

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: P332702-927

Luminaire Tested: **SA4XXDIP-C1195D1035U927-4F0-1E-UDD-D4**

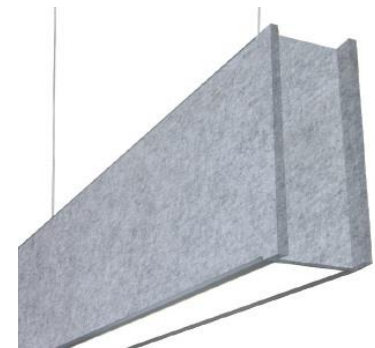
Issue Date: 10/7/2019

**Test Information**

Test Method: LM-79-08  
Report Number: P332702-927  
REPORT IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-1807-864-18,  
Test Lab: INNOVATION CENTER  
Issue Date: 10/7/2019  
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)  
Product Line: NEO-RAY  
Catalog Number: SA4XXDIP-C1195D1035U927-4F0-1E-UDD-D4  
Description: DEFINE 4 DIRECT-INDIRECT PENDANT LED LUMINAIRE  
DOWNLIGHT 1195 LUMENS PER FOOT, DROP SATIN WHITE DIFFUSER  
UPLIGHT 1035 LUMENS PER FOOT, BATWING OPTIC  
Light Source: -  
Ballast/Driver: ELECTRONIC DRIVER

**Summary**

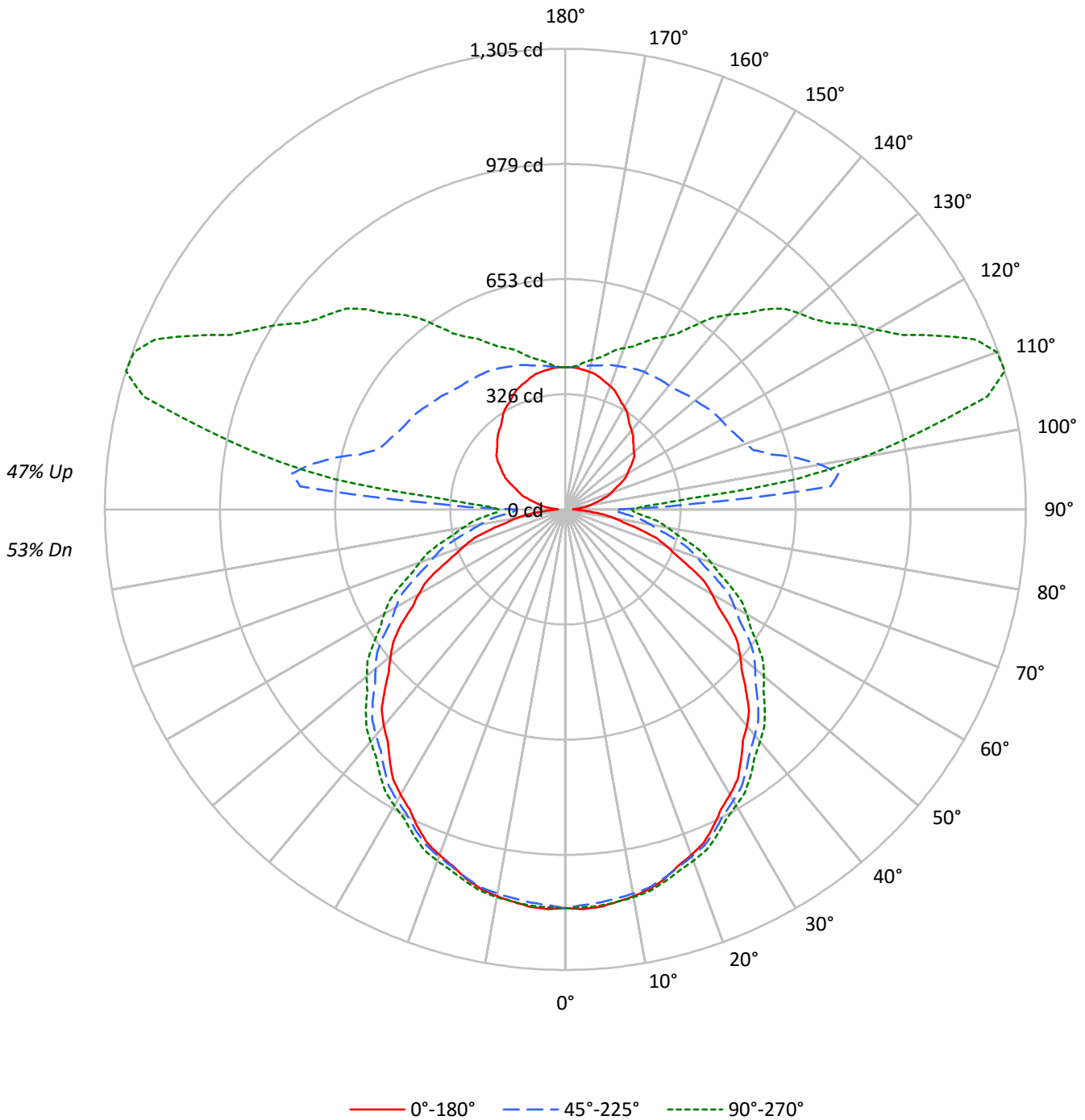
Lumens per Lamp: N/A  
Luminaire Lumens: 6780.5 lumens  
Efficiency: N/A  
Efficacy: 101.5 lumens/watt  
Spacing Criteria (0/90/45): 1.23 / 1.28 / 1.39  
Luminous Opening: Rectangular w/ Sides (W: 0.33' x L: 4' x H: 0.08')  
CIE Type: General Diffuse  
  
