

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: P332043-930

Luminaire Tested: **S123DIP-S1000D1195U930-4F0-1E-UDD-F1**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P332043-930
REPORT IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-1807-864-9,
Test Lab: INNOVATION CENTER
Issue Date: 3/3/2020
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: NEO-RAY
Catalog Number: S123DIP-S1000D1195U930-4F0-1E-UDD-F1
Description: DEFINE 3 DIRECT-INDIRECT PENDANT LED LUMINAIRE
DOWNLIGHT 1000 LUMENS PER FOOT, FLUSH SATIN WHITE DIFFUSER
UPLIGHT 1195 LUMENS PER FOOT, FLUSH SATIN WHITE DIFFUSER
Light Source: -
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 6702.7 lumens
Efficiency: N/A
Efficacy: 102.5 lumens/watt
Spacing Criteria (0/90/45): 1.21 / 1.18 / 1.31
Luminous Opening: Rectangular (W 0.25' x L: 4' x H: 0')
CIE Type: General Diffuse

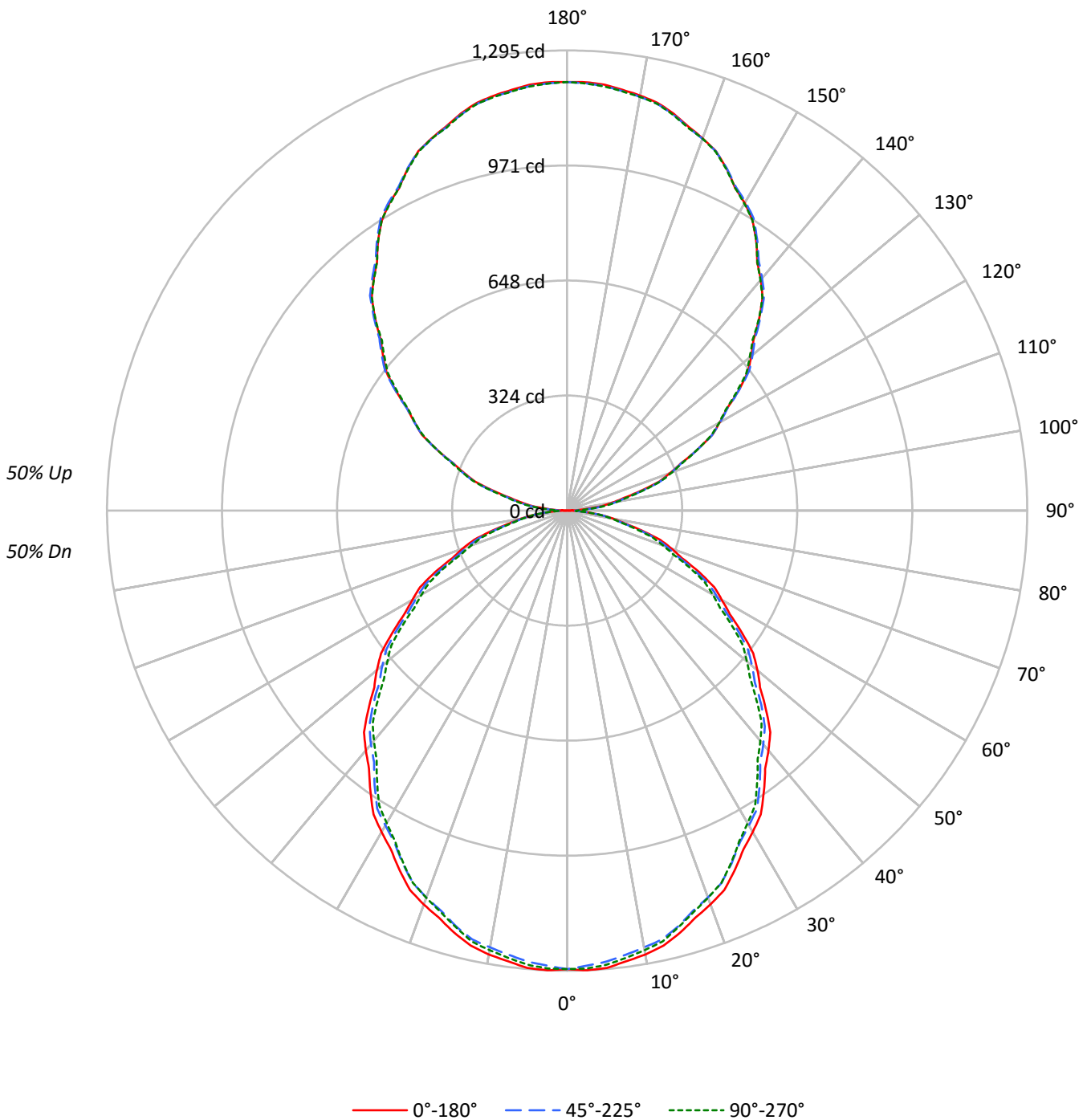
Input Watts (W): 65.4
Input Voltage (V): 120
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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	107	107	107	107	99	99	99	99	83	83	83		69	69	69		56	56	56	50
1	98	93	89	86	90	86	83	80	73	71	68		61	59	58		50	48	47	42
2	89	82	75	70	82	75	70	65	64	60	57		53	51	48		44	42	40	35
3	81	72	64	58	75	66	60	55	56	52	47		47	44	41		39	36	34	30
4	74	63	55	49	68	59	52	46	50	45	40		42	38	35		35	32	29	26
5	68	56	48	42	63	52	45	40	45	39	35		38	33	30		31	28	25	22
6	63	51	42	37	58	47	40	35	40	35	30		34	30	26		28	25	22	19
7	58	46	38	32	53	43	35	30	37	31	27		31	27	23		26	22	20	17
8	54	41	34	28	50	39	32	27	33	28	24		28	24	21		24	20	18	15
9	50	38	30	25	46	35	29	24	31	25	21		26	22	19		22	18	16	14
10	47	35	27	23	43	32	26	21	28	23	19		24	20	17		20	17	15	13

