

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: P332035

Luminaire Tested: **S123DIP-S1000D1025U835-4F0-1E-UDD-F4**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P332035
REPORT IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-1807-864-17,
Test Lab: INNOVATION CENTER
Issue Date: 3/3/2020
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: NEO-RAY
Catalog Number: S123DIP-S1000D1025U835-4F0-1E-UDD-F4
Description: DEFINE 3 DIRECT-INDIRECT PENDANT LED LUMINAIRE
DOWNLIGHT 1000 LUMENS PER FOOT, FLUSH SATIN WHITE DIFFUSER
UPLIGHT 1025 LUMENS PER FOOT, BATWING OPTIC
Light Source: -
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 7832.5 lumens
Efficiency: N/A
Efficacy: 129.5 lumens/watt
Spacing Criteria (0/90/45): 1.21 / 1.18 / 1.31
Luminous Opening: Rectangular (W 0.25' x L: 4' x H: 0')
CIE Type: General Diffuse

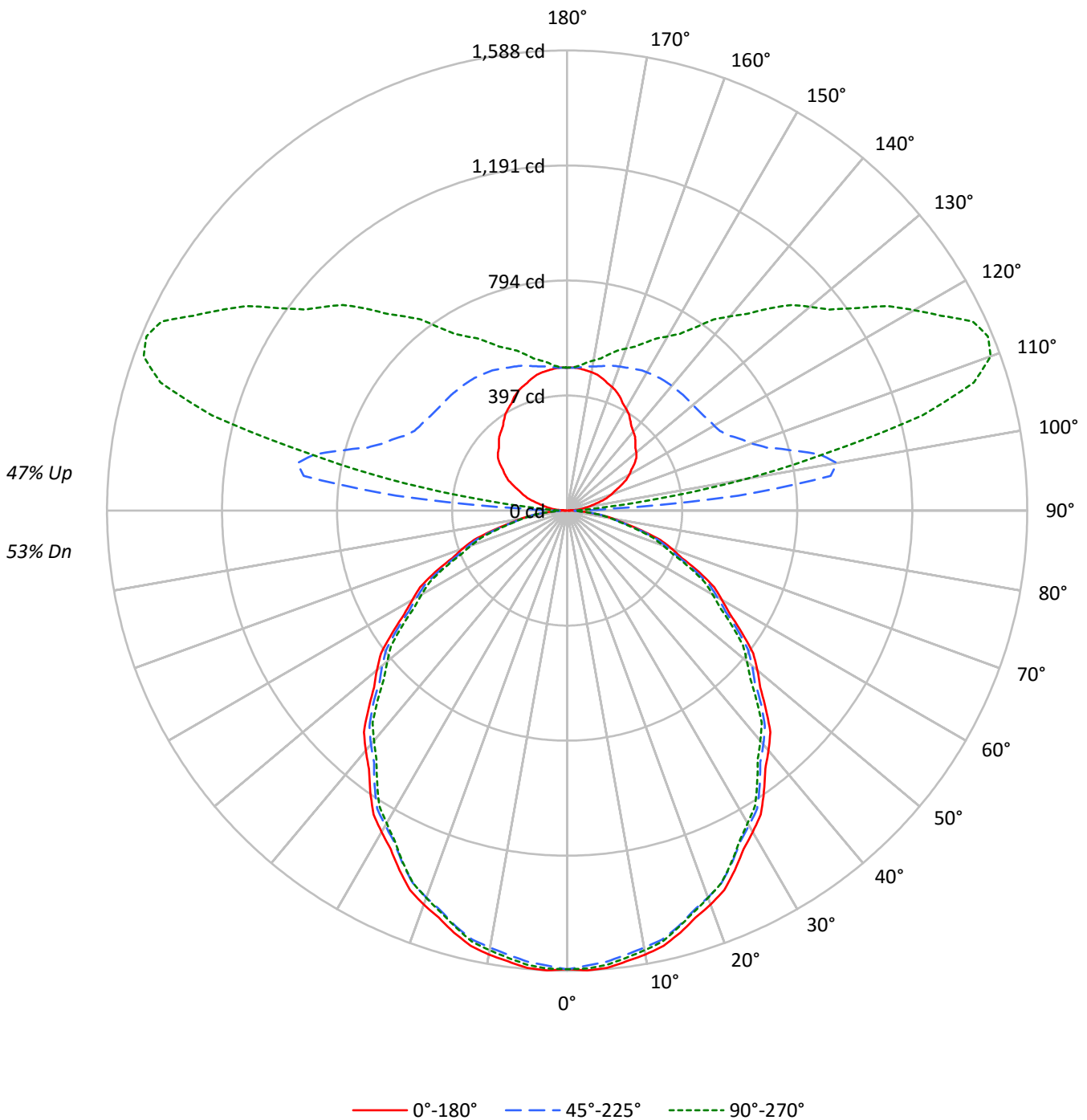
Input Watts (W): 60.5
Input Voltage (V): 120
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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Luminous Intensity Polar Plot





