

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: P332381

Luminaire Tested: **S123RDIP-S1165D1025U835-4F0-1E-UDD-F**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P332381
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: S123RDIP-S1165D1025U835-4F0-1E-UDD-F
Description: DEFINE 3 DIRECT-INDIRECT PENDANT LED LUMINAIRE
DOWNLIGHT 1165 LUMENS PER FOOT, FLUSH SATIN WHITE DIFFUSER, REGRESSED
HOUSING
UPLIGHT 1025 LUMENS PER FOOT, NO LENS
Light Source: -
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 8479.3 lumens
Efficiency: N/A
Efficacy: 126.9 lumens/watt
Spacing Criteria (0/90/45): 1.21 / 1.06 / 1.22
Luminous Opening: Rectangular (W 0.25' x L: 4' x H: 0')
CIE Type: General Diffuse

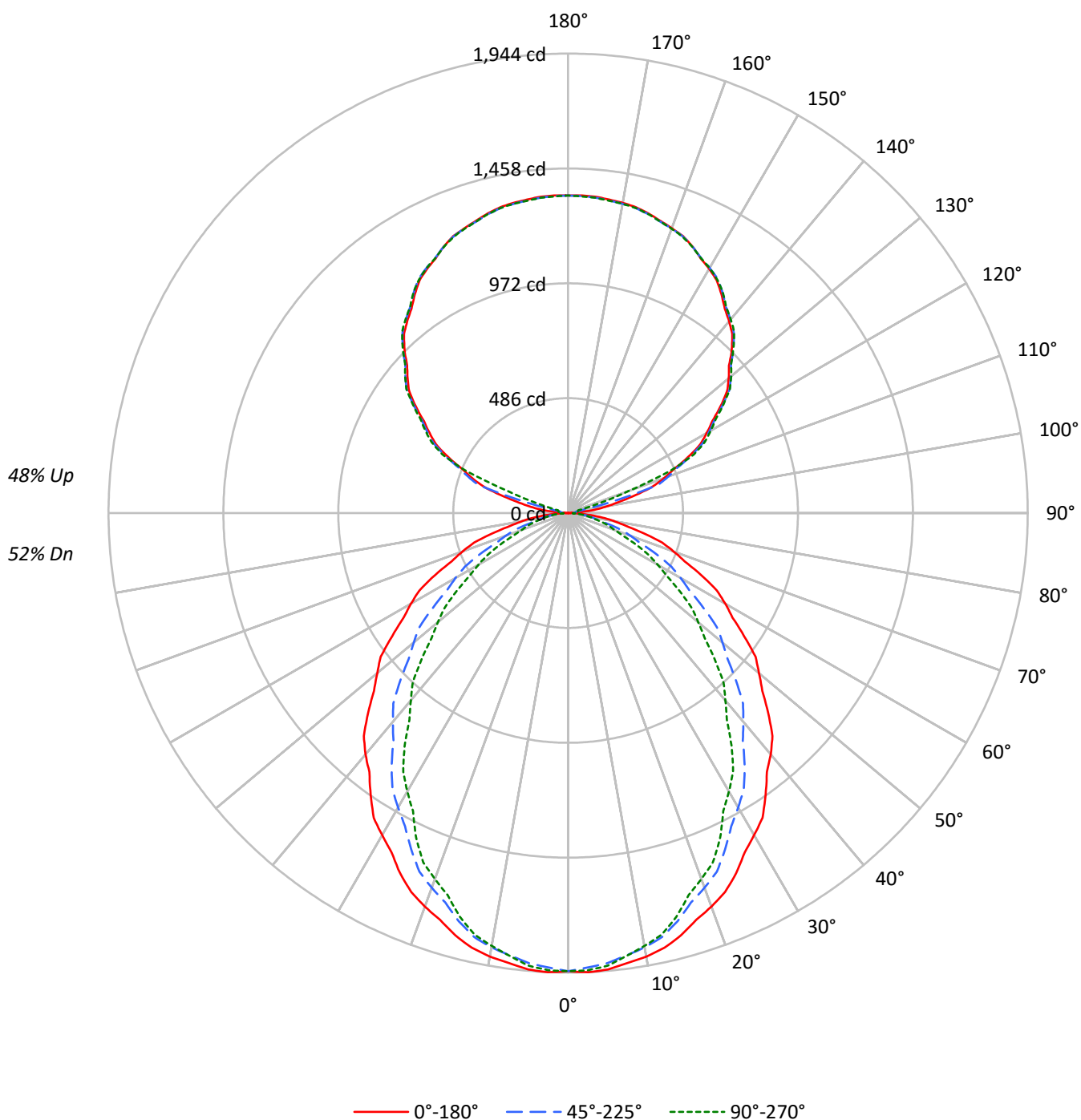
Input Watts (W): 66.8
Input Voltage (V): 120
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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	0			
RCR																					
0	108	108	108	108	99	99	99	99	84	84	84	70	70	70	58	58	58	52			
1	99	94	91	87	91	87	84	81	74	72	70	62	61	59	51	50	49	44			
2	90	83	77	72	83	77	72	67	66	62	58	55	52	50	46	44	42	38			
3	82	73	66	60	76	68	62	56	58	53	49	49	46	43	41	38	36	32			
4	75	65	57	51	70	60	53	48	52	47	42	44	40	37	37	34	31	28			
5	69	58	50	44	64	54	47	42	47	41	37	40	35	32	33	30	28	24			
6	64	52	44	38	59	49	41	36	42	36	32	36	32	28	30	27	24	22			
7	59	47	39	34	55	44	37	32	38	33	29	33	28	25	28	24	22	19			
8	55	43	35	30	51	40	33	28	35	29	25	30	26	23	25	22	20	17			
9	51	39	32	27	47	37	30	25	32	27	23	28	23	20	24	20	18	16			
10	48	36	29	24	44	34	27	23	30	24	21	26	21	18	22	19	16	14			

