-20°	289.9	4.9
20°-30°	407.1	6.9
30°-40°	443.9	7.5
40°-50°	408.2	6.9
50°-60°	320.6	5.4
60°-70°	209.0	3.5
70°-80°	107.8	1.8
80°-90°	32.6	0.5
90°-100°	207.5	3.5
100°-110°	704.2	11.9
110°-120°	748.1	12.6
120°-130°	615.8	10.4
130°-140°	494.5	8.3
140°-150°	373.7	6.3
150°-160°	262.6	4.4
160°-170°	154.6	2.6
170°-180°	50.3	0.8
0°-30°	802.6	13.5
0°-40°	1246.6	21.0
0°-60°	1975.3	33.3
0°-90°	2324.8	39.2
90°-120°	1659.8	28.0
90°-150°	3143.8	53.0
90°-180°	3611.0	60.8
0°-180°	5936.1	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	34	32	33	4
95°	35	86	391	148	114	37
105°	122	184	740	1322	1125	129
115°	215	271	619	1277	1480	213
125°	299	354	595	1034	1201	266
135°	351	419	588	869	995	271
145°	401	461	585	726	794	252
155°	456	492	568	642	668	210
165°	497	512	544	577	586	140
175°	518	518	523	530	528	49
180°	519	519	519	519	519	



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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	12.4	11.8	10.7	9.7	9.5	10.5	11.9	13.1	13.3	12.9
90°	1.0	4.0	8.0	10.0	12.0	15.0	20.0	26.9	32.9	33.9	32.9
92.5°	12.2	17.6	24.8	29.1	35.9	45.3	67.9	99.6	127.9	129.7	109.6
95°	34.9	38.9	48.9	57.9	73.9	97.8	143.7	230.5	346.3	391.2	342.3
97.5°	56.9	62.3	72.9	86.4	104.8	131.9	189.6	310.6	503.0	667.9	700.6
100°	76.8	79.8	88.8	104.8	124.8	152.7	205.6	327.4	542.9	788.4	932.2
102.5°	95.2	97.4	106.4	122.4	143.1	171.1	220.0	328.2	527.8	792.4	1018.4
105°	121.8	125.8	132.7	147.7	169.7	197.6	244.5	333.3	498.0	739.5	1005.0
107.5°	150.5	153.7	160.5	174.3	196.0	224.2	269.7	347.1	483.2	682.9	917.4
110°	169.7	173.7	179.6	192.6	213.6	242.5	286.4	358.3	480.1	655.7	862.3



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CANDELA DISTRIBUTION (continued):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
112.5°	187.2	191.2	198.0	210.2	230.3	260.1	302.4	370.3	480.8	638.1	824.0
115°	214.6	219.6	225.6	237.5	257.5	284.4	327.4	388.2	485.0	618.8	776.5
117.5°	242.9	246.9	252.9	263.5	282.6	310.6	350.3	407.4	492.2	609.4	746.5
120°	260.5	264.5	270.5	279.4	299.4	327.4	366.3	420.2	497.0	603.8	730.6
122.5°	277.3	280.4	286.4	296.2	316.2	344.9	381.4	431.3	502.6	600.6	717.0
125°	299.4	302.4	308.4	320.4	340.3	368.3	404.2	449.1	511.0	594.8	697.6
127.5°	317.0	321.0	329.3	342.5	361.7	390.4	425.4	465.7	519.6	591.4	679.7
130°	327.4	331.3	341.3	355.3	375.3	403.2	438.1	476.1	526.0	589.8	667.7
132.5°	336.9	341.7	352.5	367.3	388.0	416.0	449.3	486.4	532.3	589.0	658.1
135°	351.3	355.3	367.3	382.2	405.2	433.1	465.1	500.0	539.9	587.8	644.7
137.5°	364.9	369.7	381.6	397.6	420.4	446.3	477.9	510.4	546.7	587.6	635.3
140°	375.3	379.3	391.2	407.2	429.2	455.1	485.0	516.0	549.9	586.8	629.8
142.5°	385.6	388.8	400.0	416.0	437.1	461.5	490.6	520.8	552.3	586.8	624.2
145°	401.2	405.2	415.2	430.2	450.1	472.1	499.0	527.0	554.9	584.8	616.8
147.5°	418.0	421.0	430.5	444.3	460.9	480.5	505.8	530.4	555.7	581.3	609.2
150°	429.2	432.1	440.1	453.1	468.1	486.0	509.0	531.9	554.9	578.9	602.8
152.5°	440.3	441.7	449.7	461.1	475.3	491.6	512.2	532.7	553.3	574.9	597.2
155°	456.1	457.1	463.1	474.1	485.0	500.0	517.0	533.9	550.9	567.9	586.8
157.5°	469.3	470.3	475.1	484.6	493.4	506.0	520.4	533.9	546.3	560.7	577.1
160°	478.1	479.1	483.0	491.0	499.0	510.0	522.0	533.9	543.9	555.9	569.9
162.5°	486.8	486.2	490.2	496.6	503.8	512.4	522.8	533.1	541.5	551.9	563.5
165°	497.0	496.0	498.0	504.0	509.0	515.0	524.0	531.0	536.9	543.9	552.9
167.5°	505.4	504.2	506.0	509.8	513.4	517.2	523.8	529.6	532.3	536.9	542.5
170°	511.0	509.0	510.0	513.0	515.0	518.0	523.0	528.0	530.0	532.9	536.9
172.5°	514.2	513.0	512.4	515.4	516.6	518.8	522.2	525.6	526.8	528.2	531.4
175°	518.0	517.0	516.0	518.0	518.0	519.0	521.0	523.0	522.0	523.0	524.0
177.5°	519.8	518.2	517.4	519.0	519.0	519.0	519.8	521.4	519.8	519.0	519.8
180°	519.0	519.0	519.0	519.0	519.0	519.0	519.0	519.0	519.0	519.0	519.0



