

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: P333013-930

Luminaire Tested: **S124RDIP-S1195D1205U930-4F0-1E-UDD-F1**

Issue Date: 3/3/2020

**Test Information**

Test Method: LM-79-08  
Report Number: P333013-930  
REPORT IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-1807-864-10,  
Test Lab: INNOVATION CENTER  
Issue Date: 3/3/2020  
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)  
Product Line: NEO-RAY  
Catalog Number: S124RDIP-S1195D1205U930-4F0-1E-UDD-F1  
Description: DEFINE 4 DIRECT-INDIRECT PENDANT LED LUMINAIRE  
DOWNLIGHT 1195 LUMENS PER FOOT, FLUSH SATIN WHITE DIFFUSER, REGRESSED  
HOUSING  
UPLIGHT 1205 LUMENS PER FOOT, FLUSH SATIN WHITE DIFFUSER  
Light Source: -  
Ballast/Driver: ELECTRONIC DRIVER

**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 7329.9 lumens  
Efficiency: N/A  
Efficacy: 102.2 lumens/watt  
Spacing Criteria (0/90/45): 1.2 / 1.09 / 1.24  
Luminous Opening: Rectangular (W 0.33' x L: 4' x H: 0')  
CIE Type: General Diffuse

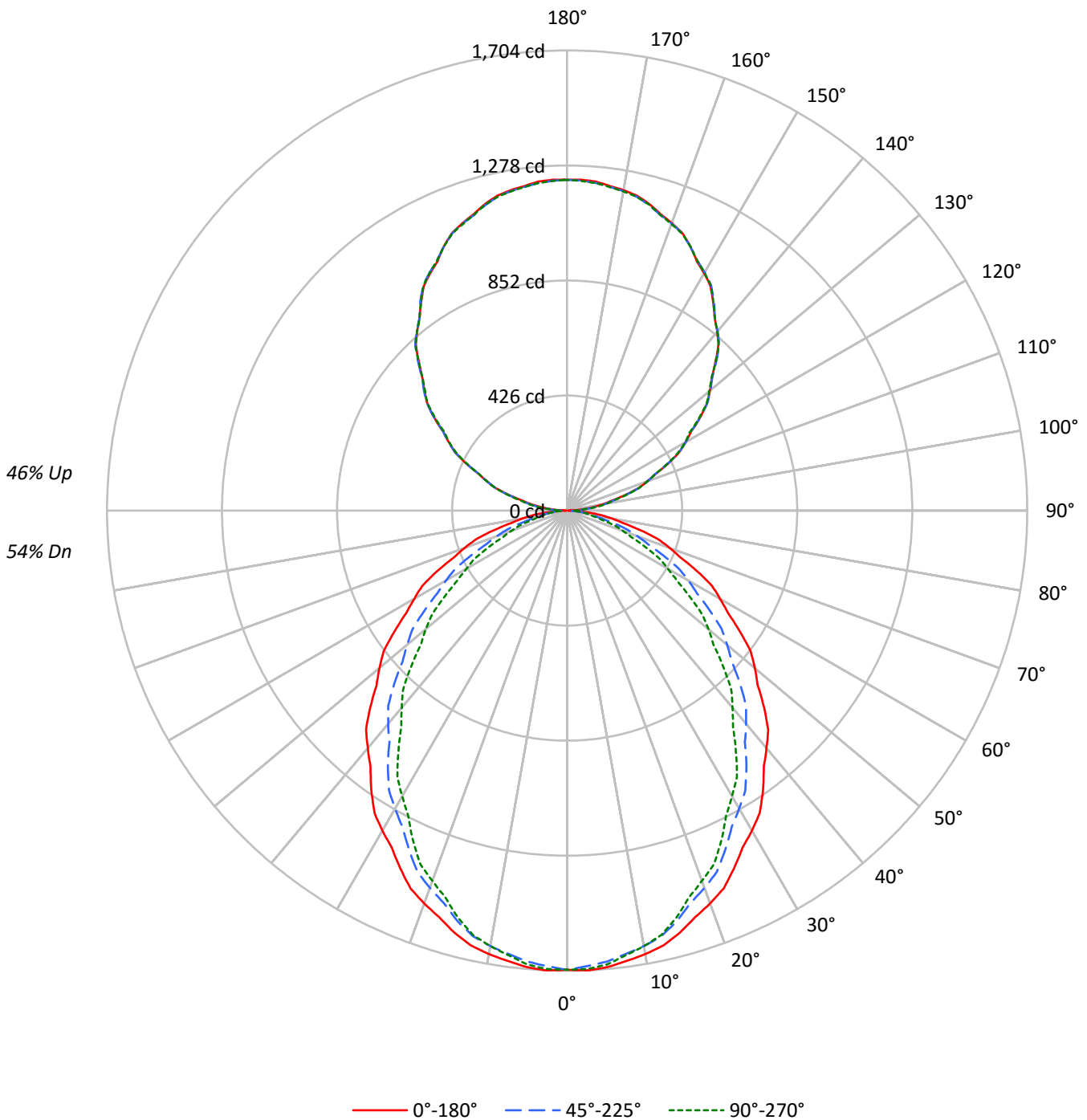
Input Watts (W): 71.7  
Input Voltage (V): 120  
Input Current (A<sub>in</sub>): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 25 FT



