

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: P332801-935

Luminaire Tested: **S124DIW-S795D1560U935-4F0-1E-UDD-D**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P332801-935
REPORT IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-1807-864-6,
Test Lab: INNOVATION CENTER
Issue Date: 3/3/2020
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: NEO-RAY
Catalog Number: S124DIW-S795D1560U935-4F0-1E-UDD-D
Description: DEFINE 4 DIRECT-INDIRECT WALL MOUNT LED LUMINAIRE
DOWNLIGHT 795 LUMENS PER FOOT, DROP SATIN WHITE DIFFUSER
UPLIGHT 1560 LUMENS PER FOOT, NO LENS
Light Source: -
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 8162.8 lumens
Efficiency: N/A
Efficacy: 119.9 lumens/watt
Spacing Criteria (0/90/45): 1.23 / 1.28 / 1.39
Luminous Opening: Rectangular w/ Sides (W: 0.33' x L: 4' x H: 0.08')
CIE Type: Semi-Indirect

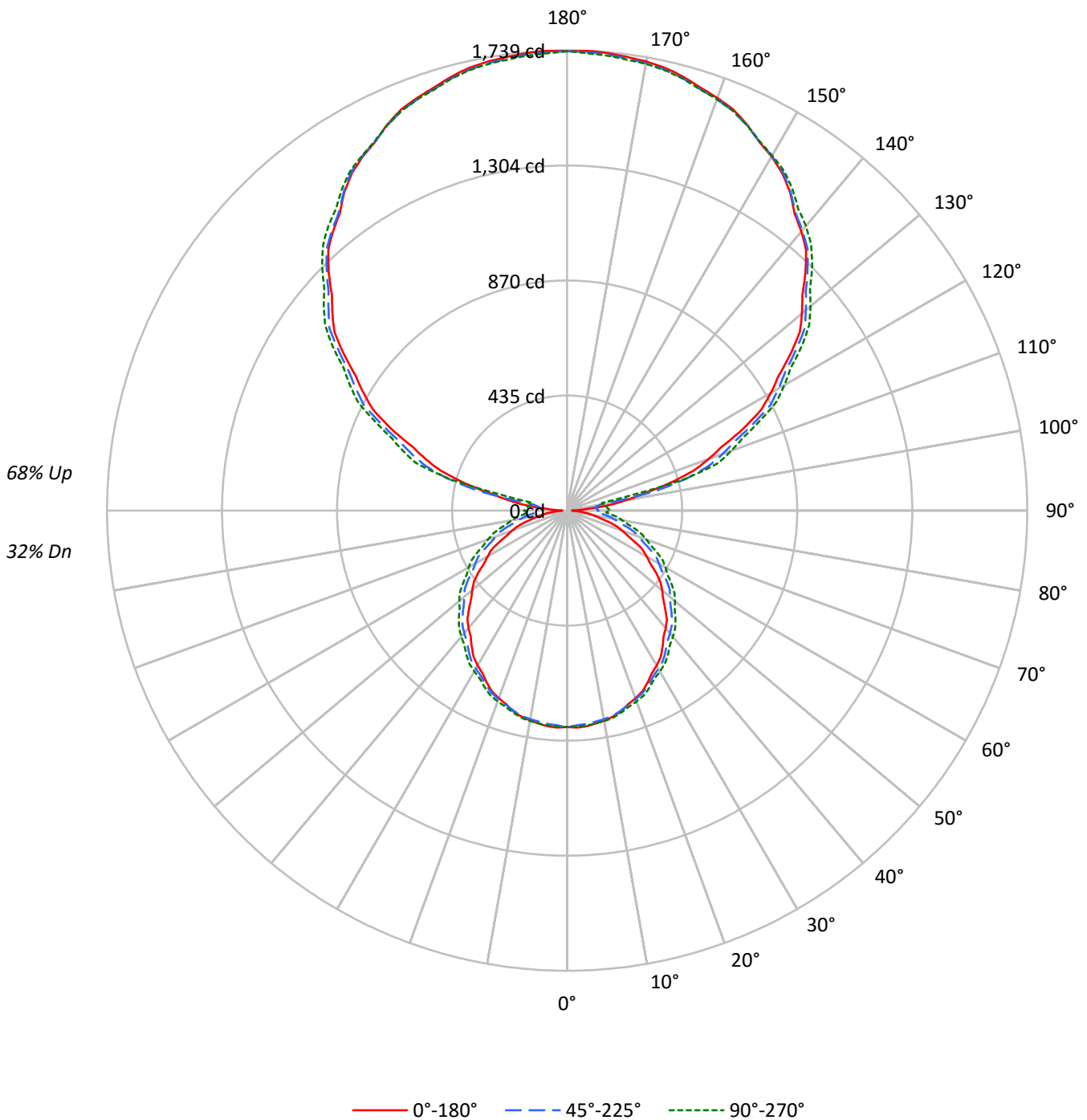
Input Watts (W): 68.1
Input Voltage (V): 120
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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Luminous Intensity Polar Plot





