

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: P332449-830

Luminaire Tested: **S123RDIW-S775D1535U830-4F0-1E-UDD-F1**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P332449-830
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-S775D1535U830-4F0-1E-UDD-F1
Description: DEFINE 3 DIRECT-INDIRECT WALL MOUNT LED LUMINAIRE
DOWNLIGHT 775 LUMENS PER FOOT, FLUSH SATIN WHITE DIFFUSER, REGRESSED
HOUSING
UPLIGHT 1535 LUMENS PER FOOT, FLUSH SATIN WHITE DIFFUSER
Light Source: -
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 7767.4 lumens
Efficiency: N/A
Efficacy: 114.1 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: Semi-Indirect

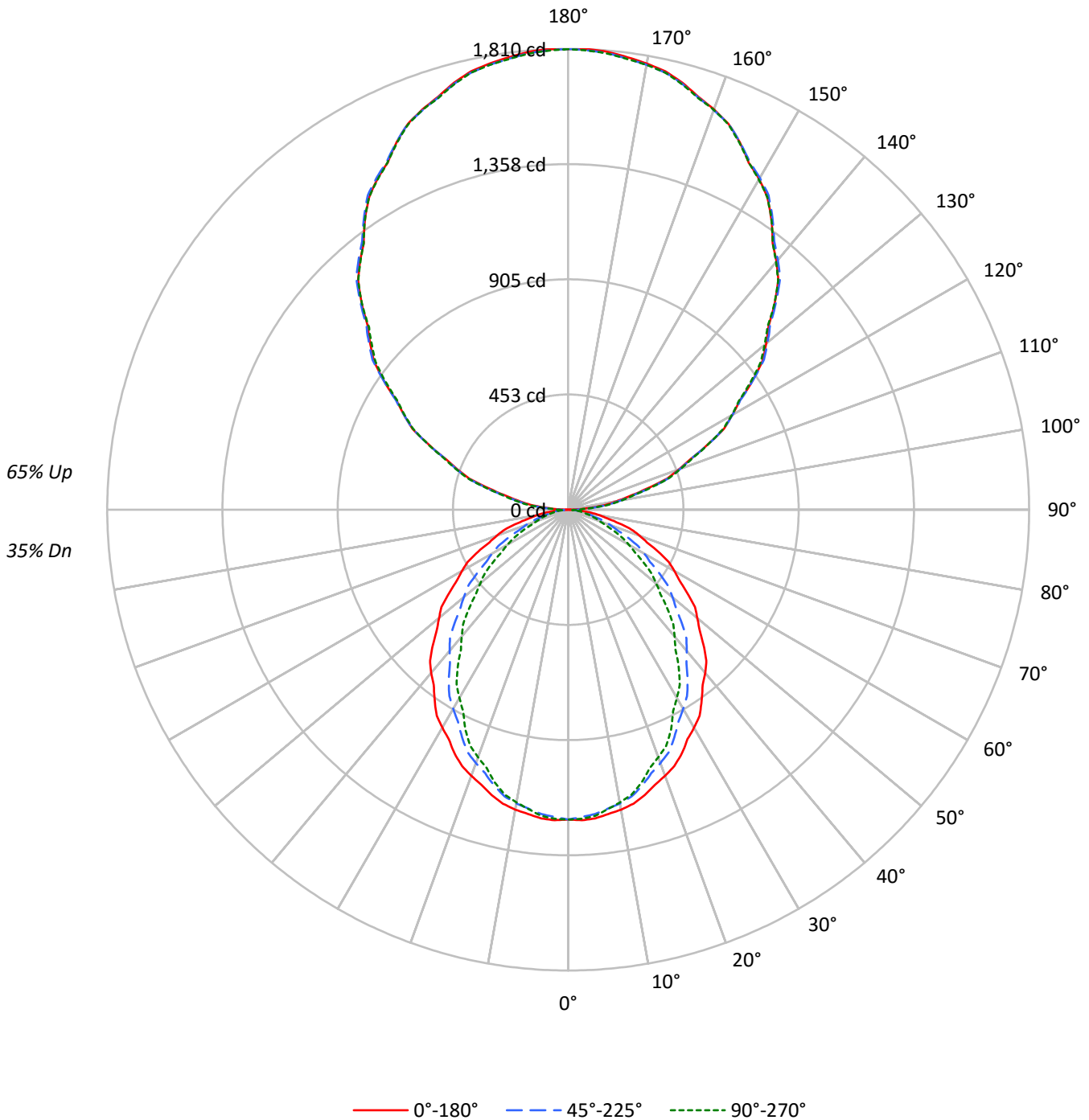
Input Watts (W): 68.1
Input Voltage (V): 120
Input Current (A_{in}): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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
RW	70	50	30	10	70	50	30	10	50	30	10	50	30	10	50	30	10
RCR																	
0	104	104	104	104	94	94	94	94	75	75	75	58	58	58	43	43	43
1	95	91	87	84	86	82	79	76	66	64	62	52	50	49	38	37	37
2	86	79	73	69	78	72	67	63	58	55	52	46	43	41	34	32	31
3	79	70	63	57	71	64	58	53	52	47	44	40	37	35	30	28	27
4	72	62	54	49	65	56	50	45	46	41	37	36	33	30	27	25	23
5	66	55	47	42	60	50	43	38	41	36	32	32	29	26	24	22	20
6	61	49	42	36	55	45	38	33	37	32	28	29	26	23	22	20	18
7	56	45	37	32	51	41	34	29	34	28	25	27	23	20	20	18	16
8	52	40	33	28	47	37	30	26	31	26	22	24	21	18	19	16	14
9	49	37	30	25	44	34	27	23	28	23	20	22	19	16	17	15	13
10	45	34	27	22	41	31	25	21	26	21	18	21	17	15	16	14	12

