

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: P333013-927

Luminaire Tested: **S124RDIP-S1195D1205U927-4F0-1E-UDD-F1**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P333013-927
REPORT IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-1807-864-10,
Test Lab: INNOVATION CENTER
Issue Date: 3/3/2020
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: NEO-RAY
Catalog Number: S124RDIP-S1195D1205U927-4F0-1E-UDD-F1
Description: DEFINE 4 DIRECT-INDIRECT PENDANT LED LUMINAIRE
DOWNLIGHT 1195 LUMENS PER FOOT, FLUSH SATIN WHITE DIFFUSER, REGRESSED
HOUSING
UPLIGHT 1205 LUMENS PER FOOT, FLUSH SATIN WHITE DIFFUSER
Light Source: -
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 7122.1 lumens
Efficiency: N/A
Efficacy: 99.3 lumens/watt
Spacing Criteria (0/90/45): 1.2 / 1.09 / 1.24
Luminous Opening: Rectangular (W 0.33' x L: 4' x H: 0')
CIE Type: General Diffuse

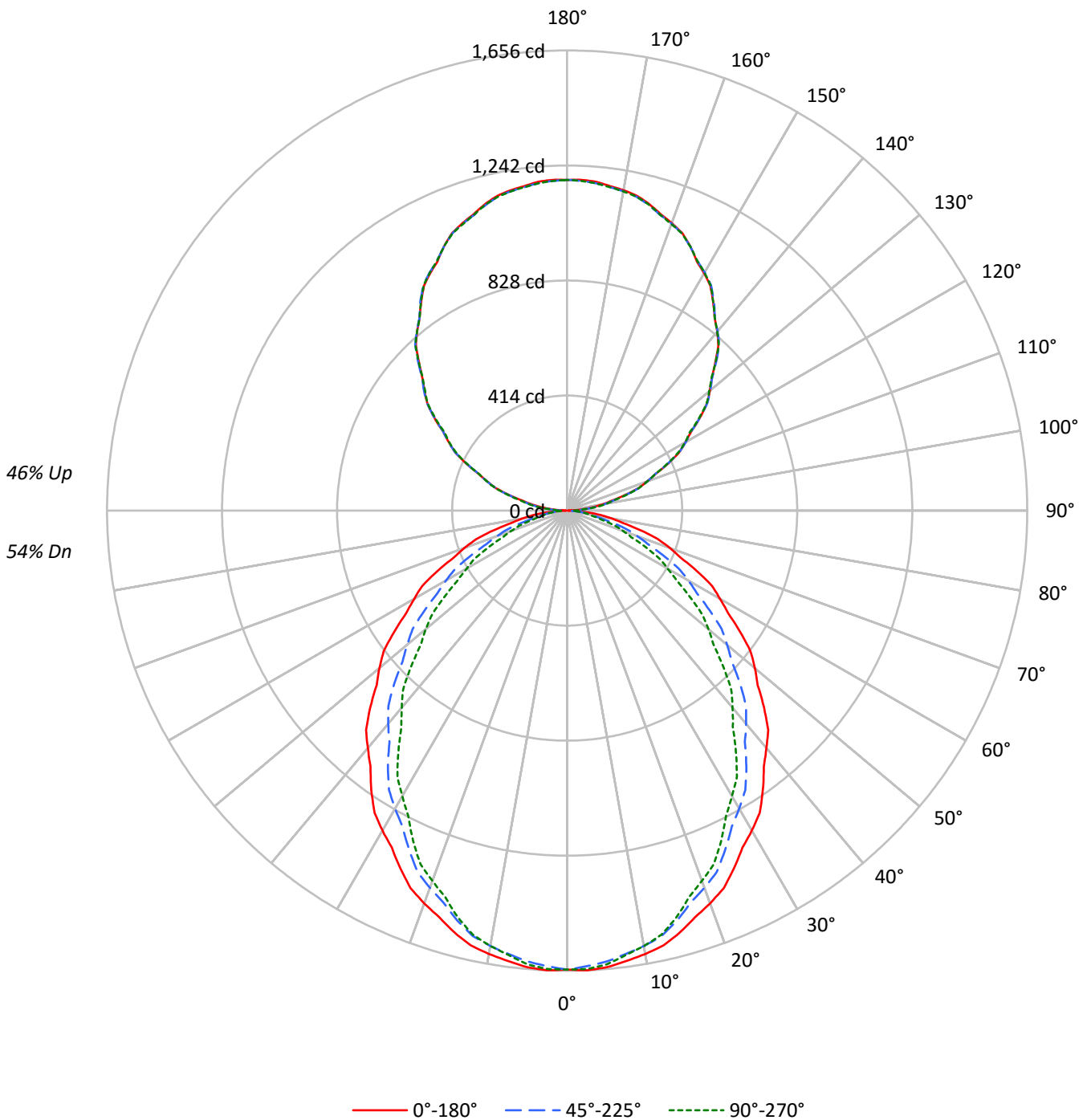
Input Watts (W): 71.7
Input Voltage (V): 120
Input Current (A_{in}): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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	108	108	108	108	100	100	100	100	85	85	85	72	72	72	59	59	59	54
1	99	95	91	87	92	88	85	82	75	73	71	64	62	60	53	52	51	46
2	90	83	77	72	83	77	72	67	66	62	59	56	53	51	47	45	43	39
3	83	73	66	60	76	68	62	57	59	54	50	50	46	43	42	39	37	33
4	76	65	57	51	70	61	54	48	52	47	43	45	41	37	38	35	32	29
5	70	58	50	44	64	54	47	42	47	41	37	40	36	33	34	31	28	25
6	64	52	44	38	59	49	42	36	42	37	32	36	32	29	31	28	25	22
7	59	47	39	34	55	44	37	32	39	33	29	33	29	25	28	25	22	20
8	55	43	35	30	51	40	33	28	35	30	26	30	26	23	26	23	20	18
9	51	39	32	27	48	37	30	25	32	27	23	28	24	21	24	21	18	16
10	48	36	29	24	45	34	27	23	30	24	21	26	22	19	22	19	17	15