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	20863	20863	20863
5°	20942	20653	20772
10°	20824	20394	20325
15°	20600	19917	19706
20°	20292	19321	18871
25°	19975	18650	18053
30°	19557	17877	16900
35°	19127	17102	15843
40°	18730	16190	14533
45°	18209	15289	13352
50°	17637	14267	12030
55°	17051	13097	10796
60°	16514	11845	9442
65°	15814	10488	8087
70°	14940	8806	6530
75°	13662	6929	6147
80°	12180	6137	5653
85°	10288	5434	5051

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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	182.0	2.1
10°-20°	506.4	6.0
20°-30°	729.2	8.6
30°-40°	821.3	9.7
40°-50°	785.8	9.3
50°-60°	643.5	7.6
60°-70°	434.1	5.1
70°-80°	218.4	2.6
80°-90°	61.5	0.7
90°-100°	48.8	0.6
100°-110°	232.8	2.7
110°-120°	559.2	6.6
120°-130°	712.1	8.4
130°-140°	760.8	9.0
140°-150°	711.5	8.4
150°-160°	573.9	6.8
160°-170°	370.4	4.4
170°-180°	127.6	1.5
0°-30°	1417.6	16.7
0°-40°	2238.9	26.4
0°-60°	3668.1	43.3
0°-90°	4382.2	51.7
90°-120°	840.8	9.9
90°-150°	3025.2	35.7
90°-180°	4097.0	48.3
0°-180°	8479.3	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1938	1938	1938	1938	1938	
5°	1938	1930	1911	1925	1922	184
15°	1849	1830	1787	1779	1768	521
25°	1682	1641	1570	1538	1520	773
35°	1456	1397	1302	1236	1206	911
45°	1196	1123	1004	918	877	923
55°	909	828	698	610	575	814
65°	621	532	412	338	318	614
75°	328	252	167	152	148	350
85°	83	50	44	41	41	94
90°	1	11	24	28	30	7
95°	61	23	31	38	38	75
105°	297	303	219	52	44	315
115°	558	564	573	583	587	551
125°	786	794	798	800	802	702
135°	979	985	989	992	989	754
145°	1130	1137	1139	1141	1141	707
155°	1245	1243	1244	1248	1243	573
165°	1313	1310	1309	1316	1310	371
175°	1344	1339	1340	1346	1338	128
180°	1344	1344	1344	1344	1344	

