

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: P332061-830

Luminaire Tested: **S123DIP-S1165D585U830-4F0-1E-UDD-F1**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P332061-830
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: S123DIP-S1165D585U830-4F0-1E-UDD-F1
Description: DEFINE 3 DIRECT-INDIRECT PENDANT LED LUMINAIRE
DOWNLIGHT 1165 LUMENS PER FOOT, FLUSH SATIN WHITE DIFFUSER
UPLIGHT 585 LUMENS PER FOOT, FLUSH SATIN WHITE DIFFUSER
Light Source: -
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 6381.8 lumens
Efficiency: N/A
Efficacy: 115.8 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: Semi-Direct

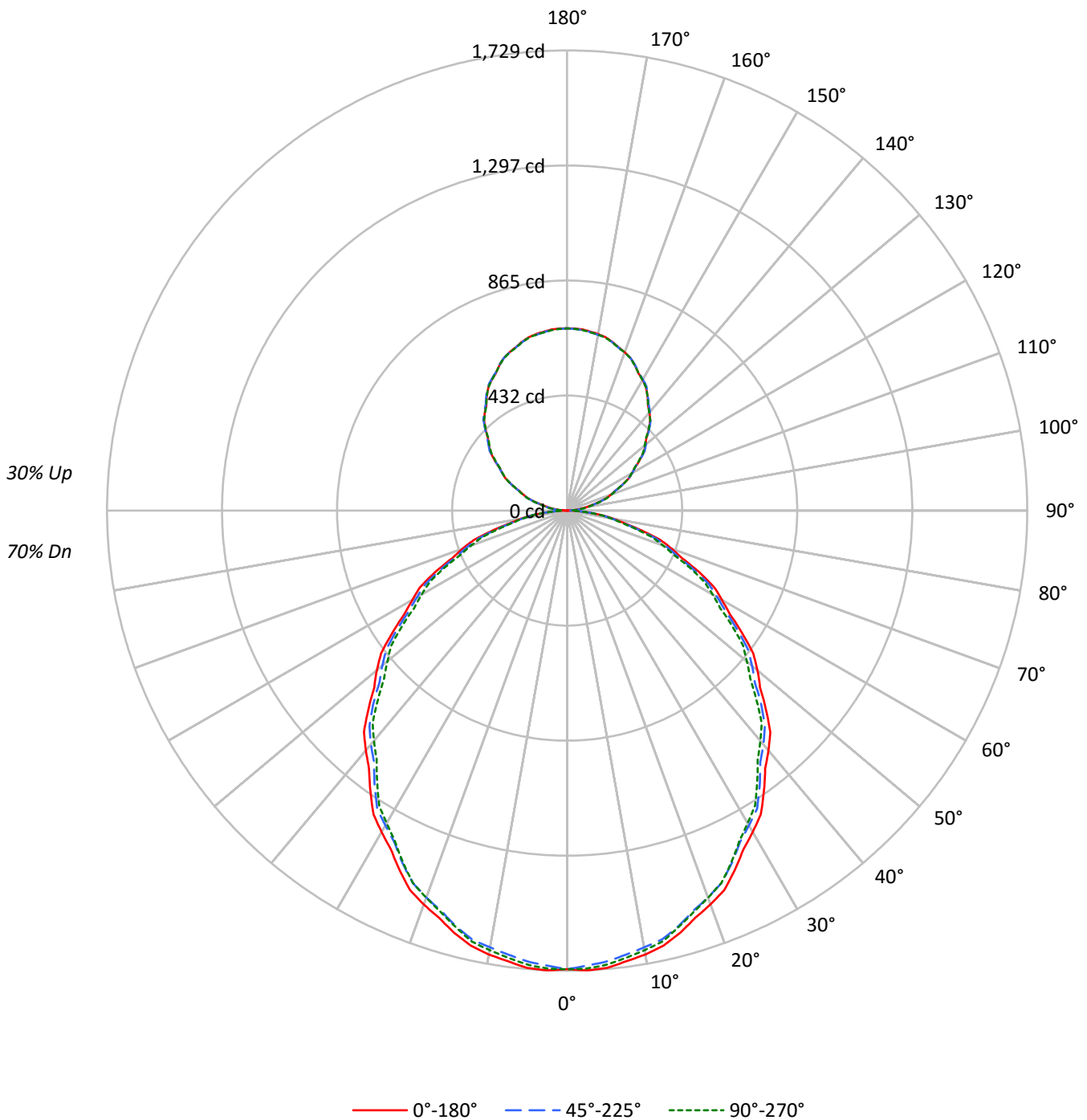
Input Watts (W): 55.1
Input Voltage (V): 120
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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	112	112	112	112	106	106	106	106	95	95	95	84	84	84	75	75	75	70
1	102	98	94	90	97	93	89	86	83	80	78	74	72	70	66	64	63	59
2	93	85	79	74	88	81	75	70	73	68	64	65	62	59	58	55	53	49
3	85	75	67	61	80	71	64	59	64	59	54	58	53	50	51	48	45	42
4	78	66	58	52	73	63	56	50	57	51	46	51	46	42	46	42	39	36
5	71	59	51	45	67	57	49	43	51	45	40	46	41	37	41	37	34	31
6	66	53	45	39	62	51	43	38	46	40	35	42	36	32	38	33	30	27
7	61	48	40	34	58	46	38	33	42	36	31	38	33	29	34	30	27	24
8	57	44	36	30	54	42	35	29	38	32	28	35	30	26	32	27	24	22
9	53	40	32	27	50	39	31	26	35	29	25	32	27	23	29	25	22	19
10	50	37	30	25	47	35	29	24	33	27	22	30	25	21	27	23	20	18

