

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: P332042-940

Luminaire Tested: **S123DIP-S1000D1195U940-4F0-1E-UDD-F**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P332042-940
REPORT IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-1807-864-5,
Test Lab: INNOVATION CENTER
Issue Date: 3/3/2020
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: NEO-RAY
Catalog Number: S123DIP-S1000D1195U940-4F0-1E-UDD-F
Description: DEFINE 3 DIRECT-INDIRECT PENDANT LED LUMINAIRE
DOWNLIGHT 1000 LUMENS PER FOOT, FLUSH SATIN WHITE DIFFUSER
UPLIGHT 1195 LUMENS PER FOOT, NO LENS
Light Source: -
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 7929.1 lumens
Efficiency: N/A
Efficacy: 121.2 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

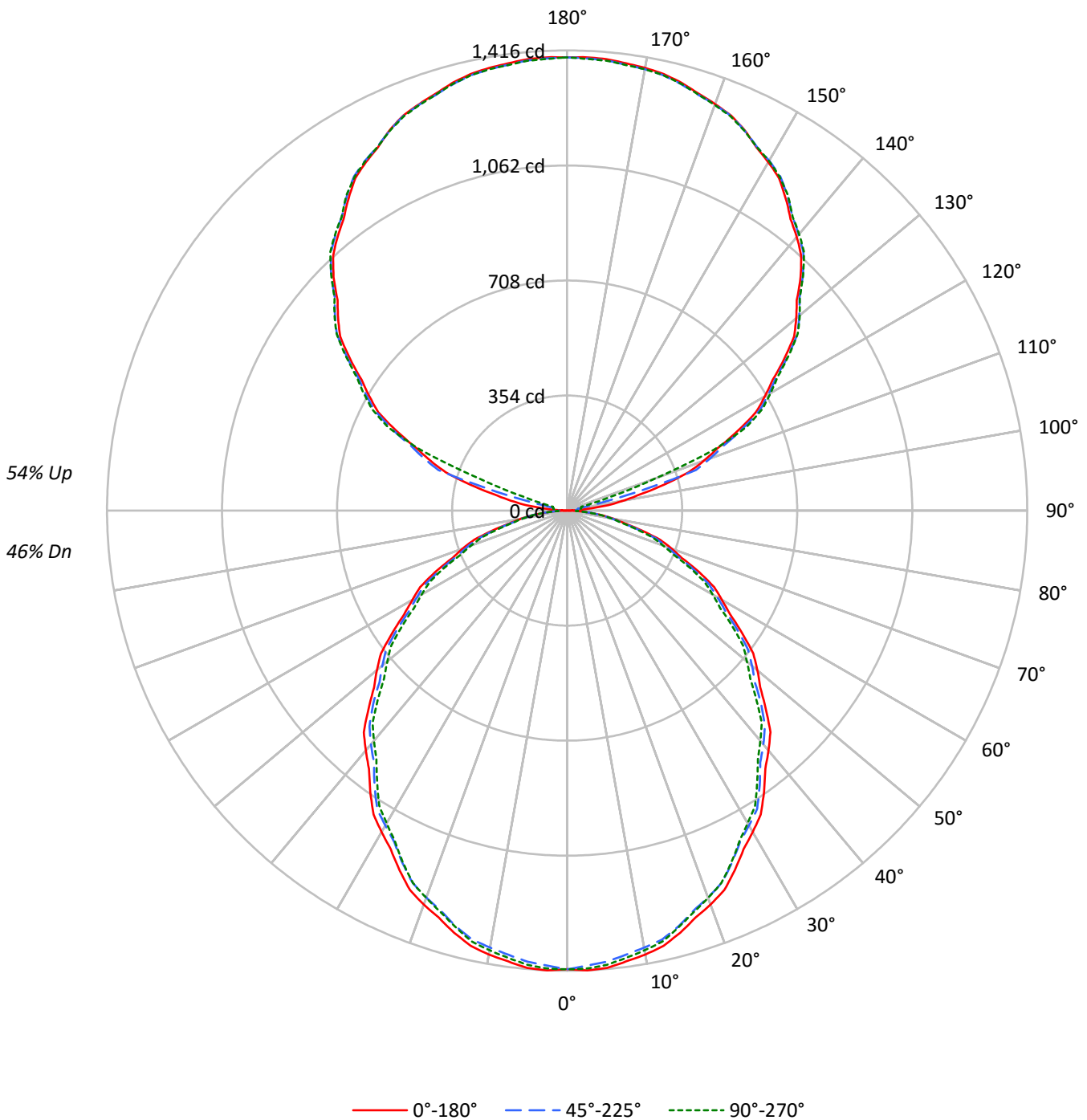
Input Watts (W): 65.4
Input Voltage (V): 120
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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	106	106	106	106	98	98	98	98	81	81	81	66	66	66	53	53	53	46
1	97	93	89	85	89	85	82	79	71	69	67	58	57	55	47	45	44	39
2	88	81	75	70	81	74	69	65	62	58	55	51	48	46	41	39	37	33
3	80	71	64	58	74	65	59	54	55	50	46	45	42	39	36	34	32	28
4	74	63	55	49	67	58	51	46	49	44	39	40	36	33	32	30	27	24
5	67	56	48	42	62	52	44	39	44	38	34	36	32	29	29	26	24	20
6	62	50	42	36	57	46	39	34	39	34	30	33	28	25	26	23	21	18
7	57	45	37	32	53	42	35	30	36	30	26	30	25	22	24	21	19	16
8	53	41	33	28	49	38	31	26	32	27	23	27	23	20	22	19	17	14
9	50	37	30	25	45	35	28	23	30	24	21	25	21	18	20	17	15	13
10	46	34	27	22	43	32	25	21	27	22	19	23	19	16	19	16	14	12

