

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: P331852-840

Luminaire Tested: **S122RDIW-S1005D710U840-4F0-1E-UDD-F1**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P331852-840
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: S122RDIW-S1005D710U840-4F0-1E-UDD-F1
Description: DEFINE 2 DIRECT-INDIRECT WALL MOUNT LED LUMINAIRE
DOWNLIGHT 1005 LUMENS PER FOOT, FLUSH SATIN WHITE DIFFUSER, REGRESSED
HOUSING
UPLIGHT 710 LUMENS PER FOOT, FLUSH SATIN WHITE DIFFUSER
Light Source: -
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 6003.9 lumens
Efficiency: N/A
Efficacy: 100.4 lumens/watt
Spacing Criteria (0/90/45): 1.2 / 0.99 / 1.16
Luminous Opening: Rectangular (W 0.17' x L: 4' x H: 0')
CIE Type: General Diffuse

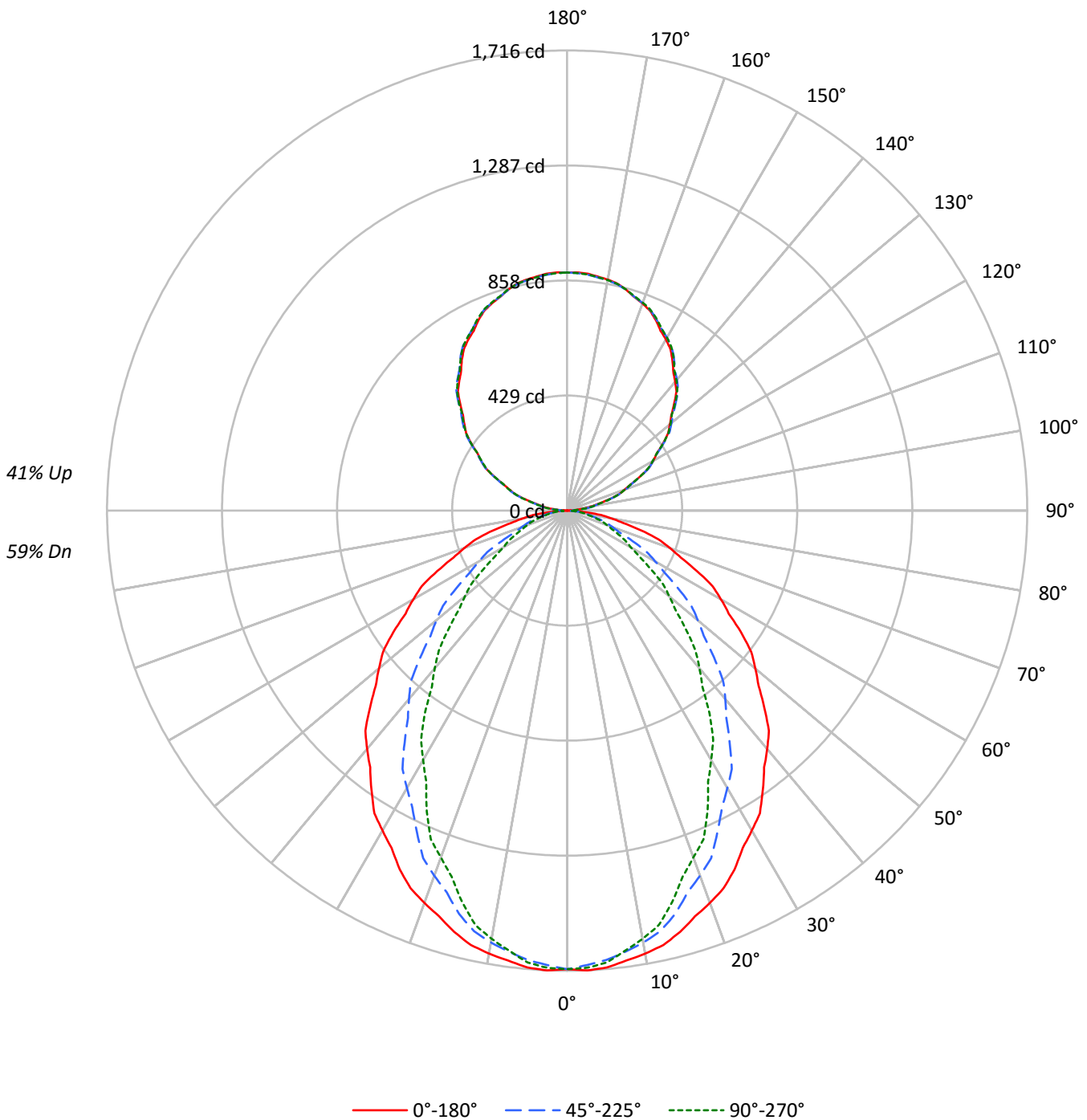
Input Watts (W): 59.8
Input Voltage (V): 120
Input Current (A_{in}): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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	96	92	89	93	90	87	84	78	76	74	67	66	64	57	56	55	50
2	92	85	79	74	85	79	74	70	69	65	62	60	57	54	51	49	47	43
3	84	75	68	62	78	70	64	59	62	57	53	53	50	47	46	43	41	37
4	77	67	59	53	72	63	56	50	55	50	45	48	44	41	41	38	36	32
5	71	60	52	46	66	56	49	44	50	44	40	43	39	36	38	34	32	29
6	66	54	46	40	61	51	44	38	45	39	35	39	35	31	34	31	28	25
7	61	49	41	36	57	46	39	34	41	35	31	36	32	28	32	28	25	23
8	57	45	37	32	53	42	35	30	38	32	28	33	29	25	29	25	23	21
9	53	41	33	28	50	39	32	27	35	29	25	31	26	23	27	23	21	19
10	50	38	30	26	46	36	29	25	32	27	23	28	24	21	25	22	19	17