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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	100	100	100	100	85	85	85	72	72	72	59	59	59	54
1	99	95	91	87	92	88	85	82	75	73	71	64	62	60	53	52	51	46
2	90	83	77	72	83	77	72	67	66	62	59	56	53	51	47	45	43	39
3	83	73	66	60	76	68	62	57	59	54	50	50	46	43	42	39	37	33
4	76	65	57	51	70	61	54	48	52	47	43	45	41	37	38	35	32	29
5	70	58	50	44	64	54	47	42	47	41	37	40	36	33	34	31	28	25
6	64	52	44	38	59	49	42	36	42	37	32	36	32	29	31	28	25	22
7	59	47	39	34	55	44	37	32	39	33	29	33	29	25	28	25	22	20
8	55	43	35	30	51	40	33	28	35	30	26	30	26	23	26	23	20	18
9	51	39	32	27	48	37	30	25	32	27	23	28	24	21	24	21	18	16
10	48	36	29	24	45	34	27	23	30	24	21	26	22	19	22	19	17	15

**AVERAGE LUMINANCE (cd/sqm):**

	0°	45°	90°
0°	13726	13726	13726
5°	13757	13588	13674
10°	13671	13426	13426
15°	13514	13143	13046
20°	13298	12773	12538
25°	13023	12339	12026
30°	12755	11882	11384
35°	12458	11406	10738
40°	12101	10866	10043
45°	11772	10330	9334
50°	11396	9712	8584
55°	10994	9070	7769
60°	10551	8365	6936
65°	10147	7484	6117
70°	9557	6515	5193
75°	8812	5402	4223
80°	7685	4114	3873
85°	6512	3742	3492



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	159.7	2.2
10°-20°	445.4	6.1
20°-30°	643.1	8.8
30°-40°	729.0	9.9
40°-50°	704.0	9.6
50°-60°	585.4	8.0
60°-70°	404.2	5.5
70°-80°	204.9	2.8
80°-90°	56.2	0.8
90°-100°	80.8	1.1
100°-110°	239.3	3.3
110°-120°	406.2	5.5
120°-130°	535.6	7.3
130°-140°	601.5	8.2
140°-150°	591.0	8.1
150°-160°	497.1	6.8
160°-170°	330.7	4.5
170°-180°	115.8	1.6
0°-30°	1248.2	17.0
0°-40°	1977.3	27.0
0°-60°	3266.6	44.6
0°-90°	3931.9	53.6
90°-120°	726.2	9.9
90°-150°	2454.3	33.5
90°-180°	3398.0	46.4
0°-180°	7329.9	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	1700	1700	1700	1700	1700	
5°	1698	1692	1677	1689	1687	161
15°	1617	1604	1573	1570	1561	455
25°	1462	1437	1385	1364	1350	673
35°	1264	1221	1157	1114	1090	790
45°	1031	981	905	843	818	795
55°	781	727	644	579	552	698
65°	531	474	392	338	320	524
75°	282	234	173	144	135	298
85°	70	46	40	38	38	79
90°	3	13	21	26	28	7
95°	57	65	72	75	75	63
105°	221	222	225	228	231	234
115°	413	413	411	410	409	407
125°	601	601	600	599	597	536
135°	776	781	782	780	777	600
145°	942	946	947	946	944	590
155°	1080	1080	1079	1082	1079	497
165°	1176	1173	1171	1176	1173	331
175°	1223	1218	1217	1223	1217	116
180°	1225	1225	1225	1225	1225	