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	15193	15193	15193
5°	15263	15055	15159
10°	15162	14924	15017
15°	14985	14755	14782
20°	14778	14513	14528
25°	14500	14226	14197
30°	14194	13908	13801
35°	13875	13571	13397
40°	13541	13198	12995
45°	13172	12858	12543
50°	12804	12439	12092
55°	12322	12003	11639
60°	11834	11496	11130
65°	11405	10942	10603
70°	10770	10313	9854
75°	9844	9491	9087
80°	8877	8498	8424
85°	7793	7497	7188



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	133.0	1.7
10°-20°	375.4	4.7
20°-30°	554.6	7.0
30°-40°	647.8	8.2
40°-50°	651.3	8.2
50°-60°	572.1	7.2
60°-70°	426.2	5.4
70°-80°	242.8	3.1
80°-90°	73.6	0.9
90°-100°	50.7	0.6
100°-110°	241.6	3.0
110°-120°	580.4	7.3
120°-130°	739.1	9.3
130°-140°	789.7	10.0
140°-150°	738.4	9.3
150°-160°	595.6	7.5
160°-170°	384.4	4.8
170°-180°	132.5	1.7
0°-30°	1062.9	13.4
0°-40°	1710.7	21.6
0°-60°	2934.1	37.0
0°-90°	3676.7	46.4
90°-120°	872.7	11.0
90°-150°	3139.9	39.6
90°-180°	4252.0	53.6
0°-180°	7929.1	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1412	1412	1412	1412	1412	
5°	1413	1406	1393	1405	1403	134
15°	1345	1339	1324	1333	1326	379
25°	1221	1213	1198	1199	1195	562
35°	1056	1048	1033	1026	1020	660
45°	865	860	845	831	824	668
55°	657	655	640	627	620	588
65°	448	441	430	420	416	442
75°	237	232	228	222	218	253
85°	63	61	61	58	58	69
90°	1	12	25	29	31	6
95°	63	24	32	39	39	78
105°	309	314	227	54	46	327
115°	579	586	595	605	609	571
125°	816	824	829	831	833	729
135°	1016	1022	1027	1030	1027	782
145°	1173	1180	1182	1184	1184	734
155°	1292	1290	1291	1295	1290	595
165°	1362	1359	1358	1366	1359	385
175°	1394	1390	1390	1397	1389	133
180°	1394	1394	1394	1394	1394	