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	13099	13099	13099
5°	13149	12967	13042
10°	13074	12804	12761
15°	12933	12504	12373
20°	12741	12129	11848
25°	12542	11709	11334
30°	12279	11225	10611
35°	12009	10738	9947
40°	11760	10165	9125
45°	11432	9601	8383
50°	11072	8957	7552
55°	10704	8223	6778
60°	10368	7436	5927
65°	9928	6584	5076
70°	9379	5530	4101
75°	8576	4350	3855
80°	7649	3856	3546
85°	6459	3409	3162



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	114.3	1.5
10°-20°	317.9	4.1
20°-30°	457.8	5.9
30°-40°	515.7	6.6
40°-50°	493.3	6.4
50°-60°	404.0	5.2
60°-70°	272.6	3.5
70°-80°	137.1	1.8
80°-90°	41.6	0.5
90°-100°	117.9	1.5
100°-110°	352.8	4.5
110°-120°	600.0	7.7
120°-130°	789.3	10.2
130°-140°	887.1	11.4
140°-150°	872.0	11.2
150°-160°	734.1	9.5
160°-170°	488.7	6.3
170°-180°	171.1	2.2
0°-30°	890.0	11.5
0°-40°	1405.7	18.1
0°-60°	2303.0	29.7
0°-90°	2754.4	35.5
90°-120°	1070.7	13.8
90°-150°	3619.1	46.6
90°-180°	5013.0	64.5
0°-180°	7767.4	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1217	1217	1217	1217	1217	
5°	1217	1212	1200	1208	1207	115
15°	1161	1149	1122	1117	1110	327
25°	1056	1030	986	966	954	485
35°	914	877	817	776	757	572
45°	751	705	631	576	551	579
55°	570	520	438	383	361	511
65°	390	334	258	212	199	386
75°	206	159	105	95	93	220
85°	52	32	28	26	26	59
90°	1	16	34	40	43	8
95°	84	94	105	110	111	94
105°	320	323	336	336	338	343
115°	604	608	606	607	606	597
125°	884	888	886	880	874	788
135°	1147	1155	1154	1149	1146	884
145°	1392	1394	1398	1397	1392	869
155°	1593	1593	1595	1600	1590	733
165°	1735	1731	1731	1739	1730	489
175°	1805	1800	1799	1807	1798	171
180°	1809	1809	1809	1809	1809	



