

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: P331593

Luminaire Tested: **S122DIW-S1005D710U835-4F0-1E-UDD-D**

Issue Date: 3/3/2020

**Test Information**

Test Method: LM-79-08  
Report Number: P331593  
REPORT IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-1807-864-2,  
Test Lab: INNOVATION CENTER  
Issue Date: 3/3/2020  
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)  
Product Line: NEO-RAY  
Catalog Number: S122DIW-S1005D710U835-4F0-1E-UDD-D  
Description: DEFINE 2 DIRECT-INDIRECT WALL MOUNT LED LUMINAIRE  
DOWNLIGHT 1005 LUMENS PER FOOT, DROP SATIN WHITE DIFFUSER  
UPLIGHT 710 LUMENS PER FOOT, NO LENS  
Light Source: -  
Ballast/Driver: ELECTRONIC DRIVER

**Summary**

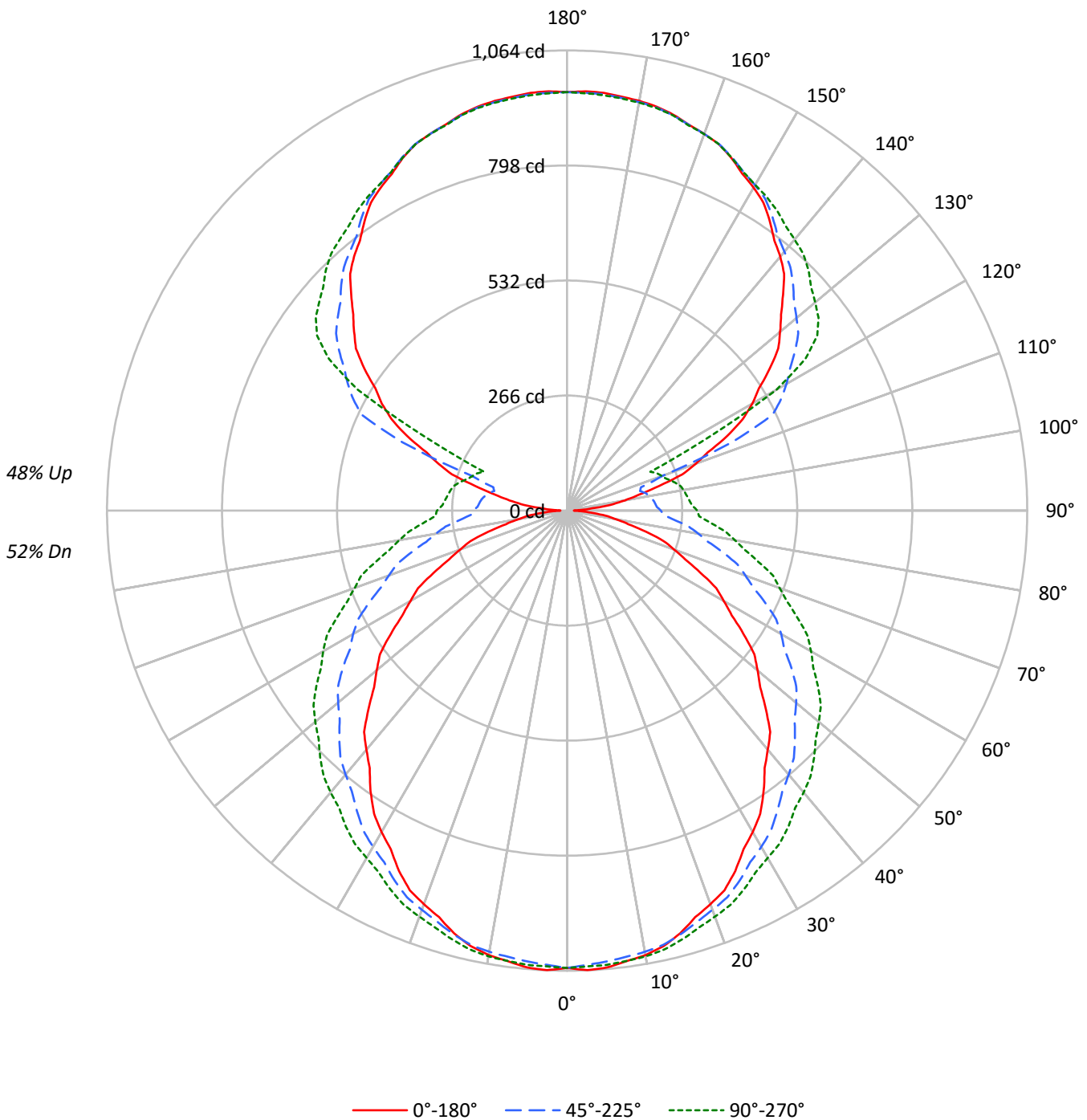
Lumens per Lamp: N/A  
Luminaire Lumens: 6871.8 lumens  
Efficiency: N/A  
Efficacy: 114.9 lumens/watt  
Spacing Criteria (0/90/45): 1.21 / 1.32 / 1.42  
Luminous Opening: Rectangular w/ Sides (W: 0.17' x L: 4' x H: 0.08')  
CIE Type: General Diffuse  
  
