

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: P331596

Luminaire Tested: **S122DIW-S1005D710U835-4F0-1E-UDD-F1**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P331596
REPORT IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-1807-864-8,
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-F1
Description: DEFINE 2 DIRECT-INDIRECT WALL MOUNT LED LUMINAIRE
DOWNLIGHT 1005 LUMENS PER FOOT, FLUSH SATIN WHITE DIFFUSER
UPLIGHT 710 LUMENS PER FOOT, FLUSH SATIN WHITE DIFFUSER
Light Source: -
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 6517.2 lumens
Efficiency: N/A
Efficacy: 109.0 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: Semi-Direct

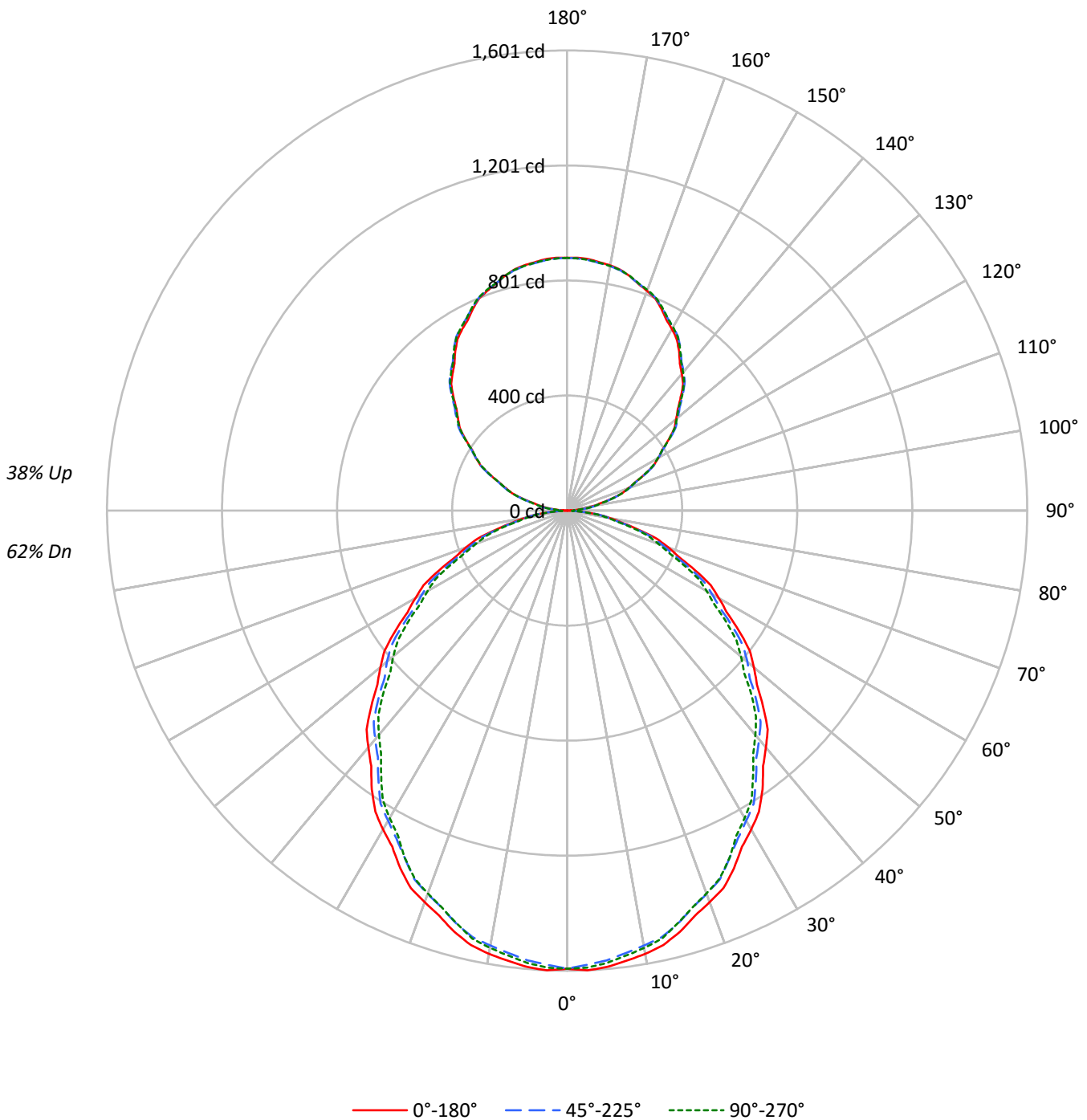
Input Watts (W): 59.8
Input Voltage (V): 120
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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	110	110	110	110	103	103	103	103	90	90	90	78	78	78	67	67	67	62
1	101	96	92	89	94	90	87	84	79	77	74	69	67	65	60	58	57	52
2	92	84	78	72	86	79	73	69	69	65	61	61	57	55	52	50	48	44
3	84	74	66	60	78	69	63	57	61	56	52	54	50	46	46	43	41	37
4	76	65	57	51	71	62	54	49	54	49	44	48	43	40	42	38	35	32
5	70	58	50	44	66	55	48	42	49	43	38	43	38	34	37	34	31	28
6	65	52	44	38	61	50	42	37	44	38	33	39	34	30	34	30	27	24
7	60	47	39	34	56	45	37	32	40	34	29	35	30	27	31	27	24	22
8	56	43	35	30	52	41	34	29	37	31	26	32	28	24	29	25	22	19
9	52	39	32	27	49	37	30	26	34	28	24	30	25	22	26	22	20	17
10	49	36	29	24	46	34	28	23	31	25	21	28	23	20	25	21	18	16

