

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: P332457

Luminaire Tested: **S123RDIW-S1000D755U835-4F0-1E-UDD-F1**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P332457
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: S123RDIW-S1000D755U835-4F0-1E-UDD-F1
Description: DEFINE 3 DIRECT-INDIRECT WALL MOUNT LED LUMINAIRE
DOWNLIGHT 1000 LUMENS PER FOOT, FLUSH SATIN WHITE DIFFUSER, REGRESSED
HOUSING
UPLIGHT 755 LUMENS PER FOOT, FLUSH SATIN WHITE DIFFUSER
Light Source: -
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 6411.8 lumens
Efficiency: N/A
Efficacy: 119.6 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

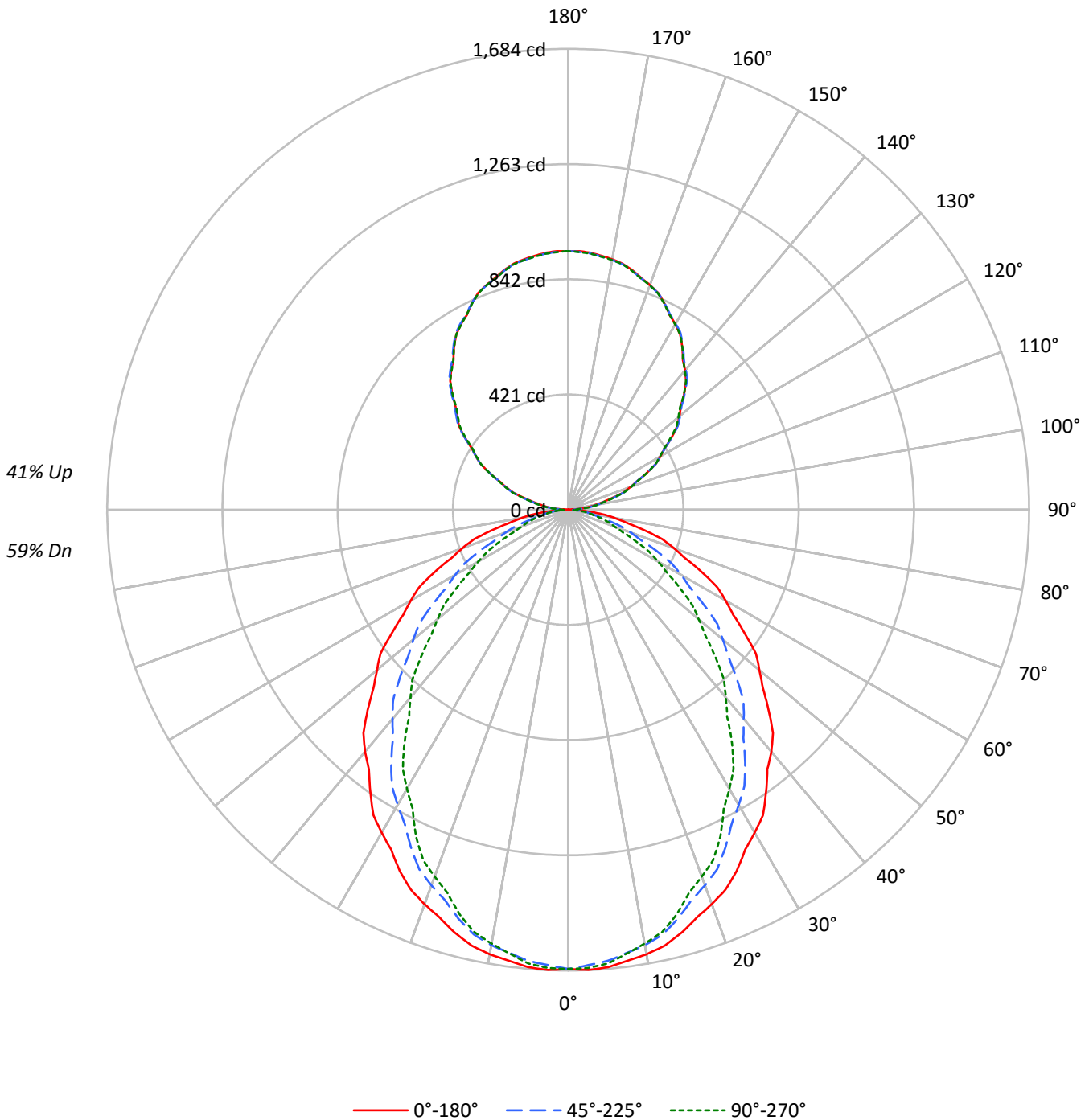
Input Watts (W): 53.6
Input Voltage (V): 120
Input Current (A_{in}): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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	109	109	109	109	102	102	102	102	88	88	88	76	76	76	65	65	65	59
1	100	96	92	89	93	90	86	84	78	76	74	67	66	64	58	56	55	51
2	92	84	78	73	85	79	74	69	69	65	61	60	57	54	51	49	47	43
3	84	74	67	61	78	70	63	58	61	56	52	53	49	46	46	43	41	37
4	77	66	58	52	72	62	55	50	55	49	45	48	43	40	41	38	35	32
5	71	59	51	45	66	56	48	43	49	43	39	43	38	35	37	34	31	28
6	65	53	45	39	61	50	43	38	44	39	34	39	34	31	34	30	27	25
7	60	48	40	35	56	46	38	33	40	35	30	36	31	27	31	27	24	22
8	56	44	36	31	52	42	34	30	37	31	27	33	28	25	29	25	22	20
9	52	40	33	28	49	38	31	27	34	28	24	30	25	22	26	23	20	18
10	49	37	30	25	46	35	28	24	31	26	22	28	23	20	25	21	18	16

