

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: P332457-940

Luminaire Tested: **S123RDIW-S1000D755U940-4F0-1E-UDD-F1**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P332457-940
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-S1000D755U940-4F0-1E-UDD-F1
Description: DEFINE 3 DIRECT-INDIRECT WALL MOUNT LED LUMINAIRE
DOWNLIGHT 1000 LUMENS PER FOOT, FLUSH SATIN WHITE DIFFUSER, REGRESSED
HOUSING
UPLIGHT 755 LUMENS PER FOOT, FLUSH SATIN WHITE DIFFUSER
Light Source: -
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 5717.5 lumens
Efficiency: N/A
Efficacy: 106.7 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: General Diffuse

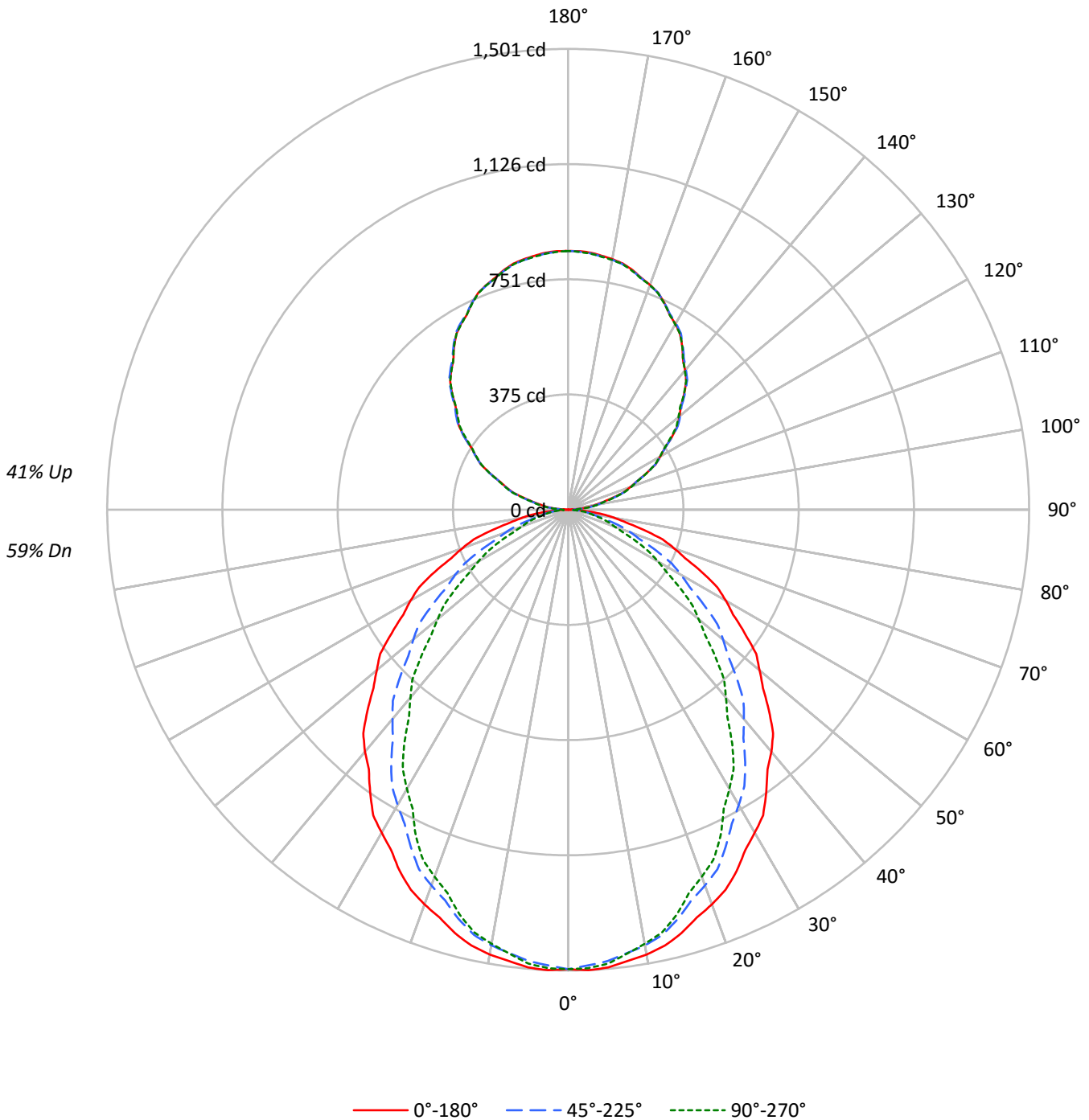
Input Watts (W): 53.6
Input Voltage (V): 120
Input Current (A_{in}): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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	0
RW	70	50	30	10	70	50	30	10	50	30	10	50	30	10	50	30	10	0
RCR																		
0	109	109	109	109	102	102	102	102	88	88	88	76	76	76	65	65	65	59
1	100	96	92	89	93	90	86	84	78	76	74	67	66	64	58	56	55	51
2	92	84	78	73	85	79	74	69	69	65	61	60	57	54	51	49	47	43
3	84	74	67	61	78	70	63	58	61	56	52	53	49	46	46	43	41	37
4	77	66	58	52	72	62	55	50	55	49	45	48	43	40	41	38	35	32
5	71	59	51	45	66	56	48	43	49	43	39	43	38	35	37	34	31	28
6	65	53	45	39	61	50	43	38	44	39	34	39	34	31	34	30	27	25
7	60	48	40	35	56	46	38	33	40	35	30	36	31	27	31	27	24	22
8	56	44	36	31	52	42	34	30	37	31	27	33	28	25	29	25	22	20
9	52	40	33	28	49	38	31	27	34	28	24	30	25	22	26	23	20	18
10	49	37	30	25	46	35	28	24	31	26	22	28	23	20	25	21	18	16