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	13337	13337	13337
5°	13367	13203	13285
10°	13283	13045	13045
15°	13131	12771	12676
20°	12921	12411	12182
25°	12653	11989	11685
30°	12393	11544	11060
35°	12105	11083	10435
40°	11758	10559	9759
45°	11439	10038	9070
50°	11074	9437	8341
55°	10683	8812	7548
60°	10253	8128	6739
65°	9859	7272	5945
70°	9286	6331	5046
75°	8562	5250	4105
80°	7471	3998	3766
85°	6326	3631	3399



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	155.2	2.2
10°-20°	432.8	6.1
20°-30°	624.9	8.8
30°-40°	708.3	9.9
40°-50°	684.0	9.6
50°-60°	568.8	8.0
60°-70°	392.8	5.5
70°-80°	199.1	2.8
80°-90°	54.6	0.8
90°-100°	78.5	1.1
100°-110°	232.5	3.3
110°-120°	394.6	5.5
120°-130°	520.4	7.3
130°-140°	584.4	8.2
140°-150°	574.3	8.1
150°-160°	483.0	6.8
160°-170°	321.4	4.5
170°-180°	112.5	1.6
0°-30°	1212.9	17.0
0°-40°	1921.2	27.0
0°-60°	3174.0	44.6
0°-90°	3820.5	53.6
90°-120°	705.6	9.9
90°-150°	2384.7	33.5
90°-180°	3302.0	46.4
0°-180°	7122.1	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1652	1652	1652	1652	1652	
5°	1650	1644	1629	1641	1639	156
15°	1571	1559	1528	1525	1517	442
25°	1420	1396	1346	1325	1312	654
35°	1228	1186	1125	1083	1059	767
45°	1002	953	879	819	794	772
55°	759	707	626	563	536	679
65°	516	460	381	328	311	509
75°	274	227	168	140	132	290
85°	68	44	39	37	37	77
90°	3	13	20	26	28	7
95°	55	63	70	73	73	61
105°	214	216	219	222	225	228
115°	401	401	399	398	398	396
125°	584	584	584	582	580	521
135°	754	759	759	757	755	583
145°	916	919	920	919	917	573
155°	1049	1049	1048	1052	1048	483
165°	1142	1139	1138	1143	1139	322
175°	1188	1184	1183	1188	1183	113
180°	1190	1190	1190	1190	1190	