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CANDELA DISTRIBUTION (FULL):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
0°	1938.2	1938.2	1938.2	1938.2	1938.2	1938.2	1938.2	1938.2	1938.2	1938.2	1938.2
2.5°	1944.5	1943.3	1942.2	1941.1	1940.0	1937.7	1934.4	1931.0	1927.7	1924.3	1927.4
5°	1938.2	1936.4	1934.7	1932.9	1931.2	1928.2	1924.0	1919.8	1915.6	1911.4	1914.6
7.5°	1920.2	1918.4	1916.5	1914.6	1912.7	1909.0	1903.6	1898.1	1892.7	1887.2	1889.0
10°	1905.2	1902.7	1900.3	1897.8	1895.4	1891.0	1884.7	1878.4	1872.1	1865.9	1866.2
12.5°	1883.8	1881.1	1878.3	1875.6	1872.9	1867.7	1860.0	1852.3	1844.6	1836.9	1836.7
15°	1848.6	1844.7	1840.9	1837.0	1833.2	1826.4	1816.6	1806.8	1797.0	1787.3	1785.5
17.5°	1804.2	1799.8	1795.3	1790.8	1786.4	1777.9	1765.5	1753.0	1740.6	1728.2	1724.5
20°	1771.5	1766.0	1760.4	1754.8	1749.2	1739.8	1726.5	1713.2	1699.9	1686.7	1682.1
22.5°	1735.1	1728.6	1722.2	1715.8	1709.4	1699.1	1685.0	1670.9	1656.8	1642.6	1637.0
25°	1681.9	1673.2	1664.5	1655.7	1647.0	1634.6	1618.5	1602.5	1586.4	1570.3	1563.0
27.5°	1617.5	1607.9	1598.2	1588.6	1578.9	1565.2	1547.3	1529.4	1511.5	1493.6	1483.4
30°	1573.5	1563.0	1552.5	1542.0	1531.6	1516.5	1497.0	1477.4	1457.9	1438.3	1426.4
32.5°	1529.5	1517.6	1505.7	1493.8	1482.0	1465.7	1445.0	1424.3	1403.6	1383.0	1370.0
35°	1455.6	1443.0	1430.4	1417.9	1405.3	1388.2	1366.5	1344.9	1323.2	1301.5	1286.5
37.5°	1380.8	1366.8	1352.8	1338.8	1324.9	1306.3	1283.2	1260.1	1237.0	1213.8	1196.8
40°	1333.0	1317.6	1302.2	1286.9	1271.5	1251.4	1226.6	1201.8	1177.0	1152.2	1134.0
42.5°	1278.9	1263.5	1248.2	1232.8	1217.4	1196.9	1171.3	1145.6	1120.0	1094.4	1074.5
45°	1196.2	1180.5	1164.8	1149.1	1133.3	1112.0	1085.1	1058.2	1031.3	1004.4	984.5
47.5°	1113.5	1096.3	1079.0	1061.8	1044.5	1022.4	995.5	968.6	941.7	914.9	893.2
50°	1053.2	1036.8	1020.3	1003.9	987.5	965.2	936.9	908.6	880.3	852.0	830.3
52.5°	999.1	981.3	963.5	945.7	927.8	904.9	876.9	848.9	820.9	792.9	770.4
55°	908.6	891.4	874.3	857.2	840.1	816.7	787.0	757.3	727.6	697.9	677.7
57.5°	824.9	806.3	787.6	769.0	750.3	726.1	696.3	666.4	636.6	606.8	587.6
60°	767.1	747.9	728.7	709.5	690.2	666.1	637.1	608.2	579.2	550.2	531.3
62.5°	709.2	690.0	670.8	651.6	632.4	608.3	579.3	550.3	521.3	492.3	474.6
65°	620.9	601.7	582.5	563.3	544.1	520.8	493.6	466.3	439.1	411.8	394.7
67.5°	532.6	513.1	493.7	474.3	454.9	432.1	406.0	379.8	353.7	327.6	314.8
70°	474.7	455.9	437.0	418.1	399.3	377.6	353.2	328.7	304.3	279.8	267.6
72.5°	416.9	398.3	379.7	361.1	342.5	322.1	299.9	277.7	255.5	233.3	223.3
75°	328.5	311.8	295.0	278.2	261.5	243.5	224.3	205.0	185.8	166.6	163.1
77.5°	248.0	232.9	217.7	202.6	187.4	173.6	161.3	148.9	136.5	124.2	122.3
80°	196.5	182.2	167.8	153.5	139.2	128.4	121.0	113.7	106.4	99.0	98.0
82.5°	147.4	135.1	122.7	110.3	98.0	90.1	86.7	83.2	79.8	76.4	75.3
85°	83.3	75.6	67.9	60.3	52.6	48.2	47.2	46.1	45.1	44.0	43.3
87.5°	30.4	27.7	25.1	22.5	19.9	18.8	19.4	20.0	20.6	21.1	21.0
90°	1.0	3.2	5.4	7.7	9.9	12.4	15.3	18.2	21.1	24.0	24.8
92.5°	18.6	17.9	17.3	16.7	16.1	16.9	19.0	21.2	23.4	25.6	27.0
95°	60.9	51.8	42.7	33.6	24.5	21.2	23.6	26.1	28.5	30.9	32.5
97.5°	122.4	118.3	114.2	110.1	106.0	96.0	80.1	64.1	48.1	32.1	33.9
100°	168.7	173.1	177.6	182.0	186.4	171.3	136.7	102.1	67.5	32.9	34.7
102.5°	221.4	224.6	227.8	231.0	234.2	216.9	179.1	141.3	103.5	65.7	60.2
105°	297.4	299.9	302.3	304.8	307.2	298.4	278.5	258.5	238.6	218.6	179.3
107.5°	377.7	379.7	381.6	383.6	385.5	388.1	391.2	394.4	397.5	400.7	371.9
110°	431.2	433.0	434.7	436.5	438.3	440.4	442.8	445.3	447.7	450.2	442.8