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	27611	27611	27611
5°	27716	27266	27417
10°	27506	26820	26591
15°	27189	26024	25275
20°	26751	24890	23639
25°	26302	23599	22057
30°	25682	22275	20025
35°	25074	20834	18242
40°	24464	19344	16179
45°	23749	17671	14312
50°	23016	15978	12479
55°	22261	14159	10716
60°	21390	12245	8896
65°	20397	10288	8103
70°	19218	8478	7449
75°	17767	7723	6949
80°	15676	6908	6332
85°	12338	5446	5446



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	160.1	2.7
10°-20°	439.5	7.3
20°-30°	617.2	10.3
30°-40°	673.0	11.2
40°-50°	618.8	10.3
50°-60°	486.0	8.1
60°-70°	316.9	5.3
70°-80°	163.4	2.7
80°-90°	45.9	0.8
90°-100°	56.3	0.9
100°-110°	174.8	2.9
110°-120°	298.7	5.0
120°-130°	392.8	6.5
130°-140°	440.9	7.3
140°-150°	432.3	7.2
150°-160°	362.6	6.0
160°-170°	240.5	4.0
170°-180°	84.1	1.4
0°-30°	1216.8	20.3
0°-40°	1889.8	31.5
0°-60°	2994.7	49.9
0°-90°	3520.9	58.6
90°-120°	529.8	8.8
90°-150°	1795.8	29.9
90°-180°	2483.0	41.4
0°-180°	6003.9	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1710	1710	1710	1710	1710	
5°	1710	1702	1682	1695	1692	162
15°	1627	1608	1557	1528	1512	458
25°	1476	1424	1325	1264	1238	679
35°	1272	1190	1057	963	926	796
45°	1040	933	774	668	627	803
55°	791	668	503	414	381	706
65°	534	408	269	219	212	529
75°	285	180	124	114	111	301
85°	67	36	29	29	29	78
90°	1	10	26	25	25	5
95°	39	46	48	48	46	45
105°	161	163	165	166	166	170
115°	300	304	303	302	300	296
125°	436	442	441	438	438	390
135°	564	572	574	573	571	436
145°	685	690	695	695	692	428
155°	783	785	788	791	789	360
165°	852	851	851	856	853	240
175°	886	884	883	888	884	84
180°	888	888	888	888	888	