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CANDELA DISTRIBUTION (FULL):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
0°	1652.0	1652.0	1652.0	1652.0	1652.0	1652.0	1652.0	1652.0	1652.0	1652.0	1652.0
2.5°	1656.1	1655.2	1654.3	1653.4	1652.5	1650.8	1648.4	1645.8	1643.4	1640.9	1643.4
5°	1649.5	1648.4	1647.3	1646.2	1645.0	1642.7	1639.4	1636.0	1632.7	1629.3	1632.1
7.5°	1634.6	1633.4	1632.2	1631.0	1629.8	1627.1	1622.7	1618.3	1613.9	1609.6	1611.4
10°	1620.4	1619.0	1617.6	1616.2	1614.8	1611.5	1606.5	1601.5	1596.4	1591.3	1592.4
12.5°	1602.2	1600.6	1598.9	1597.3	1595.7	1591.9	1585.9	1580.0	1574.0	1568.0	1568.8
15°	1571.1	1568.5	1566.1	1563.5	1561.0	1556.2	1549.2	1542.1	1535.1	1528.0	1527.5
17.5°	1533.4	1529.7	1526.1	1522.4	1518.8	1512.8	1504.3	1495.9	1487.4	1479.0	1477.4
20°	1504.0	1500.4	1496.7	1493.1	1489.5	1482.8	1473.3	1463.7	1454.1	1444.6	1442.3
22.5°	1471.6	1467.6	1463.5	1459.4	1455.2	1448.1	1437.8	1427.6	1417.4	1407.2	1403.7
25°	1420.5	1415.5	1410.4	1405.4	1400.3	1392.0	1380.5	1369.0	1357.5	1345.9	1341.2
27.5°	1366.9	1360.6	1354.2	1347.9	1341.5	1332.2	1319.9	1307.6	1295.2	1282.9	1277.0
30°	1329.5	1322.5	1315.4	1308.4	1301.4	1291.3	1278.0	1264.8	1251.6	1238.4	1231.4
32.5°	1290.0	1282.1	1274.1	1266.2	1258.3	1247.5	1233.8	1220.2	1206.5	1192.9	1184.7
35°	1228.3	1219.2	1210.3	1201.3	1192.3	1180.7	1166.7	1152.7	1138.6	1124.6	1115.0
37.5°	1162.3	1152.9	1143.7	1134.4	1125.1	1112.7	1097.2	1081.6	1066.0	1050.4	1039.7
40°	1115.7	1106.4	1097.2	1087.9	1078.6	1066.0	1050.0	1033.9	1017.9	1001.9	990.1
42.5°	1071.2	1061.4	1051.7	1042.0	1032.3	1019.1	1002.3	985.6	969.0	952.3	940.2
45°	1001.9	991.4	981.0	970.7	960.3	946.6	929.8	912.9	896.0	879.2	865.4
47.5°	930.3	919.5	908.8	898.0	887.3	873.1	855.6	838.0	820.5	803.0	788.7
50°	881.7	870.7	859.8	848.8	837.8	823.3	805.3	787.3	769.4	751.4	737.4
52.5°	832.1	821.3	810.6	799.9	789.2	774.5	756.1	737.7	719.2	700.8	686.5
55°	759.0	747.7	736.5	725.2	714.0	699.3	681.0	662.7	644.4	626.1	611.6
57.5°	686.6	674.9	663.2	651.6	639.8	625.0	607.0	589.0	571.0	553.0	538.2
60°	635.0	623.8	612.5	601.3	590.0	575.4	557.5	539.5	521.4	503.4	488.9
62.5°	588.4	576.8	565.1	553.4	541.7	526.6	508.2	489.7	471.3	452.9	439.3
65°	516.1	504.0	491.9	479.8	467.8	452.7	434.7	416.8	398.8	380.7	368.7
67.5°	440.9	429.4	417.8	406.2	394.7	380.5	363.8	347.1	330.4	313.7	303.3
70°	393.4	381.6	369.8	358.0	346.2	332.2	316.2	300.2	284.2	268.2	258.9
72.5°	342.8	332.2	321.5	310.8	300.1	287.2	272.0	256.9	241.8	226.6	218.7
75°	274.5	264.1	253.7	243.3	232.9	221.1	207.9	194.6	181.5	168.3	161.8
77.5°	205.2	196.4	187.5	178.7	169.8	160.1	149.4	138.8	128.1	117.4	113.6
80°	160.7	152.5	144.3	136.2	128.0	119.8	111.3	102.9	94.4	86.0	85.2
82.5°	122.2	114.7	107.3	99.7	92.3	86.1	81.3	76.4	71.6	66.8	66.1
85°	68.3	62.7	57.0	51.4	45.8	42.6	41.7	40.9	40.1	39.2	38.7
87.5°	23.8	22.5	21.2	19.8	18.5	17.8	17.9	18.0	18.1	18.2	18.2
90°	2.8	5.0	7.3	9.5	11.7	13.7	15.4	17.0	18.6	20.3	21.5
92.5°	19.7	22.3	24.9	27.4	30.0	31.8	33.0	34.1	35.3	36.4	37.2
95°	55.2	57.0	58.9	60.8	62.6	64.2	65.7	67.1	68.5	69.9	70.6
97.5°	96.5	97.9	99.4	100.8	102.3	103.9	105.6	107.3	108.9	110.6	111.4
100°	128.9	129.7	130.5	131.3	132.1	133.5	135.3	137.1	138.9	140.9	141.2
102.5°	162.7	163.0	163.3	163.7	164.1	165.0	166.7	168.4	170.1	171.7	172.3
105°	214.4	214.7	214.8	215.1	215.2	215.8	216.6	217.4	218.2	219.0	219.7
107.5°	268.7	269.0	269.3	269.5	269.7	269.9	270.1	270.1	270.3	270.4	271.0
110°	305.5	305.9	306.3	306.8	307.2	307.3	307.1	306.9	306.7	306.5	306.1