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CANDELA DISTRIBUTION (continued):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
112.5°	482.3	483.9	485.5	487.1	488.7	490.7	493.2	495.6	498.0	500.5	500.6
115°	558.0	559.3	560.6	562.0	563.3	565.0	566.9	568.9	570.9	572.9	575.2
117.5°	631.2	632.9	634.5	636.2	637.8	639.1	640.1	641.2	642.2	643.2	645.0
120°	676.7	678.7	680.7	682.7	684.7	686.1	686.7	687.4	688.1	688.7	690.5
122.5°	723.1	724.7	726.3	728.0	729.6	730.9	731.7	732.6	733.4	734.2	735.5
125°	786.5	788.3	790.1	791.9	793.6	795.0	795.9	796.7	797.6	798.5	799.0
127.5°	848.0	849.8	851.6	853.3	855.1	856.5	857.6	858.7	859.7	860.8	861.5
130°	886.4	888.1	889.9	891.7	893.5	894.8	895.7	896.6	897.4	898.3	899.2
132.5°	923.1	924.9	926.6	928.4	930.2	931.4	932.1	932.8	933.6	934.3	935.2
135°	979.2	980.5	981.8	983.2	984.5	985.6	986.5	987.4	988.3	989.2	989.8
137.5°	1027.1	1028.8	1030.5	1032.2	1033.8	1034.9	1035.4	1035.9	1036.4	1036.9	1037.9
140°	1059.0	1060.4	1061.7	1063.0	1064.4	1065.4	1066.0	1066.7	1067.4	1068.0	1068.9
142.5°	1088.6	1089.9	1091.2	1092.6	1093.9	1094.9	1095.6	1096.2	1096.9	1097.6	1098.3
145°	1129.9	1131.5	1133.0	1134.6	1136.1	1137.1	1137.6	1138.0	1138.4	1138.9	1139.3
147.5°	1168.8	1169.9	1170.9	1171.9	1172.9	1173.6	1174.1	1174.5	1175.0	1175.4	1175.9
150°	1192.8	1193.5	1194.1	1194.8	1195.4	1196.0	1196.4	1196.9	1197.3	1197.8	1198.2
152.5°	1214.3	1214.7	1215.0	1215.3	1215.6	1215.9	1216.1	1216.4	1216.7	1216.9	1217.7
155°	1244.7	1244.2	1243.8	1243.4	1242.9	1242.8	1243.0	1243.2	1243.5	1243.7	1244.8
157.5°	1268.2	1268.2	1268.2	1268.1	1268.1	1267.9	1267.7	1267.5	1267.3	1267.0	1268.4
160°	1282.6	1282.4	1282.2	1282.0	1281.7	1281.5	1281.3	1281.1	1280.8	1280.6	1282.0
162.5°	1296.2	1295.6	1295.0	1294.5	1293.9	1293.5	1293.3	1293.0	1292.8	1292.6	1294.1
165°	1312.6	1311.9	1311.2	1310.6	1309.9	1309.5	1309.2	1309.0	1308.8	1308.6	1310.3
167.5°	1325.3	1324.5	1323.6	1322.7	1321.8	1321.3	1321.3	1321.3	1321.3	1321.3	1323.1
170°	1332.5	1331.6	1330.8	1329.9	1329.0	1328.5	1328.5	1328.5	1328.5	1328.5	1330.3
172.5°	1337.3	1336.3	1335.2	1334.1	1333.1	1332.6	1332.8	1333.0	1333.1	1333.3	1335.1
175°	1343.5	1342.4	1341.3	1340.2	1339.1	1338.6	1338.8	1339.1	1339.3	1339.5	1341.1
177.5°	1345.1	1344.2	1343.3	1342.4	1341.6	1341.2	1341.4	1341.6	1341.7	1341.9	1343.3
180°	1343.5	1343.5	1343.5	1343.5	1343.5	1343.5	1343.5	1343.5	1343.5	1343.5	1343.5