TEST NUMBER: P332801-935

CATALOG NUMBER: S124DIW-S795D1560U935-4F0-1E-UDD-D

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	92	92	92	92	73	73	73	55	55	55	39	39	39
1	93	89	85	81	83	80	76	73	63	61	59	48	46	45	34	33	32
2	84	77	71	65	76	69	64	59	55	51	48	41	39	37	29	28	26
3	77	67	60	54	69	61	54	49	48	44	40	36	33	31	26	24	22
4	70	59	51	45	63	53	47	41	42	38	34	32	29	26	23	21	19
5	64	53	45	39	57	47	41	35	38	33	29	29	25	22	20	18	16
6	59	47	39	33	53	42	35	30	34	29	25	26	22	19	18	16	14
7	54	42	34	29	49	38	31	26	31	25	22	23	20	17	17	14	12
8	50	38	31	25	45	35	28	23	28	23	19	21	18	15	15	13	11
9	47	35	27	22	42	31	25	21	25	20	17	20	16	13	14	12	10
10	44	32	25	20	39	29	23	18	23	18	15	18	15	12	13	11	9

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	6603	6603	6603
5°	6622	6453	6471
10°	6582	6347	6342
15°	6524	6225	6190
20°	6435	6090	6044
25°	6334	5939	5882
30°	6226	5788	5714
35°	6103	5635	5569
40°	6004	5488	5417
45°	5858	5352	5286
50°	5735	5197	5149
55°	5608	5051	4987
60°	5409	4863	4840
65°	5191	4662	4657
70°	4927	4433	4447
75°	4561	4182	4255
80°	4149	3940	4067
85°	3636	3724	3960



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	77.4	0.9
10°-20°	221.9	2.7
20°-30°	335.5	4.1
30°-40°	405.9	5.0
40°-50°	429.2	5.3
50°-60°	403.9	4.9
60°-70°	335.1	4.1
70°-80°	235.4	2.9
80°-90°	138.1	1.7
90°-100°	138.4	1.7
100°-110°	437.1	5.4
110°-120°	763.5	9.4
120°-130°	941.5	11.5
130°-140°	993.2	12.2
140°-150°	921.7	11.3
150°-160°	741.8	9.1
160°-170°	478.4	5.9
170°-180°	164.9	2.0
0°-30°	634.9	7.8
0°-40°	1040.8	12.8
0°-60°	1873.9	23.0
0°-90°	2582.5	31.6
90°-120°	1338.9	16.4
90°-150°	4195.3	51.4
90°-180°	5580.0	68.4
0°-180°	8162.8	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	818	818	818	818	818	
5°	819	816	810	816	816	78
15°	785	786	783	791	790	221
25°	718	723	726	736	737	331
35°	628	639	648	661	664	393
45°	524	541	559	574	579	405
55°	410	430	457	475	481	365
65°	284	313	344	366	374	281
75°	158	192	230	255	264	168
85°	49	87	128	155	165	52
90°	18	69	119	152	164	13
95°	83	72	108	140	150	101
105°	399	426	466	496	461	418
115°	735	748	775	797	804	724
125°	1029	1035	1054	1074	1082	919
135°	1274	1274	1285	1301	1310	982
145°	1468	1471	1471	1478	1484	917
155°	1609	1610	1606	1611	1608	742
165°	1697	1691	1691	1700	1689	479
175°	1736	1729	1730	1740	1726	165
180°	1736	1736	1736	1736	1736	