Input Watts (W): 66.8  
Input Voltage (V): 120  
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



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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	108	108	108	108	100	100	100	100	85	85	85	71	71	71	58	58	58	53				
1	97	92	88	84	90	86	82	78	73	70	67	61	59	57	50	49	47	42				
2	88	80	74	68	81	74	68	64	63	59	55	53	50	47	43	41	39	34				
3	80	70	62	56	74	65	58	53	55	50	46	46	42	39	38	35	33	29				
4	73	62	53	47	67	57	50	44	49	43	39	41	37	33	34	31	28	24				
5	67	55	46	40	62	51	43	38	44	38	33	37	32	28	30	27	24	21				
6	62	49	41	35	57	46	38	33	39	33	29	33	28	25	27	24	21	18				
7	57	44	36	30	52	41	34	29	35	29	25	30	25	22	25	21	19	16				
8	53	40	32	27	49	37	30	25	32	26	22	27	23	19	23	19	17	14				
9	49	37	29	24	45	34	27	22	30	24	20	25	21	17	21	18	15	13				
10	46	34	26	21	42	31	25	20	27	22	18	23	19	16	20	16	13	11				

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

	0°	45°	90°
0°	9120	9120	9120
5°	9147	8912	8938
10°	9092	8767	8760
15°	9010	8598	8551
20°	8888	8412	8347
25°	8749	8203	8124
30°	8599	7995	7894
35°	8429	7783	7692
40°	8293	7580	7482
45°	8093	7394	7302
50°	7922	7178	7111
55°	7746	6976	6888
60°	7471	6718	6685
65°	7170	6440	6434
70°	6805	6123	6141
75°	6298	5775	5878
80°	5734	5442	5618
85°	5012	5144	5468



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	107.0	1.6
10°-20°	306.5	4.5
20°-30°	463.4	6.8
30°-40°	560.7	8.3
40°-50°	592.8	8.7
50°-60°	557.9	8.2
60°-70°	462.9	6.8
70°-80°	325.1	4.8
80°-90°	186.0	2.7
90°-100°	399.9	5.9
100°-110°	685.9	10.1
110°-120°	596.2	8.8
120°-130°	486.5	7.2
130°-140°	393.4	5.8
140°-150°	293.1	4.3
150°-160°	204.1	3.0
160°-170°	120.1	1.8
170°-180°	39.1	0.6
0°-30°	876.9	12.9
0°-40°	1437.6	21.2
0°-60°	2588.3	38.2
0°-90°	3562.3	52.5
90°-120°	1682.0	24.8
90°-150°	2855.0	42.1
90°-180°	3218.0	47.5
0°-180°	6780.5	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	1130	1130	1130	1130	1130	
5°	1131	1127	1118	1128	1127	107
15°	1084	1085	1082	1092	1092	305
25°	992	999	1003	1016	1018	457
35°	868	883	896	912	917	543
45°	724	748	772	792	800	559
55°	567	594	631	656	664	505
65°	392	433	476	506	517	389
75°	218	265	318	352	364	231
85°	67	120	177	214	228	71
90°	21	77	140	176	189	15
95°	42	141	755	462	349	42
105°	104	172	602	1231	1238	111
115°	170	225	522	975	1165	170
125°	232	275	496	815	920	207
135°	272	324	468	702	802	211
145°	312	356	454	574	635	196
155°	354	382	441	500	521	163
165°	385	397	423	448	455	109
175°	402	402	406	411	410	38
180°	402	402	402	402	402	