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CANDELA DISTRIBUTION (FULL):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
0°	1411.5	1411.5	1411.5	1411.5	1411.5	1411.5	1411.5	1411.5	1411.5	1411.5	1411.5
2.5°	1416.3	1415.5	1414.6	1413.7	1412.9	1411.2	1408.9	1406.5	1404.2	1401.8	1403.9
5°	1412.6	1411.3	1410.0	1408.6	1407.3	1405.2	1402.2	1399.2	1396.2	1393.3	1396.0
7.5°	1398.8	1397.5	1396.2	1394.8	1393.5	1391.2	1388.2	1385.1	1382.1	1378.9	1381.3
10°	1387.2	1385.9	1384.5	1383.1	1381.8	1379.4	1375.9	1372.3	1368.9	1365.4	1367.8
12.5°	1371.6	1370.6	1369.4	1368.2	1367.2	1364.9	1361.6	1358.3	1355.0	1351.7	1353.5
15°	1344.7	1343.6	1342.6	1341.5	1340.4	1338.1	1334.6	1331.1	1327.6	1324.1	1326.2
17.5°	1313.4	1312.0	1310.6	1309.2	1307.8	1305.4	1301.8	1298.3	1294.9	1291.3	1292.8
20°	1290.1	1288.5	1286.9	1285.2	1283.6	1281.0	1277.6	1274.1	1270.6	1267.0	1268.1
22.5°	1263.9	1262.3	1260.7	1259.0	1257.4	1254.9	1251.3	1247.9	1244.4	1240.8	1241.7
25°	1220.9	1219.3	1217.7	1216.1	1214.4	1211.9	1208.4	1204.9	1201.4	1197.8	1198.1
27.5°	1175.1	1173.5	1171.9	1170.4	1168.8	1166.1	1162.3	1158.6	1154.8	1151.0	1151.2
30°	1142.0	1140.7	1139.3	1138.0	1136.7	1134.1	1130.3	1126.5	1122.8	1119.0	1119.0
32.5°	1109.0	1107.2	1105.5	1103.7	1101.9	1099.6	1096.6	1093.8	1090.8	1087.9	1086.4
35°	1055.9	1054.3	1052.7	1051.1	1049.4	1046.9	1043.3	1039.8	1036.3	1032.8	1031.2
37.5°	1001.5	999.4	997.4	995.3	993.3	990.5	986.9	983.4	979.8	976.2	974.3
40°	963.7	962.0	960.4	958.8	957.2	954.5	950.7	946.9	943.2	939.3	937.2
42.5°	925.8	923.9	922.1	920.2	918.5	915.6	911.9	908.1	904.3	900.5	898.4
45°	865.3	864.2	863.2	862.1	861.0	858.7	855.2	851.7	848.2	844.7	841.5
47.5°	805.4	803.8	802.3	800.7	799.2	796.7	793.4	790.1	786.8	783.5	780.3
50°	764.6	763.2	761.9	760.5	759.2	756.8	753.2	749.8	746.3	742.8	739.8
52.5°	721.8	720.9	720.1	719.2	718.2	715.9	712.2	708.5	704.7	701.0	698.5
55°	656.6	656.3	656.0	655.8	655.5	653.6	650.1	646.6	643.1	639.6	636.6
57.5°	594.4	593.5	592.6	591.7	590.8	588.9	586.1	583.3	580.5	577.7	575.1
60°	549.7	549.5	549.2	548.9	548.7	547.0	543.7	540.5	537.3	534.0	531.5
62.5°	510.0	509.3	508.5	507.8	507.2	505.2	501.9	498.7	495.5	492.2	489.8
65°	447.8	446.5	445.1	443.8	442.5	440.4	437.7	435.1	432.3	429.6	427.5
67.5°	382.1	380.8	379.7	378.5	377.3	375.7	373.6	371.6	369.5	367.5	365.6
70°	342.2	340.6	339.0	337.4	335.8	334.1	332.5	330.9	329.3	327.7	325.8
72.5°	300.5	299.3	298.1	296.9	295.8	294.3	292.4	290.6	288.7	286.9	285.3
75°	236.7	235.6	234.5	233.4	232.4	231.4	230.6	229.8	229.0	228.2	226.9
77.5°	180.1	179.5	178.9	178.3	177.7	176.9	176.0	175.0	174.1	173.1	172.2
80°	143.2	142.4	141.6	140.8	140.0	139.3	138.8	138.2	137.7	137.1	136.9
82.5°	107.3	107.1	107.0	106.8	106.6	106.5	106.4	106.3	106.2	106.1	105.6
85°	63.1	62.6	62.1	61.5	61.0	60.7	60.7	60.7	60.7	60.7	60.1
87.5°	25.4	25.2	25.1	24.9	24.7	24.8	25.1	25.6	25.9	26.3	26.3
90°	1.1	3.3	5.6	7.9	10.3	12.9	15.9	18.9	21.8	24.9	25.8
92.5°	19.3	18.6	18.0	17.3	16.7	17.5	19.8	22.0	24.3	26.5	28.0
95°	63.2	53.8	44.3	34.9	25.4	22.0	24.5	27.0	29.6	32.1	33.7
97.5°	127.0	122.8	118.5	114.3	110.0	99.7	83.1	66.5	49.9	33.3	35.2
100°	175.0	179.7	184.3	188.9	193.5	177.8	142.0	106.0	70.1	34.2	36.0
102.5°	229.8	233.1	236.4	239.7	243.1	225.1	185.8	146.6	107.4	68.1	62.4
105°	308.7	311.3	313.8	316.3	318.9	309.8	289.0	268.3	247.6	226.9	186.1
107.5°	392.0	394.0	396.1	398.1	400.1	402.8	406.1	409.3	412.6	415.9	385.9
110°	447.5	449.4	451.2	453.1	455.0	457.1	459.7	462.2	464.7	467.3	459.7