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CANDELA DISTRIBUTION (FULL):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
0°	1710.1	1710.1	1710.1	1710.1	1710.1	1710.1	1710.1	1710.1	1710.1	1710.1	1710.1
2.5°	1716.4	1715.0	1713.5	1712.2	1710.8	1708.6	1705.6	1702.6	1699.6	1696.6	1699.3
5°	1710.1	1708.4	1706.7	1705.0	1703.2	1700.2	1695.7	1691.2	1686.8	1682.3	1685.4
7.5°	1692.5	1690.4	1688.3	1686.1	1683.9	1680.3	1675.1	1669.8	1664.7	1659.4	1660.3
10°	1677.7	1675.3	1672.8	1670.4	1668.0	1663.3	1656.5	1649.6	1642.7	1635.9	1634.9
12.5°	1659.1	1656.1	1653.1	1650.2	1647.3	1641.3	1632.5	1623.8	1615.0	1606.2	1604.3
15°	1626.6	1622.8	1619.0	1615.2	1611.4	1603.7	1592.1	1580.3	1568.6	1556.9	1550.4
17.5°	1586.6	1580.8	1575.1	1569.3	1563.6	1553.2	1538.1	1523.2	1508.1	1493.2	1485.4
20°	1556.9	1550.0	1543.2	1536.3	1529.4	1517.4	1500.2	1483.0	1465.8	1448.6	1440.0
22.5°	1524.7	1517.0	1509.3	1501.7	1493.9	1480.4	1461.0	1441.6	1422.2	1402.8	1391.7
25°	1476.4	1465.4	1454.4	1443.4	1432.4	1415.6	1392.9	1370.2	1347.5	1324.7	1310.7
27.5°	1418.3	1406.3	1394.3	1382.4	1370.4	1351.6	1326.1	1300.4	1274.9	1249.3	1232.8
30°	1377.5	1364.3	1351.3	1338.2	1325.1	1304.8	1277.3	1249.8	1222.3	1194.8	1177.2
32.5°	1337.8	1322.5	1307.3	1292.0	1276.7	1255.1	1227.0	1198.9	1170.8	1142.8	1122.8
35°	1272.1	1254.7	1237.1	1219.5	1202.0	1178.1	1147.8	1117.6	1087.3	1057.0	1035.4
37.5°	1206.6	1187.3	1168.0	1148.7	1129.5	1103.8	1071.5	1039.3	1006.9	974.7	950.9
40°	1160.7	1140.1	1119.4	1098.8	1078.2	1051.2	1017.8	984.5	951.1	917.8	893.3
42.5°	1113.7	1092.0	1070.3	1048.4	1026.7	998.7	964.2	929.7	895.2	860.8	835.6
45°	1040.1	1016.9	993.9	970.9	947.9	918.3	882.1	846.1	809.9	773.9	749.4
47.5°	968.2	943.8	919.4	894.9	870.5	839.7	802.4	765.1	727.8	690.5	666.3
50°	916.3	891.8	867.4	842.9	818.5	787.4	749.6	711.8	673.9	636.1	612.4
52.5°	865.5	839.9	814.5	788.9	763.4	732.2	695.1	658.1	621.1	584.1	561.2
55°	790.8	764.1	737.2	710.3	683.6	651.6	614.4	577.2	540.2	503.0	482.3
57.5°	714.4	686.9	659.3	631.9	604.3	572.7	537.0	501.3	465.6	429.9	411.0
60°	662.4	634.9	607.3	579.9	552.3	520.9	485.4	450.0	414.5	379.2	361.6
62.5°	611.7	584.1	556.6	529.1	501.6	470.9	437.2	403.3	369.6	335.9	319.1
65°	533.9	506.0	478.3	450.4	422.5	393.1	362.1	331.2	300.2	269.3	257.6
67.5°	459.0	431.4	403.7	376.1	348.4	320.6	292.9	265.0	237.1	209.2	203.9
70°	407.1	380.2	353.4	326.6	299.7	274.5	250.7	227.0	203.3	179.6	176.1
72.5°	357.5	331.7	306.1	280.3	254.6	232.2	213.2	194.1	175.0	156.0	153.1
75°	284.8	260.6	236.6	212.6	188.4	170.6	158.9	147.2	135.5	123.8	121.4
77.5°	213.3	192.2	171.1	150.0	128.8	115.4	109.8	104.1	98.5	92.9	91.5
80°	168.6	151.2	133.6	116.0	98.6	88.1	84.6	81.2	77.8	74.3	72.9
82.5°	127.8	114.1	100.5	86.7	73.1	65.0	62.7	60.4	58.1	55.7	54.9
85°	66.6	59.3	52.1	44.8	37.7	33.5	32.5	31.5	30.4	29.4	29.4
87.5°	20.0	18.2	16.4	14.5	12.7	12.2	12.9	13.7	14.4	15.1	14.8
90°	0.7	2.7	4.7	6.8	8.8	11.6	15.2	18.9	22.5	26.3	25.9
92.5°	13.3	14.8	16.3	17.8	19.2	20.4	21.2	22.1	22.9	23.8	23.9
95°	39.0	40.6	42.3	43.9	45.6	46.7	47.0	47.3	47.7	48.0	48.0
97.5°	71.2	72.6	74.1	75.5	77.1	78.1	78.8	79.4	80.0	80.6	80.6
100°	95.1	96.5	97.9	99.2	100.5	101.4	101.9	102.4	102.9	103.4	103.4
102.5°	120.4	121.4	122.5	123.5	124.6	125.4	126.1	126.7	127.3	127.9	128.2
105°	161.1	161.6	162.1	162.6	163.1	163.5	163.9	164.2	164.5	164.9	165.2
107.5°	202.2	202.9	203.7	204.4	205.1	205.5	205.5	205.5	205.5	205.5	205.6
110°	228.5	229.5	230.6	231.6	232.6	233.1	233.1	233.1	233.1	233.1	233.1



