

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: P332448-830

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

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P332448-830
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: S123RDIW-S775D1535U830-4F0-1E-UDD-F
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, NO LENS
Light Source: -
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 8538.2 lumens
Efficiency: N/A
Efficacy: 125.4 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

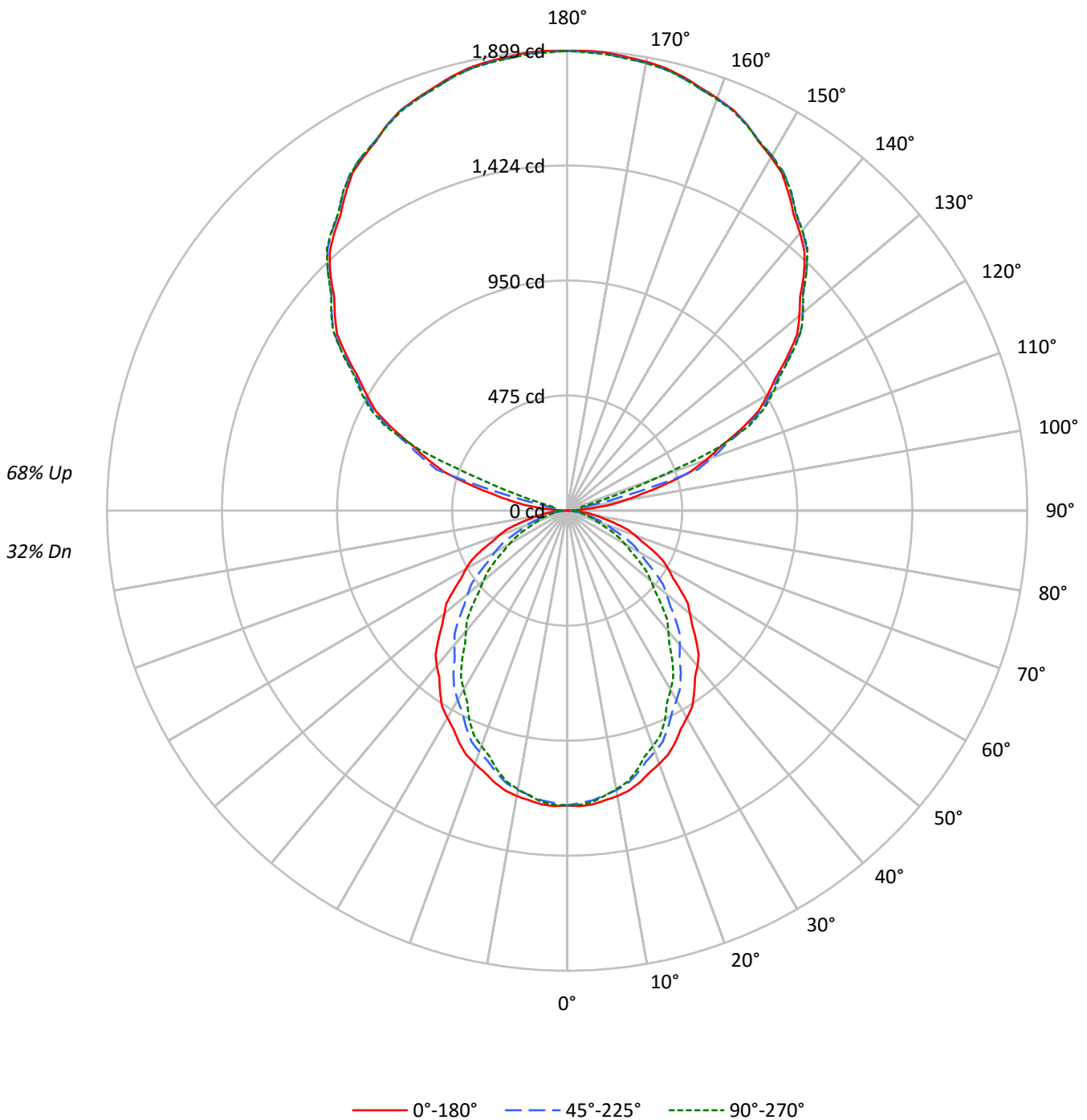
Input Watts (W): 68.1
Input Voltage (V): 120
Input Current (A_{in}): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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	103	103	103	103	93	93	93	93	73	73	73	56	56	56	40	40	40
1	94	90	86	83	85	81	78	75	65	62	61	49	48	47	35	35	34
2	86	79	73	68	77	71	66	62	57	53	50	44	41	39	31	30	29
3	78	69	62	57	70	63	57	52	50	46	43	39	36	34	28	26	25
4	72	61	54	48	64	56	49	44	45	40	36	35	31	29	25	23	22
5	66	55	47	41	59	50	43	38	40	35	31	31	28	25	23	21	19
6	61	49	41	36	54	44	38	33	36	31	27	28	25	22	21	18	17
7	56	44	36	31	50	40	33	29	33	28	24	26	22	19	19	17	15
8	52	40	33	27	47	36	30	25	30	25	21	23	20	17	17	15	13
9	48	36	29	24	43	33	27	23	27	22	19	21	18	15	16	14	12
10	45	33	26	22	41	30	24	20	25	20	17	20	16	14	15	13	11