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CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
0°	1938.2	1938.2	1938.2	1938.2	1938.2	1938.2	1938.2	1938.2
2.5°	1930.5	1933.6	1936.6	1937.9	1937.3	1936.8	1936.2	1935.6
5°	1917.7	1920.9	1924.0	1925.2	1924.5	1923.8	1923.1	1922.4
7.5°	1890.7	1892.5	1894.2	1894.5	1893.3	1892.1	1890.9	1889.7
10°	1866.6	1866.9	1867.3	1866.6	1864.8	1863.1	1861.3	1859.6
12.5°	1836.5	1836.3	1836.1	1835.0	1833.0	1830.9	1828.9	1826.9
15°	1783.8	1782.0	1780.3	1778.2	1775.7	1773.3	1770.8	1768.4
17.5°	1720.8	1717.0	1713.3	1709.7	1706.0	1702.4	1698.8	1695.1
20°	1677.6	1673.0	1668.5	1664.1	1659.9	1655.7	1651.6	1647.4
22.5°	1631.3	1625.7	1620.0	1615.2	1611.3	1607.4	1603.5	1599.6
25°	1555.7	1548.3	1541.0	1535.4	1531.6	1527.7	1523.9	1520.0
27.5°	1473.2	1463.0	1452.8	1444.8	1438.9	1433.1	1427.2	1421.3
30°	1414.5	1402.7	1390.8	1382.1	1376.5	1370.9	1365.3	1359.7
32.5°	1357.0	1344.0	1331.0	1321.6	1315.7	1309.8	1304.0	1298.1
35°	1271.5	1256.5	1241.5	1230.8	1224.5	1218.2	1211.9	1205.7
37.5°	1179.7	1162.7	1145.6	1133.2	1125.5	1117.7	1110.0	1102.2
40°	1115.9	1097.7	1079.6	1066.5	1058.4	1050.4	1042.4	1034.3
42.5°	1054.7	1034.8	1015.0	1001.5	994.3	987.1	979.9	972.7
45°	964.6	944.7	924.8	910.7	902.3	893.9	885.5	877.1
47.5°	871.5	849.9	828.2	813.7	806.2	798.7	791.2	783.8
50°	808.7	787.0	765.3	750.5	742.5	734.4	726.4	718.4
52.5°	747.9	725.4	702.9	688.0	680.8	673.7	666.5	659.3
55°	657.4	637.1	616.9	603.3	596.3	589.3	582.3	575.3
57.5°	568.5	549.3	530.2	517.6	511.7	505.8	499.8	493.9
60°	512.4	493.6	474.7	462.3	456.4	450.4	444.5	438.6
62.5°	456.8	439.1	421.3	409.4	403.1	396.9	390.7	384.5
65°	377.6	360.5	343.4	332.9	329.1	325.2	321.4	317.5
67.5°	302.0	289.2	276.4	268.0	263.9	259.7	255.6	251.5
70°	255.3	243.1	230.9	222.9	219.0	215.2	211.3	207.5
72.5°	213.3	203.3	193.3	187.5	185.9	184.3	182.7	181.1
75°	159.6	156.1	152.6	150.6	149.9	149.2	148.5	147.8
77.5°	120.4	118.5	116.6	115.3	114.6	113.9	113.2	112.5
80°	96.9	95.9	94.8	94.0	93.3	92.6	91.9	91.2
82.5°	74.3	73.3	72.2	71.6	71.5	71.3	71.2	71.1
85°	42.6	41.9	41.2	40.9	40.9	40.9	40.9	40.9
87.5°	20.9	20.8	20.7	20.6	20.4	20.2	20.0	19.8
90°	25.7	26.6	27.5	28.2	28.6	29.1	29.5	29.9
92.5°	28.4	29.8	31.2	32.1	32.3	32.6	32.9	33.1
95°	34.0	35.6	37.2	37.9	37.9	37.9	37.9	37.9
97.5°	35.7	37.5	39.2	40.2	40.5	40.7	40.9	41.1
100°	36.5	38.3	40.0	41.0	41.3	41.5	41.7	41.9
102.5°	54.7	49.2	43.7	41.1	41.5	41.9	42.3	42.7
105°	140.1	100.8	61.6	42.1	42.6	43.0	43.5	43.9
107.5°	343.1	314.3	285.5	256.3	226.7	197.1	167.5	137.9
110°	435.5	428.2	420.9	401.4	369.6	337.9	306.2	274.5