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CANDELA DISTRIBUTION (continued):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
112.5°	257.3	258.3	259.3	260.3	261.4	261.8	261.7	261.5	261.4	261.3	260.8
115°	299.7	300.7	301.7	302.8	303.8	304.1	303.8	303.4	303.1	302.8	302.6
117.5°	342.0	343.4	344.7	346.0	347.3	347.5	346.6	345.7	344.8	343.9	343.5
120°	370.2	371.5	372.8	374.2	375.5	375.5	374.2	372.8	371.5	370.2	370.2
122.5°	396.0	397.6	399.2	400.7	402.3	402.7	401.7	400.8	399.9	399.0	398.6
125°	436.2	437.7	439.1	440.6	442.1	442.6	442.1	441.6	441.1	440.6	440.1
127.5°	475.2	477.2	479.1	480.9	482.8	483.5	482.9	482.3	481.7	481.1	480.5
130°	499.8	502.0	504.1	506.3	508.5	509.4	509.1	508.8	508.4	508.1	507.8
132.5°	527.5	529.2	531.0	532.7	534.4	535.4	535.4	535.5	535.6	535.6	534.9
135°	564.3	566.1	567.9	569.8	571.6	572.7	573.0	573.4	573.7	574.0	573.8
137.5°	603.1	604.6	606.1	607.6	609.0	610.1	610.5	611.0	611.4	611.8	611.7
140°	626.5	627.9	629.4	631.0	632.5	633.6	634.5	635.3	636.1	636.9	636.9
142.5°	650.5	652.0	653.5	655.0	656.4	657.5	658.0	658.6	659.1	659.7	659.8
145°	684.9	686.1	687.2	688.4	689.6	690.6	691.7	692.7	693.7	694.7	694.8
147.5°	715.7	717.0	718.4	719.8	721.2	722.3	723.0	723.6	724.3	725.0	725.3
150°	736.6	737.6	738.6	739.6	740.6	741.4	742.1	742.8	743.5	744.2	744.7
152.5°	755.2	756.2	757.2	758.2	759.2	760.1	760.9	761.7	762.5	763.4	764.0
155°	783.0	783.6	784.1	784.6	785.1	785.6	786.1	786.6	787.1	787.6	788.4
157.5°	806.9	807.3	807.6	807.9	808.3	808.6	808.9	809.2	809.5	809.8	810.9
160°	821.3	821.6	821.9	822.3	822.6	822.9	823.0	823.2	823.3	823.5	824.6
162.5°	834.5	834.6	834.7	834.7	834.8	834.9	835.1	835.3	835.4	835.6	836.7
165°	852.0	851.8	851.7	851.5	851.4	851.3	851.3	851.3	851.3	851.3	852.4
167.5°	866.8	866.3	865.8	865.3	864.7	864.4	864.4	864.3	864.3	864.3	865.5
170°	874.5	874.0	873.5	873.0	872.5	872.2	872.0	871.8	871.7	871.5	872.7
172.5°	879.9	879.4	878.9	878.4	877.9	877.6	877.4	877.3	877.1	876.9	878.1
175°	886.5	886.1	885.6	885.0	884.5	884.1	883.7	883.4	883.1	882.7	883.9
177.5°	889.2	888.8	888.4	888.0	887.6	887.3	887.0	886.8	886.5	886.2	887.0
180°	888.0	888.0	888.0	888.0	888.0	888.0	888.0	888.0	888.0	888.0	888.0