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CATALOG NUMBER: S124DIW-S795D1560U935-4F0-1E-UDD-D

CANDELA DISTRIBUTION (FULL):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
0°	817.9	817.9	817.9	817.9	817.9	817.9	817.9	817.9	817.9	817.9	817.9
2.5°	820.8	820.3	819.8	819.3	818.8	817.9	816.6	815.3	814.0	812.7	813.8
5°	818.7	818.1	817.5	816.9	816.3	815.3	813.8	812.4	811.0	809.6	811.2
7.5°	811.8	811.4	811.1	810.7	810.3	809.5	808.4	807.2	806.0	804.9	806.7
10°	805.9	805.7	805.6	805.3	805.1	804.5	803.5	802.5	801.4	800.4	802.3
12.5°	797.9	797.8	797.8	797.7	797.7	797.4	796.7	795.9	795.2	794.5	796.3
15°	784.9	785.1	785.2	785.5	785.7	785.5	784.9	784.3	783.6	783.0	784.9
17.5°	767.1	767.7	768.3	769.0	769.6	769.7	769.6	769.6	769.4	769.3	771.2
20°	754.7	755.3	755.9	756.5	757.1	757.5	757.7	757.9	758.1	758.3	760.3
22.5°	740.7	741.5	742.3	743.0	743.8	744.4	744.8	745.1	745.5	745.9	747.9
25°	718.0	719.2	720.5	721.7	722.9	723.8	724.4	725.0	725.7	726.3	728.5
27.5°	692.8	694.5	696.3	698.1	699.9	701.3	702.2	703.1	704.0	705.0	707.1
30°	675.9	677.5	679.2	680.8	682.4	683.9	685.4	686.7	688.2	689.6	691.8
32.5°	657.5	659.5	661.5	663.4	665.4	667.1	668.7	670.3	671.9	673.5	676.1
35°	628.3	630.7	633.2	635.6	638.0	640.2	642.3	644.4	646.4	648.4	651.3
37.5°	598.7	601.6	604.4	607.2	610.0	612.7	615.2	617.7	620.3	622.8	625.7
40°	579.7	582.4	585.0	587.6	590.3	593.1	595.9	598.7	601.6	604.4	607.5
42.5°	557.8	560.7	563.7	566.6	569.6	572.7	576.1	579.5	582.8	586.1	589.5
45°	523.8	527.7	531.6	535.5	539.3	543.2	547.1	551.0	554.7	558.6	562.1
47.5°	491.5	495.4	499.4	503.4	507.4	511.6	516.1	520.6	525.0	529.5	533.1
50°	468.0	472.4	476.9	481.4	485.9	490.3	494.8	499.3	503.8	508.2	512.4
52.5°	444.5	449.0	453.5	458.0	462.4	467.3	472.3	477.5	482.7	487.8	491.8
55°	410.3	414.6	418.9	423.1	427.4	432.6	438.7	444.8	450.9	457.0	461.1
57.5°	372.0	377.3	382.6	387.9	393.1	398.8	404.9	411.0	417.1	423.1	427.9
60°	347.1	352.4	357.7	363.0	368.2	374.3	381.0	387.7	394.4	401.1	405.8
62.5°	322.9	328.7	334.5	340.3	346.0	352.3	359.0	365.8	372.5	379.2	383.8
65°	283.9	290.4	297.0	303.4	310.0	316.7	323.6	330.5	337.4	344.3	349.4
67.5°	246.3	253.3	260.2	267.1	274.1	281.2	288.6	296.0	303.4	310.8	316.0
70°	220.7	227.6	234.5	241.5	248.4	255.7	263.5	271.2	278.9	286.6	292.1
72.5°	195.8	202.9	210.0	217.1	224.1	231.8	240.0	248.2	256.5	264.7	270.0
75°	157.6	165.1	172.5	180.1	187.6	195.7	204.2	212.8	221.4	229.9	235.6
77.5°	121.8	129.8	137.8	145.8	153.7	162.2	171.2	180.1	189.1	198.0	203.8
80°	99.8	108.0	116.1	124.2	132.4	140.9	149.9	158.9	167.8	176.8	182.9
82.5°	77.8	86.3	94.8	103.2	111.7	120.5	129.4	138.4	147.3	156.3	162.5
85°	48.6	57.1	65.6	74.2	82.7	91.6	100.7	109.9	119.1	128.2	134.3
87.5°	27.9	36.9	45.8	54.7	63.6	72.8	82.1	91.5	100.9	110.3	116.6
90°	18.5	29.9	41.2	52.5	63.8	75.0	86.0	97.1	108.1	119.2	126.8
92.5°	30.3	37.8	45.3	52.8	60.3	69.6	80.6	91.7	102.7	113.8	121.2
95°	83.3	80.2	77.1	74.0	70.9	73.7	82.3	91.0	99.6	108.2	115.5
97.5°	162.5	174.4	186.2	198.1	210.1	204.1	180.1	156.2	132.2	108.3	113.8
100°	223.0	233.5	244.0	254.5	264.9	254.3	222.4	190.5	158.6	126.7	127.3
102.5°	291.5	300.1	308.5	316.9	325.4	330.9	333.5	336.0	338.6	341.2	293.6
105°	399.1	404.8	410.7	416.5	422.2	429.6	438.6	447.6	456.6	465.5	473.2
107.5°	500.4	504.6	508.9	513.1	517.2	523.9	533.0	542.1	551.1	560.3	566.5
110°	568.3	572.0	575.7	579.4	583.1	589.4	598.2	607.1	616.0	624.8	630.1