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	16108	16108	16108
5°	16170	15946	16038
10°	16078	15746	15692
15°	15905	15377	15216
20°	15668	14917	14569
25°	15423	14400	13938
30°	15100	13803	13048
35°	14767	13205	12232
40°	14462	12500	11221
45°	14059	11805	10310
50°	13618	11015	9287
55°	13165	10113	8336
60°	12751	9145	7289
65°	12210	8099	6243
70°	11534	6801	5042
75°	10551	5352	4741
80°	9403	4736	4364
85°	7941	4199	3903



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	140.5	2.5
10°-20°	391.0	6.8
20°-30°	563.0	9.8
30°-40°	634.1	11.1
40°-50°	606.7	10.6
50°-60°	496.8	8.7
60°-70°	335.2	5.9
70°-80°	168.6	2.9
80°-90°	47.1	0.8
90°-100°	54.9	1.0
100°-110°	164.3	2.9
110°-120°	279.4	4.9
120°-130°	367.5	6.4
130°-140°	413.1	7.2
140°-150°	406.1	7.1
150°-160°	341.9	6.0
160°-170°	227.6	4.0
170°-180°	79.7	1.4
0°-30°	1094.5	19.1
0°-40°	1728.6	30.2
0°-60°	2832.1	49.5
0°-90°	3383.1	59.2
90°-120°	498.6	8.7
90°-150°	1685.3	29.5
90°-180°	2334.0	40.8
0°-180°	5717.5	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1496	1496	1496	1496	1496	
5°	1496	1490	1476	1486	1484	142
15°	1427	1413	1380	1374	1365	402
25°	1299	1267	1212	1188	1174	597
35°	1124	1078	1005	954	931	703
45°	924	867	776	709	677	712
55°	702	640	539	471	444	629
65°	479	411	318	261	245	474
75°	254	195	129	117	114	270
85°	64	39	34	32	32	72
90°	1	7	16	18	20	6
95°	39	44	49	52	52	44
105°	149	150	156	156	158	159
115°	281	283	282	283	282	278
125°	412	414	412	410	407	367
135°	534	538	537	535	533	411
145°	648	649	651	650	648	405
155°	742	742	743	745	741	341
165°	808	806	806	810	806	228
175°	840	838	838	841	837	80
180°	843	843	843	843	843	