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CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
0°	1710.1	1710.1	1710.1	1710.1	1710.1	1710.1	1710.1	1710.1
2.5°	1702.0	1704.8	1707.6	1708.6	1708.1	1707.6	1707.0	1706.5
5°	1688.5	1691.6	1694.7	1695.7	1694.7	1693.6	1692.6	1691.6
7.5°	1661.1	1662.0	1662.9	1662.5	1660.7	1658.9	1657.2	1655.4
10°	1633.8	1632.7	1631.7	1630.2	1628.1	1626.1	1624.0	1621.9
12.5°	1602.5	1600.5	1598.7	1596.1	1592.7	1589.2	1585.8	1582.4
15°	1543.9	1537.3	1530.8	1525.8	1522.4	1518.9	1515.5	1512.1
17.5°	1477.6	1469.9	1462.1	1455.2	1449.4	1443.4	1437.4	1431.6
20°	1431.4	1422.8	1414.2	1406.1	1398.6	1391.0	1383.4	1375.8
22.5°	1380.7	1369.6	1358.5	1350.1	1344.5	1338.9	1333.2	1327.6
25°	1296.6	1282.5	1268.4	1258.8	1253.5	1248.4	1243.2	1238.1
27.5°	1216.4	1199.9	1183.5	1171.1	1163.0	1154.8	1146.6	1138.4
30°	1159.7	1142.2	1124.6	1111.3	1102.0	1092.7	1083.4	1074.1
32.5°	1102.8	1082.8	1062.7	1048.3	1039.7	1030.9	1022.1	1013.4
35°	1013.7	992.1	970.4	955.7	948.2	940.6	933.0	925.5
37.5°	927.0	903.1	879.2	862.9	854.3	845.7	837.0	828.3
40°	868.9	844.4	820.1	803.4	794.5	785.5	776.6	767.6
42.5°	810.3	785.1	759.8	742.9	734.2	725.5	716.9	708.2
45°	725.0	700.5	676.1	659.8	651.6	643.3	635.0	626.8
47.5°	642.0	617.7	593.4	577.5	570.1	562.6	555.0	547.5
50°	588.7	564.9	541.2	525.6	518.5	511.2	504.0	496.8
52.5°	538.3	515.3	492.5	477.7	471.0	464.3	457.7	451.0
55°	461.7	441.1	420.4	406.9	400.3	393.7	387.3	380.7
57.5°	392.1	373.1	354.3	342.0	336.6	331.0	325.6	320.0
60°	344.1	326.6	309.0	297.5	292.0	286.5	280.9	275.5
62.5°	302.5	285.7	269.0	258.9	255.7	252.4	249.0	245.8
65°	245.9	234.2	222.5	216.1	215.1	214.1	213.1	212.1
67.5°	198.5	193.2	187.7	184.5	183.5	182.4	181.3	180.2
70°	172.7	169.3	165.8	163.4	162.0	160.6	159.3	157.8
72.5°	150.3	147.3	144.4	142.6	141.8	141.0	140.1	139.3
75°	119.0	116.6	114.2	112.8	112.5	112.1	111.8	111.4
77.5°	90.1	88.8	87.4	86.3	85.8	85.3	84.7	84.2
80°	71.5	70.2	68.8	68.1	68.1	68.1	68.1	68.1
82.5°	54.0	53.2	52.4	52.0	52.0	52.0	52.0	52.0
85°	29.4	29.4	29.4	29.4	29.4	29.4	29.4	29.4
87.5°	14.4	14.1	13.7	13.6	13.6	13.7	13.7	13.7
90°	25.5	25.2	24.9	24.8	24.9	25.1	25.3	25.4
92.5°	23.9	24.0	24.1	24.1	24.1	24.2	24.2	24.2
95°	48.0	48.0	48.0	47.8	47.5	47.2	46.8	46.5
97.5°	80.6	80.6	80.6	80.6	80.6	80.6	80.5	80.5
100°	103.4	103.4	103.4	103.3	103.2	103.0	102.8	102.7
102.5°	128.3	128.4	128.6	128.6	128.4	128.2	128.1	127.8
105°	165.5	165.8	166.2	166.3	166.3	166.3	166.3	166.3
107.5°	205.7	205.9	206.0	205.7	204.9	204.2	203.4	202.7
110°	233.1	233.1	233.1	232.8	232.3	231.8	231.3	230.9