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**CANDELA DISTRIBUTION (FULL):**

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
0°	1700.2	1700.2	1700.2	1700.2	1700.2	1700.2	1700.2	1700.2	1700.2	1700.2	1700.2
2.5°	1704.4	1703.5	1702.6	1701.6	1700.7	1699.0	1696.5	1693.9	1691.3	1688.8	1691.3
5°	1697.6	1696.5	1695.3	1694.2	1693.1	1690.7	1687.3	1683.8	1680.3	1676.8	1679.7
7.5°	1682.3	1681.1	1679.8	1678.6	1677.4	1674.5	1670.1	1665.6	1661.0	1656.5	1658.4
10°	1667.7	1666.2	1664.8	1663.4	1661.9	1658.6	1653.4	1648.2	1643.0	1637.8	1638.9
12.5°	1648.9	1647.3	1645.6	1643.9	1642.3	1638.3	1632.2	1626.1	1619.9	1613.8	1614.5
15°	1616.9	1614.3	1611.8	1609.2	1606.5	1601.6	1594.4	1587.1	1579.9	1572.6	1572.1
17.5°	1578.2	1574.3	1570.6	1566.8	1563.1	1556.9	1548.2	1539.5	1530.8	1522.2	1520.5
20°	1547.9	1544.2	1540.4	1536.7	1532.9	1526.1	1516.3	1506.4	1496.6	1486.8	1484.4
22.5°	1514.6	1510.4	1506.2	1501.9	1497.7	1490.4	1479.8	1469.3	1458.7	1448.2	1444.7
25°	1462.0	1456.8	1451.6	1446.4	1441.2	1432.6	1420.8	1408.9	1397.1	1385.2	1380.3
27.5°	1406.8	1400.3	1393.8	1387.2	1380.6	1371.1	1358.4	1345.7	1333.0	1320.4	1314.3
30°	1368.3	1361.1	1353.8	1346.5	1339.4	1328.9	1315.3	1301.7	1288.2	1274.6	1267.3
32.5°	1327.6	1319.5	1311.3	1303.2	1295.0	1283.9	1269.8	1255.8	1241.7	1227.7	1219.3
35°	1264.1	1254.8	1245.6	1236.3	1227.1	1215.2	1200.8	1186.3	1171.8	1157.4	1147.5
37.5°	1196.2	1186.6	1177.0	1167.5	1158.0	1145.2	1129.2	1113.1	1097.1	1081.1	1070.1
40°	1148.3	1138.7	1129.2	1119.7	1110.0	1097.1	1080.6	1064.0	1047.6	1031.1	1019.0
42.5°	1102.4	1092.4	1082.4	1072.4	1062.4	1048.8	1031.6	1014.4	997.3	980.1	967.7
45°	1031.1	1020.3	1009.7	999.0	988.3	974.2	956.9	939.6	922.2	904.8	890.6
47.5°	957.4	946.3	935.3	924.2	913.2	898.6	880.6	862.5	844.5	826.5	811.7
50°	907.4	896.1	884.8	873.6	862.3	847.3	828.8	810.3	791.8	773.3	758.9
52.5°	856.4	845.3	834.3	823.2	812.2	797.1	778.2	759.2	740.2	721.2	706.5
55°	781.1	769.6	758.0	746.4	734.8	719.7	700.8	682.1	663.2	644.4	629.4
57.5°	706.6	694.6	682.6	670.6	658.5	643.3	624.8	606.2	587.7	569.2	553.9
60°	653.5	642.0	630.4	618.8	607.2	592.2	573.7	555.2	536.6	518.1	503.1
62.5°	605.6	593.6	581.6	569.6	557.5	542.0	523.0	504.0	485.0	466.1	452.2
65°	531.2	518.7	506.3	493.8	481.4	465.9	447.4	428.9	410.4	391.8	379.4
67.5°	453.8	441.9	430.0	418.1	406.2	391.6	374.4	357.3	340.1	322.9	312.2
70°	404.9	392.7	380.6	368.4	356.3	341.9	325.5	309.0	292.5	276.0	266.4
72.5°	352.8	341.9	330.8	319.8	308.8	295.5	280.0	264.4	248.8	233.3	225.1
75°	282.5	271.8	261.1	250.4	239.7	227.6	213.9	200.3	186.8	173.2	166.5
77.5°	211.2	202.1	193.0	183.9	174.8	164.8	153.8	142.8	131.8	120.8	116.9
80°	165.3	156.9	148.5	140.1	131.8	123.3	114.5	105.9	97.2	88.5	87.6
82.5°	125.8	118.1	110.4	102.6	95.0	88.6	83.6	78.7	73.7	68.7	68.1
85°	70.3	64.5	58.7	52.9	47.1	43.9	43.0	42.1	41.3	40.4	39.8
87.5°	24.5	23.2	21.8	20.4	19.0	18.3	18.4	18.5	18.7	18.8	18.8
90°	2.9	5.1	7.5	9.8	12.1	14.1	15.8	17.4	19.2	20.9	22.1
92.5°	20.3	22.9	25.6	28.2	30.9	32.8	34.0	35.1	36.4	37.5	38.2
95°	56.8	58.7	60.7	62.5	64.4	66.1	67.6	69.1	70.5	72.0	72.6
97.5°	99.3	100.8	102.3	103.8	105.3	107.0	108.7	110.4	112.1	113.8	114.6
100°	132.6	133.5	134.3	135.1	136.0	137.4	139.3	141.1	143.0	145.0	145.4
102.5°	167.5	167.8	168.1	168.4	168.8	169.8	171.5	173.3	175.0	176.8	177.3
105°	220.7	220.9	221.1	221.4	221.5	222.1	222.9	223.7	224.6	225.4	226.1
107.5°	276.5	276.9	277.1	277.4	277.6	277.8	277.9	278.0	278.2	278.3	278.9
110°	314.5	314.9	315.3	315.8	316.2	316.3	316.1	315.8	315.6	315.4	315.0