TEST NUMBER: P332381

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CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
112.5°	500.7	500.9	501.0	497.7	491.0	484.3	477.6	470.9
115°	577.4	579.6	581.8	583.4	584.2	585.1	586.0	586.9
117.5°	646.8	648.5	650.3	651.3	651.5	651.6	651.8	652.0
120°	692.3	694.0	695.8	696.7	696.7	696.7	696.7	696.7
122.5°	736.7	738.0	739.2	739.9	740.1	740.3	740.4	740.6
125°	799.4	799.8	800.3	800.7	801.2	801.6	802.1	802.5
127.5°	862.2	862.9	863.6	863.8	863.3	862.9	862.4	862.0
130°	900.1	901.0	901.9	902.1	901.7	901.2	900.8	900.3
132.5°	936.0	936.9	937.8	937.9	937.3	936.7	936.1	935.5
135°	990.5	991.2	991.8	991.8	991.2	990.5	989.8	989.2
137.5°	1039.0	1040.1	1041.1	1041.4	1041.0	1040.6	1040.1	1039.7
140°	1069.8	1070.7	1071.6	1071.8	1071.3	1070.9	1070.5	1070.0
142.5°	1099.0	1099.7	1100.4	1100.4	1099.8	1099.2	1098.6	1098.0
145°	1139.8	1140.2	1140.7	1140.9	1140.9	1140.9	1140.9	1140.9
147.5°	1176.3	1176.7	1177.2	1176.9	1175.9	1174.9	1173.8	1172.8
150°	1198.7	1199.1	1199.6	1199.4	1198.8	1198.1	1197.4	1196.8
152.5°	1218.5	1219.3	1220.1	1220.0	1219.0	1218.0	1217.0	1215.9
155°	1245.9	1247.0	1248.1	1248.0	1246.7	1245.4	1244.0	1242.7
157.5°	1269.7	1271.0	1272.4	1272.2	1270.4	1268.7	1267.0	1265.3
160°	1283.3	1284.6	1285.9	1285.8	1284.3	1282.7	1281.2	1279.6
162.5°	1295.6	1297.1	1298.6	1298.7	1297.3	1295.9	1294.6	1293.2
165°	1312.1	1313.9	1315.7	1315.8	1314.2	1312.7	1311.1	1309.6
167.5°	1324.9	1326.7	1328.4	1328.4	1326.7	1324.9	1323.1	1321.3
170°	1332.1	1333.9	1335.6	1335.6	1333.9	1332.1	1330.3	1328.5
172.5°	1336.9	1338.6	1340.4	1340.3	1338.4	1336.4	1334.5	1332.5
175°	1342.6	1344.2	1345.7	1345.6	1343.8	1342.1	1340.3	1338.5
177.5°	1344.7	1346.2	1347.6	1347.4	1345.6	1343.9	1342.1	1340.3
180°	1343.5	1343.5	1343.5	1343.5	1343.5	1343.5	1343.5	1343.5

(END OF REPORT)