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	18064	18064	18064
5°	18133	17882	17986
10°	18030	17658	17598
15°	17836	17245	17063
20°	17570	16728	16339
25°	17296	16149	15631
30°	16933	15479	14633
35°	16561	14808	13717
40°	16218	14018	12584
45°	15767	13239	11561
50°	15270	12353	10416
55°	14763	11340	9348
60°	14299	10256	8174
65°	13692	9082	7002
70°	12935	7626	5655
75°	11832	6001	5319
80°	10544	5312	4891
85°	8904	4705	4372



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	157.6	2.5
10°-20°	438.5	6.8
20°-30°	631.4	9.8
30°-40°	711.2	11.1
40°-50°	680.4	10.6
50°-60°	557.2	8.7
60°-70°	375.9	5.9
70°-80°	189.1	2.9
80°-90°	52.8	0.8
90°-100°	61.6	1.0
100°-110°	184.2	2.9
110°-120°	313.4	4.9
120°-130°	412.2	6.4
130°-140°	463.3	7.2
140°-150°	455.4	7.1
150°-160°	383.4	6.0
160°-170°	255.2	4.0
170°-180°	89.4	1.4
0°-30°	1227.4	19.1
0°-40°	1938.6	30.2
0°-60°	3176.1	49.5
0°-90°	3793.9	59.2
90°-120°	559.2	8.7
90°-150°	1890.0	29.5
90°-180°	2618.0	40.8
0°-180°	6411.8	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1678	1678	1678	1678	1678	
5°	1678	1671	1655	1666	1665	159
15°	1601	1584	1548	1541	1531	451
25°	1456	1421	1360	1332	1316	669
35°	1260	1209	1127	1070	1044	788
45°	1036	972	870	795	760	799
55°	787	717	604	528	498	705
65°	538	461	357	293	275	532
75°	284	219	144	131	128	303
85°	72	44	38	36	35	81
90°	1	8	18	21	22	6
95°	44	49	55	58	58	49
105°	167	169	175	175	177	179
115°	316	317	316	317	316	312
125°	462	464	462	459	456	412
135°	599	603	603	600	598	461
145°	727	728	730	730	727	454
155°	832	832	833	835	831	383
165°	906	904	904	908	903	255
175°	943	940	940	944	939	89
180°	945	945	945	945	945	