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	1.3
10°-20°	317.9	3.7
20°-30°	457.8	5.4
30°-40°	515.7	6.0
40°-50°	493.3	5.8
50°-60°	404.0	4.7
60°-70°	272.6	3.2
70°-80°	137.1	1.6
80°-90°	41.6	0.5
90°-100°	69.0	0.8
100°-110°	328.6	3.8
110°-120°	789.4	9.2
120°-130°	1005.2	11.8
130°-140°	1074.1	12.6
140°-150°	1004.4	11.8
150°-160°	810.1	9.5
160°-170°	522.9	6.1
170°-180°	180.2	2.1
0°-30°	890.0	10.4
0°-40°	1405.7	16.5
0°-60°	2303.0	27.0
0°-90°	2754.3	32.3
90°-120°	1187.0	13.9
90°-150°	4270.6	50.0
90°-180°	5784.0	67.7
0°-180°	8538.2	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	39	42	7
95°	86	32	44	53	54	106
105°	420	428	309	73	62	445
115°	788	796	809	822	829	777
125°	1110	1121	1127	1130	1133	991
135°	1382	1391	1396	1400	1396	1064
145°	1595	1604	1608	1610	1611	998
155°	1757	1754	1756	1762	1754	809
165°	1853	1849	1847	1857	1849	523
175°	1897	1890	1891	1900	1890	180
180°	1897	1897	1897	1897	1897	



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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	16.6	15.4	14.0	13.8	14.6	15.4	16.2	17.1	17.1
90°	1.4	4.5	7.6	10.8	13.9	17.5	21.6	25.6	29.8	33.8	35.1
92.5°	26.2	25.4	24.4	23.6	22.7	23.8	26.9	30.0	33.0	36.1	38.1
95°	86.0	73.1	60.3	47.4	34.6	29.9	33.4	36.8	40.2	43.6	45.9
97.5°	172.8	167.0	161.3	155.4	149.7	135.5	113.0	90.5	68.0	45.3	47.9
100°	238.2	244.4	250.6	256.9	263.2	241.9	193.0	144.2	95.4	46.5	49.0
102.5°	312.5	317.1	321.6	326.0	330.5	306.1	252.8	199.4	146.1	92.7	84.9
105°	419.9	423.4	426.8	430.3	433.7	421.3	393.1	365.0	336.8	308.6	253.2
107.5°	533.2	535.9	538.7	541.5	544.2	547.8	552.2	556.8	561.2	565.6	525.0
110°	608.7	611.2	613.7	616.2	618.8	621.7	625.2	628.6	632.1	635.5	625.2