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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	71	71	71	59	59	59	53
1	98	94	90	86	91	87	84	81	74	72	70	62	61	59	52	50	49	44
2	89	82	76	71	83	76	71	66	65	61	58	55	52	49	45	43	41	37
3	82	72	65	59	75	67	60	55	57	52	48	48	45	42	40	38	35	31
4	75	64	56	50	69	59	52	47	51	45	41	43	39	36	36	33	30	27
5	69	57	49	43	63	53	46	40	46	40	35	39	34	31	32	29	26	23
6	63	51	43	37	58	48	40	35	41	35	31	35	31	27	29	26	23	20
7	58	46	38	32	54	43	36	31	37	31	27	32	27	24	27	23	21	18
8	54	42	34	29	50	39	32	27	34	28	24	29	25	21	25	21	19	16
9	50	38	31	26	47	36	29	24	31	26	22	27	22	19	23	19	17	15
10	47	35	28	23	44	33	26	22	29	23	20	25	20	17	21	18	15	13

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	17038	17038	17038
5°	17117	16883	17001
10°	17004	16736	16840
15°	16805	16547	16577
20°	16573	16276	16292
25°	16262	15954	15922
30°	15918	15597	15478
35°	15559	15219	15023
40°	15185	14802	14573
45°	14772	14420	14067
50°	14359	13949	13561
55°	13818	13461	13052
60°	13272	12893	12482
65°	12791	12271	11889
70°	12079	11566	11050
75°	11038	10643	10189
80°	9955	9534	9447
85°	8744	8410	8065



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	149.1	1.9
10°-20°	421.0	5.4
20°-30°	621.9	7.9
30°-40°	726.5	9.3
40°-50°	730.4	9.3
50°-60°	641.5	8.2
60°-70°	478.0	6.1
70°-80°	272.3	3.5
80°-90°	82.0	1.0
90°-100°	274.4	3.5
100°-110°	777.0	9.9
110°-120°	764.4	9.8
120°-130°	609.7	7.8
130°-140°	480.7	6.1
140°-150°	358.8	4.6
150°-160°	250.1	3.2
160°-170°	146.9	1.9
170°-180°	47.8	0.6
0°-30°	1192.0	15.2
0°-40°	1918.5	24.5
0°-60°	3290.4	42.0
0°-90°	4122.6	52.6
90°-120°	1815.8	23.2
90°-150°	3265.1	41.7
90°-180°	3710.0	47.4
0°-180°	7832.5	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1583	1583	1583	1583	1583	
5°	1584	1577	1562	1575	1573	150
15°	1508	1502	1485	1495	1488	425
25°	1369	1360	1343	1344	1341	630
35°	1184	1175	1158	1150	1143	740
45°	970	964	947	932	924	749
55°	736	734	717	703	696	659
65°	502	495	482	471	467	495
75°	265	260	256	249	245	284
85°	71	68	68	65	65	78
90°	2	12	25	28	29	6
95°	34	110	592	173	116	37
105°	116	171	802	1403	1270	123
115°	205	255	614	1346	1544	203
125°	284	336	573	1038	1218	252
135°	333	398	565	855	987	258
145°	380	436	558	701	772	238
155°	432	466	540	614	640	199
165°	472	486	517	548	558	133
175°	492	493	496	503	502	47
180°	493	493	493	493	493	