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	2.3
10°-20°	421.7	6.5
20°-30°	619.8	9.5
30°-40°	720.0	11.0
40°-50°	719.2	11.0
50°-60°	627.2	9.6
60°-70°	463.8	7.1
70°-80°	262.7	4.0
80°-90°	74.2	1.1
90°-100°	55.7	0.9
100°-110°	173.1	2.7
110°-120°	295.8	4.5
120°-130°	389.0	6.0
130°-140°	436.6	6.7
140°-150°	428.1	6.6
150°-160°	359.1	5.5
160°-170°	238.2	3.7
170°-180°	83.2	1.3
0°-30°	1191.4	18.3
0°-40°	1911.4	29.3
0°-60°	3257.9	50.0
0°-90°	4058.5	62.3
90°-120°	524.6	8.0
90°-150°	1778.3	27.3
90°-180°	2459.0	37.7
0°-180°	6517.2	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	10	26	25	25	5
95°	39	46	48	47	46	44
105°	160	162	163	165	165	168
115°	297	301	300	299	297	294
125°	432	438	436	434	433	386
135°	559	567	568	568	565	431
145°	678	683	688	688	686	424
155°	775	778	780	783	781	357
165°	844	843	843	848	844	238
175°	878	876	874	879	875	83
180°	879	879	879	879	879	



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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	22.1	21.9	21.8	21.6	21.6	21.8	22.0	22.2	22.4	21.5
90°	0.7	2.7	4.7	6.7	8.7	11.5	15.1	18.7	22.3	26.0	25.6
92.5°	13.2	14.7	16.1	17.6	19.0	20.2	21.0	21.9	22.7	23.6	23.7
95°	38.6	40.2	41.9	43.5	45.2	46.2	46.5	46.8	47.2	47.5	47.5
97.5°	70.5	71.9	73.4	74.8	76.3	77.3	78.0	78.6	79.2	79.8	79.8
100°	94.2	95.6	96.9	98.2	99.5	100.4	100.9	101.4	101.9	102.4	102.4
102.5°	119.2	120.2	121.3	122.3	123.4	124.2	124.9	125.5	126.1	126.7	126.9
105°	159.5	160.0	160.5	161.0	161.5	161.9	162.3	162.6	162.9	163.3	163.6
107.5°	200.2	200.9	201.7	202.4	203.1	203.5	203.5	203.5	203.5	203.5	203.6
110°	226.3	227.3	228.3	229.3	230.3	230.8	230.8	230.8	230.8	230.8	230.8



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CANDELA DISTRIBUTION (continued):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
112.5°	254.8	255.8	256.8	257.8	258.8	259.2	259.1	258.9	258.8	258.7	258.3
115°	296.8	297.8	298.8	299.8	300.8	301.1	300.8	300.4	300.1	299.8	299.6
117.5°	338.7	340.0	341.3	342.6	343.9	344.1	343.2	342.3	341.4	340.5	340.1
120°	366.6	367.9	369.2	370.5	371.8	371.8	370.5	369.2	367.9	366.6	366.6
122.5°	392.1	393.7	395.3	396.8	398.4	398.8	397.8	396.9	396.0	395.1	394.7
125°	431.9	433.4	434.8	436.3	437.8	438.3	437.8	437.3	436.8	436.3	435.8
127.5°	470.6	472.5	474.4	476.2	478.1	478.8	478.2	477.6	477.0	476.4	475.8
130°	494.9	497.1	499.2	501.4	503.5	504.4	504.1	503.8	503.4	503.1	502.8
132.5°	522.3	524.0	525.8	527.5	529.2	530.2	530.2	530.3	530.4	530.4	529.7
135°	558.8	560.6	562.4	564.2	566.0	567.1	567.4	567.8	568.1	568.4	568.2
137.5°	597.2	598.7	600.2	601.7	603.1	604.1	604.5	605.0	605.4	605.8	605.7
140°	620.4	621.8	623.3	624.8	626.3	627.4	628.3	629.1	629.9	630.7	630.7
142.5°	644.1	645.6	647.1	648.6	650.0	651.1	651.6	652.2	652.7	653.3	653.4
145°	678.2	679.4	680.5	681.7	682.9	683.9	684.9	685.9	686.9	687.9	688.0
147.5°	708.7	710.0	711.4	712.8	714.2	715.2	715.9	716.5	717.2	717.9	718.2
150°	729.4	730.4	731.4	732.4	733.4	734.2	734.9	735.5	736.2	736.9	737.4
152.5°	747.8	748.8	749.8	750.8	751.8	752.7	753.5	754.3	755.1	755.9	756.5
155°	775.4	775.9	776.4	776.9	777.4	777.9	778.4	778.9	779.4	779.9	780.7
157.5°	799.0	799.4	799.7	800.0	800.4	800.7	801.0	801.3	801.6	801.9	803.0
160°	813.3	813.6	813.9	814.3	814.6	814.9	815.0	815.2	815.3	815.5	816.5
162.5°	826.3	826.4	826.5	826.5	826.6	826.7	826.9	827.1	827.2	827.4	828.5
165°	843.7	843.5	843.4	843.2	843.1	843.0	843.0	843.0	843.0	843.0	844.1
167.5°	858.3	857.8	857.3	856.8	856.3	856.0	856.0	855.9	855.9	855.9	857.0
170°	866.0	865.5	865.0	864.5	864.0	863.7	863.5	863.3	863.2	863.0	864.2
172.5°	871.3	870.8	870.3	869.8	869.3	869.0	868.8	868.7	868.5	868.3	869.5
175°	877.8	877.4	876.9	876.4	875.9	875.5	875.1	874.8	874.5	874.1	875.3
177.5°	880.5	880.1	879.7	879.3	878.9	878.6	878.3	878.1	877.8	877.5	878.3
180°	879.3	879.3	879.3	879.3	879.3	879.3	879.3	879.3	879.3	879.3	879.3