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CANDELA DISTRIBUTION (continued):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
112.5°	680.9	683.2	685.4	687.7	689.8	692.8	696.2	699.6	703.0	706.5	706.7
115°	787.7	789.6	791.5	793.3	795.2	797.6	800.4	803.1	806.0	808.8	811.9
117.5°	891.1	893.4	895.7	898.1	900.4	902.3	903.7	905.1	906.5	908.0	910.5
120°	955.4	958.2	961.0	963.8	966.7	968.6	969.4	970.3	971.3	972.2	974.8
122.5°	1020.8	1023.0	1025.4	1027.7	1030.0	1031.8	1032.9	1034.2	1035.3	1036.5	1038.3
125°	1110.3	1112.9	1115.4	1117.9	1120.4	1122.3	1123.5	1124.7	1126.1	1127.3	1127.9
127.5°	1197.1	1199.7	1202.2	1204.7	1207.2	1209.2	1210.7	1212.2	1213.7	1215.2	1216.2
130°	1251.2	1253.8	1256.3	1258.8	1261.3	1263.2	1264.4	1265.6	1267.0	1268.2	1269.4
132.5°	1303.2	1305.6	1308.2	1310.6	1313.2	1314.9	1315.9	1316.9	1317.9	1318.9	1320.1
135°	1382.3	1384.2	1386.1	1388.0	1389.9	1391.4	1392.6	1393.9	1395.2	1396.4	1397.3
137.5°	1449.9	1452.4	1454.7	1457.1	1459.4	1461.0	1461.7	1462.4	1463.1	1463.8	1465.3
140°	1495.1	1496.9	1498.8	1500.7	1502.6	1503.9	1504.9	1505.8	1506.7	1507.7	1509.0
142.5°	1536.7	1538.6	1540.5	1542.4	1544.3	1545.7	1546.6	1547.6	1548.5	1549.4	1550.4
145°	1595.1	1597.2	1599.5	1601.7	1603.8	1605.2	1605.9	1606.5	1607.1	1607.8	1608.4
147.5°	1650.0	1651.5	1652.9	1654.4	1655.8	1656.8	1657.5	1658.1	1658.7	1659.3	1660.0
150°	1683.9	1684.8	1685.7	1686.7	1687.6	1688.4	1689.0	1689.7	1690.3	1690.9	1691.5
152.5°	1714.3	1714.8	1715.1	1715.6	1716.1	1716.5	1716.8	1717.2	1717.6	1718.0	1719.1
155°	1757.1	1756.5	1755.9	1755.3	1754.6	1754.4	1754.8	1755.1	1755.4	1755.7	1757.3
157.5°	1790.4	1790.4	1790.3	1790.2	1790.2	1790.0	1789.6	1789.3	1789.0	1788.7	1790.5
160°	1810.7	1810.3	1810.1	1809.8	1809.4	1809.1	1808.8	1808.5	1808.2	1807.9	1809.8
162.5°	1829.9	1829.0	1828.2	1827.4	1826.6	1826.0	1825.7	1825.4	1825.0	1824.8	1826.9
165°	1852.9	1852.0	1851.1	1850.1	1849.2	1848.6	1848.2	1847.9	1847.7	1847.3	1849.8
167.5°	1870.9	1869.7	1868.5	1867.3	1866.0	1865.4	1865.4	1865.4	1865.4	1865.4	1867.8
170°	1881.1	1879.9	1878.6	1877.4	1876.1	1875.5	1875.5	1875.5	1875.5	1875.5	1878.0
172.5°	1887.9	1886.4	1884.9	1883.4	1881.9	1881.2	1881.5	1881.8	1882.0	1882.3	1884.8
175°	1896.6	1895.1	1893.5	1892.0	1890.4	1889.7	1890.1	1890.4	1890.6	1891.0	1893.2
177.5°	1898.8	1897.6	1896.4	1895.2	1893.9	1893.4	1893.7	1893.9	1894.1	1894.4	1896.4
180°	1896.6	1896.6	1896.6	1896.6	1896.6	1896.6	1896.6	1896.6	1896.6	1896.6	1896.6