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**CANDELA DISTRIBUTION (continued):**

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
112.5°	353.8	354.0	354.1	354.2	354.2	354.1	353.7	353.4	352.9	352.5	352.5
115°	412.9	412.9	412.9	412.9	412.9	412.8	412.4	412.0	411.5	411.1	410.9
117.5°	468.7	468.9	469.0	469.2	469.4	469.3	469.0	468.7	468.4	468.1	467.4
120°	505.8	506.6	507.5	508.3	509.2	509.3	508.7	508.0	507.4	506.8	505.7
122.5°	544.5	544.8	545.1	545.4	545.8	545.8	545.5	545.3	544.9	544.6	544.0
125°	601.4	601.4	601.4	601.4	601.4	601.4	601.2	601.0	600.7	600.5	600.1
127.5°	653.2	653.9	654.4	655.1	655.7	655.9	655.5	655.2	654.8	654.5	654.1
130°	689.6	690.2	690.8	691.5	692.1	692.4	692.4	692.4	692.4	692.4	692.0
132.5°	726.7	727.2	727.7	728.1	728.6	728.7	728.6	728.4	728.2	728.1	727.6
135°	775.8	777.1	778.3	779.6	780.8	781.5	781.5	781.5	781.5	781.5	781.1
137.5°	829.2	829.8	830.4	831.0	831.5	832.0	832.3	832.7	833.0	833.3	832.8
140°	864.8	865.2	865.7	866.1	866.5	866.7	866.7	866.7	866.7	866.7	866.5
142.5°	897.4	897.8	898.2	898.6	899.1	899.2	899.0	898.9	898.7	898.5	898.5
145°	942.5	943.3	944.2	945.0	945.8	946.4	946.6	946.8	947.0	947.2	947.0
147.5°	987.2	988.2	989.2	990.2	991.2	991.6	991.5	991.3	991.2	991.0	990.8
150°	1014.5	1015.3	1016.2	1017.0	1017.8	1018.2	1018.2	1018.2	1018.2	1018.2	1018.2
152.5°	1040.2	1040.7	1041.2	1041.7	1042.3	1042.6	1042.8	1042.9	1043.1	1043.3	1043.7
155°	1079.8	1079.8	1079.8	1079.8	1079.8	1079.7	1079.5	1079.3	1079.0	1078.9	1079.7
157.5°	1113.1	1112.8	1112.4	1112.1	1111.7	1111.4	1111.4	1111.3	1111.3	1111.3	1111.9
160°	1132.9	1132.7	1132.5	1132.2	1132.0	1131.8	1131.6	1131.4	1131.1	1131.0	1131.6
162.5°	1151.0	1150.5	1150.0	1149.4	1148.8	1148.5	1148.3	1148.1	1147.9	1147.6	1148.8
165°	1175.5	1174.8	1174.2	1173.6	1173.0	1172.4	1172.0	1171.6	1171.2	1170.8	1172.0
167.5°	1194.3	1193.4	1192.5	1191.6	1190.7	1190.3	1190.3	1190.3	1190.4	1190.4	1191.7
170°	1204.8	1203.8	1202.7	1201.7	1200.6	1200.2	1200.4	1200.6	1200.9	1201.1	1202.3
172.5°	1212.4	1211.5	1210.6	1209.7	1208.9	1208.4	1208.5	1208.6	1208.6	1208.7	1210.1
175°	1222.9	1221.8	1220.7	1219.7	1218.6	1218.0	1217.8	1217.6	1217.4	1217.2	1218.6
177.5°	1226.3	1225.4	1224.6	1223.8	1222.9	1222.5	1222.5	1222.5	1222.5	1222.5	1223.7
180°	1224.7	1224.7	1224.7	1224.7	1224.7	1224.7	1224.7	1224.7	1224.7	1224.7	1224.7