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CANDELA DISTRIBUTION (FULL):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
0°	1582.9	1582.9	1582.9	1582.9	1582.9	1582.9	1582.9	1582.9	1582.9	1582.9	1582.9
2.5°	1588.3	1587.4	1586.4	1585.4	1584.5	1582.6	1580.0	1577.3	1574.7	1572.0	1574.4
5°	1584.2	1582.7	1581.2	1579.7	1578.2	1575.8	1572.5	1569.1	1565.8	1562.5	1565.5
7.5°	1568.7	1567.2	1565.7	1564.2	1562.7	1560.2	1556.8	1553.3	1549.9	1546.4	1549.1
10°	1555.7	1554.2	1552.6	1551.1	1549.6	1546.9	1543.0	1539.0	1535.1	1531.2	1533.9
12.5°	1538.2	1537.0	1535.7	1534.4	1533.2	1530.7	1527.0	1523.3	1519.6	1515.9	1517.9
15°	1508.0	1506.8	1505.6	1504.4	1503.2	1500.6	1496.7	1492.8	1488.8	1484.9	1487.3
17.5°	1472.9	1471.3	1469.8	1468.2	1466.6	1463.9	1459.9	1456.0	1452.1	1448.1	1449.8
20°	1446.8	1445.0	1443.2	1441.3	1439.5	1436.6	1432.7	1428.8	1424.9	1420.9	1422.1
22.5°	1417.4	1415.6	1413.8	1411.9	1410.1	1407.3	1403.3	1399.4	1395.5	1391.5	1392.5
25°	1369.2	1367.4	1365.6	1363.8	1361.9	1359.1	1355.1	1351.2	1347.3	1343.3	1343.6
27.5°	1317.8	1316.0	1314.2	1312.5	1310.7	1307.7	1303.5	1299.3	1295.0	1290.8	1291.0
30°	1280.7	1279.2	1277.7	1276.2	1274.7	1271.8	1267.6	1263.3	1259.1	1254.9	1254.9
32.5°	1243.7	1241.7	1239.7	1237.7	1235.7	1233.1	1229.8	1226.6	1223.3	1220.0	1218.3
35°	1184.1	1182.3	1180.5	1178.7	1176.8	1174.0	1170.0	1166.1	1162.2	1158.2	1156.4
37.5°	1123.1	1120.8	1118.5	1116.2	1113.9	1110.8	1106.8	1102.8	1098.8	1094.8	1092.6
40°	1080.7	1078.8	1077.0	1075.2	1073.4	1070.4	1066.1	1061.9	1057.7	1053.4	1051.0
42.5°	1038.2	1036.1	1034.1	1032.0	1030.0	1026.8	1022.6	1018.4	1014.1	1009.9	1007.5
45°	970.4	969.2	968.0	966.8	965.6	963.0	959.1	955.1	951.2	947.3	943.7
47.5°	903.2	901.4	899.7	897.9	896.2	893.4	889.8	886.1	882.4	878.7	875.1
50°	857.5	855.9	854.4	852.9	851.4	848.7	844.7	840.8	836.9	833.0	829.6
52.5°	809.5	808.5	807.5	806.5	805.4	802.8	798.7	794.5	790.3	786.1	783.3
55°	736.3	736.0	735.7	735.4	735.1	733.0	729.1	725.1	721.2	717.3	713.9
57.5°	666.6	665.6	664.6	663.6	662.5	660.4	657.3	654.1	651.0	647.9	644.9
60°	616.5	616.2	615.9	615.6	615.3	613.4	609.7	606.1	602.5	598.9	596.1
62.5°	571.9	571.1	570.3	569.5	568.8	566.6	562.9	559.3	555.7	552.0	549.3
65°	502.2	500.7	499.2	497.7	496.2	493.9	490.9	487.9	484.8	481.8	479.4
67.5°	428.5	427.1	425.8	424.5	423.1	421.3	419.0	416.7	414.4	412.1	410.0
70°	383.8	382.0	380.2	378.4	376.6	374.7	372.9	371.1	369.3	367.5	365.4
72.5°	337.0	335.7	334.3	333.0	331.7	330.0	327.9	325.9	323.8	321.7	319.9
75°	265.4	264.2	263.0	261.8	260.6	259.5	258.6	257.7	256.8	255.9	254.4
77.5°	202.0	201.3	200.6	200.0	199.3	198.4	197.4	196.3	195.2	194.1	193.1
80°	160.6	159.7	158.8	157.9	157.0	156.2	155.6	155.0	154.4	153.8	153.5
82.5°	120.3	120.1	120.0	119.8	119.6	119.4	119.3	119.2	119.1	119.0	118.4
85°	70.8	70.2	69.6	69.0	68.4	68.1	68.1	68.1	68.1	68.1	67.4
87.5°	28.7	28.4	28.1	27.9	27.6	27.5	27.9	28.2	28.6	28.9	28.5
90°	2.0	4.0	6.0	9.0	11.0	13.0	16.0	19.0	22.0	25.0	24.0
92.5°	12.4	18.4	26.8	34.5	42.9	57.7	83.8	126.8	168.9	153.5	115.8
95°	33.9	36.9	47.9	64.9	90.8	129.8	214.6	363.3	527.0	591.9	480.1
97.5°	57.9	58.9	67.5	82.2	107.8	149.9	231.0	398.7	671.6	917.3	981.4
100°	73.9	74.9	81.9	95.8	119.8	158.7	228.6	376.3	638.8	945.3	1141.9
102.5°	90.6	92.4	98.6	111.8	133.4	169.1	231.8	357.1	590.9	893.4	1149.9
105°	115.8	118.8	124.8	136.8	155.7	186.7	240.6	343.4	532.0	802.5	1089.0
107.5°	142.5	145.5	151.3	163.1	180.9	209.6	256.9	342.4	494.5	722.3	982.4
110°	161.7	164.7	169.7	180.7	197.6	225.6	270.5	346.4	480.1	676.8	915.3