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	13891	13891	13891
5°	13956	13765	13861
10°	13864	13645	13729
15°	13701	13490	13515
20°	13512	13270	13283
25°	13258	13007	12981
30°	12978	12716	12619
35°	12686	12408	12248
40°	12381	12067	11880
45°	12044	11756	11469
50°	11707	11372	11055
55°	11265	10975	10640
60°	10820	10512	10176
65°	10427	10004	9694
70°	9847	9429	9010
75°	9000	8675	8305
80°	8114	7773	7705
85°	7126	6854	6570



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	121.6	1.8
10°-20°	343.3	5.1
20°-30°	507.0	7.6
30°-40°	592.3	8.8
40°-50°	595.5	8.9
50°-60°	523.1	7.8
60°-70°	389.7	5.8
70°-80°	222.0	3.3
80°-90°	67.3	1.0
90°-100°	78.6	1.2
100°-110°	235.1	3.5
110°-120°	399.9	6.0
120°-130°	526.0	7.8
130°-140°	591.2	8.8
140°-150°	581.2	8.7
150°-160°	489.3	7.3
160°-170°	325.7	4.9
170°-180°	114.0	1.7
0°-30°	971.9	14.5
0°-40°	1564.1	23.3
0°-60°	2682.6	40.0
0°-90°	3361.6	50.2
90°-120°	713.6	10.6
90°-150°	2412.1	36.0
90°-180°	3341.0	49.8
0°-180°	6702.7	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1290	1290	1290	1290	1290	
5°	1292	1286	1274	1284	1283	122
15°	1230	1224	1211	1219	1213	346
25°	1116	1109	1095	1096	1093	514
35°	965	958	944	938	932	604
45°	791	786	772	759	753	611
55°	600	598	585	573	567	538
65°	409	404	393	384	381	404
75°	216	212	209	203	200	231
85°	58	56	56	53	53	63
90°	1	11	23	26	28	7
95°	56	63	70	74	74	63
105°	213	215	224	224	225	228
115°	403	405	404	404	404	398
125°	589	592	590	586	583	525
135°	764	770	769	766	764	589
145°	927	929	932	931	927	579
155°	1062	1062	1063	1066	1060	489
165°	1157	1154	1154	1159	1153	326
175°	1203	1199	1199	1204	1198	114
180°	1206	1206	1206	1206	1206	