TEST NUMBER: P331852-840

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CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
112.5°	260.4	260.0	259.6	259.2	258.9	258.5	258.1	257.8
115°	302.5	302.3	302.1	301.7	301.2	300.7	300.2	299.7
117.5°	343.1	342.6	342.2	341.7	341.2	340.7	340.2	339.7
120°	370.2	370.2	370.2	369.9	369.4	368.9	368.4	367.9
122.5°	398.2	397.8	397.4	397.0	396.6	396.3	395.9	395.6
125°	439.6	439.1	438.6	438.3	438.2	438.0	437.8	437.7
127.5°	479.9	479.3	478.7	478.2	477.6	477.1	476.6	476.1
130°	507.5	507.1	506.8	506.2	505.5	504.9	504.2	503.6
132.5°	534.2	533.4	532.7	532.1	531.6	531.0	530.5	530.0
135°	573.7	573.5	573.4	573.0	572.5	572.0	571.5	571.0
137.5°	611.5	611.4	611.3	610.9	610.2	609.6	608.8	608.1
140°	636.9	636.9	636.9	636.6	636.0	635.3	634.6	634.0
142.5°	660.0	660.1	660.2	660.0	659.3	658.6	658.0	657.3
145°	695.0	695.2	695.3	695.1	694.4	693.8	693.1	692.5
147.5°	725.7	726.0	726.4	726.3	725.7	725.0	724.4	723.8
150°	745.1	745.6	746.1	746.1	745.6	745.1	744.7	744.2
152.5°	764.6	765.2	765.9	765.9	765.2	764.6	764.0	763.4
155°	789.2	790.1	790.9	791.1	790.6	790.1	789.6	789.1
157.5°	812.0	813.1	814.3	814.5	813.6	812.8	812.0	811.2
160°	825.6	826.6	827.6	827.7	827.1	826.4	825.8	825.1
162.5°	837.8	839.0	840.1	840.2	839.4	838.7	837.9	837.1
165°	853.6	854.7	856.0	856.2	855.3	854.4	853.6	852.8
167.5°	866.7	867.8	869.0	869.1	868.3	867.4	866.6	865.7
170°	873.8	875.0	876.2	876.3	875.3	874.2	873.2	872.2
172.5°	879.3	880.4	881.6	881.6	880.7	879.7	878.7	877.7
175°	885.0	886.3	887.5	887.5	886.5	885.6	884.5	883.5
177.5°	887.8	888.6	889.4	889.4	888.6	887.8	887.0	886.2
180°	888.0	888.0	888.0	888.0	888.0	888.0	888.0	888.0

(END OF REPORT)