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**CANDELA DISTRIBUTION (FULL):**

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
0°	1129.7	1129.7	1129.7	1129.7	1129.7	1129.7	1129.7	1129.7	1129.7	1129.7	1129.7
2.5°	1133.7	1133.0	1132.3	1131.6	1131.0	1129.7	1127.9	1126.2	1124.3	1122.5	1124.1
5°	1130.8	1130.0	1129.2	1128.4	1127.5	1126.1	1124.1	1122.1	1120.2	1118.2	1120.5
7.5°	1121.3	1120.8	1120.2	1119.7	1119.3	1118.2	1116.6	1114.9	1113.3	1111.7	1114.2
10°	1113.2	1112.9	1112.6	1112.3	1112.1	1111.2	1109.8	1108.4	1107.0	1105.6	1108.1
12.5°	1102.0	1102.0	1101.9	1101.8	1101.8	1101.3	1100.3	1099.4	1098.4	1097.5	1099.8
15°	1084.1	1084.3	1084.7	1084.9	1085.2	1084.9	1084.1	1083.2	1082.4	1081.6	1084.1
17.5°	1059.5	1060.4	1061.2	1062.1	1062.9	1063.3	1063.1	1062.9	1062.7	1062.6	1065.2
20°	1042.4	1043.1	1044.0	1044.9	1045.7	1046.2	1046.6	1046.9	1047.1	1047.4	1050.2
22.5°	1023.1	1024.1	1025.2	1026.3	1027.4	1028.2	1028.6	1029.2	1029.7	1030.2	1033.0
25°	991.7	993.4	995.1	996.8	998.5	999.7	1000.6	1001.4	1002.3	1003.1	1006.2
27.5°	956.8	959.3	961.8	964.2	966.7	968.6	969.9	971.2	972.5	973.8	976.6
30°	933.5	935.8	938.0	940.3	942.5	944.7	946.6	948.6	950.5	952.5	955.6
32.5°	908.2	910.9	913.6	916.3	919.0	921.5	923.7	925.9	928.0	930.3	933.8
35°	867.8	871.2	874.5	877.9	881.2	884.3	887.2	889.9	892.8	895.6	899.5
37.5°	827.0	830.9	834.8	838.7	842.6	846.2	849.7	853.2	856.7	860.2	864.2
40°	800.7	804.4	808.0	811.7	815.3	819.1	823.1	827.0	830.9	834.9	839.1
42.5°	770.4	774.4	778.6	782.7	786.8	791.2	795.7	800.3	804.9	809.6	814.3
45°	723.6	728.9	734.3	739.6	744.9	750.3	755.6	761.0	766.3	771.7	776.4
47.5°	678.7	684.3	689.8	695.3	700.8	706.7	712.9	719.1	725.2	731.4	736.3
50°	646.4	652.6	658.8	665.0	671.1	677.3	683.5	689.7	695.9	702.0	707.7
52.5°	614.0	620.2	626.4	632.6	638.7	645.4	652.4	659.6	666.6	673.8	679.4
55°	566.7	572.6	578.5	584.4	590.3	597.5	605.9	614.3	622.8	631.2	636.8
57.5°	513.8	521.2	528.5	535.8	543.0	550.9	559.3	567.7	576.1	584.4	591.1
60°	479.4	486.7	494.0	501.4	508.7	517.0	526.2	535.5	544.8	554.1	560.5
62.5°	446.0	454.0	462.0	470.0	477.9	486.6	495.9	505.2	514.4	523.7	530.1
65°	392.1	401.2	410.1	419.1	428.1	437.4	446.9	456.5	466.0	475.6	482.7
67.5°	340.2	349.8	359.4	368.9	378.5	388.4	398.6	408.8	419.1	429.4	436.5
70°	304.8	314.4	324.0	333.5	343.1	353.2	363.8	374.5	385.2	395.9	403.5
72.5°	270.5	280.2	290.0	299.8	309.6	320.1	331.5	342.9	354.2	365.6	373.0
75°	217.6	228.0	238.4	248.7	259.2	270.3	282.1	293.9	305.7	317.5	325.3
77.5°	168.3	179.3	190.3	201.3	212.3	224.0	236.4	248.7	261.1	273.5	281.5
80°	137.9	149.1	160.3	171.6	182.8	194.6	207.0	219.4	231.8	244.2	252.5
82.5°	107.5	119.2	130.9	142.6	154.3	166.4	178.7	191.1	203.4	215.8	224.4
85°	67.0	78.8	90.6	102.4	114.2	126.5	139.1	151.8	164.5	177.1	185.5
87.5°	37.6	49.4	61.3	73.0	84.6	96.5	109.7	122.1	134.7	147.3	155.3
90°	21.0	33.8	47.5	59.5	71.5	83.2	100.1	112.1	125.8	139.5	146.8
92.5°	28.3	42.5	60.0	79.8	101.5	129.0	181.3	254.8	326.6	370.0	336.0
95°	42.5	54.2	71.4	90.9	119.2	162.8	243.1	384.4	584.9	754.6	780.4
97.5°	61.7	69.7	84.5	102.0	126.3	163.8	228.2	346.7	546.0	781.1	942.1
100°	74.0	81.4	94.2	111.0	133.3	167.8	225.4	325.7	498.0	732.0	942.0
102.5°	86.7	94.3	105.7	120.9	141.7	174.4	227.3	316.6	464.7	673.1	889.3
105°	103.9	111.9	121.5	136.6	156.5	187.4	235.8	311.8	432.9	602.3	795.2
107.5°	125.5	131.7	140.2	155.0	173.2	203.0	247.6	317.3	421.7	559.5	718.1
110°	139.0	144.6	152.4	165.9	184.0	212.3	256.9	322.1	418.9	543.4	678.8