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	18547	18547	18547
5°	18634	18377	18506
10°	18510	18218	18332
15°	18293	18013	18046
20°	18040	17718	17734
25°	17701	17368	17332
30°	17329	16978	16850
35°	16938	16567	16353
40°	16530	16114	15864
45°	16081	15696	15314
50°	15630	15183	14763
55°	15041	14653	14208
60°	14449	14034	13586
65°	13924	13359	12944
70°	13149	12589	12032
75°	12015	11582	11088
80°	10835	10377	10290
85°	9510	9152	8793



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	162.3	2.5
10°-20°	458.3	7.2
20°-30°	677.0	10.6
30°-40°	790.8	12.4
40°-50°	795.1	12.5
50°-60°	698.4	10.9
60°-70°	520.3	8.2
70°-80°	296.4	4.6
80°-90°	87.1	1.4
90°-100°	44.6	0.7
100°-110°	133.4	2.1
110°-120°	227.0	3.6
120°-130°	298.5	4.7
130°-140°	335.6	5.3
140°-150°	329.8	5.2
150°-160°	277.7	4.4
160°-170°	184.8	2.9
170°-180°	64.7	1.0
0°-30°	1297.6	20.3
0°-40°	2088.4	32.7
0°-60°	3581.8	56.1
0°-90°	4485.7	70.3
90°-120°	405.0	6.3
90°-150°	1368.9	21.5
90°-180°	1896.0	29.7
0°-180°	6381.8	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1723	1723	1723	1723	1723	
5°	1725	1717	1701	1715	1713	163
15°	1642	1635	1616	1627	1619	463
25°	1490	1481	1462	1464	1459	686
35°	1289	1280	1261	1252	1244	806
45°	1056	1050	1031	1014	1006	815
55°	802	799	781	765	757	718
65°	547	539	524	513	508	539
75°	289	283	278	271	267	309
85°	77	74	74	71	71	85
90°	1	6	13	15	16	6
95°	32	36	40	42	42	36
105°	121	122	127	127	128	130
115°	228	230	229	230	229	226
125°	334	336	335	333	331	298
135°	434	437	437	434	433	334
145°	526	527	529	528	526	329
155°	603	603	603	605	602	277
165°	656	655	655	658	654	185
175°	683	681	681	683	680	65
180°	684	684	684	684	684	