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CANDELA DISTRIBUTION (FULL):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
0°	1678.2	1678.2	1678.2	1678.2	1678.2	1678.2	1678.2	1678.2	1678.2	1678.2	1678.2
2.5°	1683.6	1682.6	1681.7	1680.7	1679.7	1677.8	1674.9	1672.0	1669.1	1666.2	1668.8
5°	1678.2	1676.6	1675.1	1673.6	1672.1	1669.5	1665.9	1662.3	1658.7	1655.0	1657.7
7.5°	1662.6	1661.0	1659.4	1657.7	1656.1	1652.9	1648.2	1643.5	1638.8	1634.1	1635.6
10°	1649.6	1647.5	1645.3	1643.2	1641.1	1637.3	1631.9	1626.4	1621.0	1615.6	1615.9
12.5°	1631.1	1628.7	1626.4	1624.0	1621.6	1617.1	1610.5	1603.8	1597.2	1590.5	1590.3
15°	1600.6	1597.3	1593.9	1590.6	1587.3	1581.4	1572.9	1564.4	1556.0	1547.5	1546.0
17.5°	1562.2	1558.3	1554.5	1550.6	1546.7	1539.4	1528.6	1517.9	1507.1	1496.3	1493.1
20°	1533.9	1529.1	1524.2	1519.4	1514.5	1506.4	1494.9	1483.4	1471.9	1460.4	1456.5
22.5°	1502.3	1496.8	1491.2	1485.6	1480.1	1471.2	1458.9	1446.7	1434.5	1422.3	1417.4
25°	1456.3	1448.8	1441.2	1433.6	1426.1	1415.3	1401.4	1387.5	1373.6	1359.7	1353.3
27.5°	1400.5	1392.2	1383.8	1375.5	1367.1	1355.2	1339.7	1324.2	1308.7	1293.3	1284.4
30°	1362.4	1353.3	1344.3	1335.2	1326.1	1313.1	1296.2	1279.2	1262.3	1245.4	1235.1
32.5°	1324.3	1314.0	1303.7	1293.4	1283.2	1269.1	1251.2	1233.3	1215.3	1197.4	1186.2
35°	1260.3	1249.4	1238.5	1227.7	1216.8	1201.9	1183.2	1164.4	1145.7	1126.9	1113.9
37.5°	1195.5	1183.4	1171.3	1159.2	1147.1	1131.1	1111.1	1091.0	1071.0	1051.0	1036.2
40°	1154.2	1140.9	1127.5	1114.2	1100.9	1083.5	1062.1	1040.6	1019.1	997.6	981.9
42.5°	1107.3	1094.0	1080.7	1067.4	1054.1	1036.4	1014.2	992.0	969.8	947.6	930.4
45°	1035.8	1022.1	1008.5	994.9	981.3	962.9	939.6	916.3	893.0	869.7	852.5
47.5°	964.2	949.2	934.3	919.3	904.4	885.3	862.0	838.7	815.4	792.1	773.4
50°	911.9	897.7	883.5	869.3	855.0	835.7	811.2	786.7	762.2	737.7	718.9
52.5°	865.1	849.7	834.2	818.8	803.4	783.5	759.3	735.0	710.8	686.5	667.0
55°	786.7	771.9	757.0	742.2	727.4	707.1	681.4	655.7	630.0	604.3	586.8
57.5°	714.3	698.1	682.0	665.8	649.7	628.7	602.8	577.0	551.2	525.4	508.8
60°	664.2	647.6	630.9	614.3	597.6	576.8	551.7	526.6	501.5	476.4	460.0
62.5°	614.1	597.5	580.8	564.2	547.6	526.7	501.6	476.5	451.4	426.3	410.9
65°	537.6	521.0	504.3	487.7	471.1	451.0	427.4	403.8	380.2	356.6	341.8
67.5°	461.1	444.3	427.5	410.7	393.9	374.1	351.5	328.9	306.3	283.6	272.6
70°	411.0	394.7	378.4	362.0	345.7	327.0	305.8	284.6	263.4	242.3	231.7
72.5°	360.9	344.9	328.8	312.7	296.6	278.9	259.7	240.5	221.2	202.0	193.3
75°	284.5	269.9	255.4	240.9	226.4	210.8	194.2	177.5	160.9	144.3	141.2
77.5°	214.8	201.6	188.5	175.4	162.3	150.3	139.6	128.9	118.2	107.5	105.9
80°	170.1	157.7	145.3	132.9	120.5	111.2	104.8	98.4	92.1	85.7	84.8
82.5°	127.7	117.0	106.3	95.5	84.8	78.0	75.0	72.1	69.1	66.1	65.2
85°	72.1	65.5	58.8	52.2	45.5	41.7	40.8	39.9	39.0	38.1	37.5
87.5°	26.3	23.9	21.6	19.3	17.0	16.0	16.4	16.9	17.3	17.7	17.6
90°	0.7	2.4	4.0	5.7	7.3	9.2	11.4	13.5	15.7	17.8	18.5
92.5°	18.0	19.1	20.2	21.3	22.4	23.6	24.8	26.1	27.3	28.5	29.0
95°	43.8	44.9	46.1	47.3	48.4	49.6	51.0	52.3	53.6	54.9	55.6
97.5°	77.8	78.6	79.5	80.4	81.2	82.1	83.1	84.0	85.0	86.0	86.7
100°	100.9	101.9	102.9	103.9	104.9	105.8	106.6	107.5	108.3	109.1	109.6
102.5°	127.7	128.3	128.9	129.4	130.0	130.9	132.0	133.1	134.1	135.2	135.7
105°	167.0	167.3	167.7	168.0	168.3	169.2	170.7	172.2	173.7	175.2	175.2
107.5°	212.7	212.9	213.1	213.3	213.5	213.9	214.5	215.1	215.7	216.3	216.8
110°	241.2	241.6	241.9	242.2	242.5	242.9	243.2	243.5	243.9	244.2	244.9