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**CANDELA DISTRIBUTION (continued):**

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
112.5°	151.9	157.0	165.1	177.4	195.1	222.9	265.9	327.4	418.1	532.7	653.9
115°	170.5	175.4	183.5	193.9	211.4	238.6	279.2	335.6	418.2	522.1	628.0
117.5°	191.2	194.9	201.3	211.5	227.1	254.2	292.6	344.7	419.0	513.7	611.8
120°	204.1	206.4	212.9	222.4	236.7	263.3	301.5	350.8	419.9	508.7	602.1
122.5°	216.7	218.4	224.1	232.3	247.2	272.7	310.5	356.7	420.9	503.0	591.9
125°	232.0	234.9	239.4	247.8	262.5	288.0	323.5	366.9	423.8	495.7	576.9
127.5°	246.5	248.7	254.1	263.8	279.2	304.0	337.0	375.7	424.7	486.4	557.9
130°	253.7	256.6	262.6	274.2	289.0	314.0	345.4	380.7	425.6	480.7	545.8
132.5°	261.9	264.2	272.1	283.0	299.0	322.4	352.9	386.7	426.8	476.0	535.2
135°	272.2	275.4	283.3	296.8	313.3	334.9	363.0	393.4	427.8	467.7	518.1
137.5°	283.8	286.5	294.9	307.4	324.4	344.4	369.6	397.2	426.9	461.8	503.7
140°	292.0	294.1	302.5	315.7	332.0	350.9	374.9	400.5	427.7	458.0	495.7
142.5°	299.8	302.1	310.1	322.9	338.8	357.0	380.0	403.2	428.6	456.1	489.4
145°	312.0	314.2	321.8	332.6	347.3	364.6	385.2	406.5	429.4	453.9	480.9
147.5°	326.1	326.6	333.4	344.4	356.6	372.2	391.5	410.1	430.2	451.1	473.6
150°	335.0	335.5	341.6	350.8	362.3	377.2	394.7	412.0	430.2	449.2	469.0
152.5°	342.2	342.3	348.6	357.4	367.9	381.7	397.2	413.3	429.0	446.0	463.9
155°	353.5	354.3	359.0	366.9	375.7	387.5	400.9	414.4	427.1	441.3	456.3
157.5°	364.7	364.7	369.2	375.3	382.9	392.3	403.6	414.4	425.0	436.4	448.5
160°	371.7	371.7	374.9	380.4	386.7	395.5	404.9	414.4	423.1	432.6	442.9
162.5°	378.0	377.4	379.9	384.8	390.5	397.4	406.2	414.4	421.2	428.8	437.8
165°	385.2	385.2	386.7	390.7	394.7	399.3	406.5	412.8	417.6	423.1	429.4
167.5°	392.3	391.5	392.3	395.3	397.5	401.1	406.3	410.9	413.8	417.4	421.8
170°	395.5	394.7	395.5	397.8	399.3	401.7	405.7	409.6	411.2	413.6	416.8
172.5°	398.5	397.8	397.9	399.7	400.6	402.3	405.0	408.4	408.7	409.8	412.3
175°	401.7	400.9	400.9	401.7	402.5	402.5	404.1	406.5	405.7	405.7	407.3
177.5°	403.1	402.5	401.9	402.5	402.5	402.5	403.1	404.4	403.1	403.1	403.8
180°	402.5	402.5	402.5	402.5	402.5	402.5	402.5	402.5	402.5	402.5	402.5



