

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: P331595

Luminaire Tested: **S122DIW-S1005D710U835-4F0-1E-UDD-F**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P331595
REPORT IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-1807-864-2,
Test Lab: INNOVATION CENTER
Issue Date: 3/3/2020
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: NEO-RAY
Catalog Number: S122DIW-S1005D710U835-4F0-1E-UDD-F
Description: DEFINE 2 DIRECT-INDIRECT WALL MOUNT LED LUMINAIRE
DOWNLIGHT 1005 LUMENS PER FOOT, FLUSH SATIN WHITE DIFFUSER
UPLIGHT 710 LUMENS PER FOOT, NO LENS
Light Source: -
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 6892.5 lumens
Efficiency: N/A
Efficacy: 115.3 lumens/watt
Spacing Criteria (0/90/45): 1.2 / 1.16 / 1.3
Luminous Opening: Rectangular (W 0.17' x L: 4' x H: 0')
CIE Type: General Diffuse

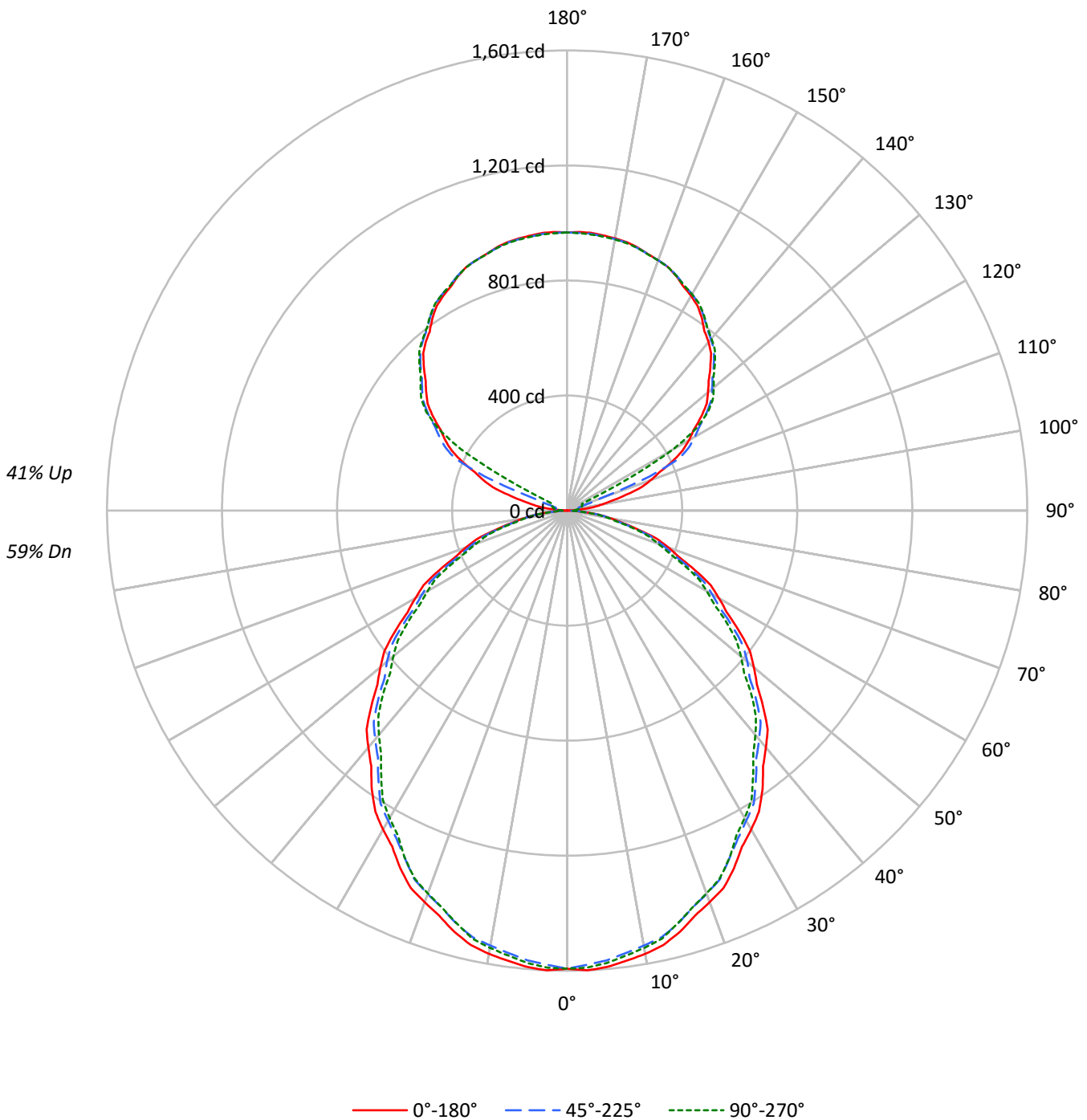
Input Watts (W): 59.8
Input Voltage (V): 120
Input Current (A_{in}): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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	64	64	64	59
1	100	95	91	88	93	89	86	83	77	75	73	67	65	63	57	56	54	50
2	91	83	77	72	84	78	72	68	68	64	60	59	55	53	50	48	46	42
3	83	73	66	60	77	69	62	57	60	55	51	52	48	45	44	41	39	35
4	76	65	57	51	71	61	54	48	53	48	43	46	42	38	40	36	34	30
5	70	58	50	44	65	54	47	41	48	42	37	42	37	33	36	32	29	26
6	64	52	44	38	60	49	41	36	43	37	33	38	33	29	32	29	26	23
7	59	47	39	33	55	44	37	32	39	33	29	34	29	26	30	26	23	20
8	55	43	35	29	51	40	33	28	36	30	26	31	27	23	27	23	21	18
9	51	39	31	26	48	37	30	25	33	27	23	29	24	21	25	21	19	17
10	48	36	29	24	45	34	27	23	30	25	21	27	22	19	23	20	17	15