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CANDELA DISTRIBUTION (FULL):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
0°	1496.5	1496.5	1496.5	1496.5	1496.5	1496.5	1496.5	1496.5	1496.5	1496.5	1496.5
2.5°	1501.3	1500.4	1499.6	1498.7	1497.8	1496.1	1493.5	1490.9	1488.4	1485.8	1488.1
5°	1496.5	1495.0	1493.7	1492.4	1491.0	1488.7	1485.5	1482.3	1479.1	1475.8	1478.2
7.5°	1482.6	1481.1	1479.7	1478.2	1476.8	1473.9	1469.7	1465.5	1461.3	1457.1	1458.5
10°	1471.0	1469.1	1467.1	1465.3	1463.4	1460.0	1455.2	1450.3	1445.5	1440.6	1440.9
12.5°	1454.5	1452.3	1450.3	1448.1	1446.0	1442.0	1436.1	1430.1	1424.2	1418.3	1418.1
15°	1427.3	1424.3	1421.3	1418.4	1415.4	1410.2	1402.6	1395.0	1387.5	1379.9	1378.6
17.5°	1393.0	1389.6	1386.2	1382.7	1379.2	1372.7	1363.1	1353.5	1343.9	1334.3	1331.4
20°	1367.8	1363.5	1359.1	1354.9	1350.5	1343.3	1333.0	1322.8	1312.5	1302.3	1298.8
22.5°	1339.6	1334.7	1329.7	1324.7	1319.8	1311.9	1300.9	1290.0	1279.2	1268.3	1263.9
25°	1298.6	1291.9	1285.1	1278.4	1271.7	1262.0	1249.6	1237.2	1224.9	1212.5	1206.8
27.5°	1248.8	1241.4	1233.9	1226.5	1219.1	1208.4	1194.6	1180.8	1167.0	1153.2	1145.3
30°	1214.9	1206.8	1198.7	1190.6	1182.5	1170.9	1155.8	1140.7	1125.6	1110.5	1101.4
32.5°	1180.9	1171.7	1162.5	1153.3	1144.2	1131.7	1115.7	1099.7	1083.7	1067.7	1057.7
35°	1123.8	1114.1	1104.4	1094.8	1085.0	1071.7	1055.1	1038.3	1021.6	1004.9	993.3
37.5°	1066.0	1055.3	1044.5	1033.7	1022.9	1008.6	990.8	972.9	955.0	937.2	924.0
40°	1029.2	1017.4	1005.4	993.5	981.7	966.2	947.1	927.9	908.7	889.6	875.6
42.5°	987.4	975.5	963.7	951.8	940.0	924.2	904.4	884.6	864.8	845.0	829.6
45°	923.6	911.4	899.3	887.2	875.0	858.6	837.9	817.1	796.3	775.5	760.2
47.5°	859.8	846.4	833.1	819.7	806.5	789.4	768.7	747.9	727.1	706.3	689.6
50°	813.2	800.5	787.8	775.2	762.4	745.2	723.4	701.5	679.7	657.8	641.1
52.5°	771.4	757.7	743.9	730.1	716.4	698.7	677.1	655.4	633.8	612.2	594.8
55°	701.5	688.3	675.0	661.8	648.6	630.5	607.6	584.7	561.8	538.9	523.3
57.5°	636.9	622.5	608.1	593.7	579.3	560.6	537.5	514.5	491.5	468.5	453.7
60°	592.3	577.5	562.6	547.8	532.9	514.3	492.0	469.6	447.2	424.8	410.2
62.5°	547.6	532.8	517.9	503.1	488.3	469.7	447.3	424.9	402.5	380.1	366.4
65°	479.4	464.6	449.7	434.9	420.1	402.2	381.1	360.1	339.0	318.0	304.8
67.5°	411.2	396.2	381.2	366.2	351.2	333.6	313.4	293.3	273.1	252.9	243.1
70°	366.5	352.0	337.4	322.8	308.3	291.6	272.7	253.8	234.9	216.1	206.6
72.5°	321.8	307.6	293.2	278.8	264.5	248.7	231.6	214.5	197.2	180.1	172.4
75°	253.7	240.7	227.7	214.8	201.9	188.0	173.2	158.3	143.5	128.7	125.9
77.5°	191.5	179.8	168.1	156.4	144.7	134.0	124.5	114.9	105.4	95.9	94.4
80°	151.7	140.6	129.6	118.5	107.5	99.2	93.5	87.7	82.1	76.4	75.6
82.5°	113.9	104.3	94.8	85.2	75.6	69.6	66.9	64.3	61.6	58.9	58.1
85°	64.3	58.4	52.4	46.5	40.6	37.2	36.4	35.6	34.8	34.0	33.4
87.5°	23.5	21.3	19.3	17.2	15.2	14.3	14.6	15.1	15.4	15.8	15.7
90°	0.6	2.1	3.6	5.1	6.5	8.2	10.2	12.0	14.0	15.9	16.5
92.5°	16.1	17.0	18.0	19.0	20.0	21.0	22.1	23.3	24.3	25.4	25.9
95°	39.1	40.0	41.1	42.2	43.2	44.2	45.5	46.6	47.8	49.0	49.6
97.5°	69.4	70.1	70.9	71.7	72.4	73.2	74.1	74.9	75.8	76.7	77.3
100°	90.0	90.9	91.8	92.6	93.5	94.3	95.1	95.9	96.6	97.3	97.7
102.5°	113.9	114.4	114.9	115.4	115.9	116.7	117.7	118.7	119.6	120.6	121.0
105°	148.9	149.2	149.5	149.8	150.1	150.9	152.2	153.6	154.9	156.2	156.2
107.5°	189.7	189.8	190.0	190.2	190.4	190.7	191.3	191.8	192.3	192.9	193.3
110°	215.1	215.4	215.7	216.0	216.2	216.6	216.9	217.1	217.5	217.8	218.4