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CANDELA DISTRIBUTION (FULL):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
0°	1216.9	1216.9	1216.9	1216.9	1216.9	1216.9	1216.9	1216.9	1216.9	1216.9	1216.9
2.5°	1220.8	1220.1	1219.4	1218.7	1218.0	1216.6	1214.5	1212.4	1210.3	1208.2	1210.1
5°	1216.9	1215.8	1214.7	1213.6	1212.5	1210.6	1208.0	1205.3	1202.7	1200.1	1202.0
7.5°	1205.6	1204.5	1203.2	1202.0	1200.9	1198.5	1195.1	1191.8	1188.4	1184.9	1186.0
10°	1196.2	1194.6	1193.1	1191.6	1190.0	1187.2	1183.3	1179.4	1175.4	1171.5	1171.7
12.5°	1182.7	1181.0	1179.3	1177.6	1175.9	1172.6	1167.8	1163.0	1158.1	1153.3	1153.2
15°	1160.6	1158.2	1155.7	1153.4	1150.9	1146.7	1140.6	1134.4	1128.2	1122.1	1121.1
17.5°	1132.7	1130.0	1127.2	1124.4	1121.5	1116.3	1108.4	1100.6	1092.8	1085.1	1082.7
20°	1112.3	1108.7	1105.2	1101.7	1098.3	1092.3	1083.9	1075.6	1067.3	1058.9	1056.1
22.5°	1089.4	1085.3	1081.3	1077.2	1073.2	1066.8	1057.9	1049.0	1040.2	1031.3	1027.7
25°	1056.0	1050.6	1045.0	1039.5	1034.1	1026.2	1016.2	1006.1	996.0	985.9	981.3
27.5°	1015.5	1009.5	1003.4	997.4	991.4	982.7	971.5	960.3	949.0	937.7	931.3
30°	987.9	981.3	974.8	968.2	961.6	952.2	939.9	927.6	915.3	903.1	895.6
32.5°	960.3	952.8	945.4	937.9	930.5	920.2	907.2	894.3	881.3	868.3	860.2
35°	913.9	906.0	898.1	890.2	882.3	871.6	858.0	844.3	830.8	817.2	807.8
37.5°	867.0	858.1	849.3	840.6	831.8	820.2	805.7	791.2	776.7	762.1	751.4
40°	836.9	827.3	817.6	807.9	798.3	785.7	770.2	754.6	739.0	723.4	712.0
42.5°	803.0	793.3	783.6	774.0	764.4	751.5	735.4	719.3	703.2	687.1	674.7
45°	751.0	741.2	731.3	721.4	711.5	698.2	681.3	664.4	647.5	630.7	618.1
47.5°	699.2	688.3	677.5	666.7	655.8	642.0	625.1	608.1	591.3	574.4	560.8
50°	661.2	650.9	640.6	630.3	620.0	606.0	588.2	570.4	552.7	534.9	521.3
52.5°	627.3	616.1	604.9	593.7	582.6	568.2	550.5	533.0	515.4	497.8	483.7
55°	570.4	559.7	548.9	538.2	527.4	512.7	494.1	475.5	456.9	438.2	425.5
57.5°	517.9	506.2	494.6	482.8	471.1	455.9	437.2	418.4	399.6	381.0	368.9
60°	481.6	469.6	457.5	445.4	433.4	418.2	400.0	381.8	363.6	345.4	333.6
62.5°	445.3	433.2	421.1	409.1	397.1	381.9	363.7	345.5	327.3	309.1	297.9
65°	389.8	377.8	365.7	353.6	341.6	327.0	309.9	292.8	275.7	258.5	247.8
67.5°	334.4	322.2	310.0	297.7	285.6	271.3	254.9	238.5	222.1	205.7	197.7
70°	298.0	286.3	274.4	262.5	250.7	237.0	221.7	206.4	191.1	175.7	168.0
72.5°	261.7	250.1	238.4	226.7	215.1	202.3	188.3	174.4	160.4	146.5	140.2
75°	206.2	195.8	185.2	174.7	164.2	152.9	140.8	128.8	116.7	104.6	102.5
77.5°	155.7	146.2	136.7	127.1	117.6	109.1	101.2	93.5	85.8	77.9	76.8
80°	123.4	114.3	105.4	96.4	87.4	80.6	76.0	71.4	66.8	62.2	61.5
82.5°	92.6	84.8	77.0	69.3	61.5	56.6	54.4	52.2	50.1	48.0	47.3
85°	52.3	47.5	42.7	37.8	33.0	30.3	29.6	28.9	28.3	27.6	27.2
87.5°	19.2	17.9	16.7	15.4	14.0	13.8	14.6	15.5	16.3	17.1	17.2
90°	1.4	4.6	7.7	10.9	14.0	17.7	21.8	25.9	30.0	34.1	35.3
92.5°	34.4	36.6	38.6	40.8	43.0	45.2	47.6	49.9	52.2	54.6	55.6
95°	83.9	86.1	88.3	90.5	92.7	95.1	97.6	100.1	102.6	105.2	106.4
97.5°	148.9	150.6	152.2	153.9	155.5	157.2	159.1	160.9	162.8	164.6	166.1
100°	193.3	195.2	197.1	199.0	200.9	202.6	204.2	205.8	207.4	209.0	209.9
102.5°	244.5	245.6	246.8	247.9	249.0	250.6	252.7	254.8	256.8	258.9	260.0
105°	319.8	320.5	321.0	321.7	322.3	324.0	326.9	329.7	332.6	335.5	335.5
107.5°	407.4	407.7	408.1	408.5	408.9	409.6	410.8	411.9	413.0	414.2	415.2
110°	461.9	462.6	463.2	463.8	464.5	465.1	465.7	466.4	466.9	467.6	468.9