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	25733	25733	25733
5°	25832	25459	25608
10°	25678	25201	25327
15°	25361	24874	24849
20°	24911	24383	24357
25°	24464	23779	23779
30°	23886	23228	23029
35°	23349	22565	22231
40°	22675	21901	21479
45°	22012	21240	20717
50°	21288	20557	19826
55°	20535	19758	19023
60°	19695	18807	18112
65°	18793	17857	17039
70°	17651	16711	15918
75°	16064	15390	15009
80°	14254	13826	13110
85°	11634	11078	9930



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	149.9	2.2
10°-20°	421.7	6.1
20°-30°	619.8	9.0
30°-40°	720.0	10.4
40°-50°	719.2	10.4
50°-60°	627.2	9.1
60°-70°	463.8	6.7
70°-80°	262.7	3.8
80°-90°	73.0	1.1
90°-100°	32.3	0.5
100°-110°	118.3	1.7
110°-120°	316.3	4.6
120°-130°	522.2	7.6
130°-140°	555.4	8.1
140°-150°	516.2	7.5
150°-160°	415.0	6.0
160°-170°	267.4	3.9
170°-180°	92.1	1.3
0°-30°	1191.4	17.3
0°-40°	1911.4	27.7
0°-60°	3257.9	47.3
0°-90°	4057.3	58.9
90°-120°	467.0	6.8
90°-150°	2060.7	29.9
90°-180°	2835.0	41.1
0°-180°	6892.5	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1594	1594	1594	1594	1594	
5°	1594	1587	1571	1582	1580	151
15°	1517	1507	1488	1493	1487	427
25°	1373	1360	1335	1338	1335	631
35°	1185	1169	1145	1136	1128	739
45°	964	953	930	914	907	744
55°	730	720	702	684	676	652
65°	492	482	467	454	446	486
75°	258	254	247	238	241	275
85°	63	61	60	55	54	72
90°	1	8	14	17	19	5
95°	46	24	27	31	30	56
105°	213	222	43	50	53	227
115°	402	415	432	123	57	396
125°	569	578	592	596	598	507
135°	704	715	722	728	727	544
145°	817	817	828	833	830	511
155°	900	894	902	905	900	414
165°	948	944	946	950	946	268
175°	970	965	966	970	964	92
180°	968	968	968	968	968	