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CANDELA DISTRIBUTION (FULL):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
0°	1723.1	1723.1	1723.1	1723.1	1723.1	1723.1	1723.1	1723.1	1723.1	1723.1	1723.1
2.5°	1729.0	1728.0	1726.9	1725.9	1724.8	1722.8	1720.0	1717.0	1714.1	1711.2	1713.8
5°	1724.6	1723.0	1721.3	1719.7	1718.0	1715.3	1711.8	1708.1	1704.5	1700.8	1704.1
7.5°	1707.7	1706.0	1704.4	1702.7	1701.1	1698.4	1694.6	1690.9	1687.2	1683.4	1686.3
10°	1693.5	1691.8	1690.2	1688.5	1686.9	1683.9	1679.6	1675.4	1671.0	1666.8	1669.7
12.5°	1674.5	1673.1	1671.7	1670.4	1669.0	1666.2	1662.3	1658.2	1654.2	1650.2	1652.4
15°	1641.6	1640.3	1639.0	1637.7	1636.3	1633.5	1629.3	1624.9	1620.7	1616.4	1619.0
17.5°	1603.4	1601.7	1600.0	1598.3	1596.5	1593.6	1589.2	1585.0	1580.6	1576.4	1578.3
20°	1574.9	1572.9	1570.9	1569.0	1567.1	1563.9	1559.6	1555.4	1551.0	1546.8	1548.1
22.5°	1542.9	1541.0	1539.0	1537.0	1535.0	1531.9	1527.6	1523.3	1519.1	1514.8	1515.8
25°	1490.4	1488.5	1486.5	1484.5	1482.6	1479.4	1475.2	1470.9	1466.6	1462.4	1462.6
27.5°	1434.5	1432.6	1430.7	1428.7	1426.8	1423.6	1419.0	1414.4	1409.8	1405.1	1405.4
30°	1394.2	1392.5	1390.9	1389.2	1387.6	1384.5	1379.9	1375.3	1370.6	1366.0	1366.0
32.5°	1353.9	1351.7	1349.5	1347.4	1345.2	1342.3	1338.8	1335.2	1331.6	1328.1	1326.3
35°	1289.0	1287.0	1285.1	1283.1	1281.1	1278.0	1273.7	1269.4	1265.1	1260.8	1258.9
37.5°	1222.6	1220.1	1217.6	1215.1	1212.6	1209.2	1204.9	1200.5	1196.2	1191.8	1189.4
40°	1176.4	1174.4	1172.4	1170.4	1168.5	1165.2	1160.6	1155.9	1151.3	1146.8	1144.2
42.5°	1130.1	1127.9	1125.7	1123.4	1121.2	1117.8	1113.1	1108.5	1103.9	1099.4	1096.7
45°	1056.4	1055.1	1053.8	1052.4	1051.1	1048.3	1044.1	1039.7	1035.5	1031.1	1027.3
47.5°	983.2	981.3	979.4	977.4	975.5	972.6	968.6	964.5	960.5	956.5	952.6
50°	933.4	931.8	930.1	928.5	926.8	923.9	919.5	915.3	911.0	906.7	903.1
52.5°	881.3	880.1	879.0	877.9	876.8	873.9	869.4	864.9	860.4	855.7	852.6
55°	801.5	801.3	800.9	800.6	800.2	798.0	793.6	789.4	785.0	780.8	777.2
57.5°	725.7	724.5	723.4	722.4	721.2	719.0	715.5	712.1	708.7	705.2	702.0
60°	671.2	670.8	670.5	670.1	669.9	667.7	663.7	659.8	655.8	651.9	648.9
62.5°	622.5	621.7	620.9	620.0	619.2	616.7	612.7	608.8	604.9	601.0	597.9
65°	546.7	545.1	543.4	541.8	540.1	537.6	534.3	531.0	527.7	524.5	521.9
67.5°	466.4	465.0	463.5	462.0	460.6	458.6	456.1	453.6	451.1	448.7	446.3
70°	417.8	415.8	413.9	411.9	409.9	407.9	406.0	404.0	402.0	400.0	397.8
72.5°	366.8	365.4	363.9	362.5	361.1	359.2	356.9	354.7	352.5	350.2	348.2
75°	288.9	287.6	286.3	284.9	283.6	282.5	281.5	280.5	279.6	278.5	276.9
77.5°	219.9	219.1	218.4	217.7	217.0	216.0	214.8	213.7	212.4	211.3	210.2
80°	174.8	173.8	172.9	171.8	170.9	170.0	169.4	168.7	168.1	167.4	167.1
82.5°	131.0	130.7	130.5	130.4	130.2	130.0	129.9	129.8	129.6	129.5	128.9
85°	77.0	76.3	75.7	75.0	74.4	74.1	74.1	74.1	74.1	74.1	73.4
87.5°	30.9	30.3	29.8	29.3	28.7	28.5	28.6	28.6	28.7	28.7	28.5
90°	0.6	1.7	2.9	4.1	5.3	6.7	8.2	9.8	11.3	12.9	13.4
92.5°	13.0	13.9	14.6	15.5	16.3	17.2	18.0	18.9	19.8	20.6	21.0
95°	31.8	32.5	33.4	34.2	35.1	36.0	36.9	37.9	38.8	39.8	40.2
97.5°	56.4	56.9	57.6	58.2	58.8	59.5	60.1	60.9	61.5	62.3	62.8
100°	73.1	73.8	74.6	75.3	76.0	76.6	77.2	77.9	78.4	79.0	79.4
102.5°	92.5	92.9	93.3	93.8	94.2	94.8	95.6	96.4	97.2	97.9	98.3
105°	120.9	121.2	121.4	121.7	122.0	122.5	123.7	124.7	125.8	126.9	126.9
107.5°	154.1	154.2	154.4	154.5	154.7	155.0	155.3	155.8	156.3	156.7	157.0
110°	174.7	174.9	175.2	175.4	175.7	175.9	176.2	176.4	176.6	176.9	177.4