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CANDELA DISTRIBUTION (FULL):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
0°	1290.5	1290.5	1290.5	1290.5	1290.5	1290.5	1290.5	1290.5	1290.5	1290.5	1290.5
2.5°	1294.9	1294.2	1293.4	1292.6	1291.8	1290.3	1288.2	1286.0	1283.9	1281.7	1283.6
5°	1291.6	1290.4	1289.2	1287.9	1286.7	1284.7	1282.1	1279.3	1276.6	1273.9	1276.4
7.5°	1279.0	1277.7	1276.5	1275.3	1274.1	1272.0	1269.3	1266.4	1263.6	1260.8	1263.0
10°	1268.4	1267.1	1265.8	1264.6	1263.4	1261.2	1258.0	1254.7	1251.6	1248.4	1250.6
12.5°	1254.1	1253.1	1252.1	1251.0	1250.0	1248.0	1245.0	1241.9	1238.9	1235.9	1237.5
15°	1229.5	1228.5	1227.5	1226.5	1225.6	1223.4	1220.3	1217.1	1213.8	1210.6	1212.6
17.5°	1200.9	1199.5	1198.3	1197.0	1195.7	1193.5	1190.3	1187.1	1183.9	1180.6	1182.0
20°	1179.6	1178.1	1176.6	1175.1	1173.6	1171.3	1168.1	1164.9	1161.7	1158.5	1159.4
22.5°	1155.6	1154.1	1152.7	1151.1	1149.7	1147.4	1144.1	1140.9	1137.8	1134.5	1135.3
25°	1116.3	1114.8	1113.4	1111.9	1110.4	1108.1	1104.8	1101.6	1098.5	1095.2	1095.4
27.5°	1074.4	1072.9	1071.5	1070.1	1068.6	1066.2	1062.7	1059.3	1055.8	1052.4	1052.6
30°	1044.2	1042.9	1041.7	1040.5	1039.3	1036.9	1033.5	1030.0	1026.5	1023.1	1023.1
32.5°	1014.0	1012.4	1010.7	1009.1	1007.5	1005.3	1002.7	1000.0	997.4	994.7	993.3
35°	965.4	963.9	962.5	961.0	959.4	957.2	953.9	950.7	947.5	944.3	942.8
37.5°	915.7	913.8	911.9	910.0	908.2	905.6	902.4	899.1	895.9	892.6	890.8
40°	881.1	879.5	878.1	876.6	875.1	872.7	869.2	865.8	862.3	858.8	856.9
42.5°	846.4	844.7	843.1	841.4	839.8	837.1	833.7	830.3	826.8	823.4	821.4
45°	791.2	790.2	789.2	788.2	787.3	785.1	782.0	778.7	775.5	772.3	769.4
47.5°	736.4	734.9	733.5	732.1	730.7	728.4	725.5	722.4	719.4	716.4	713.5
50°	699.1	697.8	696.6	695.4	694.1	691.9	688.7	685.5	682.3	679.1	676.4
52.5°	660.0	659.2	658.4	657.5	656.6	654.5	651.2	647.8	644.3	640.9	638.6
55°	600.3	600.1	599.8	599.6	599.3	597.6	594.4	591.2	588.0	584.8	582.0
57.5°	543.5	542.7	541.8	541.0	540.1	538.4	535.9	533.3	530.8	528.2	525.8
60°	502.6	502.4	502.1	501.9	501.7	500.1	497.1	494.2	491.2	488.3	486.0
62.5°	466.3	465.6	465.0	464.3	463.7	461.9	458.9	456.0	453.1	450.0	447.8
65°	409.4	408.2	407.0	405.8	404.6	402.7	400.2	397.8	395.3	392.8	390.9
67.5°	349.4	348.2	347.2	346.1	345.0	343.5	341.6	339.7	337.9	336.0	334.3
70°	312.9	311.4	310.0	308.5	307.0	305.5	304.0	302.6	301.1	299.6	297.9
72.5°	274.8	273.7	272.6	271.5	270.4	269.0	267.3	265.7	264.0	262.3	260.8
75°	216.4	215.4	214.4	213.4	212.5	211.6	210.8	210.1	209.4	208.6	207.4
77.5°	164.7	164.1	163.5	163.1	162.5	161.8	160.9	160.0	159.1	158.2	157.4
80°	130.9	130.2	129.5	128.7	128.0	127.3	126.9	126.4	125.9	125.4	125.1
82.5°	98.1	97.9	97.8	97.7	97.5	97.3	97.3	97.2	97.1	97.0	96.5
85°	57.7	57.2	56.7	56.3	55.8	55.5	55.5	55.5	55.5	55.5	55.0
87.5°	23.2	23.1	22.9	22.7	22.6	22.7	23.0	23.4	23.7	24.1	24.1
90°	1.0	3.0	5.1	7.3	9.4	11.8	14.5	17.3	20.0	22.7	23.6
92.5°	22.9	24.4	25.8	27.2	28.6	30.2	31.7	33.3	34.8	36.4	37.0
95°	55.9	57.4	58.9	60.3	61.8	63.3	65.1	66.7	68.4	70.1	70.9
97.5°	99.3	100.4	101.5	102.6	103.6	104.8	106.1	107.3	108.4	109.7	110.6
100°	128.8	130.1	131.3	132.6	133.9	135.0	136.1	137.1	138.2	139.3	139.9
102.5°	162.9	163.7	164.4	165.2	166.0	167.1	168.4	169.8	171.2	172.6	173.3
105°	213.1	213.5	214.0	214.4	214.8	216.0	217.8	219.8	221.7	223.6	223.6
107.5°	271.5	271.7	272.0	272.2	272.5	273.0	273.8	274.5	275.2	276.1	276.7
110°	307.9	308.3	308.7	309.2	309.6	310.0	310.4	310.8	311.2	311.7	312.5