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CANDELA DISTRIBUTION (FULL):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
0°	1593.8	1593.8	1593.8	1593.8	1593.8	1593.8	1593.8	1593.8	1593.8	1593.8	1593.8
2.5°	1601.2	1599.8	1598.5	1597.1	1595.7	1593.6	1590.6	1587.6	1584.6	1581.6	1584.3
5°	1593.8	1592.5	1591.1	1589.7	1588.4	1585.8	1582.1	1578.3	1574.6	1570.8	1573.6
7.5°	1579.7	1577.6	1575.5	1573.4	1571.3	1568.3	1564.5	1560.7	1556.9	1553.1	1555.8
10°	1566.2	1563.9	1561.5	1559.1	1556.7	1553.5	1549.4	1545.3	1541.2	1537.1	1539.9
12.5°	1547.9	1545.7	1543.6	1541.5	1539.4	1536.3	1532.2	1528.1	1524.1	1520.0	1521.9
15°	1517.2	1515.2	1513.1	1511.1	1509.0	1505.8	1501.4	1496.9	1492.5	1488.1	1489.5
17.5°	1478.0	1475.9	1473.9	1471.8	1469.8	1466.5	1462.0	1457.5	1453.0	1448.6	1450.1
20°	1449.8	1447.7	1445.7	1443.6	1441.6	1438.2	1433.4	1428.7	1423.9	1419.1	1420.1
22.5°	1421.6	1418.7	1415.9	1413.0	1410.1	1406.5	1402.0	1397.5	1393.0	1388.5	1388.7
25°	1373.2	1370.4	1367.7	1365.0	1362.3	1358.0	1352.2	1346.4	1340.6	1334.8	1335.5
27.5°	1318.0	1315.5	1313.1	1310.6	1308.2	1304.7	1300.1	1295.5	1291.0	1286.4	1285.4
30°	1281.2	1278.5	1275.7	1273.0	1270.3	1266.4	1261.3	1256.2	1251.1	1245.9	1244.9
32.5°	1242.0	1239.8	1237.6	1235.4	1233.2	1229.5	1224.1	1218.7	1213.3	1207.9	1206.1
35°	1184.6	1181.2	1177.8	1174.4	1171.0	1166.6	1161.1	1155.7	1150.3	1144.8	1142.8
37.5°	1120.0	1117.0	1114.0	1111.0	1108.0	1103.8	1098.3	1092.9	1087.4	1082.0	1079.4
40°	1075.8	1073.1	1070.4	1067.7	1064.9	1060.9	1055.4	1050.0	1044.5	1039.1	1036.0
42.5°	1032.9	1030.2	1027.5	1024.8	1022.0	1017.9	1012.5	1007.0	1001.6	996.1	992.8
45°	964.0	961.6	959.2	956.8	954.4	950.7	945.6	940.5	935.4	930.2	926.5
47.5°	895.3	893.1	890.8	888.6	886.3	882.5	877.2	871.9	866.6	861.3	857.3
50°	847.5	845.8	844.1	842.4	840.7	837.4	832.7	827.9	823.1	818.4	813.6
52.5°	800.9	798.7	796.4	794.2	791.9	788.5	784.0	779.5	775.1	770.6	766.6
55°	729.5	727.4	725.4	723.4	721.3	718.2	714.2	710.1	706.0	701.9	697.8
57.5°	657.8	656.1	654.5	652.9	651.2	648.2	643.7	639.2	634.7	630.2	626.2
60°	609.9	608.6	607.2	605.9	604.5	601.4	596.7	591.9	587.1	582.4	578.6
62.5°	563.4	561.2	559.0	556.8	554.6	551.7	548.0	544.4	540.7	537.0	533.5
65°	491.9	489.9	487.9	485.8	483.8	481.0	477.6	474.2	470.8	467.4	464.4
67.5°	419.3	417.7	416.0	414.4	412.8	410.4	407.3	404.3	401.2	398.2	395.8
70°	373.9	372.6	371.2	369.9	368.5	366.3	363.2	360.1	357.1	354.0	351.6
72.5°	327.3	326.0	324.6	323.3	321.9	320.2	318.3	316.3	314.3	312.3	309.9
75°	257.5	256.8	256.1	255.4	254.7	253.5	251.8	250.1	248.4	246.7	244.7
77.5°	194.9	193.8	192.6	191.5	190.3	189.4	188.7	188.0	187.3	186.7	185.6
80°	153.3	152.9	152.6	152.2	151.9	151.4	150.7	150.0	149.3	148.7	147.6
82.5°	114.0	114.0	113.9	113.8	113.7	113.5	113.1	112.7	112.3	111.9	110.6
85°	62.8	62.5	62.2	61.8	61.5	61.1	60.8	60.4	60.1	59.8	58.7
87.5°	22.2	22.0	21.8	21.6	21.4	21.1	20.9	20.6	20.3	20.0	19.3
90°	0.7	2.4	4.1	5.8	7.5	9.0	10.3	11.5	12.8	14.0	14.8
92.5°	14.1	14.0	13.8	13.7	13.5	13.8	14.4	15.0	15.6	16.2	16.6
95°	45.5	40.4	35.2	30.1	25.0	22.9	24.0	25.1	26.2	27.3	28.1
97.5°	90.3	75.8	61.4	46.9	32.4	26.5	29.0	31.5	34.0	36.5	37.2
100°	123.9	102.6	81.3	60.0	38.7	29.3	32.0	34.6	37.3	39.9	41.1
102.5°	160.9	156.4	151.8	147.3	142.8	129.5	107.4	85.3	63.1	41.0	42.6
105°	212.8	217.5	222.2	226.8	231.5	212.6	170.1	127.6	85.2	42.7	44.4
107.5°	272.0	275.8	279.6	283.3	287.1	263.5	212.6	161.7	110.7	59.8	58.0
110°	310.1	313.4	316.7	319.9	323.2	302.3	257.4	212.4	167.5	122.5	107.0