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CANDELA DISTRIBUTION (continued):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
112.5°	179.3	182.3	187.3	198.2	215.2	242.4	284.1	354.4	472.1	646.4	857.0
115°	204.6	208.6	214.6	224.6	241.6	268.5	306.4	367.3	469.1	613.9	786.6
117.5°	230.0	234.6	239.6	248.7	267.7	292.7	330.2	384.5	470.9	594.7	744.0
120°	247.5	250.5	255.5	265.5	284.5	309.4	345.4	397.3	474.1	585.9	721.7
122.5°	262.7	265.7	270.7	281.5	299.7	326.2	361.3	409.3	479.7	580.3	703.3
125°	284.5	286.5	292.5	303.4	322.4	349.4	384.3	428.2	488.1	573.0	679.8
127.5°	301.1	304.0	311.4	322.6	343.6	370.5	404.3	443.8	497.7	569.4	659.0
130°	311.4	314.4	323.4	335.4	356.3	383.3	416.2	454.2	504.1	567.0	647.8
132.5°	319.4	323.2	333.0	347.4	368.3	394.5	426.6	463.8	508.9	566.2	637.4
135°	333.4	337.4	348.4	363.3	384.3	411.2	442.2	476.1	516.1	565.0	623.9
137.5°	346.6	350.8	361.5	377.5	398.3	423.2	453.0	485.3	520.8	562.8	612.1
140°	355.4	360.3	370.3	386.3	406.3	431.2	460.2	490.1	524.0	562.0	604.9
142.5°	364.9	369.1	379.9	394.3	414.2	437.6	465.8	494.9	526.4	560.4	598.5
145°	380.3	383.3	392.3	407.3	424.2	447.2	473.1	500.1	528.0	558.0	589.9
147.5°	395.9	397.7	406.5	419.4	435.8	455.4	479.1	503.3	528.0	554.2	581.5
150°	406.3	407.3	415.2	428.2	442.2	460.2	483.1	504.1	528.0	551.0	575.9
152.5°	416.6	416.8	424.8	436.2	448.6	465.8	485.5	505.7	525.6	547.0	569.6
155°	432.2	432.2	438.2	448.2	459.2	473.1	490.1	506.1	523.0	540.0	560.0
157.5°	444.6	445.4	450.2	459.0	468.3	479.1	492.7	507.1	519.7	533.8	549.2
160°	454.2	454.2	458.2	466.1	473.1	483.1	495.1	507.1	518.1	529.0	542.0
162.5°	461.4	461.4	464.6	470.9	477.1	485.5	495.9	506.3	514.9	524.2	534.8
165°	472.1	471.1	473.1	478.1	482.1	489.1	497.1	504.1	510.1	517.1	525.0
167.5°	480.3	479.1	480.1	483.9	486.7	491.1	496.9	502.5	505.3	509.9	515.7
170°	485.1	483.1	484.1	487.1	489.1	491.1	496.1	500.1	502.1	505.1	510.1
172.5°	488.3	487.1	487.3	489.5	490.7	491.9	496.1	499.3	499.7	501.1	504.5
175°	492.1	491.1	490.1	492.1	492.1	493.1	495.1	497.1	496.1	496.1	498.1
177.5°	493.9	493.1	492.3	493.1	493.1	493.1	493.9	495.5	493.9	493.1	493.9
180°	493.1	493.1	493.1	493.1	493.1	493.1	493.1	493.1	493.1	493.1	493.1