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CANDELA DISTRIBUTION (continued):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
112.5°	345.8	346.0	346.3	346.5	346.7	346.9	347.0	347.1	347.2	347.2	348.3
115°	402.6	403.2	403.8	404.5	405.1	405.2	404.8	404.4	404.0	403.6	403.7
117.5°	459.8	460.2	460.6	461.1	461.5	461.5	460.9	460.3	459.8	459.3	459.2
120°	495.5	496.7	498.0	499.2	500.5	500.6	499.5	498.5	497.4	496.4	496.2
122.5°	532.6	533.5	534.4	535.3	536.3	536.5	535.9	535.3	534.8	534.3	533.7
125°	589.2	589.9	590.4	591.1	591.7	591.8	591.4	591.0	590.6	590.2	589.3
127.5°	641.5	642.9	644.2	645.6	646.9	647.3	646.9	646.4	646.0	645.5	644.3
130°	676.4	678.0	679.7	681.4	683.1	683.6	683.0	682.3	681.8	681.1	680.3
132.5°	711.2	712.9	714.6	716.2	718.0	718.6	718.1	717.6	717.1	716.7	715.7
135°	764.4	765.7	767.0	768.3	769.5	770.1	769.8	769.6	769.4	769.2	768.3
137.5°	813.8	814.7	815.8	816.8	817.9	818.7	819.3	819.8	820.4	820.9	820.0
140°	847.8	848.9	849.9	851.0	852.0	852.6	852.9	853.0	853.3	853.5	853.3
142.5°	878.9	880.0	881.0	882.1	883.1	883.8	884.2	884.6	884.9	885.3	885.1
145°	927.4	927.8	928.2	928.6	929.0	929.6	930.3	930.8	931.5	932.1	931.9
147.5°	969.8	970.6	971.3	972.1	972.9	973.5	974.1	974.7	975.3	975.9	975.9
150°	999.4	999.8	1000.2	1000.6	1001.1	1001.5	1001.9	1002.3	1002.7	1003.1	1003.1
152.5°	1023.6	1024.3	1024.8	1025.4	1026.0	1026.4	1026.6	1027.0	1027.2	1027.4	1027.8
155°	1061.9	1061.9	1061.9	1061.9	1061.9	1062.0	1062.3	1062.4	1062.7	1062.8	1063.7
157.5°	1094.5	1094.2	1094.0	1093.7	1093.5	1093.4	1093.6	1093.8	1094.0	1094.1	1095.0
160°	1114.9	1114.5	1114.1	1113.7	1113.3	1113.0	1113.0	1113.0	1113.0	1113.0	1114.1
162.5°	1133.1	1132.5	1132.0	1131.4	1130.8	1130.6	1130.7	1130.9	1131.1	1131.2	1132.3
165°	1156.7	1156.0	1155.4	1154.7	1154.1	1153.8	1153.8	1153.8	1153.8	1153.8	1155.0
167.5°	1175.4	1174.5	1173.7	1172.9	1172.0	1171.7	1171.8	1172.0	1172.2	1172.3	1173.6
170°	1186.0	1185.1	1184.3	1183.5	1182.6	1182.2	1182.2	1182.2	1182.2	1182.2	1183.7
172.5°	1194.3	1193.5	1192.6	1191.8	1191.0	1190.6	1190.6	1190.6	1190.6	1190.6	1191.9
175°	1203.1	1202.2	1201.3	1200.5	1199.7	1199.2	1199.2	1199.2	1199.2	1199.2	1200.5
177.5°	1206.6	1206.0	1205.3	1204.6	1204.0	1203.6	1203.6	1203.6	1203.6	1203.6	1204.6
180°	1205.9	1205.9	1205.9	1205.9	1205.9	1205.9	1205.9	1205.9	1205.9	1205.9	1205.9