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CANDELA DISTRIBUTION (continued):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
112.5°	346.0	348.9	351.8	354.6	357.5	353.4	342.3	331.2	320.1	309.0	252.3
115°	402.5	405.2	407.8	410.5	413.1	416.4	420.3	424.2	428.0	431.9	359.9
117.5°	453.1	456.0	459.0	461.9	464.9	467.7	470.4	473.1	475.7	478.4	461.0
120°	490.0	492.4	494.7	497.0	499.4	501.9	504.7	507.5	510.3	513.1	515.0
122.5°	521.4	523.9	526.3	528.8	531.2	534.0	537.0	540.1	543.1	546.2	547.3
125°	569.1	571.2	573.2	575.2	577.2	579.7	582.7	585.6	588.6	591.5	592.6
127.5°	612.4	614.6	616.9	619.1	621.4	623.6	625.8	628.0	630.2	632.4	634.0
130°	639.8	642.3	644.8	647.3	649.8	651.9	653.6	655.3	657.0	658.8	660.5
132.5°	667.9	670.0	672.1	674.2	676.3	678.2	679.9	681.6	683.4	685.1	686.5
135°	704.3	706.7	709.2	711.7	714.2	716.2	717.6	719.0	720.4	721.8	723.3
137.5°	741.1	742.8	744.6	746.3	748.0	749.7	751.3	752.9	754.5	756.1	757.6
140°	765.2	766.4	767.6	768.9	770.1	771.6	773.3	775.0	776.7	778.5	779.9
142.5°	785.3	786.4	787.6	788.7	789.8	791.3	793.3	795.3	797.2	799.2	800.5
145°	817.0	816.8	816.7	816.5	816.3	817.6	820.2	822.9	825.5	828.2	829.3
147.5°	844.5	844.0	843.4	842.8	842.2	843.2	845.8	848.4	851.0	853.6	854.5
150°	862.5	861.4	860.3	859.2	858.1	858.8	861.3	863.8	866.3	868.8	869.7
152.5°	877.6	876.4	875.2	873.9	872.7	873.3	875.7	878.0	880.4	882.8	883.7
155°	899.6	898.2	896.8	895.4	894.0	894.2	896.1	897.9	899.8	901.7	902.6
157.5°	916.8	915.6	914.4	913.2	912.1	912.1	913.4	914.7	916.0	917.3	918.4
160°	926.9	925.9	925.0	924.1	923.1	923.1	924.1	925.0	925.9	926.9	927.8
162.5°	935.8	934.9	934.0	933.0	932.1	932.0	932.8	933.7	934.5	935.3	936.3
165°	947.9	946.9	946.0	945.1	944.1	943.9	944.4	944.8	945.3	945.8	946.9
167.5°	956.8	955.9	955.0	954.0	953.1	952.9	953.3	953.7	954.2	954.6	955.7
170°	961.9	960.9	960.0	959.1	958.1	957.8	958.1	958.5	958.8	959.1	960.2
172.5°	965.2	964.3	963.4	962.4	961.5	961.2	961.5	961.8	962.1	962.4	963.5
175°	969.6	968.5	967.4	966.3	965.2	964.8	965.1	965.5	965.8	966.1	967.2
177.5°	970.3	969.4	968.5	967.7	966.8	966.4	966.5	966.7	966.8	966.9	967.8
180°	967.5	967.5	967.5	967.5	967.5	967.5	967.5	967.5	967.5	967.5	967.5