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CANDELA DISTRIBUTION (continued):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
112.5°	500.6	502.2	503.9	505.6	507.2	509.3	511.8	514.4	516.9	519.4	519.6
115°	579.2	580.5	581.8	583.3	584.6	586.4	588.4	590.5	592.6	594.7	597.0
117.5°	655.1	656.8	658.5	660.3	662.0	663.3	664.4	665.5	666.6	667.6	669.4
120°	702.4	704.5	706.6	708.6	710.7	712.1	712.7	713.5	714.2	714.8	716.7
122.5°	750.5	752.2	753.9	755.5	757.3	758.6	759.5	760.4	761.2	762.1	763.4
125°	816.4	818.2	820.0	821.9	823.8	825.1	826.0	827.0	827.9	828.8	829.3
127.5°	880.2	882.0	883.9	885.7	887.5	889.0	890.1	891.3	892.3	893.4	894.2
130°	920.0	921.9	923.6	925.5	927.3	928.7	929.6	930.6	931.5	932.4	933.4
132.5°	958.1	959.9	961.8	963.6	965.5	966.7	967.5	968.2	968.9	969.7	970.6
135°	1016.3	1017.7	1019.0	1020.5	1021.8	1023.0	1024.0	1024.8	1025.7	1026.7	1027.3
137.5°	1066.0	1067.8	1069.5	1071.3	1073.1	1074.2	1074.7	1075.2	1075.7	1076.2	1077.3
140°	1099.2	1100.5	1102.0	1103.3	1104.7	1105.7	1106.4	1107.1	1107.9	1108.5	1109.5
142.5°	1129.9	1131.2	1132.7	1134.0	1135.4	1136.4	1137.1	1137.8	1138.5	1139.2	1140.0
145°	1172.8	1174.4	1176.0	1177.6	1179.2	1180.3	1180.7	1181.2	1181.6	1182.1	1182.5
147.5°	1213.2	1214.2	1215.3	1216.3	1217.4	1218.2	1218.6	1219.1	1219.5	1219.9	1220.5
150°	1238.1	1238.7	1239.4	1240.1	1240.8	1241.4	1241.8	1242.2	1242.8	1243.2	1243.7
152.5°	1260.4	1260.7	1261.1	1261.3	1261.7	1261.9	1262.2	1262.6	1262.8	1263.1	1263.9
155°	1291.9	1291.5	1290.9	1290.5	1290.0	1289.9	1290.1	1290.4	1290.7	1290.8	1292.0
157.5°	1316.3	1316.3	1316.3	1316.2	1316.2	1316.0	1315.8	1315.5	1315.4	1315.1	1316.5
160°	1331.2	1331.1	1330.8	1330.6	1330.3	1330.1	1329.9	1329.6	1329.5	1329.2	1330.6
162.5°	1345.3	1344.8	1344.2	1343.5	1342.9	1342.6	1342.3	1342.1	1341.8	1341.6	1343.2
165°	1362.4	1361.6	1360.9	1360.3	1359.6	1359.1	1358.9	1358.6	1358.4	1358.2	1360.0
167.5°	1375.6	1374.7	1373.8	1372.9	1371.9	1371.5	1371.5	1371.5	1371.5	1371.5	1373.3
170°	1383.0	1382.2	1381.3	1380.3	1379.4	1378.9	1378.9	1378.9	1378.9	1378.9	1380.7
172.5°	1388.0	1387.0	1385.8	1384.7	1383.6	1383.1	1383.3	1383.5	1383.7	1383.8	1385.7
175°	1394.5	1393.3	1392.1	1391.0	1389.8	1389.4	1389.6	1389.8	1390.1	1390.3	1392.0
177.5°	1396.2	1395.2	1394.3	1393.4	1392.4	1392.0	1392.2	1392.4	1392.6	1392.8	1394.3
180°	1394.5	1394.5	1394.5	1394.5	1394.5	1394.5	1394.5	1394.5	1394.5	1394.5	1394.5