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CANDELA DISTRIBUTION (continued):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
112.5°	270.9	271.1	271.3	271.5	271.7	271.8	271.9	272.0	272.0	272.1	272.9
115°	315.5	315.9	316.4	316.9	317.4	317.5	317.2	316.9	316.5	316.2	316.4
117.5°	360.3	360.6	360.9	361.3	361.6	361.6	361.1	360.7	360.3	359.8	359.8
120°	388.2	389.2	390.2	391.2	392.2	392.2	391.4	390.6	389.8	388.9	388.8
122.5°	417.3	418.0	418.7	419.5	420.2	420.3	419.9	419.5	419.1	418.6	418.2
125°	461.7	462.2	462.7	463.2	463.7	463.7	463.4	463.1	462.7	462.4	461.8
127.5°	502.6	503.7	504.8	505.8	506.9	507.2	506.9	506.5	506.1	505.8	504.8
130°	530.0	531.3	532.6	533.9	535.2	535.7	535.2	534.7	534.2	533.7	533.0
132.5°	557.3	558.6	559.9	561.2	562.6	563.0	562.7	562.3	561.9	561.6	560.8
135°	599.0	600.0	601.0	602.0	602.9	603.4	603.2	603.0	602.9	602.7	602.0
137.5°	637.6	638.4	639.2	640.1	640.9	641.5	641.9	642.4	642.8	643.2	642.5
140°	664.3	665.1	666.0	666.8	667.6	668.1	668.3	668.4	668.6	668.8	668.6
142.5°	688.7	689.5	690.3	691.1	691.9	692.5	692.8	693.1	693.4	693.7	693.5
145°	726.7	727.0	727.3	727.6	728.0	728.4	728.9	729.4	729.9	730.4	730.2
147.5°	759.9	760.5	761.1	761.7	762.3	762.8	763.3	763.7	764.2	764.7	764.7
150°	783.1	783.4	783.7	784.1	784.4	784.7	785.0	785.4	785.7	786.0	786.0
152.5°	802.1	802.5	803.0	803.5	803.9	804.2	804.4	804.6	804.8	805.0	805.3
155°	832.1	832.1	832.1	832.1	832.1	832.1	832.3	832.5	832.6	832.8	833.5
157.5°	857.6	857.4	857.2	857.0	856.8	856.8	856.9	857.0	857.2	857.3	858.0
160°	873.6	873.3	873.0	872.6	872.3	872.1	872.1	872.1	872.1	872.1	873.0
162.5°	887.9	887.4	886.9	886.5	886.0	885.9	886.0	886.1	886.3	886.4	887.2
165°	906.3	905.8	905.3	904.8	904.3	904.0	904.0	904.0	904.0	904.0	905.0
167.5°	921.0	920.3	919.7	919.0	918.3	918.1	918.2	918.3	918.5	918.6	919.6
170°	929.3	928.6	928.0	927.3	926.6	926.3	926.3	926.3	926.3	926.3	927.5
172.5°	935.8	935.2	934.5	933.8	933.2	932.8	932.8	932.8	932.8	932.8	933.9
175°	942.6	942.0	941.3	940.7	940.0	939.7	939.7	939.7	939.7	939.7	940.7
177.5°	945.5	944.9	944.4	943.9	943.4	943.1	943.1	943.1	943.1	943.1	943.9
180°	944.9	944.9	944.9	944.9	944.9	944.9	944.9	944.9	944.9	944.9	944.9