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CANDELA DISTRIBUTION (continued):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
112.5°	634.0	638.1	642.1	646.3	650.3	656.2	663.7	671.4	679.0	686.6	691.0
115°	735.2	737.9	740.6	743.3	746.0	750.4	756.6	762.9	769.1	775.3	780.4
117.5°	827.2	829.5	831.7	834.0	836.2	840.7	847.4	854.1	860.8	867.5	871.6
120°	888.8	890.5	892.3	894.1	895.9	899.6	905.2	910.8	916.4	922.0	926.7
122.5°	947.0	947.8	948.6	949.4	950.2	953.6	959.6	965.6	971.6	977.6	982.0
125°	1029.4	1030.4	1031.3	1032.3	1033.2	1036.0	1040.4	1045.0	1049.5	1054.0	1058.7
127.5°	1108.2	1108.3	1108.4	1108.5	1108.5	1111.2	1116.4	1121.6	1126.9	1132.1	1135.6
130°	1158.3	1158.4	1158.5	1158.6	1158.6	1160.8	1164.9	1169.1	1173.1	1177.2	1181.2
132.5°	1205.1	1205.4	1205.7	1206.0	1206.3	1208.3	1212.0	1215.7	1219.4	1223.1	1226.9
135°	1274.3	1274.0	1273.7	1273.4	1273.2	1274.3	1276.9	1279.4	1282.0	1284.6	1288.4
137.5°	1336.4	1336.3	1336.2	1336.1	1336.0	1337.0	1338.9	1340.8	1342.8	1344.8	1348.4
140°	1376.8	1377.3	1377.6	1377.9	1378.4	1378.9	1379.8	1380.5	1381.3	1382.1	1385.6
142.5°	1412.5	1413.5	1414.5	1415.5	1416.5	1417.1	1417.3	1417.6	1417.7	1418.0	1420.9
145°	1468.1	1468.8	1469.5	1470.2	1470.8	1471.1	1471.1	1471.1	1471.1	1471.1	1472.7
147.5°	1512.5	1514.0	1515.4	1516.7	1518.2	1518.7	1518.5	1518.2	1517.9	1517.6	1518.0
150°	1544.7	1545.7	1546.6	1547.6	1548.5	1548.9	1548.6	1548.3	1548.0	1547.7	1547.7
152.5°	1571.0	1571.9	1572.8	1573.6	1574.5	1574.8	1574.2	1573.6	1573.1	1572.6	1573.1
155°	1608.8	1609.0	1609.3	1609.6	1609.9	1609.6	1608.8	1607.9	1607.1	1606.1	1607.3
157.5°	1640.7	1640.5	1640.4	1640.2	1640.0	1639.4	1638.4	1637.4	1636.5	1635.5	1637.0
160°	1659.4	1658.5	1657.7	1656.8	1656.0	1655.4	1655.0	1654.8	1654.5	1654.2	1656.0
162.5°	1676.0	1674.9	1673.8	1672.8	1671.6	1670.9	1670.6	1670.3	1670.1	1669.7	1671.5
165°	1697.0	1695.6	1694.2	1692.7	1691.3	1690.6	1690.6	1690.6	1690.6	1690.6	1692.8
167.5°	1713.6	1712.2	1710.6	1709.2	1707.6	1706.8	1706.7	1706.5	1706.3	1706.2	1708.7
170°	1723.0	1721.3	1719.5	1717.8	1716.1	1715.4	1715.6	1716.0	1716.2	1716.5	1718.8
172.5°	1729.2	1727.5	1725.8	1724.1	1722.3	1721.6	1721.9	1722.2	1722.4	1722.8	1725.0
175°	1735.9	1734.2	1732.5	1730.8	1729.1	1728.4	1728.6	1728.9	1729.2	1729.5	1732.1
177.5°	1739.1	1737.5	1735.9	1734.2	1732.7	1732.1	1732.5	1733.0	1733.5	1733.9	1735.8
180°	1735.9	1735.9	1735.9	1735.9	1735.9	1735.9	1735.9	1735.9	1735.9	1735.9	1735.9