Input Watts (W): 59.8  
Input Voltage (V): 120  
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



TEST NUMBER: P331593

CATALOG NUMBER: S122DIW-S1005D710U835-4F0-1E-UDD-D

### Luminous Intensity Polar Plot





TEST NUMBER: P331593

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**COEFFICIENT OF UTILIZATION - ZONAL CAVITY METHOD:**

RF	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	50	30	10	0														
RCR																																						
0	108	108	108	108	100	100	100	100	85	85	85	71	71	71	58	58	58	52																				
1	97	92	87	83	89	85	81	77	72	69	66	60	58	56	49	47	46	41																				
2	87	79	72	67	80	73	67	62	62	57	54	52	48	45	42	40	38	33																				
3	79	69	61	55	73	64	57	51	54	49	44	45	41	38	37	34	31	27																				
4	72	61	52	46	66	56	49	43	48	42	37	40	35	32	33	29	26	23																				
5	66	54	45	39	61	50	42	37	43	37	32	36	31	27	29	26	23	20																				
6	61	48	40	34	56	45	37	32	38	32	28	32	27	24	26	23	20	17																				
7	56	43	35	29	52	40	33	28	35	29	24	29	24	21	24	20	18	15																				
8	52	39	31	26	48	37	29	24	31	26	21	27	22	18	22	18	16	13																				
9	49	36	28	23	45	33	26	22	29	23	19	24	20	17	20	17	14	12																				
10	45	33	25	20	42	31	24	19	26	21	17	23	18	15	19	15	13	11																				

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

	0°	45°	90°
0°	17073	17073	17073
5°	17157	16435	16373
10°	17049	15949	15770
15°	16814	15435	15136
20°	16517	14884	14525
25°	16223	14353	13970
30°	15810	13808	13414
35°	15392	13280	13021
40°	14952	12831	12629
45°	14535	12429	12294
50°	14086	12066	11964
55°	13616	11675	11627
60°	13040	11269	11271
65°	12441	10795	10850
70°	11770	10285	10393
75°	10911	9784	9973
80°	9555	9272	9549
85°	8259	8830	9217



TEST NUMBER: P331593

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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	100.2	1.5
10°-20°	287.3	4.2
20°-30°	435.4	6.3
30°-40°	530.3	7.7
40°-50°	570.5	8.3
50°-60°	554.1	8.1
60°-70°	483.8	7.0
70°-80°	372.4	5.4
80°-90°	252.3	3.7
90°-100°	204.5	3.0
100°-110°	244.1	3.6
110°-120°	399.4	5.8
120°-130°	568.6	8.3
130°-140°	574.8	8.4
140°-150°	519.6	7.6
150°-160°	415.0	6.0
160°-170°	267.4	3.9
170°-180°	92.1	1.3
0°-30°	822.9	12.0
0°-40°	1353.3	19.7
0°-60°	2477.9	36.1
0°-90°	3586.4	52.2
90°-120°	848.0	12.3
90°-150°	2510.9	36.5
90°-180°	3285.0	47.8
0°-180°	6871.8	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	1057	1057	1057	1057	1057	
5°	1060	1056	1047	1055	1054	101
15°	1012	1014	1014	1028	1027	285
25°	920	930	944	962	967	423
35°	792	819	848	880	892	495
45°	650	692	745	790	808	501
55°	498	555	633	686	708	445
65°	340	416	506	566	588	338
75°	188	275	372	436	458	199
85°	55	150	248	310	334	59
90°	16	113	216	279	301	12
95°	58	109	204	263	283	65
105°	220	276	174	234	256	236
115°	409	441	524	259	212	402
125°	572	584	644	688	706	511
135°	706	718	739	776	789	545
145°	817	817	828	842	846	511
155°	900	894	902	905	900	414
165°	948	944	946	950	946	268
175°	970	965	966	970	964	92
180°	968	968	968	968	968	