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CANDELA DISTRIBUTION (continued):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
112.5°	518.8	519.2	519.5	519.9	520.3	520.6	520.7	520.8	520.9	521.0	522.5
115°	604.1	605.0	606.0	606.9	607.8	608.0	607.4	606.7	606.1	605.5	605.8
117.5°	689.9	690.5	691.2	691.8	692.4	692.3	691.5	690.7	689.8	689.1	689.0
120°	743.4	745.3	747.2	749.0	750.9	751.1	749.5	747.9	746.3	744.8	744.4
122.5°	799.1	800.4	801.8	803.2	804.6	804.9	804.1	803.2	802.5	801.6	800.8
125°	884.0	885.0	886.0	886.9	887.9	888.0	887.4	886.7	886.1	885.5	884.2
127.5°	962.5	964.5	966.6	968.6	970.6	971.3	970.5	969.9	969.2	968.5	966.7
130°	1014.8	1017.4	1019.8	1022.4	1024.9	1025.7	1024.7	1023.8	1022.8	1021.9	1020.7
132.5°	1067.1	1069.6	1072.1	1074.7	1077.2	1078.2	1077.4	1076.8	1076.0	1075.3	1073.8
135°	1147.0	1148.9	1150.8	1152.6	1154.6	1155.4	1155.1	1154.7	1154.4	1154.1	1152.8
137.5°	1220.9	1222.5	1224.1	1225.7	1227.2	1228.4	1229.3	1230.0	1230.9	1231.7	1230.4
140°	1272.1	1273.7	1275.3	1276.8	1278.4	1279.3	1279.7	1280.0	1280.3	1280.6	1280.3
142.5°	1318.7	1320.2	1321.8	1323.4	1325.0	1326.1	1326.6	1327.2	1327.8	1328.3	1328.0
145°	1391.5	1392.1	1392.7	1393.4	1394.0	1394.8	1395.7	1396.7	1397.6	1398.5	1398.3
147.5°	1455.1	1456.2	1457.4	1458.6	1459.7	1460.7	1461.6	1462.4	1463.3	1464.2	1464.2
150°	1499.5	1500.2	1500.7	1501.4	1502.0	1502.6	1503.3	1503.9	1504.5	1505.1	1505.1
152.5°	1535.9	1536.7	1537.7	1538.5	1539.4	1540.0	1540.4	1540.8	1541.2	1541.5	1542.1
155°	1593.3	1593.3	1593.3	1593.3	1593.3	1593.5	1593.7	1594.0	1594.4	1594.7	1596.0
157.5°	1642.2	1641.8	1641.4	1641.1	1640.7	1640.6	1640.9	1641.1	1641.3	1641.6	1642.9
160°	1672.9	1672.3	1671.6	1670.9	1670.4	1670.0	1670.0	1670.0	1670.0	1670.0	1671.6
162.5°	1700.2	1699.3	1698.4	1697.5	1696.7	1696.3	1696.6	1696.9	1697.0	1697.3	1698.9
165°	1735.4	1734.5	1733.5	1732.6	1731.6	1731.2	1731.2	1731.2	1731.2	1731.2	1733.1
167.5°	1763.6	1762.3	1761.0	1759.7	1758.5	1758.0	1758.2	1758.5	1758.8	1759.0	1761.0
170°	1779.4	1778.2	1777.0	1775.7	1774.4	1773.8	1773.8	1773.8	1773.8	1773.8	1776.0
172.5°	1792.0	1790.7	1789.4	1788.2	1787.0	1786.3	1786.3	1786.3	1786.3	1786.3	1788.3
175°	1805.1	1803.8	1802.5	1801.3	1800.0	1799.4	1799.4	1799.4	1799.4	1799.4	1801.3
177.5°	1810.4	1809.5	1808.5	1807.4	1806.4	1805.9	1805.9	1805.9	1805.9	1805.9	1807.4
180°	1809.3	1809.3	1809.3	1809.3	1809.3	1809.3	1809.3	1809.3	1809.3	1809.3	1809.3