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CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
0°	817.9	817.9	817.9	817.9	817.9	817.9	817.9	817.9
2.5°	814.9	816.1	817.3	817.8	817.6	817.4	817.3	817.1
5°	812.9	814.5	816.1	816.8	816.6	816.4	816.2	816.0
7.5°	808.5	810.3	812.2	813.0	812.8	812.5	812.4	812.2
10°	804.1	805.9	807.8	808.6	808.4	808.1	808.0	807.8
12.5°	797.9	799.6	801.2	802.0	802.0	801.9	801.9	801.8
15°	786.7	788.5	790.3	791.2	791.0	790.7	790.6	790.3
17.5°	773.0	774.9	776.8	777.7	777.5	777.3	777.1	777.0
20°	762.3	764.4	766.5	767.5	767.5	767.5	767.5	767.5
22.5°	749.9	751.9	754.0	755.2	755.5	755.8	756.1	756.5
25°	730.7	733.0	735.2	736.4	736.6	736.8	737.0	737.3
27.5°	709.1	711.2	713.3	714.5	714.7	715.0	715.2	715.4
30°	694.1	696.3	698.5	699.9	700.3	700.7	701.1	701.5
32.5°	678.6	681.2	683.7	685.3	685.6	686.0	686.5	686.9
35°	654.1	656.9	659.8	661.5	662.1	662.7	663.4	664.0
37.5°	628.5	631.5	634.3	636.1	636.7	637.4	638.0	638.7
40°	610.5	613.6	616.6	618.5	619.4	620.2	621.0	621.8
42.5°	592.9	596.2	599.6	601.7	602.3	603.0	603.6	604.2
45°	565.6	569.0	572.5	574.7	575.8	576.8	577.8	578.8
47.5°	536.7	540.3	543.9	546.2	547.5	548.7	549.9	551.1
50°	516.4	520.5	524.5	527.2	528.4	529.7	530.9	532.1
52.5°	495.9	500.0	504.0	506.7	507.9	509.1	510.3	511.6
55°	465.1	469.2	473.3	476.0	477.2	478.4	479.6	480.8
57.5°	432.8	437.6	442.5	445.5	446.6	447.7	448.9	450.0
60°	410.5	415.2	419.8	423.0	424.6	426.3	427.9	429.6
62.5°	388.5	393.2	397.9	401.1	402.7	404.3	405.9	407.5
65°	354.6	359.6	364.7	368.1	369.7	371.3	372.9	374.5
67.5°	321.2	326.3	331.5	334.8	336.5	338.0	339.7	341.2
70°	297.6	303.2	308.7	312.1	313.5	315.0	316.3	317.8
72.5°	275.3	280.7	286.0	289.5	291.0	292.7	294.2	295.8
75°	241.3	246.9	252.7	256.4	258.3	260.1	261.9	263.7
77.5°	209.6	215.3	221.1	225.0	227.0	228.9	230.8	232.8
80°	189.0	195.1	201.2	205.0	206.6	208.3	209.9	211.5
82.5°	168.8	175.0	181.3	185.4	187.1	188.9	190.7	192.5
85°	140.4	146.5	152.7	156.7	158.8	160.7	162.8	164.9
87.5°	122.8	129.1	135.3	139.4	141.3	143.2	145.1	147.0
90°	134.5	142.2	149.7	154.7	156.9	159.1	161.3	163.5
92.5°	128.7	136.2	143.7	148.3	150.0	151.8	153.5	155.2
95°	122.7	129.9	137.2	141.8	144.0	146.0	148.2	150.3
97.5°	119.2	124.8	130.3	134.1	136.1	138.1	140.2	142.2
100°	127.9	128.5	129.1	130.3	132.0	133.6	135.3	137.1
102.5°	246.1	198.5	150.8	127.9	129.5	131.2	132.9	134.5
105°	481.0	488.6	496.3	495.8	487.0	478.2	469.5	460.7
107.5°	572.7	579.0	585.3	589.7	592.3	594.9	597.4	600.0
110°	635.3	640.6	645.8	649.7	652.2	654.7	657.2	659.7