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CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
0°	1290.5	1290.5	1290.5	1290.5	1290.5	1290.5	1290.5	1290.5
2.5°	1285.6	1287.6	1289.6	1290.5	1290.2	1290.0	1289.8	1289.6
5°	1278.8	1281.2	1283.8	1284.7	1284.3	1283.8	1283.3	1282.8
7.5°	1265.3	1267.5	1269.7	1270.6	1270.3	1270.1	1269.7	1269.4
10°	1252.8	1255.0	1257.3	1258.1	1257.6	1257.1	1256.6	1256.1
12.5°	1239.2	1240.8	1242.4	1243.1	1242.8	1242.5	1242.2	1241.9
15°	1214.6	1216.5	1218.5	1218.8	1217.3	1215.8	1214.3	1212.8
17.5°	1183.4	1184.8	1186.2	1186.6	1186.1	1185.5	1185.0	1184.5
20°	1160.4	1161.5	1162.5	1162.5	1161.8	1161.1	1160.3	1159.6
22.5°	1136.1	1136.9	1137.7	1137.6	1136.7	1135.7	1134.8	1133.8
25°	1095.7	1096.0	1096.3	1096.0	1095.2	1094.5	1093.7	1093.0
27.5°	1052.8	1053.0	1053.2	1052.8	1051.9	1050.9	1050.0	1049.0
30°	1023.1	1023.1	1023.1	1022.2	1020.5	1018.8	1017.1	1015.3
32.5°	991.9	990.6	989.2	988.0	987.1	986.1	985.2	984.2
35°	941.3	939.9	938.4	937.0	935.8	934.6	933.4	932.1
37.5°	889.1	887.3	885.5	884.2	883.5	882.6	881.8	881.1
40°	854.9	853.0	851.0	849.5	848.5	847.5	846.5	845.5
42.5°	819.4	817.4	815.5	814.0	813.0	812.0	811.1	810.1
45°	766.4	763.4	760.5	758.4	757.2	755.9	754.7	753.4
47.5°	710.5	707.7	704.7	702.8	701.6	700.6	699.5	698.4
50°	673.7	671.0	668.2	666.2	664.7	663.2	661.7	660.2
52.5°	636.3	634.0	631.7	629.7	628.3	626.8	625.3	623.9
55°	579.4	576.7	574.0	571.9	570.7	569.5	568.3	567.0
57.5°	523.3	521.0	518.5	516.6	515.2	513.7	512.3	510.9
60°	483.8	481.6	479.4	477.7	476.4	475.2	473.9	472.7
62.5°	445.6	443.4	441.2	439.7	438.8	438.0	437.2	436.3
65°	388.9	386.9	384.9	383.6	382.9	382.1	381.3	380.6
67.5°	332.6	330.8	329.1	327.8	326.7	325.6	324.6	323.6
70°	296.1	294.4	292.7	291.2	290.0	288.8	287.6	286.3
72.5°	259.3	257.7	256.2	255.1	254.5	253.8	253.2	252.6
75°	206.2	204.9	203.7	202.7	201.9	201.2	200.5	199.7
77.5°	156.5	155.7	154.9	154.5	154.5	154.5	154.5	154.5
80°	124.9	124.7	124.4	124.3	124.3	124.3	124.3	124.3
82.5°	96.1	95.6	95.2	94.9	94.7	94.5	94.3	94.1
85°	54.5	54.0	53.5	53.2	53.2	53.2	53.2	53.2
87.5°	24.1	24.0	24.0	24.0	24.1	24.1	24.2	24.3
90°	24.5	25.3	26.1	26.7	27.1	27.6	28.0	28.5
92.5°	37.7	38.4	39.1	39.3	39.1	38.8	38.5	38.2
95°	71.7	72.6	73.5	73.9	73.9	73.9	73.9	73.9
97.5°	111.6	112.6	113.6	114.0	113.9	113.8	113.7	113.7
100°	140.5	141.1	141.8	142.3	142.8	143.2	143.6	144.0
102.5°	173.8	174.5	175.1	175.4	175.3	175.2	175.1	175.0
105°	223.6	223.6	223.6	223.8	224.2	224.6	225.0	225.4
107.5°	277.4	278.1	278.8	278.9	278.7	278.4	278.2	277.9
110°	313.3	314.2	315.0	315.2	314.8	314.4	314.0	313.6