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CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
0°	1216.9	1216.9	1216.9	1216.9	1216.9	1216.9	1216.9	1216.9
2.5°	1212.0	1214.0	1215.9	1216.7	1216.4	1216.0	1215.6	1215.3
5°	1204.0	1206.0	1208.0	1208.7	1208.3	1207.9	1207.4	1207.0
7.5°	1187.1	1188.2	1189.3	1189.5	1188.7	1188.0	1187.2	1186.5
10°	1172.0	1172.1	1172.3	1172.0	1170.8	1169.7	1168.7	1167.5
12.5°	1153.0	1152.9	1152.8	1152.1	1150.8	1149.5	1148.3	1147.0
15°	1119.9	1118.8	1117.8	1116.4	1114.9	1113.3	1111.8	1110.3
17.5°	1080.3	1078.1	1075.7	1073.5	1071.1	1068.8	1066.6	1064.3
20°	1053.3	1050.4	1047.5	1044.8	1042.2	1039.5	1036.9	1034.3
22.5°	1024.3	1020.7	1017.1	1014.1	1011.6	1009.2	1006.7	1004.3
25°	976.8	972.1	967.5	964.0	961.6	959.1	956.8	954.3
27.5°	924.9	918.6	912.2	907.1	903.4	899.8	896.1	892.4
30°	888.2	880.6	873.2	867.7	864.2	860.7	857.1	853.7
32.5°	852.0	843.9	835.7	829.7	826.0	822.4	818.7	815.0
35°	798.3	788.9	779.5	772.8	768.8	764.9	760.9	757.0
37.5°	740.6	730.0	719.3	711.5	706.6	701.7	696.9	692.0
40°	700.6	689.2	677.8	669.6	664.5	659.5	654.4	649.4
42.5°	662.1	649.7	637.3	628.8	624.2	619.7	615.2	610.7
45°	605.7	593.1	580.6	571.7	566.5	561.2	556.0	550.7
47.5°	547.1	533.6	520.0	510.9	506.1	501.4	496.8	492.1
50°	507.7	494.1	480.5	471.2	466.2	461.1	456.1	451.0
52.5°	469.6	455.4	441.3	432.0	427.4	422.9	418.4	413.9
55°	412.7	400.0	387.3	378.7	374.4	369.9	365.6	361.2
57.5°	356.9	344.9	332.9	325.0	321.3	317.5	313.8	310.1
60°	321.7	309.9	298.0	290.3	286.5	282.8	279.1	275.3
62.5°	286.8	275.7	264.6	257.0	253.1	249.2	245.3	241.4
65°	237.0	226.3	215.6	209.0	206.6	204.2	201.8	199.3
67.5°	189.6	181.6	173.5	168.2	165.7	163.1	160.5	157.9
70°	160.3	152.6	145.0	140.0	137.5	135.1	132.7	130.3
72.5°	133.9	127.6	121.4	117.7	116.7	115.7	114.7	113.7
75°	100.2	98.0	95.9	94.5	94.1	93.7	93.2	92.7
77.5°	75.6	74.4	73.2	72.4	72.0	71.5	71.1	70.7
80°	60.9	60.2	59.6	59.0	58.5	58.2	57.7	57.2
82.5°	46.7	46.0	45.3	45.0	44.9	44.8	44.7	44.6
85°	26.8	26.3	25.9	25.6	25.6	25.6	25.6	25.6
87.5°	17.2	17.3	17.4	17.4	17.3	17.3	17.2	17.2
90°	36.7	37.9	39.2	40.2	40.7	41.4	42.0	42.6
92.5°	56.6	57.6	58.6	58.9	58.5	58.2	57.8	57.4
95°	107.7	109.0	110.2	110.8	110.8	110.8	110.8	110.8
97.5°	167.5	168.9	170.4	171.1	171.0	170.8	170.7	170.6
100°	210.8	211.8	212.7	213.5	214.1	214.8	215.4	216.0
102.5°	260.9	261.8	262.8	263.2	263.1	262.9	262.8	262.7
105°	335.5	335.5	335.5	335.7	336.4	337.1	337.6	338.3
107.5°	416.2	417.2	418.2	418.5	418.1	417.7	417.4	417.0
110°	470.1	471.4	472.7	473.0	472.3	471.7	471.1	470.4