TEST NUMBER: P331593

CATALOG NUMBER: S122DIW-S1005D710U835-4F0-1E-UDD-D

**CANDELA DISTRIBUTION (FULL):**

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
0°	1057.4	1057.4	1057.4	1057.4	1057.4	1057.4	1057.4	1057.4	1057.4	1057.4	1057.4
2.5°	1063.6	1062.8	1061.9	1061.1	1060.3	1058.9	1057.0	1055.1	1053.2	1051.3	1052.7
5°	1060.5	1059.5	1058.5	1057.4	1056.4	1054.9	1052.9	1050.8	1048.8	1046.7	1048.8
7.5°	1051.0	1050.3	1049.6	1049.0	1048.3	1047.2	1045.6	1044.0	1042.5	1040.9	1043.3
10°	1043.7	1043.0	1042.3	1041.6	1040.9	1040.1	1039.1	1038.0	1037.0	1036.0	1038.7
12.5°	1031.4	1031.5	1031.7	1031.8	1031.9	1031.6	1030.9	1030.1	1029.4	1028.6	1031.4
15°	1011.5	1012.2	1012.8	1013.5	1014.2	1014.5	1014.5	1014.5	1014.5	1014.5	1017.6
17.5°	985.7	987.2	988.6	990.0	991.4	992.7	993.8	994.9	996.0	997.1	1000.3
20°	968.6	970.3	972.0	973.7	975.4	976.9	978.3	979.6	981.0	982.4	986.1
22.5°	950.2	952.1	954.1	956.1	958.1	960.0	961.9	963.8	965.7	967.6	971.4
25°	919.5	921.9	924.3	926.7	929.1	931.8	934.8	937.9	941.0	944.0	948.1
27.5°	882.7	886.6	890.5	894.4	898.3	902.0	905.6	909.2	912.8	916.5	921.6
30°	858.2	862.6	867.1	871.5	875.9	880.4	884.8	889.2	893.6	898.1	903.5
32.5°	831.2	836.2	841.2	846.2	851.1	856.2	861.5	866.7	872.0	877.2	883.5
35°	792.3	798.1	803.9	809.7	815.5	821.6	828.1	834.5	841.0	847.5	855.0
37.5°	750.0	756.7	763.4	770.0	776.7	784.2	792.6	801.0	809.4	817.8	826.1
40°	721.8	729.3	736.8	744.3	751.8	760.1	769.3	778.5	787.7	796.9	805.8
42.5°	694.9	702.3	709.8	717.3	724.8	733.8	744.4	755.0	765.5	776.1	785.7
45°	649.8	659.0	668.2	677.4	686.6	697.1	709.1	721.0	732.9	744.8	755.4
47.5°	605.4	615.4	625.4	635.4	645.4	657.4	671.4	685.3	699.3	713.2	724.3
50°	574.7	585.3	595.8	606.4	616.9	629.9	645.2	660.5	675.8	691.2	702.8
52.5°	545.3	556.4	567.5	578.6	589.7	603.3	619.4	635.6	651.7	667.9	679.7
55°	498.1	510.3	522.6	534.9	547.1	562.1	579.8	597.5	615.2	632.9	645.2
57.5°	451.5	465.3	479.1	493.0	506.8	522.7	540.8	558.8	576.9	594.9	608.1
60°	418.4	433.0	447.7	462.3	477.0	494.0	513.4	532.8	552.2	571.6	584.6
62.5°	389.0	404.1	419.3	434.5	449.7	467.0	486.4	505.8	525.3	544.7	558.4
65°	340.2	356.9	373.6	390.3	407.0	425.4	445.5	465.5	485.6	505.7	519.7
67.5°	295.5	312.9	330.3	347.8	365.2	384.2	404.8	425.4	445.9	466.5	480.6
70°	263.6	281.3	299.0	316.7	334.4	353.8	375.0	396.1	417.2	438.3	452.9
72.5°	234.2	252.4	270.7	288.9	307.2	327.0	348.4	369.8	391.2	412.6	426.9
75°	188.5	207.6	226.6	245.7	264.8	285.2	307.0	328.8	350.6	372.4	387.0
77.5°	144.4	164.3	184.3	204.2	224.2	245.2	267.4	289.5	311.6	333.8	348.4
80°	114.9	135.7	156.5	177.3	198.0	219.5	241.6	263.8	285.9	308.0	322.3
82.5°	90.4	110.9	131.4	151.9	172.4	193.9	216.3	238.7	261.1	283.5	297.8
85°	55.2	76.3	97.4	118.5	139.6	161.1	182.9	204.7	226.5	248.3	262.6
87.5°	30.2	50.8	71.5	92.1	112.7	134.1	156.1	178.2	200.2	222.3	236.3
90°	16.0	37.5	59.0	80.4	101.9	124.1	147.2	170.2	193.3	216.3	230.7
92.5°	28.2	46.5	64.7	82.9	101.2	121.1	142.7	164.3	185.9	207.5	221.3
95°	57.8	68.6	79.5	90.4	101.3	117.5	139.0	160.5	182.0	203.5	217.3
97.5°	101.0	100.8	100.6	100.3	100.1	111.1	133.2	155.3	177.5	199.6	212.8
100°	134.6	125.9	117.2	108.5	99.8	106.3	128.0	149.7	171.4	193.2	207.0
102.5°	170.4	177.4	184.4	191.4	198.4	200.1	196.5	192.9	189.3	185.7	199.6
105°	220.5	235.0	249.6	264.1	278.7	273.5	248.8	224.0	199.3	174.5	188.1
107.5°	279.4	291.1	302.7	314.4	326.1	314.9	280.9	247.0	213.0	179.0	188.7
110°	316.3	326.3	336.4	346.5	356.6	347.5	319.2	290.9	262.7	234.4	229.7