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**CANDELA DISTRIBUTION (continued):**

	55°	60°	65°	70°	75°	80°	85°	90°
0°	1129.7	1129.7	1129.7	1129.7	1129.7	1129.7	1129.7	1129.7
2.5°	1125.7	1127.3	1128.9	1129.5	1129.3	1129.0	1128.9	1128.6
5°	1122.8	1125.0	1127.2	1128.2	1127.9	1127.7	1127.4	1127.1
7.5°	1116.7	1119.3	1121.8	1122.9	1122.6	1122.4	1122.0	1121.8
10°	1110.6	1113.2	1115.7	1116.8	1116.6	1116.3	1115.9	1115.7
12.5°	1102.1	1104.4	1106.7	1107.9	1107.8	1107.7	1107.6	1107.6
15°	1086.6	1089.2	1091.6	1092.8	1092.5	1092.3	1091.9	1091.6
17.5°	1067.8	1070.3	1072.9	1074.1	1073.9	1073.6	1073.4	1073.2
20°	1053.0	1055.8	1058.7	1060.0	1060.0	1060.0	1060.0	1060.0
22.5°	1035.8	1038.6	1041.4	1043.1	1043.5	1043.9	1044.4	1044.9
25°	1009.3	1012.4	1015.5	1017.2	1017.5	1017.7	1018.0	1018.3
27.5°	979.5	982.4	985.2	986.8	987.2	987.5	987.9	988.2
30°	958.7	961.8	964.9	966.7	967.3	967.8	968.4	969.0
32.5°	937.3	940.9	944.4	946.5	947.1	947.6	948.2	948.7
35°	903.5	907.4	911.3	913.7	914.6	915.4	916.2	917.1
37.5°	868.2	872.1	876.2	878.6	879.5	880.4	881.3	882.2
40°	843.3	847.6	851.8	854.4	855.6	856.7	857.8	858.9
42.5°	818.9	823.6	828.2	831.0	831.9	832.8	833.7	834.6
45°	781.2	786.0	790.8	793.8	795.3	796.6	798.0	799.5
47.5°	741.3	746.2	751.2	754.5	756.2	757.9	759.5	761.3
50°	713.3	718.9	724.5	728.2	729.9	731.6	733.2	734.9
52.5°	685.0	690.6	696.2	699.9	701.6	703.2	704.9	706.6
55°	642.5	648.1	653.7	657.4	659.0	660.8	662.4	664.1
57.5°	597.8	604.5	611.2	615.3	616.9	618.5	620.0	621.6
60°	567.0	573.5	579.9	584.2	586.5	588.7	591.0	593.3
62.5°	536.6	543.1	549.5	553.9	556.2	558.4	560.6	562.9
65°	489.6	496.7	503.7	508.3	510.6	512.9	515.2	517.4
67.5°	443.6	450.8	457.9	462.6	464.8	466.9	469.1	471.3
70°	411.1	418.7	426.3	431.1	433.0	435.0	437.0	438.9
72.5°	380.3	387.7	395.1	399.8	402.0	404.2	406.4	408.6
75°	333.3	341.1	349.0	354.2	356.7	359.3	361.8	364.3
77.5°	289.5	297.5	305.4	310.8	313.5	316.2	318.9	321.5
80°	261.0	269.4	277.9	283.2	285.4	287.7	289.9	292.2
82.5°	233.1	241.8	250.4	256.0	258.5	260.9	263.4	265.9
85°	193.9	202.4	210.8	216.4	219.3	222.0	224.9	227.7
87.5°	163.6	171.9	180.2	185.5	188.1	190.8	193.1	195.6
90°	155.7	164.7	173.6	178.9	181.9	185.0	186.4	188.6
92.5°	290.3	259.8	243.8	233.1	226.1	224.0	223.6	225.9
95°	711.2	596.3	497.9	426.2	390.0	368.0	356.3	348.6
97.5°	982.8	944.6	874.6	796.9	742.5	697.4	676.0	662.0
100°	1065.1	1088.5	1057.3	1003.5	936.8	890.5	868.7	864.4
102.5°	1055.1	1141.0	1159.5	1140.0	1099.9	1067.1	1044.3	1041.5
105°	983.3	1127.1	1212.4	1249.5	1253.3	1249.3	1240.5	1237.9
107.5°	885.4	1038.0	1155.2	1230.2	1271.3	1291.3	1301.2	1305.4
110°	826.1	969.3	1090.4	1181.9	1240.2	1275.7	1292.2	1301.6