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CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
0°	1593.8	1593.8	1593.8	1593.8	1593.8	1593.8	1593.8	1593.8
2.5°	1587.0	1589.7	1592.5	1593.6	1593.0	1592.5	1591.9	1591.4
5°	1576.3	1579.0	1581.7	1582.8	1582.1	1581.4	1580.7	1580.0
7.5°	1558.5	1561.2	1564.0	1565.0	1564.2	1563.5	1562.7	1562.0
10°	1542.6	1545.3	1548.0	1548.9	1547.9	1546.8	1545.8	1544.8
12.5°	1523.8	1525.7	1527.6	1528.2	1527.4	1526.7	1525.9	1525.2
15°	1490.8	1492.2	1493.5	1493.4	1491.7	1490.0	1488.3	1486.6
17.5°	1451.7	1453.3	1454.8	1454.8	1453.1	1451.5	1449.9	1448.2
20°	1421.2	1422.2	1423.2	1423.0	1421.7	1420.3	1419.0	1417.6
22.5°	1388.9	1389.1	1389.3	1389.0	1388.2	1387.4	1386.5	1385.7
25°	1336.2	1336.9	1337.6	1337.6	1336.9	1336.2	1335.5	1334.8
27.5°	1284.4	1283.3	1282.3	1281.0	1279.4	1277.7	1276.1	1274.5
30°	1243.9	1242.9	1241.9	1240.7	1239.3	1237.9	1236.6	1235.2
32.5°	1204.3	1202.4	1200.6	1199.0	1197.6	1196.3	1194.9	1193.5
35°	1140.7	1138.7	1136.6	1134.8	1133.1	1131.4	1129.6	1127.9
37.5°	1076.9	1074.4	1071.9	1069.8	1068.2	1066.5	1064.9	1063.3
40°	1032.9	1029.9	1026.8	1024.6	1023.2	1021.9	1020.5	1019.1
42.5°	989.5	986.1	982.8	980.2	978.3	976.4	974.5	972.5
45°	922.8	919.0	915.3	912.7	911.3	910.0	908.6	907.3
47.5°	853.4	849.4	845.5	842.5	840.5	838.6	836.6	834.6
50°	808.8	804.1	799.3	796.1	794.4	792.7	791.0	789.3
52.5°	762.7	758.7	754.8	751.7	749.4	747.2	744.9	742.7
55°	693.7	689.6	685.6	682.7	681.0	679.3	677.6	675.8
57.5°	622.1	618.1	614.1	611.4	610.2	608.9	607.6	606.3
60°	574.9	571.1	567.4	565.0	564.0	563.0	561.9	560.9
62.5°	530.1	526.6	523.1	520.7	519.4	518.1	516.8	515.5
65°	461.3	458.2	455.2	452.8	451.1	449.4	447.7	446.0
67.5°	393.4	391.0	388.6	386.7	385.4	384.0	382.7	381.3
70°	349.2	346.9	344.5	342.6	341.2	339.9	338.5	337.2
72.5°	307.6	305.2	302.8	301.1	300.0	298.9	297.8	296.7
75°	242.7	240.6	238.6	237.9	238.6	239.2	239.9	240.6
77.5°	184.6	183.6	182.6	181.6	180.6	179.7	178.7	177.8
80°	146.6	145.6	144.6	143.7	143.0	142.4	141.7	141.0
82.5°	109.3	108.0	106.7	106.0	105.8	105.7	105.6	105.4
85°	57.7	56.7	55.7	55.0	54.7	54.3	54.0	53.6
87.5°	18.6	18.0	17.3	16.9	16.7	16.5	16.3	16.0
90°	15.6	16.3	17.1	17.7	18.0	18.3	18.6	18.9
92.5°	17.1	17.5	17.9	18.2	18.3	18.5	18.7	18.9
95°	28.9	29.6	30.4	30.7	30.6	30.4	30.3	30.1
97.5°	37.8	38.4	39.0	39.4	39.6	39.8	40.0	40.2
100°	42.4	43.6	44.9	45.7	46.0	46.3	46.6	46.9
102.5°	44.3	45.9	47.5	48.5	49.0	49.4	49.8	50.3
105°	46.1	47.8	49.5	50.7	51.3	52.0	52.6	53.2
107.5°	56.3	54.6	52.8	52.3	52.9	53.5	54.1	54.7
110°	91.4	75.8	60.3	52.8	53.4	54.1	54.7	55.3