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CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
0°	1582.9	1582.9	1582.9	1582.9	1582.9	1582.9	1582.9	1582.9
2.5°	1576.8	1579.3	1581.7	1582.8	1582.5	1582.3	1582.0	1581.8
5°	1568.5	1571.5	1574.6	1575.8	1575.2	1574.6	1574.0	1573.4
7.5°	1551.9	1554.6	1557.3	1558.5	1558.1	1557.8	1557.4	1557.0
10°	1536.6	1539.3	1542.1	1543.1	1542.5	1541.9	1541.3	1540.7
12.5°	1519.9	1521.9	1523.9	1524.7	1524.4	1524.0	1523.6	1523.3
15°	1489.7	1492.1	1494.6	1494.9	1493.1	1491.2	1489.4	1487.6
17.5°	1451.5	1453.2	1454.9	1455.4	1454.8	1454.1	1453.4	1452.8
20°	1423.3	1424.6	1425.8	1425.9	1425.0	1424.1	1423.2	1422.3
22.5°	1393.5	1394.4	1395.4	1395.3	1394.2	1393.0	1391.9	1390.7
25°	1343.9	1344.3	1344.6	1344.3	1343.3	1342.4	1341.5	1340.6
27.5°	1291.3	1291.5	1291.8	1291.3	1290.2	1289.0	1287.9	1286.7
30°	1254.9	1254.9	1254.9	1253.8	1251.7	1249.6	1247.5	1245.3
32.5°	1216.6	1215.0	1213.3	1211.8	1210.7	1209.5	1208.4	1207.2
35°	1154.6	1152.8	1151.0	1149.3	1147.8	1146.3	1144.8	1143.3
37.5°	1090.5	1088.3	1086.1	1084.5	1083.6	1082.6	1081.6	1080.7
40°	1048.6	1046.2	1043.8	1041.9	1040.7	1039.5	1038.3	1037.1
42.5°	1005.0	1002.6	1000.2	998.4	997.2	996.0	994.8	993.6
45°	940.0	936.4	932.8	930.2	928.7	927.2	925.7	924.1
47.5°	871.5	868.0	864.4	862.0	860.6	859.3	858.0	856.6
50°	826.3	823.0	819.6	817.1	815.3	813.4	811.6	809.8
52.5°	780.4	777.6	774.8	772.4	770.6	768.8	767.0	765.2
55°	710.6	707.3	704.0	701.5	700.0	698.5	697.0	695.5
57.5°	641.9	639.0	636.0	633.6	631.9	630.1	628.4	626.6
60°	593.4	590.7	588.0	585.9	584.3	582.8	581.3	579.8
62.5°	546.6	543.9	541.1	539.3	538.2	537.2	536.2	535.2
65°	477.0	474.5	472.1	470.5	469.6	468.7	467.7	466.8
67.5°	407.9	405.8	403.7	402.0	400.7	399.4	398.1	396.9
70°	363.2	361.1	359.0	357.2	355.7	354.2	352.7	351.1
72.5°	318.0	316.1	314.2	312.9	312.1	311.3	310.6	309.8
75°	252.9	251.3	249.8	248.6	247.7	246.8	245.9	245.0
77.5°	192.0	191.0	190.0	189.5	189.5	189.5	189.5	189.5
80°	153.2	152.9	152.6	152.4	152.4	152.4	152.4	152.4
82.5°	117.9	117.3	116.8	116.4	116.1	115.9	115.7	115.4
85°	66.8	66.2	65.6	65.3	65.3	65.3	65.3	65.3
87.5°	28.5	28.4	28.4	28.7	28.5	28.7	28.9	28.7
90°	25.0	26.0	27.0	28.9	27.9	28.9	29.9	28.9
92.5°	84.0	66.7	58.9	53.7	51.9	48.9	49.9	48.1
95°	359.3	243.6	190.7	154.7	135.8	126.8	119.8	115.8
97.5°	895.8	717.5	588.7	469.3	395.7	350.8	323.8	315.2
100°	1176.9	1096.0	979.2	837.5	736.7	663.8	624.9	625.9
102.5°	1270.3	1267.7	1199.6	1109.8	1031.3	973.6	941.1	918.1
105°	1297.6	1397.5	1416.4	1390.5	1344.5	1306.6	1274.7	1269.7
107.5°	1219.0	1381.1	1468.5	1504.1	1504.9	1492.1	1481.3	1472.1
110°	1143.9	1327.6	1453.3	1523.2	1551.2	1559.2	1557.2	1555.2