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CANDELA DISTRIBUTION (continued):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
112.5°	196.2	196.3	196.5	196.6	196.8	196.9	197.0	197.0	197.1	197.1	197.7
115°	228.5	228.8	229.2	229.6	229.9	230.0	229.7	229.5	229.2	229.0	229.1
117.5°	261.0	261.2	261.5	261.6	261.9	261.8	261.6	261.3	261.0	260.6	260.6
120°	281.2	281.9	282.6	283.3	284.1	284.1	283.5	283.0	282.3	281.7	281.6
122.5°	302.3	302.7	303.3	303.8	304.3	304.4	304.2	303.9	303.5	303.2	302.9
125°	334.4	334.8	335.1	335.5	335.8	335.9	335.6	335.5	335.2	335.0	334.4
127.5°	364.1	364.9	365.6	366.4	367.1	367.4	367.1	366.8	366.6	366.4	365.7
130°	383.9	384.8	385.8	386.7	387.7	388.0	387.7	387.3	386.9	386.5	386.1
132.5°	403.6	404.6	405.6	406.5	407.5	407.8	407.6	407.3	407.0	406.8	406.1
135°	433.9	434.6	435.3	436.0	436.7	437.1	436.9	436.8	436.7	436.6	436.1
137.5°	461.8	462.4	463.0	463.6	464.2	464.7	465.0	465.2	465.6	465.9	465.4
140°	481.2	481.7	482.4	483.0	483.5	483.9	484.0	484.2	484.3	484.4	484.3
142.5°	498.8	499.4	500.0	500.6	501.1	501.6	501.8	502.0	502.3	502.5	502.4
145°	526.3	526.6	526.8	527.1	527.3	527.5	527.9	528.3	528.7	529.0	528.9
147.5°	550.4	550.8	551.3	551.7	552.1	552.5	552.9	553.2	553.6	553.8	553.8
150°	567.2	567.4	567.7	567.9	568.2	568.4	568.6	568.8	569.1	569.3	569.3
152.5°	581.0	581.3	581.6	581.9	582.3	582.5	582.7	582.8	583.0	583.1	583.2
155°	602.7	602.7	602.7	602.7	602.7	602.8	602.9	602.9	603.1	603.2	603.7
157.5°	621.1	621.0	620.9	620.8	620.6	620.6	620.7	620.8	620.9	620.9	621.4
160°	632.7	632.5	632.3	632.1	631.8	631.7	631.7	631.7	631.7	631.7	632.3
162.5°	643.1	642.7	642.4	642.1	641.8	641.7	641.8	641.9	642.0	642.1	642.6
165°	656.4	656.1	655.7	655.3	655.0	654.8	654.8	654.8	654.8	654.8	655.5
167.5°	667.0	666.6	666.1	665.6	665.2	665.0	665.1	665.2	665.2	665.3	666.1
170°	673.1	672.6	672.1	671.7	671.2	670.9	670.9	670.9	670.9	670.9	671.8
172.5°	677.8	677.3	676.8	676.4	675.9	675.7	675.7	675.7	675.7	675.7	676.5
175°	682.8	682.3	681.8	681.4	680.9	680.6	680.6	680.6	680.6	680.6	681.4
177.5°	684.9	684.5	684.1	683.6	683.2	683.1	683.1	683.1	683.1	683.1	683.6
180°	684.4	684.4	684.4	684.4	684.4	684.4	684.4	684.4	684.4	684.4	684.4