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CANDELA DISTRIBUTION (continued):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
112.5°	241.6	241.7	241.9	242.1	242.3	242.4	242.5	242.5	242.5	242.6	243.3
115°	281.3	281.7	282.1	282.6	283.0	283.1	282.9	282.6	282.2	282.0	282.1
117.5°	321.3	321.6	321.8	322.2	322.4	322.4	322.0	321.6	321.3	320.8	320.8
120°	346.2	347.1	347.9	348.8	349.7	349.7	349.0	348.3	347.6	346.8	346.7
122.5°	372.1	372.7	373.4	374.1	374.7	374.8	374.4	374.1	373.7	373.3	372.9
125°	411.7	412.1	412.6	413.0	413.5	413.5	413.2	413.0	412.6	412.3	411.8
127.5°	448.2	449.2	450.1	451.0	452.0	452.3	452.0	451.7	451.3	451.0	450.1
130°	472.6	473.8	474.9	476.1	477.2	477.7	477.2	476.8	476.4	475.9	475.3
132.5°	497.0	498.1	499.3	500.4	501.7	502.0	501.8	501.4	501.1	500.8	500.1
135°	534.1	535.0	535.9	536.8	537.6	538.1	537.9	537.7	537.6	537.4	536.8
137.5°	568.6	569.3	570.0	570.8	571.5	572.0	572.4	572.8	573.2	573.5	572.9
140°	592.4	593.1	593.9	594.6	595.3	595.8	595.9	596.0	596.2	596.4	596.2
142.5°	614.1	614.8	615.5	616.3	617.0	617.5	617.8	618.0	618.3	618.6	618.4
145°	648.0	648.3	648.5	648.8	649.2	649.5	650.0	650.4	650.9	651.3	651.1
147.5°	677.6	678.1	678.7	679.2	679.8	680.2	680.6	681.0	681.4	681.9	681.9
150°	698.3	698.6	698.8	699.2	699.5	699.7	700.0	700.3	700.6	700.9	700.9
152.5°	715.2	715.6	716.0	716.5	716.8	717.1	717.3	717.5	717.6	717.8	718.1
155°	742.0	742.0	742.0	742.0	742.0	742.0	742.2	742.3	742.4	742.6	743.2
157.5°	764.7	764.6	764.4	764.2	764.0	764.0	764.1	764.2	764.4	764.5	765.1
160°	779.0	778.7	778.5	778.1	777.8	777.7	777.7	777.7	777.7	777.7	778.5
162.5°	791.8	791.3	790.9	790.5	790.1	790.0	790.1	790.1	790.3	790.4	791.1
165°	808.2	807.7	807.3	806.8	806.4	806.1	806.1	806.1	806.1	806.1	807.0
167.5°	821.3	820.6	820.1	819.5	818.9	818.7	818.8	818.9	819.0	819.1	820.0
170°	828.7	828.0	827.5	826.9	826.3	826.0	826.0	826.0	826.0	826.0	827.1
172.5°	834.5	833.9	833.3	832.7	832.1	831.8	831.8	831.8	831.8	831.8	832.8
175°	840.5	840.0	839.4	838.8	838.2	837.9	837.9	837.9	837.9	837.9	838.8
177.5°	843.1	842.6	842.1	841.7	841.2	841.0	841.0	841.0	841.0	841.0	841.7
180°	842.6	842.6	842.6	842.6	842.6	842.6	842.6	842.6	842.6	842.6	842.6