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**CANDELA DISTRIBUTION (continued):**

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
112.5°	352.1	360.7	369.3	377.9	386.6	393.2	398.0	402.8	407.5	412.3	366.4
115°	408.7	415.1	421.4	427.8	434.2	447.0	466.2	485.5	504.7	523.9	462.1
117.5°	457.7	463.1	468.5	473.9	479.3	490.4	507.3	524.1	541.0	557.8	550.5
120°	494.6	498.3	502.0	505.7	509.4	519.5	535.9	552.3	568.7	585.2	596.6
122.5°	526.0	529.0	532.0	535.0	538.0	547.4	563.3	579.1	595.0	610.9	621.2
125°	572.2	574.2	576.3	578.3	580.3	588.2	602.1	615.9	629.8	643.7	653.9
127.5°	615.5	617.4	619.3	621.2	623.1	629.5	640.5	651.5	662.5	673.5	683.5
130°	642.9	645.1	647.2	649.4	651.5	657.0	665.9	674.7	683.6	692.5	702.4
132.5°	670.9	672.7	674.5	676.2	678.0	682.5	689.7	697.0	704.2	711.4	720.8
135°	705.8	708.3	710.8	713.3	715.7	719.4	724.2	729.0	733.8	738.6	747.3
137.5°	742.6	744.3	746.0	747.6	749.3	751.7	754.8	757.9	760.9	764.0	771.8
140°	766.7	767.6	768.5	769.4	770.3	772.0	774.3	776.7	779.1	781.5	788.4
142.5°	786.9	787.6	788.4	789.2	790.0	791.4	793.5	795.6	797.7	799.8	805.4
145°	817.0	816.8	816.7	816.5	816.3	817.6	820.2	822.9	825.5	828.2	831.3
147.5°	844.5	844.0	843.4	842.8	842.2	843.2	845.8	848.4	851.0	853.6	854.7
150°	862.5	861.4	860.3	859.2	858.1	858.8	861.3	863.8	866.3	868.8	869.7
152.5°	877.6	876.4	875.2	873.9	872.7	873.3	875.7	878.0	880.4	882.8	883.7
155°	899.6	898.2	896.8	895.4	894.0	894.2	896.1	897.9	899.8	901.7	902.6
157.5°	916.8	915.6	914.4	913.2	912.1	912.1	913.4	914.7	916.0	917.3	918.4
160°	926.9	925.9	925.0	924.1	923.1	923.1	924.1	925.0	925.9	926.9	927.8
162.5°	935.8	934.9	934.0	933.0	932.1	932.0	932.8	933.7	934.5	935.3	936.3
165°	947.9	946.9	946.0	945.1	944.1	943.9	944.4	944.8	945.3	945.8	946.9
167.5°	956.8	955.9	955.0	954.0	953.1	952.9	953.3	953.7	954.2	954.6	955.7
170°	961.9	960.9	960.0	959.1	958.1	957.8	958.1	958.5	958.8	959.1	960.2
172.5°	965.2	964.3	963.4	962.4	961.5	961.2	961.5	961.8	962.1	962.4	963.5
175°	969.6	968.5	967.4	966.3	965.2	964.8	965.1	965.5	965.8	966.1	967.2
177.5°	970.3	969.4	968.5	967.7	966.8	966.4	966.5	966.7	966.8	966.9	967.8
180°	967.5	967.5	967.5	967.5	967.5	967.5	967.5	967.5	967.5	967.5	967.5