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CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
0°	1723.1	1723.1	1723.1	1723.1	1723.1	1723.1	1723.1	1723.1
2.5°	1716.5	1719.1	1721.7	1723.0	1722.7	1722.4	1722.1	1721.9
5°	1707.4	1710.7	1714.0	1715.3	1714.7	1714.0	1713.4	1712.7
7.5°	1689.3	1692.2	1695.3	1696.5	1696.1	1695.7	1695.4	1695.0
10°	1672.7	1675.7	1678.7	1679.8	1679.1	1678.5	1677.8	1677.2
12.5°	1654.5	1656.7	1658.9	1659.8	1659.3	1659.0	1658.6	1658.2
15°	1621.6	1624.3	1626.9	1627.3	1625.3	1623.3	1621.4	1619.4
17.5°	1580.1	1582.0	1583.8	1584.3	1583.7	1582.9	1582.2	1581.5
20°	1549.4	1550.8	1552.1	1552.2	1551.2	1550.2	1549.3	1548.2
22.5°	1516.9	1518.0	1519.0	1518.9	1517.7	1516.4	1515.1	1513.9
25°	1463.0	1463.3	1463.7	1463.3	1462.4	1461.3	1460.4	1459.3
27.5°	1405.7	1405.9	1406.2	1405.7	1404.5	1403.2	1401.9	1400.7
30°	1366.0	1366.0	1366.0	1364.9	1362.5	1360.3	1357.9	1355.7
32.5°	1324.4	1322.6	1320.7	1319.2	1318.0	1316.6	1315.4	1314.2
35°	1256.9	1254.9	1252.9	1251.1	1249.4	1247.8	1246.1	1244.5
37.5°	1187.0	1184.7	1182.3	1180.6	1179.5	1178.5	1177.4	1176.4
40°	1141.5	1138.9	1136.2	1134.3	1132.9	1131.6	1130.3	1129.0
42.5°	1094.1	1091.5	1088.8	1086.8	1085.5	1084.2	1082.9	1081.6
45°	1023.3	1019.4	1015.4	1012.6	1011.0	1009.3	1007.7	1006.0
47.5°	948.8	944.9	940.9	938.3	936.9	935.4	934.0	932.6
50°	899.5	895.9	892.2	889.5	887.5	885.5	883.5	881.6
52.5°	849.6	846.5	843.4	840.8	838.9	836.9	834.9	832.9
55°	773.5	770.0	766.3	763.6	762.0	760.3	758.7	757.1
57.5°	698.8	695.6	692.3	689.8	687.9	686.0	684.0	682.1
60°	646.0	643.0	640.1	637.7	636.1	634.4	632.8	631.1
62.5°	595.0	592.0	589.1	587.0	585.9	584.8	583.7	582.6
65°	519.2	516.6	514.0	512.2	511.1	510.2	509.2	508.2
67.5°	444.0	441.7	439.4	437.5	436.2	434.8	433.4	432.1
70°	395.4	393.1	390.8	388.8	387.2	385.5	383.9	382.3
72.5°	346.2	344.1	342.0	340.6	339.8	338.9	338.1	337.2
75°	275.2	273.6	271.9	270.6	269.7	268.6	267.7	266.6
77.5°	209.1	207.9	206.8	206.2	206.2	206.2	206.2	206.2
80°	166.7	166.5	166.1	166.0	166.0	166.0	166.0	166.0
82.5°	128.3	127.7	127.1	126.7	126.4	126.2	125.9	125.6
85°	72.8	72.1	71.4	71.2	71.2	71.2	71.2	71.2
87.5°	28.3	28.2	28.0	27.9	28.0	28.0	28.1	28.1
90°	13.9	14.3	14.8	15.2	15.5	15.6	15.9	16.1
92.5°	21.4	21.8	22.1	22.3	22.1	22.0	21.9	21.7
95°	40.7	41.2	41.7	41.9	41.9	41.9	41.9	41.9
97.5°	63.3	63.9	64.5	64.7	64.7	64.6	64.6	64.5
100°	79.7	80.1	80.5	80.8	81.0	81.2	81.4	81.7
102.5°	98.7	99.1	99.3	99.5	99.5	99.4	99.4	99.3
105°	126.9	126.9	126.9	127.0	127.2	127.4	127.7	128.0
107.5°	157.4	157.8	158.2	158.3	158.2	158.1	157.9	157.8
110°	177.9	178.3	178.8	178.9	178.7	178.4	178.2	178.0