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CANDELA DISTRIBUTION (continued):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
112.5°	343.8	344.0	344.0	344.1	344.2	344.0	343.6	343.3	342.9	342.5	342.5
115°	401.2	401.2	401.2	401.2	401.2	401.1	400.7	400.3	399.8	399.4	399.3
117.5°	455.4	455.6	455.7	455.9	456.1	456.0	455.7	455.4	455.1	454.9	454.2
120°	491.5	492.3	493.1	493.9	494.7	494.9	494.2	493.6	493.0	492.4	491.4
122.5°	529.0	529.3	529.7	530.0	530.4	530.4	530.0	529.8	529.5	529.2	528.5
125°	584.4	584.4	584.4	584.4	584.4	584.3	584.2	583.9	583.7	583.5	583.1
127.5°	634.7	635.3	635.9	636.5	637.2	637.3	636.9	636.6	636.3	636.0	635.6
130°	670.0	670.7	671.2	671.8	672.5	672.8	672.8	672.8	672.8	672.8	672.4
132.5°	706.1	706.5	707.0	707.4	707.9	708.1	707.9	707.7	707.6	707.4	706.9
135°	753.8	755.0	756.2	757.5	758.7	759.3	759.3	759.3	759.3	759.3	758.9
137.5°	805.6	806.3	806.8	807.4	807.9	808.4	808.7	809.1	809.4	809.7	809.2
140°	840.3	840.7	841.1	841.5	841.9	842.1	842.1	842.1	842.1	842.1	841.9
142.5°	872.0	872.4	872.7	873.1	873.6	873.7	873.5	873.4	873.2	873.1	873.0
145°	915.8	916.6	917.4	918.2	919.0	919.6	919.7	920.0	920.1	920.4	920.1
147.5°	959.2	960.2	961.2	962.1	963.1	963.5	963.4	963.2	963.1	962.9	962.7
150°	985.7	986.5	987.4	988.2	989.0	989.4	989.4	989.4	989.4	989.4	989.4
152.5°	1010.7	1011.2	1011.7	1012.2	1012.7	1013.0	1013.2	1013.4	1013.5	1013.7	1014.2
155°	1049.2	1049.2	1049.2	1049.2	1049.2	1049.1	1048.9	1048.7	1048.5	1048.3	1049.1
157.5°	1081.6	1081.2	1080.9	1080.5	1080.1	1079.9	1079.9	1079.8	1079.8	1079.7	1080.4
160°	1100.7	1100.6	1100.3	1100.1	1099.9	1099.7	1099.5	1099.3	1099.1	1098.9	1099.5
162.5°	1118.4	1117.8	1117.4	1116.8	1116.3	1115.9	1115.7	1115.6	1115.3	1115.1	1116.2
165°	1142.2	1141.5	1140.9	1140.3	1139.7	1139.2	1138.8	1138.4	1138.0	1137.6	1138.8
167.5°	1160.4	1159.5	1158.6	1157.8	1157.0	1156.5	1156.6	1156.6	1156.7	1156.7	1157.9
170°	1170.7	1169.7	1168.6	1167.6	1166.6	1166.2	1166.4	1166.6	1166.8	1167.0	1168.2
172.5°	1178.1	1177.2	1176.3	1175.4	1174.6	1174.2	1174.3	1174.3	1174.3	1174.4	1175.8
175°	1188.2	1187.2	1186.1	1185.1	1184.1	1183.4	1183.3	1183.0	1182.9	1182.6	1184.1
177.5°	1191.5	1190.6	1189.9	1189.1	1188.2	1187.8	1187.8	1187.8	1187.8	1187.8	1189.0
180°	1190.0	1190.0	1190.0	1190.0	1190.0	1190.0	1190.0	1190.0	1190.0	1190.0	1190.0