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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°	12.6	12.0	12.2	12.3	12.3	12.3	12.3	12.3
90°	31.9	29.9	31.9	32.9	32.9	32.9	32.9	32.9
92.5°	87.0	74.7	66.3	60.1	59.3	56.1	56.9	55.3
95°	261.5	200.6	158.7	136.7	123.8	115.8	112.8	113.8
97.5°	610.2	499.2	391.2	319.2	271.5	246.9	232.3	224.0
100°	911.2	787.4	650.7	530.0	447.1	404.2	375.3	357.3
102.5°	1108.4	1080.5	980.5	852.5	762.5	689.2	653.1	628.8
105°	1212.6	1325.4	1338.4	1305.4	1243.5	1181.7	1138.7	1124.8
107.5°	1137.6	1307.4	1411.2	1459.5	1467.3	1463.9	1455.3	1436.8
110°	1072.9	1251.5	1379.3	1461.1	1504.0	1523.0	1532.0	1531.0



TEST NUMBER: P331698

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CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
112.5°	1013.8	1185.3	1321.8	1415.6	1475.3	1507.0	1524.0	1529.4
115°	941.1	1094.8	1225.6	1328.4	1399.2	1445.1	1471.1	1480.1
117.5°	886.4	1021.4	1139.9	1236.4	1308.6	1357.1	1384.5	1392.0
120°	859.3	983.1	1088.8	1179.7	1249.5	1296.4	1325.4	1335.4
122.5°	837.7	951.1	1051.3	1133.4	1196.0	1242.1	1267.9	1276.3
125°	806.4	909.2	997.0	1071.9	1129.8	1167.7	1192.6	1200.6
127.5°	775.5	868.5	951.3	1020.4	1070.9	1106.4	1128.0	1134.4
130°	755.5	841.3	920.2	986.1	1035.0	1068.9	1088.8	1096.8
132.5°	736.3	815.8	888.2	950.1	998.2	1032.2	1050.5	1057.7
135°	709.6	775.5	841.3	897.2	940.1	973.1	991.0	995.0
137.5°	688.2	743.3	795.6	844.3	883.5	911.8	927.6	933.6
140°	674.7	722.6	768.5	812.4	844.3	870.3	885.3	891.2
142.5°	663.5	704.2	743.7	780.5	810.8	834.4	847.7	848.9
145°	647.7	680.7	711.6	740.5	764.5	781.5	791.4	794.4
147.5°	635.5	661.5	685.6	706.8	726.6	740.1	746.9	748.7
150°	626.8	648.7	669.7	687.6	702.6	714.6	720.6	721.6
152.5°	618.0	638.3	656.1	671.7	683.4	693.8	698.2	698.4
155°	605.8	621.8	636.7	647.7	658.7	665.7	669.7	667.7
157.5°	591.6	605.0	617.6	626.2	633.9	639.7	641.5	641.5
160°	582.8	593.8	604.8	611.8	618.8	623.8	624.8	624.8
162.5°	574.1	583.4	592.8	598.2	605.2	608.6	609.6	608.8
165°	560.9	567.9	574.9	578.9	582.8	586.8	586.8	585.8
167.5°	548.3	553.7	558.5	562.1	563.9	566.1	565.9	564.7
170°	541.9	544.9	548.9	550.9	551.9	554.9	553.9	551.9
172.5°	534.7	536.9	540.1	541.3	542.3	543.7	542.7	541.5
175°	527.0	528.0	529.0	530.0	530.0	531.0	530.0	528.0
177.5°	521.4	521.4	522.2	522.2	522.2	522.2	521.4	519.8
180°	519.0	519.0	519.0	519.0	519.0	519.0	519.0	519.0

(END OF REPORT)