TEST NUMBER: P332061-830

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CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
112.5°	198.2	198.8	199.3	199.6	199.6	199.5	199.5	199.4
115°	229.2	229.4	229.5	229.5	229.4	229.2	229.1	229.0
117.5°	260.6	260.5	260.5	260.3	260.0	259.7	259.4	259.0
120°	281.4	281.3	281.3	281.1	280.8	280.6	280.3	280.1
122.5°	302.6	302.3	302.0	301.6	301.3	301.0	300.7	300.3
125°	333.9	333.5	333.0	332.5	332.1	331.6	331.1	330.6
127.5°	365.0	364.3	363.6	363.1	362.5	361.9	361.4	360.8
130°	385.6	385.1	384.7	384.0	383.1	382.3	381.4	380.6
132.5°	405.6	405.0	404.4	403.9	403.2	402.6	401.9	401.2
135°	435.5	435.1	434.6	434.2	434.0	433.8	433.6	433.3
137.5°	464.9	464.4	463.9	463.4	463.0	462.5	462.0	461.6
140°	484.2	484.0	483.9	483.4	482.6	481.7	480.9	480.1
142.5°	502.2	502.1	502.0	501.6	501.0	500.3	499.6	499.0
145°	528.8	528.7	528.6	528.2	527.7	527.3	526.8	526.3
147.5°	553.8	553.8	553.8	553.5	552.8	552.0	551.4	550.6
150°	569.3	569.3	569.3	569.0	568.3	567.5	566.8	566.1
152.5°	583.5	583.7	583.9	583.6	583.1	582.4	581.8	581.2
155°	604.2	604.6	605.1	604.9	604.1	603.2	602.5	601.6
157.5°	622.0	622.5	622.9	622.8	622.2	621.5	620.9	620.2
160°	632.9	633.5	634.0	634.1	633.7	633.2	632.7	632.3
162.5°	643.2	643.9	644.4	644.3	643.6	642.8	642.1	641.3
165°	656.3	657.0	657.7	657.6	656.8	655.9	655.2	654.3
167.5°	666.8	667.6	668.4	668.4	667.6	666.8	666.1	665.3
170°	672.6	673.4	674.3	674.3	673.4	672.6	671.8	670.9
172.5°	677.1	677.9	678.6	678.6	677.8	676.9	676.1	675.2
175°	682.0	682.8	683.5	683.4	682.6	681.7	680.9	680.0
177.5°	684.3	684.9	685.4	685.3	684.7	684.0	683.3	682.7
180°	684.4	684.4	684.4	684.4	684.4	684.4	684.4	684.4

(END OF REPORT)