TEST NUMBER: P332801-935

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CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
112.5°	695.4	699.8	704.2	707.7	710.5	713.2	715.9	718.7
115°	785.5	790.5	795.6	798.8	800.2	801.7	803.1	804.5
117.5°	875.7	879.9	884.0	886.7	888.3	889.8	891.3	892.9
120°	931.3	935.9	940.6	943.5	944.5	945.6	946.6	947.6
122.5°	986.4	990.8	995.2	997.9	998.8	999.6	1000.6	1001.4
125°	1063.4	1068.2	1072.9	1076.1	1077.5	1079.1	1080.6	1082.1
127.5°	1139.1	1142.5	1146.1	1148.4	1149.5	1150.7	1151.8	1153.1
130°	1185.2	1189.1	1193.1	1195.7	1196.9	1198.1	1199.4	1200.6
132.5°	1230.7	1234.5	1238.3	1240.7	1241.7	1242.7	1243.7	1244.7
135°	1292.3	1296.1	1299.9	1302.8	1304.5	1306.3	1308.1	1309.9
137.5°	1352.0	1355.6	1359.2	1361.4	1362.3	1363.1	1364.0	1364.8
140°	1389.1	1392.6	1396.1	1398.5	1399.8	1401.1	1402.4	1403.8
142.5°	1423.9	1426.8	1429.8	1431.8	1432.6	1433.6	1434.5	1435.4
145°	1474.1	1475.7	1477.1	1478.6	1480.0	1481.4	1482.8	1484.2
147.5°	1518.4	1518.8	1519.1	1519.8	1520.8	1521.7	1522.7	1523.6
150°	1547.7	1547.7	1547.7	1547.9	1548.2	1548.4	1548.8	1549.0
152.5°	1573.6	1574.0	1574.5	1574.6	1574.4	1574.3	1574.1	1573.9
155°	1608.4	1609.6	1610.8	1610.9	1610.1	1609.2	1608.3	1607.5
157.5°	1638.5	1640.0	1641.5	1641.5	1640.0	1638.5	1637.0	1635.5
160°	1657.7	1659.4	1661.1	1661.1	1659.4	1657.7	1656.0	1654.2
162.5°	1673.3	1675.0	1676.7	1676.5	1674.6	1672.7	1670.7	1668.7
165°	1695.1	1697.5	1699.8	1699.6	1697.0	1694.4	1691.9	1689.3
167.5°	1711.2	1713.7	1716.3	1716.1	1713.2	1710.4	1707.4	1704.6
170°	1721.1	1723.5	1725.8	1725.4	1722.6	1719.7	1716.8	1713.9
172.5°	1727.3	1729.7	1732.0	1731.6	1728.5	1725.4	1722.3	1719.1
175°	1734.7	1737.3	1739.9	1739.5	1735.9	1732.5	1729.1	1725.6
177.5°	1737.6	1739.5	1741.3	1740.9	1738.1	1735.3	1732.5	1729.7
180°	1735.9	1735.9	1735.9	1735.9	1735.9	1735.9	1735.9	1735.9

(END OF REPORT)