TEST NUMBER: P332035

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CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
112.5°	1069.6	1257.3	1398.2	1488.1	1539.2	1563.9	1571.5	1571.9
115°	971.2	1144.9	1291.6	1400.4	1475.3	1519.2	1539.2	1544.2
117.5°	900.0	1049.9	1181.6	1292.0	1370.1	1420.4	1449.2	1455.9
120°	862.4	997.2	1117.0	1217.8	1296.6	1352.5	1376.5	1382.5
122.5°	832.9	954.9	1065.9	1159.5	1229.6	1279.9	1306.2	1313.8
125°	793.6	902.4	998.2	1078.0	1141.9	1185.8	1210.8	1217.8
127.5°	759.2	856.2	942.7	1015.3	1072.2	1109.8	1132.3	1138.7
130°	737.7	827.5	908.3	976.2	1029.1	1065.1	1086.0	1094.0
132.5°	717.7	800.3	875.6	940.3	990.0	1025.9	1044.5	1050.1
135°	690.7	761.6	826.5	883.4	932.3	962.2	980.2	987.2
137.5°	666.2	724.3	780.2	829.5	870.6	901.0	916.1	920.7
140°	651.8	702.7	750.6	793.6	831.5	859.4	875.4	874.4
142.5°	638.2	682.0	723.5	760.8	793.2	817.9	832.3	831.3
145°	621.9	654.8	686.7	715.7	740.6	761.6	769.6	771.6
147.5°	608.5	634.6	660.4	681.0	699.9	714.1	721.7	722.5
150°	598.9	621.9	642.8	661.8	676.8	687.7	693.7	693.7
152.5°	590.1	609.9	628.5	644.2	656.0	666.2	669.8	669.8
155°	576.9	592.9	607.9	619.9	628.9	636.8	638.8	639.8
157.5°	563.0	576.3	587.9	597.3	605.1	611.1	612.7	612.5
160°	555.0	566.0	575.9	582.9	589.9	595.9	595.9	594.9
162.5°	545.4	554.8	564.0	570.2	574.8	579.9	579.9	578.9
165°	533.0	539.0	546.0	551.0	555.0	559.0	558.0	558.0
167.5°	522.2	526.8	530.8	534.4	536.2	539.0	538.0	538.0
170°	515.1	518.1	522.0	524.0	525.0	527.0	526.0	526.0
172.5°	508.7	510.9	514.1	515.3	515.5	517.5	515.7	514.9
175°	500.1	501.1	503.1	503.1	503.1	504.1	503.1	502.1
177.5°	494.7	495.5	496.3	496.3	495.5	496.3	494.7	494.7
180°	493.1	493.1	493.1	493.1	493.1	493.1	493.1	493.1

(END OF REPORT)