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CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
0°	1411.5	1411.5	1411.5	1411.5	1411.5	1411.5	1411.5	1411.5
2.5°	1406.0	1408.3	1410.4	1411.4	1411.1	1411.0	1410.7	1410.5
5°	1398.6	1401.3	1404.1	1405.2	1404.6	1404.1	1403.6	1403.0
7.5°	1383.8	1386.3	1388.7	1389.7	1389.4	1389.1	1388.8	1388.4
10°	1370.2	1372.6	1375.1	1376.0	1375.5	1374.9	1374.4	1373.9
12.5°	1355.3	1357.1	1358.9	1359.6	1359.3	1359.0	1358.6	1358.3
15°	1328.4	1330.5	1332.8	1333.0	1331.4	1329.7	1328.1	1326.5
17.5°	1294.3	1295.8	1297.4	1297.8	1297.3	1296.6	1296.0	1295.5
20°	1269.2	1270.3	1271.4	1271.5	1270.7	1269.9	1269.1	1268.3
22.5°	1242.6	1243.4	1244.3	1244.2	1243.2	1242.2	1241.2	1240.1
25°	1198.4	1198.7	1199.0	1198.7	1197.8	1197.0	1196.2	1195.4
27.5°	1151.5	1151.6	1151.9	1151.5	1150.5	1149.4	1148.4	1147.4
30°	1119.0	1119.0	1119.0	1118.0	1116.2	1114.3	1112.4	1110.4
32.5°	1084.9	1083.4	1081.9	1080.6	1079.6	1078.5	1077.5	1076.5
35°	1029.6	1028.0	1026.4	1024.8	1023.5	1022.2	1020.8	1019.5
37.5°	972.4	970.4	968.5	967.1	966.3	965.4	964.5	963.7
40°	935.0	932.9	930.8	929.1	928.0	926.9	925.9	924.8
42.5°	896.2	894.0	891.9	890.3	889.2	888.1	887.1	886.0
45°	838.2	835.0	831.8	829.5	828.1	826.8	825.5	824.0
47.5°	777.1	774.0	770.8	768.7	767.4	766.2	765.1	763.8
50°	736.8	733.9	730.8	728.6	727.0	725.3	723.7	722.1
52.5°	695.9	693.4	690.9	688.8	687.2	685.5	683.9	682.3
55°	633.6	630.7	627.8	625.5	624.2	622.9	621.5	620.2
57.5°	572.4	569.8	567.1	565.0	563.5	561.9	560.4	558.7
60°	529.1	526.7	524.3	522.5	521.0	519.7	518.4	517.0
62.5°	487.4	485.0	482.5	480.9	479.9	479.0	478.1	477.2
65°	425.3	423.1	421.0	419.5	418.7	417.9	417.1	416.3
67.5°	363.7	361.9	360.0	358.5	357.3	356.1	355.0	353.9
70°	323.9	322.0	320.1	318.5	317.2	315.8	314.5	313.1
72.5°	283.6	281.9	280.2	279.0	278.3	277.6	277.0	276.3
75°	225.5	224.1	222.7	221.7	220.9	220.1	219.3	218.5
77.5°	171.2	170.3	169.4	169.0	169.0	169.0	169.0	169.0
80°	136.6	136.3	136.1	135.9	135.9	135.9	135.9	135.9
82.5°	105.1	104.6	104.2	103.8	103.5	103.3	103.2	102.9
85°	59.6	59.0	58.5	58.2	58.2	58.2	58.2	58.2
87.5°	26.3	26.2	26.2	26.2	26.3	26.4	26.5	26.6
90°	26.7	27.6	28.5	29.2	29.7	30.1	30.6	31.1
92.5°	29.4	30.9	32.5	33.3	33.5	33.9	34.2	34.4
95°	35.3	36.9	38.5	39.3	39.3	39.3	39.3	39.3
97.5°	37.0	38.9	40.8	41.7	42.0	42.3	42.4	42.7
100°	37.9	39.7	41.6	42.6	42.8	43.1	43.2	43.5
102.5°	56.7	51.0	45.3	42.7	43.1	43.5	44.0	44.3
105°	145.3	104.6	63.8	43.8	44.2	44.7	45.1	45.6
107.5°	356.1	326.2	296.3	266.0	235.3	204.6	173.9	143.2
110°	452.0	444.4	436.8	416.6	383.7	350.7	317.8	284.9