TEST NUMBER: P332449-830

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CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
112.5°	524.1	525.6	527.1	527.8	527.7	527.5	527.4	527.3
115°	606.1	606.4	606.7	606.7	606.4	606.1	605.8	605.5
117.5°	688.9	688.9	688.8	688.3	687.4	686.5	685.7	684.8
120°	744.1	743.9	743.5	743.0	742.4	741.8	741.1	740.5
122.5°	799.9	799.2	798.3	797.5	796.6	795.7	794.8	793.9
125°	883.0	881.7	880.4	879.1	877.9	876.7	875.3	874.1
127.5°	965.0	963.2	961.4	959.8	958.4	956.9	955.5	953.9
130°	1019.4	1018.1	1016.9	1015.1	1013.0	1010.7	1008.5	1006.3
132.5°	1072.3	1070.8	1069.3	1067.7	1066.0	1064.3	1062.5	1060.8
135°	1151.6	1150.3	1149.1	1148.1	1147.5	1146.8	1146.2	1145.6
137.5°	1229.1	1227.8	1226.4	1225.1	1223.9	1222.8	1221.5	1220.3
140°	1280.0	1279.7	1279.3	1278.1	1275.8	1273.7	1271.4	1269.2
142.5°	1327.8	1327.4	1327.1	1326.1	1324.4	1322.7	1321.0	1319.3
145°	1397.9	1397.6	1397.3	1396.5	1395.2	1394.0	1392.7	1391.5
147.5°	1464.2	1464.2	1464.2	1463.3	1461.4	1459.5	1457.5	1455.7
150°	1505.1	1505.1	1505.1	1504.2	1502.3	1500.4	1498.5	1496.7
152.5°	1542.6	1543.0	1543.6	1543.0	1541.3	1539.7	1538.0	1536.4
155°	1597.2	1598.5	1599.8	1599.3	1597.0	1594.9	1592.6	1590.4
157.5°	1644.3	1645.6	1646.9	1646.7	1644.9	1643.1	1641.3	1639.6
160°	1673.2	1674.8	1676.3	1676.5	1675.3	1674.0	1672.7	1671.4
162.5°	1700.4	1702.0	1703.6	1703.5	1701.4	1699.4	1697.3	1695.4
165°	1734.9	1736.8	1738.7	1738.6	1736.4	1734.2	1731.9	1729.8
167.5°	1762.9	1764.9	1766.8	1766.8	1764.9	1762.9	1761.0	1759.0
170°	1778.2	1780.5	1782.6	1782.6	1780.5	1778.2	1776.0	1773.8
172.5°	1790.2	1792.2	1794.1	1794.0	1791.8	1789.6	1787.3	1785.2
175°	1803.2	1805.1	1806.9	1806.8	1804.6	1802.3	1800.2	1798.0
177.5°	1808.9	1810.4	1811.9	1811.8	1810.1	1808.3	1806.6	1804.8
180°	1809.3	1809.3	1809.3	1809.3	1809.3	1809.3	1809.3	1809.3

(END OF REPORT)