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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°	20.6	19.7	18.8	18.3	18.0	17.8	17.5	17.3
90°	25.3	25.0	24.7	24.6	24.7	24.9	25.1	25.2
92.5°	23.7	23.8	23.9	23.9	23.9	24.0	24.0	24.0
95°	47.5	47.5	47.5	47.3	47.0	46.7	46.3	46.0
97.5°	79.8	79.8	79.8	79.8	79.8	79.8	79.7	79.7
100°	102.4	102.4	102.4	102.3	102.2	102.0	101.8	101.7
102.5°	127.0	127.1	127.3	127.3	127.1	126.9	126.8	126.6
105°	163.9	164.2	164.6	164.7	164.7	164.7	164.7	164.7
107.5°	203.7	203.9	204.0	203.7	202.9	202.2	201.4	200.7
110°	230.8	230.8	230.8	230.5	230.0	229.5	229.0	228.6



TEST NUMBER: P331596

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CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
112.5°	257.9	257.5	257.1	256.7	256.4	256.0	255.6	255.3
115°	299.5	299.3	299.1	298.8	298.3	297.8	297.3	296.8
117.5°	339.7	339.3	338.9	338.4	337.9	337.4	336.9	336.4
120°	366.6	366.6	366.6	366.3	365.8	365.3	364.8	364.3
122.5°	394.3	393.9	393.5	393.1	392.7	392.4	392.0	391.7
125°	435.3	434.8	434.3	434.0	433.9	433.7	433.5	433.4
127.5°	475.2	474.6	474.0	473.5	472.9	472.4	471.9	471.4
130°	502.5	502.1	501.8	501.3	500.6	500.0	499.3	498.7
132.5°	529.0	528.2	527.5	526.9	526.4	525.8	525.3	524.8
135°	568.1	567.9	567.8	567.4	566.9	566.4	565.9	565.4
137.5°	605.5	605.4	605.3	604.9	604.2	603.6	602.9	602.2
140°	630.7	630.7	630.7	630.4	629.8	629.1	628.4	627.8
142.5°	653.6	653.7	653.8	653.6	652.9	652.2	651.6	650.9
145°	688.2	688.4	688.5	688.3	687.6	687.0	686.3	685.7
147.5°	718.6	718.9	719.3	719.2	718.6	717.9	717.3	716.7
150°	737.8	738.3	738.8	738.8	738.3	737.8	737.4	736.9
152.5°	757.1	757.7	758.4	758.4	757.7	757.1	756.5	755.9
155°	781.5	782.4	783.2	783.4	782.9	782.4	781.9	781.4
157.5°	804.1	805.2	806.3	806.5	805.7	804.9	804.1	803.3
160°	817.5	818.5	819.5	819.6	819.0	818.3	817.7	817.0
162.5°	829.6	830.8	831.9	832.0	831.2	830.5	829.7	828.9
165°	845.3	846.4	847.6	847.8	846.9	846.1	845.3	844.5
167.5°	858.2	859.3	860.5	860.6	859.8	858.9	858.1	857.2
170°	865.3	866.5	867.6	867.7	866.7	865.7	864.7	863.7
172.5°	870.7	871.8	873.0	873.0	872.1	871.1	870.1	869.1
175°	876.4	877.6	878.8	878.8	877.8	876.9	875.9	874.9
177.5°	879.1	879.9	880.7	880.7	879.9	879.1	878.3	877.5
180°	879.3	879.3	879.3	879.3	879.3	879.3	879.3	879.3

(END OF REPORT)