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**CANDELA DISTRIBUTION (continued):**

	55°	60°	65°	70°	75°	80°	85°	90°
0°	1057.4	1057.4	1057.4	1057.4	1057.4	1057.4	1057.4	1057.4
2.5°	1054.0	1055.4	1056.8	1057.2	1056.6	1056.1	1055.5	1055.0
5°	1050.8	1052.9	1054.9	1055.7	1055.4	1055.1	1054.7	1054.4
7.5°	1045.8	1048.3	1050.7	1051.8	1051.4	1051.1	1050.7	1050.4
10°	1041.4	1044.2	1046.9	1048.1	1047.7	1047.4	1047.1	1046.7
12.5°	1034.1	1036.8	1039.5	1040.7	1040.4	1040.0	1039.7	1039.4
15°	1020.7	1023.7	1026.8	1028.2	1027.8	1027.5	1027.1	1026.8
17.5°	1003.5	1006.7	1009.9	1011.5	1011.5	1011.5	1011.5	1011.5
20°	989.8	993.6	997.3	999.2	999.2	999.2	999.2	999.2
22.5°	975.1	978.9	982.6	984.8	985.3	985.9	986.4	987.0
25°	952.2	956.3	960.4	962.9	964.0	965.0	966.0	967.0
27.5°	926.8	932.0	937.2	940.1	940.9	941.6	942.4	943.1
30°	909.0	914.4	919.9	923.1	924.1	925.1	926.2	927.2
32.5°	889.8	896.0	902.3	906.3	908.2	910.0	911.9	913.7
35°	862.5	870.0	877.5	882.4	884.8	887.2	889.6	891.9
37.5°	834.4	842.7	851.0	856.4	858.9	861.5	864.0	866.5
40°	814.6	823.5	832.3	838.3	841.4	844.4	847.5	850.6
42.5°	795.4	805.1	814.8	821.1	824.2	827.3	830.3	833.4
45°	765.9	776.5	787.0	794.0	797.4	800.8	804.2	807.6
47.5°	735.3	746.3	757.4	764.8	768.5	772.3	776.0	779.8
50°	714.3	725.9	737.5	745.2	748.9	752.6	756.4	760.1
52.5°	691.6	703.4	715.3	723.2	727.2	731.3	735.3	739.3
55°	657.5	669.7	682.0	690.3	694.7	699.2	703.6	708.0
57.5°	621.4	634.6	647.8	656.6	661.1	665.6	670.1	674.6
60°	597.5	610.5	623.4	632.3	637.0	641.8	646.6	651.3
62.5°	572.2	585.9	599.7	608.8	613.3	617.8	622.3	626.8
65°	533.7	547.6	561.6	570.8	575.2	579.6	584.1	588.5
67.5°	494.7	508.8	522.9	532.3	536.9	541.5	546.2	550.8
70°	467.6	482.2	496.9	506.2	510.3	514.4	518.5	522.6
72.5°	441.3	455.7	470.0	479.7	484.6	489.5	494.4	499.3
75°	401.7	416.3	431.0	440.5	444.9	449.4	453.8	458.2
77.5°	362.9	377.5	392.1	401.8	406.5	411.3	416.1	420.8
80°	336.6	351.0	365.3	374.8	379.6	384.3	389.1	393.9
82.5°	312.1	326.4	340.7	350.1	354.6	359.1	363.6	368.1
85°	276.9	291.2	305.5	315.0	319.8	324.6	329.3	334.1
87.5°	250.4	264.4	278.5	287.7	292.1	296.5	301.0	305.4
90°	245.1	259.5	273.9	283.3	287.7	292.1	296.5	300.9
92.5°	235.0	248.8	262.5	271.5	275.8	280.1	284.4	288.6
95°	231.0	244.7	258.4	267.2	271.2	275.1	279.0	283.0
97.5°	226.1	239.3	252.5	261.2	265.4	269.6	273.8	278.0
100°	220.8	234.7	248.5	257.5	261.5	265.6	269.7	273.7
102.5°	213.6	227.5	241.5	250.5	254.7	258.9	263.1	267.3
105°	201.8	215.4	229.0	238.0	242.4	246.8	251.1	255.5
107.5°	198.4	208.1	217.8	224.9	229.2	233.6	238.0	242.3
110°	225.1	220.4	215.7	215.6	220.0	224.3	228.7	233.1