TEST NUMBER: P331595

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CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
112.5°	195.5	138.8	82.0	53.9	54.4	54.9	55.4	55.9
115°	287.9	215.8	143.8	102.2	91.0	79.8	68.6	57.4
117.5°	443.6	426.1	408.7	381.6	344.8	308.0	271.2	234.4
120°	516.9	518.7	520.6	511.0	490.0	469.0	448.0	427.0
122.5°	548.4	549.5	550.7	549.2	545.1	541.0	537.0	532.9
125°	593.7	594.8	595.9	596.7	597.1	597.6	598.1	598.5
127.5°	635.6	637.2	638.8	639.6	639.7	639.8	639.9	640.0
130°	662.2	663.9	665.6	666.4	666.2	666.1	665.9	665.8
132.5°	688.0	689.5	690.9	691.6	691.4	691.3	691.1	691.0
135°	724.9	726.4	728.0	728.6	728.3	728.0	727.7	727.4
137.5°	759.1	760.6	762.2	762.7	762.1	761.6	761.1	760.5
140°	781.3	782.7	784.1	784.4	783.6	782.8	782.0	781.3
142.5°	801.7	803.0	804.3	804.5	803.8	803.0	802.2	801.4
145°	830.3	831.4	832.5	832.7	831.9	831.1	830.3	829.6
147.5°	855.3	856.1	856.9	857.0	856.3	855.7	855.0	854.3
150°	870.6	871.6	872.5	872.6	871.8	871.0	870.2	869.5
152.5°	884.6	885.6	886.5	886.5	885.4	884.4	883.4	882.3
155°	903.5	904.5	905.4	905.2	904.0	902.8	901.5	900.3
157.5°	919.5	920.5	921.6	921.5	920.3	919.1	917.9	916.6
160°	928.7	929.7	930.6	930.5	929.4	928.3	927.3	926.2
162.5°	937.4	938.4	939.5	939.4	938.0	936.7	935.3	934.0
165°	948.0	949.0	950.1	950.1	949.0	948.0	946.9	945.8
167.5°	956.8	957.9	958.9	958.8	957.4	956.0	954.6	953.2
170°	961.3	962.3	963.4	963.3	961.9	960.5	959.1	957.7
172.5°	964.6	965.7	966.8	966.6	965.2	963.8	962.4	961.0
175°	968.3	969.3	970.4	970.2	968.6	967.1	965.5	964.0
177.5°	968.7	969.5	970.4	970.3	969.2	968.0	966.9	965.8
180°	967.5	967.5	967.5	967.5	967.5	967.5	967.5	967.5

(END OF REPORT)