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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	17.2	17.3	17.3	17.2	17.2	17.2	17.2
90°	36.3	37.6	38.8	39.8	40.4	41.0	41.7	42.2
92.5°	40.1	42.1	44.1	45.2	45.6	46.0	46.4	46.8
95°	48.1	50.2	52.4	53.5	53.5	53.5	53.5	53.5
97.5°	50.4	52.9	55.4	56.8	57.1	57.4	57.8	58.1
100°	51.5	54.0	56.6	58.0	58.2	58.5	58.9	59.2
102.5°	77.2	69.5	61.6	58.1	58.6	59.2	59.8	60.3
105°	197.7	142.3	86.9	59.5	60.1	60.8	61.4	62.0
107.5°	484.3	443.7	403.0	361.8	320.1	278.2	236.5	194.7
110°	614.8	604.5	594.2	566.6	521.8	477.0	432.3	387.5



TEST NUMBER: P332448-830

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CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
112.5°	706.9	707.1	707.3	702.7	693.1	683.7	674.3	664.8
115°	815.1	818.2	821.3	823.5	824.8	826.0	827.3	828.6
117.5°	913.0	915.5	918.0	919.5	919.6	919.9	920.2	920.4
120°	977.3	979.8	982.3	983.5	983.5	983.5	983.5	983.5
122.5°	1040.0	1041.8	1043.6	1044.5	1044.8	1045.0	1045.3	1045.6
125°	1128.5	1129.2	1129.7	1130.4	1131.1	1131.6	1132.3	1132.9
127.5°	1217.2	1218.2	1219.2	1219.4	1218.8	1218.1	1217.5	1216.9
130°	1270.6	1272.0	1273.2	1273.5	1272.9	1272.2	1271.6	1271.0
132.5°	1321.4	1322.7	1323.9	1324.1	1323.2	1322.4	1321.4	1320.6
135°	1398.3	1399.2	1400.1	1400.1	1399.2	1398.3	1397.3	1396.4
137.5°	1466.8	1468.3	1469.8	1470.2	1469.6	1469.0	1468.3	1467.7
140°	1510.2	1511.5	1512.7	1513.1	1512.4	1511.8	1511.2	1510.5
142.5°	1551.4	1552.5	1553.4	1553.5	1552.7	1551.7	1550.9	1550.0
145°	1609.0	1609.7	1610.2	1610.6	1610.6	1610.6	1610.6	1610.6
147.5°	1660.6	1661.2	1661.9	1661.4	1660.0	1658.6	1657.1	1655.7
150°	1692.1	1692.8	1693.4	1693.3	1692.3	1691.4	1690.5	1689.5
152.5°	1720.2	1721.4	1722.5	1722.3	1720.9	1719.4	1718.0	1716.6
155°	1758.9	1760.4	1762.0	1761.8	1759.9	1758.0	1756.1	1754.4
157.5°	1792.4	1794.3	1796.2	1795.9	1793.5	1791.0	1788.6	1786.1
160°	1811.7	1813.5	1815.3	1815.2	1813.0	1810.8	1808.6	1806.5
162.5°	1829.0	1831.2	1833.2	1833.3	1831.5	1829.5	1827.6	1825.6
165°	1852.3	1854.8	1857.4	1857.5	1855.3	1853.1	1850.9	1848.7
167.5°	1870.4	1872.8	1875.4	1875.4	1872.8	1870.4	1867.8	1865.4
170°	1880.5	1883.0	1885.6	1885.6	1883.0	1880.5	1878.0	1875.5
172.5°	1887.3	1889.8	1892.2	1892.2	1889.4	1886.7	1883.9	1881.1
175°	1895.4	1897.5	1899.8	1899.6	1897.1	1894.6	1892.1	1889.6
177.5°	1898.4	1900.4	1902.4	1902.1	1899.6	1897.1	1894.6	1892.2
180°	1896.6	1896.6	1896.6	1896.6	1896.6	1896.6	1896.6	1896.6

(END OF REPORT)