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**CANDELA DISTRIBUTION (continued):**

	55°	60°	65°	70°	75°	80°	85°	90°
0°	1700.2	1700.2	1700.2	1700.2	1700.2	1700.2	1700.2	1700.2
2.5°	1693.9	1696.5	1699.0	1700.1	1699.9	1699.7	1699.4	1699.2
5°	1682.6	1685.5	1688.4	1689.5	1689.0	1688.4	1687.8	1687.3
7.5°	1660.2	1662.1	1663.9	1664.4	1663.5	1662.6	1661.6	1660.7
10°	1640.1	1641.2	1642.4	1642.4	1641.2	1640.1	1638.9	1637.8
12.5°	1615.2	1615.9	1616.6	1616.1	1614.5	1612.9	1611.3	1609.6
15°	1571.5	1570.9	1570.3	1569.0	1567.0	1565.0	1563.0	1561.0
17.5°	1518.9	1517.3	1515.6	1513.4	1510.3	1507.2	1504.1	1501.0
20°	1482.1	1479.8	1477.5	1474.5	1470.7	1467.0	1463.1	1459.4
22.5°	1441.3	1437.8	1434.4	1431.1	1428.0	1424.9	1421.9	1418.8
25°	1375.3	1370.4	1365.5	1361.6	1358.7	1355.8	1352.9	1350.1
27.5°	1308.2	1302.1	1296.1	1290.9	1286.8	1282.6	1278.5	1274.3
30°	1260.0	1252.9	1245.6	1239.7	1235.0	1230.4	1225.8	1221.2
32.5°	1210.9	1202.5	1194.1	1187.7	1183.3	1178.9	1174.5	1170.1
35°	1137.7	1127.9	1118.0	1110.5	1105.3	1100.1	1094.9	1089.6
37.5°	1059.1	1048.1	1037.1	1029.0	1023.8	1018.6	1013.4	1008.2
40°	1006.8	994.7	982.5	973.8	968.6	963.4	958.2	953.0
42.5°	955.3	942.9	930.5	921.6	916.2	910.8	905.3	899.8
45°	876.4	862.3	848.1	838.4	833.2	828.0	822.8	817.6
47.5°	797.0	782.4	767.7	757.4	751.7	746.0	740.2	734.5
50°	744.4	729.9	715.4	705.5	700.0	694.5	689.0	683.5
52.5°	691.9	677.2	662.4	652.2	646.5	640.8	635.0	629.3
55°	614.3	599.3	584.2	574.0	568.5	563.0	557.5	552.0
57.5°	538.7	523.3	508.1	498.4	494.2	490.0	485.8	481.7
60°	488.0	473.0	458.0	448.2	443.5	438.9	434.2	429.6
62.5°	438.3	424.4	410.5	401.7	398.0	394.4	390.6	386.9
65°	367.0	354.6	342.1	334.1	330.7	327.2	323.8	320.2
67.5°	301.5	290.7	280.1	272.8	269.0	265.1	261.3	257.5
70°	256.9	247.4	237.8	231.6	228.7	225.8	222.9	220.0
72.5°	217.0	208.8	200.6	195.3	192.6	190.0	187.3	184.6
75°	159.9	153.2	146.5	142.4	140.6	138.8	137.1	135.4
77.5°	113.1	109.2	105.3	103.1	102.6	102.1	101.6	101.0
80°	86.8	85.9	85.0	84.5	84.2	83.9	83.6	83.3
82.5°	67.5	66.9	66.2	65.7	65.5	65.1	64.9	64.6
85°	39.2	38.6	38.1	37.7	37.7	37.7	37.7	37.7
87.5°	18.8	18.8	18.8	19.0	19.3	19.6	20.0	20.3
90°	23.4	24.6	25.9	26.7	27.1	27.6	28.0	28.5
92.5°	39.1	39.8	40.5	41.0	41.3	41.6	41.8	42.1
95°	73.2	73.9	74.5	74.8	74.8	74.8	74.8	74.8
97.5°	115.4	116.1	116.9	117.2	117.2	117.2	117.2	117.2
100°	145.8	146.2	146.6	146.8	146.8	146.8	146.8	146.8
102.5°	177.9	178.6	179.1	179.4	179.7	179.9	180.0	180.2
105°	226.7	227.3	228.0	228.6	229.3	229.8	230.5	231.1
107.5°	279.5	280.1	280.6	281.0	280.9	280.9	280.8	280.8
110°	314.5	314.1	313.7	313.8	314.5	315.1	315.8	316.3