TEST NUMBER: P332043-930

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CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
112.5°	349.3	350.3	351.3	351.8	351.7	351.6	351.6	351.5
115°	404.0	404.1	404.4	404.4	404.1	404.0	403.7	403.6
117.5°	459.2	459.1	459.1	458.8	458.2	457.5	457.0	456.4
120°	495.9	495.8	495.5	495.2	494.8	494.4	494.0	493.5
122.5°	533.2	532.6	532.1	531.5	530.9	530.4	529.7	529.1
125°	588.5	587.7	586.8	586.0	585.1	584.2	583.4	582.6
127.5°	643.1	642.0	640.7	639.7	638.7	637.7	636.7	635.9
130°	679.4	678.6	677.8	676.5	675.1	673.6	672.1	670.7
132.5°	714.7	713.7	712.7	711.6	710.5	709.3	708.2	707.0
135°	767.5	766.6	765.8	765.2	764.8	764.3	763.9	763.5
137.5°	819.1	818.2	817.3	816.5	815.7	815.0	814.2	813.3
140°	853.0	852.9	852.6	851.8	850.4	848.9	847.4	846.0
142.5°	884.9	884.7	884.5	883.8	882.6	881.5	880.4	879.3
145°	931.7	931.5	931.3	930.7	929.9	929.0	928.2	927.4
147.5°	975.9	975.9	975.9	975.3	974.0	972.7	971.4	970.2
150°	1003.1	1003.1	1003.1	1002.6	1001.3	1000.0	998.7	997.5
152.5°	1028.1	1028.4	1028.7	1028.4	1027.3	1026.2	1025.1	1024.0
155°	1064.5	1065.4	1066.2	1065.9	1064.5	1063.0	1061.5	1060.0
157.5°	1095.8	1096.7	1097.6	1097.5	1096.3	1095.1	1094.0	1092.7
160°	1115.2	1116.2	1117.3	1117.4	1116.6	1115.7	1114.8	1114.0
162.5°	1133.3	1134.4	1135.5	1135.3	1133.9	1132.6	1131.2	1129.9
165°	1156.3	1157.6	1158.9	1158.7	1157.2	1155.8	1154.3	1152.8
167.5°	1174.9	1176.2	1177.5	1177.5	1176.2	1174.9	1173.6	1172.3
170°	1185.1	1186.7	1188.1	1188.1	1186.7	1185.1	1183.7	1182.2
172.5°	1193.2	1194.5	1195.8	1195.7	1194.2	1192.7	1191.2	1189.8
175°	1201.8	1203.1	1204.3	1204.2	1202.7	1201.3	1199.8	1198.3
177.5°	1205.7	1206.6	1207.6	1207.5	1206.4	1205.2	1204.0	1202.9
180°	1205.9	1205.9	1205.9	1205.9	1205.9	1205.9	1205.9	1205.9

(END OF REPORT)