TEST NUMBER: P332702-927

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**CANDELA DISTRIBUTION (continued):**

	55°	60°	65°	70°	75°	80°	85°	90°
112.5°	780.7	907.9	1022.5	1113.7	1179.7	1222.2	1244.4	1258.1
115°	733.0	836.4	935.2	1015.1	1079.6	1129.0	1156.3	1164.6
117.5°	705.1	791.5	870.1	938.5	994.0	1036.1	1064.0	1071.2
120°	690.7	769.9	838.8	898.9	946.2	983.3	1006.1	1017.0
122.5°	678.1	754.7	817.9	870.9	911.1	942.9	962.3	973.0
125°	658.2	731.6	791.5	838.5	871.8	896.4	913.1	919.6
127.5°	634.2	704.3	763.7	808.6	842.2	864.6	879.2	885.8
130°	616.6	684.0	742.9	788.2	822.3	843.8	858.1	864.5
132.5°	598.7	662.3	719.6	764.8	798.3	822.3	836.0	842.4
135°	572.4	628.3	681.0	723.7	757.0	780.9	795.2	801.6
137.5°	549.1	596.8	641.5	680.0	711.0	734.3	746.1	753.2
140°	535.8	576.6	615.8	651.6	680.6	699.4	711.9	719.7
142.5°	523.9	559.9	593.7	624.6	650.3	667.7	678.6	684.2
145°	507.9	536.5	561.9	585.5	606.3	620.9	629.9	635.0
147.5°	494.7	516.3	535.5	553.5	568.9	581.4	588.3	590.6
150°	488.0	506.1	522.0	536.2	548.8	559.1	563.9	564.7
152.5°	481.0	496.6	511.2	522.9	533.7	542.0	544.9	545.7
155°	470.6	483.2	495.0	504.5	512.5	518.8	521.2	521.2
157.5°	459.3	469.9	479.9	487.5	493.5	498.2	499.6	499.6
160°	452.3	461.1	469.8	476.1	480.9	485.6	486.4	486.4
162.5°	445.4	452.8	459.6	465.3	468.8	473.6	474.4	473.7
165°	435.8	440.5	446.0	450.0	453.1	456.3	455.5	454.7
167.5°	426.4	430.1	434.5	436.9	438.5	440.5	440.4	439.7
170°	420.7	423.1	426.3	428.6	430.2	431.0	430.2	430.2
172.5°	415.7	417.4	419.3	421.0	422.0	422.8	422.0	420.7
175°	408.8	409.6	411.2	411.2	411.2	412.8	411.2	409.6
177.5°	404.4	405.0	405.0	405.7	405.0	405.7	404.4	403.1
180°	402.5	402.5	402.5	402.5	402.5	402.5	402.5	402.5

(END OF REPORT)