TEST NUMBER: P333013-930

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**CANDELA DISTRIBUTION (continued):**

	55°	60°	65°	70°	75°	80°	85°	90°
112.5°	352.4	352.3	352.2	352.2	352.4	352.5	352.6	352.8
115°	410.7	410.4	410.3	410.0	409.9	409.6	409.4	409.2
117.5°	466.7	465.9	465.2	464.7	464.2	463.8	463.4	463.0
120°	504.7	503.6	502.6	502.2	502.6	503.0	503.5	503.9
122.5°	543.2	542.5	541.8	541.0	540.3	539.6	538.7	538.0
125°	599.7	599.2	598.8	598.4	598.0	597.6	597.1	596.7
127.5°	653.7	653.3	652.8	652.5	652.2	651.8	651.4	651.1
130°	691.5	691.1	690.7	690.1	689.3	688.4	687.5	686.7
132.5°	727.2	726.8	726.4	725.9	725.6	725.3	725.0	724.6
135°	780.6	780.2	779.8	779.3	778.6	778.0	777.3	776.7
137.5°	832.3	831.7	831.2	831.0	831.1	831.2	831.4	831.4
140°	866.3	866.1	865.8	865.7	865.4	865.2	865.0	864.8
142.5°	898.5	898.4	898.4	898.3	898.3	898.2	898.2	898.1
145°	946.8	946.6	946.4	945.9	945.3	944.7	944.0	943.5
147.5°	990.7	990.5	990.3	990.1	989.9	989.7	989.4	989.3
150°	1018.2	1018.2	1018.2	1018.1	1017.9	1017.7	1017.5	1017.3
152.5°	1044.2	1044.8	1045.3	1045.3	1044.7	1044.2	1043.6	1043.1
155°	1080.6	1081.4	1082.2	1082.2	1081.4	1080.6	1079.7	1078.9
157.5°	1112.6	1113.1	1113.8	1113.8	1113.0	1112.3	1111.6	1110.9
160°	1132.2	1132.9	1133.5	1133.3	1132.2	1131.1	1130.2	1129.1
162.5°	1149.9	1151.0	1152.2	1152.3	1151.2	1150.1	1149.1	1148.0
165°	1173.3	1174.5	1175.8	1176.0	1175.2	1174.4	1173.5	1172.6
167.5°	1192.9	1194.3	1195.5	1195.5	1194.2	1192.9	1191.6	1190.3
170°	1203.6	1204.8	1206.2	1206.0	1204.5	1203.1	1201.6	1200.1
172.5°	1211.5	1212.9	1214.4	1214.4	1212.8	1211.4	1209.9	1208.4
175°	1220.1	1221.6	1223.0	1223.0	1221.6	1220.1	1218.6	1217.2
177.5°	1224.8	1226.0	1227.2	1227.1	1225.7	1224.4	1223.0	1221.7
180°	1224.7	1224.7	1224.7	1224.7	1224.7	1224.7	1224.7	1224.7

(END OF REPORT)