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CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
0°	1678.2	1678.2	1678.2	1678.2	1678.2	1678.2	1678.2	1678.2
2.5°	1671.5	1674.2	1676.8	1677.9	1677.4	1677.0	1676.5	1676.0
5°	1660.5	1663.2	1665.9	1667.0	1666.4	1665.8	1665.2	1664.6
7.5°	1637.1	1638.6	1640.1	1640.4	1639.3	1638.3	1637.3	1636.2
10°	1616.2	1616.5	1616.8	1616.2	1614.6	1613.1	1611.6	1610.1
12.5°	1590.1	1590.0	1589.8	1588.8	1587.1	1585.3	1583.6	1581.8
15°	1544.5	1543.0	1541.5	1539.6	1537.5	1535.4	1533.3	1531.2
17.5°	1489.9	1486.7	1483.5	1480.3	1477.2	1474.0	1470.9	1467.7
20°	1452.5	1448.6	1444.7	1440.9	1437.3	1433.6	1430.0	1426.4
22.5°	1412.5	1407.6	1402.7	1398.5	1395.2	1391.8	1388.4	1385.0
25°	1347.0	1340.6	1334.3	1329.4	1326.1	1322.8	1319.5	1316.1
27.5°	1275.6	1266.8	1257.9	1251.0	1245.9	1240.8	1235.7	1230.7
30°	1224.8	1214.5	1204.2	1196.7	1191.8	1187.0	1182.1	1177.3
32.5°	1174.9	1163.7	1152.4	1144.3	1139.2	1134.1	1129.0	1123.9
35°	1100.9	1087.9	1074.9	1065.7	1060.3	1054.8	1049.4	1043.9
37.5°	1021.5	1006.7	992.0	981.2	974.5	967.8	961.1	954.4
40°	966.2	950.5	934.7	923.4	916.4	909.5	902.5	895.6
42.5°	913.2	896.0	878.8	867.1	860.9	854.7	848.4	842.2
45°	835.2	818.0	800.7	788.5	781.2	774.0	766.7	759.5
47.5°	754.6	735.9	717.1	704.5	698.0	691.6	685.1	678.6
50°	700.2	681.4	662.7	649.8	642.9	635.9	629.0	622.0
52.5°	647.6	628.1	608.6	595.7	589.5	583.3	577.1	570.8
55°	569.2	551.7	534.1	522.3	516.3	510.2	504.2	498.1
57.5°	492.2	475.6	459.1	448.2	443.1	437.9	432.8	427.6
60°	443.7	427.4	411.0	400.3	395.2	390.0	384.9	379.7
62.5°	395.5	380.2	364.8	354.4	349.1	343.7	338.3	332.9
65°	327.0	312.1	297.3	288.2	284.9	281.6	278.3	274.9
67.5°	261.5	250.4	239.4	232.0	228.5	224.9	221.3	217.8
70°	221.1	210.5	199.9	193.0	189.6	186.3	183.0	179.7
72.5°	184.7	176.0	167.4	162.4	161.0	159.6	158.2	156.8
75°	138.2	135.2	132.2	130.4	129.8	129.1	128.5	127.9
77.5°	104.3	102.6	101.0	99.9	99.3	98.7	98.1	97.5
80°	83.9	83.0	82.1	81.4	80.8	80.2	79.5	78.9
82.5°	64.3	63.4	62.5	62.0	61.9	61.8	61.6	61.5
85°	36.9	36.3	35.7	35.4	35.4	35.4	35.4	35.4
87.5°	17.5	17.4	17.3	17.1	17.0	16.8	16.6	16.4
90°	19.1	19.8	20.5	20.9	21.3	21.6	21.9	22.3
92.5°	29.6	30.1	30.6	30.8	30.6	30.4	30.2	30.0
95°	56.2	56.9	57.6	57.9	57.9	57.9	57.9	57.9
97.5°	87.5	88.2	89.0	89.3	89.3	89.2	89.1	89.1
100°	110.1	110.6	111.1	111.5	111.8	112.2	112.5	112.8
102.5°	136.2	136.7	137.2	137.4	137.4	137.3	137.2	137.2
105°	175.2	175.2	175.2	175.3	175.7	176.0	176.3	176.7
107.5°	217.3	217.9	218.4	218.6	218.4	218.2	218.0	217.8
110°	245.5	246.2	246.8	247.0	246.7	246.3	246.0	245.7