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CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
0°	1652.0	1652.0	1652.0	1652.0	1652.0	1652.0	1652.0	1652.0
2.5°	1645.8	1648.4	1650.8	1651.9	1651.7	1651.5	1651.2	1651.1
5°	1634.9	1637.7	1640.5	1641.6	1641.1	1640.5	1640.0	1639.4
7.5°	1613.1	1614.9	1616.8	1617.2	1616.3	1615.4	1614.5	1613.6
10°	1593.6	1594.7	1595.9	1595.9	1594.7	1593.6	1592.4	1591.3
12.5°	1569.4	1570.1	1570.7	1570.3	1568.8	1567.2	1565.6	1564.0
15°	1526.9	1526.4	1525.8	1524.6	1522.6	1520.6	1518.7	1516.7
17.5°	1475.8	1474.3	1472.7	1470.4	1467.4	1464.4	1461.5	1458.5
20°	1440.1	1437.8	1435.6	1432.7	1429.0	1425.4	1421.7	1418.0
22.5°	1400.4	1397.0	1393.7	1390.5	1387.5	1384.5	1381.6	1378.6
25°	1336.3	1331.6	1326.8	1323.0	1320.2	1317.4	1314.5	1311.8
27.5°	1271.1	1265.2	1259.3	1254.3	1250.3	1246.3	1242.2	1238.2
30°	1224.3	1217.3	1210.3	1204.5	1200.0	1195.6	1191.0	1186.5
32.5°	1176.5	1168.4	1160.2	1154.1	1149.8	1145.5	1141.2	1136.9
35°	1105.4	1095.9	1086.3	1079.0	1074.0	1068.9	1063.8	1058.8
37.5°	1029.0	1018.4	1007.7	999.8	994.7	989.7	984.7	979.6
40°	978.3	966.5	954.7	946.2	941.1	936.0	931.1	926.0
42.5°	928.2	916.2	904.1	895.5	890.2	884.9	879.6	874.3
45°	851.6	837.8	824.0	814.6	809.6	804.5	799.5	794.4
47.5°	774.4	760.2	745.9	735.9	730.4	724.8	719.2	713.7
50°	723.3	709.2	695.1	685.5	680.2	674.8	669.5	664.1
52.5°	672.2	658.0	643.6	633.7	628.2	622.7	617.0	611.5
55°	596.9	582.3	567.7	557.7	552.4	547.0	541.7	536.3
57.5°	523.4	508.5	493.7	484.3	480.2	476.1	472.1	468.0
60°	474.2	459.6	445.0	435.5	430.9	426.4	421.9	417.4
62.5°	425.9	412.4	398.9	390.3	386.7	383.2	379.5	376.0
65°	356.6	344.5	332.4	324.6	321.3	317.9	314.6	311.2
67.5°	292.9	282.5	272.1	265.1	261.3	257.6	253.9	250.2
70°	249.6	240.3	231.1	225.1	222.2	219.4	216.6	213.8
72.5°	210.8	202.9	195.0	189.7	187.1	184.6	182.0	179.4
75°	155.3	148.9	142.4	138.3	136.7	134.9	133.2	131.6
77.5°	109.9	106.1	102.3	100.2	99.7	99.2	98.7	98.2
80°	84.4	83.5	82.6	82.1	81.8	81.5	81.3	81.0
82.5°	65.6	65.0	64.3	63.8	63.6	63.3	63.1	62.7
85°	38.1	37.5	37.0	36.7	36.7	36.7	36.7	36.7
87.5°	18.2	18.3	18.3	18.5	18.8	19.1	19.4	19.7
90°	22.7	23.9	25.2	26.0	26.4	26.8	27.2	27.6
92.5°	37.9	38.7	39.4	39.8	40.2	40.4	40.6	40.9
95°	71.1	71.8	72.4	72.7	72.7	72.7	72.7	72.7
97.5°	112.1	112.8	113.6	113.9	113.9	113.9	113.9	113.9
100°	141.6	142.0	142.4	142.7	142.7	142.7	142.7	142.7
102.5°	172.9	173.5	174.0	174.4	174.6	174.8	174.9	175.1
105°	220.3	220.9	221.5	222.1	222.8	223.3	223.9	224.6
107.5°	271.6	272.1	272.7	273.0	272.9	272.9	272.8	272.8
110°	305.6	305.2	304.8	304.9	305.5	306.2	306.8	307.4