TEST NUMBER: P332042-940

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CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
112.5°	519.7	519.9	520.0	516.6	509.6	502.7	495.7	488.7
115°	599.2	601.5	603.9	605.5	606.4	607.3	608.2	609.1
117.5°	671.3	673.2	674.9	676.0	676.2	676.4	676.5	676.7
120°	718.5	720.3	722.2	723.1	723.1	723.1	723.1	723.1
122.5°	764.6	766.0	767.2	767.9	768.1	768.3	768.6	768.7
125°	829.7	830.2	830.6	831.1	831.5	832.1	832.5	832.9
127.5°	894.9	895.6	896.3	896.5	896.1	895.6	895.2	894.7
130°	934.2	935.1	936.1	936.3	935.9	935.4	935.0	934.5
132.5°	971.5	972.5	973.4	973.5	972.9	972.2	971.6	970.9
135°	1028.1	1028.8	1029.5	1029.5	1028.8	1028.1	1027.3	1026.7
137.5°	1078.4	1079.5	1080.6	1080.9	1080.5	1080.0	1079.6	1079.1
140°	1110.4	1111.3	1112.2	1112.4	1112.0	1111.5	1111.1	1110.6
142.5°	1140.7	1141.4	1142.1	1142.2	1141.6	1140.9	1140.2	1139.6
145°	1183.0	1183.5	1183.9	1184.1	1184.1	1184.1	1184.1	1184.1
147.5°	1220.9	1221.4	1221.8	1221.6	1220.5	1219.4	1218.3	1217.3
150°	1244.1	1244.6	1245.0	1244.9	1244.2	1243.6	1242.9	1242.2
152.5°	1264.7	1265.6	1266.4	1266.3	1265.2	1264.2	1263.1	1262.0
155°	1293.2	1294.3	1295.5	1295.3	1294.0	1292.6	1291.2	1289.9
157.5°	1317.9	1319.2	1320.6	1320.4	1318.7	1316.8	1315.0	1313.2
160°	1331.9	1333.3	1334.7	1334.6	1333.0	1331.4	1329.7	1328.1
162.5°	1344.8	1346.3	1347.9	1347.9	1346.5	1345.1	1343.6	1342.2
165°	1361.9	1363.7	1365.6	1365.7	1364.1	1362.4	1360.8	1359.2
167.5°	1375.1	1377.0	1378.9	1378.9	1377.0	1375.1	1373.3	1371.5
170°	1382.6	1384.5	1386.3	1386.3	1384.5	1382.6	1380.7	1378.9
172.5°	1387.6	1389.4	1391.2	1391.2	1389.1	1387.1	1385.1	1383.0
175°	1393.6	1395.2	1396.8	1396.6	1394.8	1392.9	1391.2	1389.3
177.5°	1395.7	1397.2	1398.6	1398.5	1396.7	1394.8	1392.9	1391.2
180°	1394.5	1394.5	1394.5	1394.5	1394.5	1394.5	1394.5	1394.5

(END OF REPORT)