TEST NUMBER: P332457

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CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
112.5°	273.7	274.5	275.3	275.6	275.6	275.5	275.4	275.4
115°	316.5	316.7	316.9	316.9	316.7	316.5	316.4	316.2
117.5°	359.8	359.7	359.7	359.5	359.0	358.5	358.1	357.6
120°	388.6	388.4	388.3	388.0	387.7	387.4	387.0	386.7
122.5°	417.8	417.3	416.9	416.5	416.0	415.5	415.1	414.6
125°	461.1	460.4	459.8	459.1	458.5	457.8	457.1	456.5
127.5°	503.9	503.0	502.1	501.2	500.5	499.7	499.0	498.2
130°	532.4	531.7	531.0	530.1	529.0	527.8	526.7	525.5
132.5°	560.0	559.2	558.4	557.6	556.7	555.8	554.9	554.0
135°	601.4	600.7	600.1	599.6	599.2	598.9	598.6	598.2
137.5°	641.8	641.1	640.5	639.8	639.2	638.5	637.9	637.3
140°	668.4	668.3	668.1	667.4	666.3	665.1	664.0	662.8
142.5°	693.4	693.2	693.0	692.5	691.6	690.7	689.8	688.9
145°	730.0	729.9	729.7	729.3	728.6	728.0	727.3	726.7
147.5°	764.7	764.7	764.7	764.2	763.2	762.2	761.2	760.2
150°	786.0	786.0	786.0	785.5	784.5	783.6	782.6	781.6
152.5°	805.6	805.8	806.1	805.8	804.9	804.1	803.2	802.4
155°	834.1	834.8	835.4	835.2	834.0	832.9	831.7	830.6
157.5°	858.7	859.4	860.1	859.9	859.0	858.1	857.2	856.2
160°	873.8	874.6	875.4	875.5	874.9	874.2	873.5	872.9
162.5°	888.0	888.9	889.7	889.6	888.5	887.5	886.4	885.3
165°	906.0	907.0	908.0	907.9	906.8	905.6	904.5	903.3
167.5°	920.6	921.7	922.7	922.7	921.7	920.6	919.6	918.6
170°	928.6	929.8	930.9	930.9	929.8	928.6	927.5	926.3
172.5°	934.9	935.9	936.9	936.9	935.7	934.6	933.4	932.3
175°	941.7	942.6	943.6	943.6	942.4	941.2	940.1	938.9
177.5°	944.7	945.5	946.3	946.2	945.3	944.3	943.4	942.5
180°	944.9	944.9	944.9	944.9	944.9	944.9	944.9	944.9

(END OF REPORT)