TEST NUMBER: P331593

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**CANDELA DISTRIBUTION (continued):**

	55°	60°	65°	70°	75°	80°	85°	90°
112.5°	320.6	274.7	228.9	208.1	212.3	216.6	220.8	225.1
115°	400.3	338.5	276.6	242.0	234.6	227.1	219.6	212.2
117.5°	543.1	535.8	528.4	508.1	474.8	441.4	408.1	374.8
120°	608.0	619.4	630.8	627.9	610.6	593.3	576.1	558.8
122.5°	631.6	642.0	652.4	657.1	656.3	655.4	654.5	653.6
125°	664.2	674.5	684.8	691.7	695.2	698.8	702.3	705.8
127.5°	693.6	703.6	713.6	720.2	723.3	726.4	729.5	732.6
130°	712.2	722.1	732.0	738.2	740.8	743.4	745.9	748.5
132.5°	730.2	739.5	748.9	754.9	757.4	760.0	762.6	765.1
135°	756.0	764.7	773.4	779.0	781.4	783.8	786.2	788.7
137.5°	779.6	787.4	795.2	800.0	801.8	803.6	805.3	807.1
140°	795.2	802.1	808.9	813.0	814.2	815.5	816.8	818.0
142.5°	811.1	816.7	822.3	825.6	826.6	827.6	828.6	829.6
145°	834.4	837.6	840.7	842.7	843.6	844.6	845.5	846.4
147.5°	855.8	856.9	858.0	858.6	858.8	858.9	859.1	859.2
150°	870.6	871.6	872.5	872.6	871.8	871.0	870.2	869.5
152.5°	884.6	885.6	886.5	886.5	885.4	884.4	883.4	882.3
155°	903.5	904.5	905.4	905.2	904.0	902.8	901.5	900.3
157.5°	919.5	920.5	921.6	921.5	920.3	919.1	917.9	916.6
160°	928.7	929.7	930.6	930.5	929.4	928.3	927.3	926.2
162.5°	937.4	938.4	939.5	939.4	938.0	936.7	935.3	934.0
165°	948.0	949.0	950.1	950.1	949.0	948.0	946.9	945.8
167.5°	956.8	957.9	958.9	958.8	957.4	956.0	954.6	953.2
170°	961.3	962.3	963.4	963.3	961.9	960.5	959.1	957.7
172.5°	964.6	965.7	966.8	966.6	965.2	963.8	962.4	961.0
175°	968.3	969.3	970.4	970.2	968.6	967.1	965.5	964.0
177.5°	968.7	969.5	970.4	970.3	969.2	968.0	966.9	965.8
180°	967.5	967.5	967.5	967.5	967.5	967.5	967.5	967.5

(END OF REPORT)