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CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
0°	1496.5	1496.5	1496.5	1496.5	1496.5	1496.5	1496.5	1496.5
2.5°	1490.5	1492.9	1495.2	1496.2	1495.8	1495.4	1495.0	1494.5
5°	1480.7	1483.1	1485.5	1486.5	1485.9	1485.4	1484.9	1484.3
7.5°	1459.8	1461.2	1462.5	1462.8	1461.8	1460.9	1460.0	1459.0
10°	1441.2	1441.5	1441.7	1441.2	1439.8	1438.4	1437.1	1435.7
12.5°	1417.9	1417.8	1417.6	1416.8	1415.2	1413.6	1412.1	1410.5
15°	1377.2	1375.9	1374.6	1372.9	1371.0	1369.1	1367.3	1365.4
17.5°	1328.6	1325.7	1322.9	1320.0	1317.2	1314.4	1311.6	1308.8
20°	1295.2	1291.7	1288.3	1284.9	1281.7	1278.4	1275.1	1271.9
22.5°	1259.5	1255.2	1250.8	1247.1	1244.1	1241.1	1238.1	1235.0
25°	1201.1	1195.4	1189.8	1185.4	1182.5	1179.6	1176.6	1173.6
27.5°	1137.5	1129.6	1121.7	1115.5	1111.0	1106.4	1101.9	1097.4
30°	1092.2	1083.0	1073.8	1067.1	1062.7	1058.5	1054.1	1049.8
32.5°	1047.7	1037.7	1027.6	1020.4	1015.8	1011.3	1006.7	1002.2
35°	981.7	970.1	958.5	950.3	945.5	940.6	935.8	930.9
37.5°	910.9	897.7	884.6	874.9	869.0	863.0	857.0	851.0
40°	861.6	847.6	833.5	823.4	817.2	811.0	804.8	798.6
42.5°	814.3	799.0	783.6	773.2	767.7	762.1	756.5	751.0
45°	744.8	729.4	714.0	703.1	696.6	690.2	683.7	677.3
47.5°	672.9	656.2	639.4	628.2	622.4	616.7	610.9	605.1
50°	624.4	607.6	590.9	579.4	573.3	567.0	560.9	554.6
52.5°	577.5	560.1	542.7	531.2	525.7	520.1	514.6	509.0
55°	507.6	492.0	476.3	465.7	460.4	455.0	449.6	444.2
57.5°	438.9	424.1	409.4	399.7	395.1	390.5	385.9	381.3
60°	395.7	381.1	366.5	357.0	352.4	347.8	343.2	338.6
62.5°	352.7	339.0	325.3	316.0	311.3	306.5	301.7	296.9
65°	291.6	278.3	265.1	257.0	254.0	251.1	248.2	245.1
67.5°	233.2	223.3	213.5	206.9	203.8	200.5	197.3	194.2
70°	197.2	187.7	178.3	172.1	169.1	166.1	163.2	160.2
72.5°	164.7	156.9	149.3	144.8	143.6	142.3	141.1	139.8
75°	123.2	120.6	117.9	116.3	115.7	115.1	114.6	114.0
77.5°	93.0	91.5	90.1	89.1	88.5	88.0	87.5	86.9
80°	74.8	74.0	73.2	72.6	72.1	71.5	70.9	70.4
82.5°	57.3	56.5	55.7	55.3	55.2	55.1	54.9	54.8
85°	32.9	32.4	31.8	31.6	31.6	31.6	31.6	31.6
87.5°	15.6	15.5	15.4	15.2	15.2	15.0	14.8	14.6
90°	17.0	17.7	18.3	18.6	19.0	19.3	19.5	19.9
92.5°	26.4	26.8	27.3	27.5	27.3	27.1	26.9	26.8
95°	50.1	50.7	51.4	51.6	51.6	51.6	51.6	51.6
97.5°	78.0	78.6	79.4	79.6	79.6	79.5	79.5	79.5
100°	98.2	98.6	99.1	99.4	99.7	100.0	100.3	100.6
102.5°	121.5	121.9	122.3	122.5	122.5	122.4	122.3	122.3
105°	156.2	156.2	156.2	156.3	156.7	156.9	157.2	157.6
107.5°	193.8	194.3	194.7	194.9	194.7	194.6	194.4	194.2
110°	218.9	219.5	220.1	220.3	220.0	219.6	219.4	219.1