TEST NUMBER: P333013-927

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CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
112.5°	342.4	342.3	342.2	342.2	342.4	342.5	342.6	342.8
115°	399.0	398.8	398.6	398.4	398.2	398.0	397.8	397.6
117.5°	453.4	452.7	452.0	451.5	451.1	450.7	450.3	449.9
120°	490.4	489.3	488.3	488.0	488.4	488.8	489.3	489.6
122.5°	527.8	527.1	526.4	525.7	525.0	524.3	523.5	522.8
125°	582.7	582.3	581.9	581.5	581.1	580.7	580.2	579.8
127.5°	635.2	634.8	634.3	634.0	633.7	633.3	633.0	632.6
130°	671.9	671.5	671.1	670.5	669.7	668.9	668.0	667.3
132.5°	706.5	706.2	705.8	705.4	705.0	704.7	704.4	704.1
135°	758.5	758.0	757.6	757.2	756.5	755.9	755.3	754.7
137.5°	808.7	808.1	807.6	807.4	807.6	807.6	807.8	807.9
140°	841.7	841.5	841.3	841.1	840.9	840.7	840.5	840.3
142.5°	873.0	872.9	872.9	872.8	872.8	872.7	872.7	872.7
145°	920.0	919.7	919.6	919.1	918.5	917.9	917.3	916.7
147.5°	962.6	962.4	962.2	962.0	961.9	961.6	961.4	961.2
150°	989.4	989.4	989.4	989.3	989.0	988.9	988.6	988.5
152.5°	1014.6	1015.2	1015.7	1015.7	1015.1	1014.5	1014.0	1013.5
155°	1050.0	1050.8	1051.5	1051.5	1050.8	1050.0	1049.1	1048.3
157.5°	1081.0	1081.6	1082.2	1082.2	1081.5	1080.8	1080.1	1079.4
160°	1100.1	1100.7	1101.4	1101.1	1100.1	1099.1	1098.1	1097.1
162.5°	1117.3	1118.4	1119.5	1119.6	1118.6	1117.5	1116.5	1115.5
165°	1140.0	1141.2	1142.5	1142.6	1141.9	1141.1	1140.2	1139.4
167.5°	1159.1	1160.4	1161.6	1161.6	1160.3	1159.0	1157.8	1156.5
170°	1169.5	1170.7	1172.0	1171.8	1170.4	1168.9	1167.5	1166.1
172.5°	1177.2	1178.5	1180.0	1180.0	1178.5	1177.0	1175.6	1174.2
175°	1185.5	1186.9	1188.4	1188.4	1186.9	1185.5	1184.1	1182.6
177.5°	1190.1	1191.3	1192.4	1192.3	1191.0	1189.7	1188.4	1187.1
180°	1190.0	1190.0	1190.0	1190.0	1190.0	1190.0	1190.0	1190.0

(END OF REPORT)