TEST NUMBER: P332457-940

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CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
112.5°	244.1	244.8	245.5	245.8	245.8	245.7	245.6	245.6
115°	282.2	282.4	282.6	282.6	282.4	282.2	282.1	282.0
117.5°	320.8	320.7	320.7	320.6	320.1	319.7	319.3	318.9
120°	346.5	346.3	346.3	346.0	345.7	345.4	345.1	344.8
122.5°	372.6	372.1	371.8	371.4	371.0	370.5	370.1	369.7
125°	411.2	410.5	410.0	409.4	408.8	408.2	407.6	407.1
127.5°	449.3	448.5	447.7	446.9	446.3	445.6	445.0	444.3
130°	474.7	474.1	473.5	472.7	471.7	470.6	469.7	468.6
132.5°	499.4	498.6	497.9	497.2	496.4	495.6	494.8	494.0
135°	536.3	535.7	535.1	534.7	534.3	534.0	533.8	533.4
137.5°	572.3	571.7	571.1	570.5	570.0	569.4	568.8	568.3
140°	596.0	595.9	595.8	595.1	594.1	593.1	592.1	591.0
142.5°	618.3	618.1	618.0	617.5	616.7	615.9	615.1	614.3
145°	650.9	650.9	650.7	650.3	649.7	649.2	648.5	648.0
147.5°	681.9	681.9	681.9	681.4	680.6	679.7	678.8	677.9
150°	700.9	700.9	700.9	700.4	699.5	698.7	697.9	697.0
152.5°	718.4	718.5	718.8	718.5	717.7	717.0	716.2	715.5
155°	743.8	744.4	744.9	744.8	743.7	742.7	741.6	740.7
157.5°	765.7	766.3	767.0	766.8	766.0	765.2	764.4	763.5
160°	779.2	779.9	780.6	780.7	780.2	779.5	778.9	778.4
162.5°	791.8	792.6	793.4	793.3	792.3	791.4	790.4	789.4
165°	807.9	808.8	809.7	809.6	808.6	807.5	806.6	805.5
167.5°	820.9	821.9	822.8	822.8	821.9	820.9	820.0	819.1
170°	828.0	829.1	830.1	830.1	829.1	828.0	827.1	826.0
172.5°	833.7	834.6	835.4	835.4	834.4	833.4	832.3	831.3
175°	839.7	840.5	841.4	841.4	840.3	839.3	838.3	837.2
177.5°	842.4	843.1	843.8	843.7	842.9	842.0	841.2	840.4
180°	842.6	842.6	842.6	842.6	842.6	842.6	842.6	842.6

(END OF REPORT)