

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: P333007-940

Luminaire Tested: **S124RDIP-S1195D1035U940-4F0-1E-UDD-F1**

Issue Date: 3/3/2020

**Test Information**

Test Method: LM-79-08  
Report Number: P333007-940  
REPORT IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-1807-864-10,  
Test Lab: INNOVATION CENTER  
Issue Date: 3/3/2020  
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)  
Product Line: NEO-RAY  
Catalog Number: S124RDIP-S1195D1035U940-4F0-1E-UDD-F1  
Description: DEFINE 4 DIRECT-INDIRECT PENDANT LED LUMINAIRE  
DOWNLIGHT 1195 LUMENS PER FOOT, FLUSH SATIN WHITE DIFFUSER, REGRESSED  
HOUSING  
UPLIGHT 1035 LUMENS PER FOOT, FLUSH SATIN WHITE DIFFUSER  
Light Source: -  
Ballast/Driver: ELECTRONIC DRIVER

**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 7492.8 lumens  
Efficiency: N/A  
Efficacy: 112.2 lumens/watt  
Spacing Criteria (0/90/45): 1.2 / 1.09 / 1.24  
Luminous Opening: Rectangular (W 0.33' x L: 4' x H: 0')  
CIE Type: General Diffuse

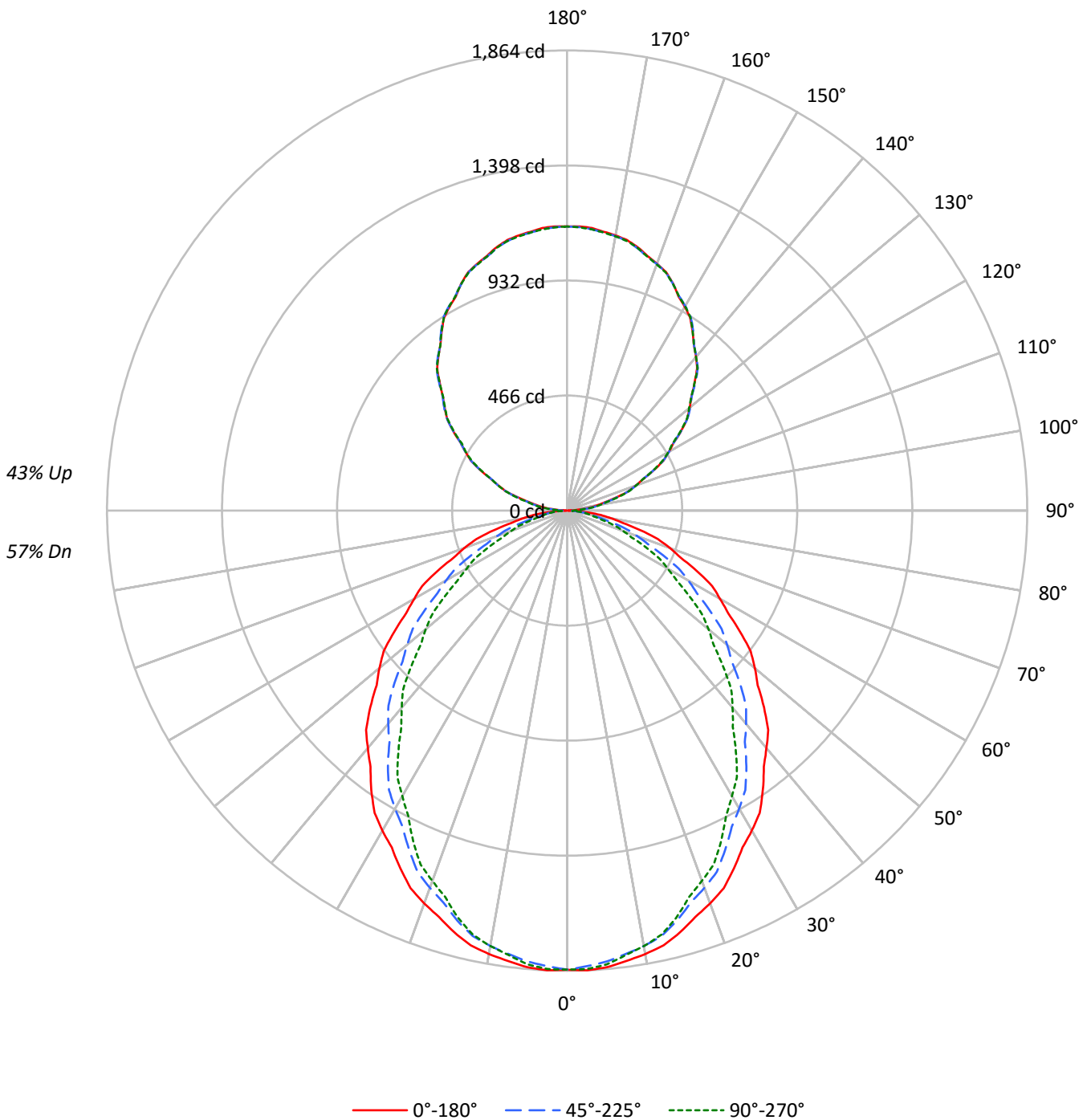
Input Watts (W): 66.8  
Input Voltage (V): 120  
Input Current (A<sub>in</sub>): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 25 FT



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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	101	101	101	101	87	87	87	75	75	75	63	63	63	57
1	100	95	92	88	93	89	86	83	77	75	73	66	64	63	56	55	54	49
2	91	84	78	73	85	78	73	68	68	64	61	59	56	53	50	48	46	41
3	83	74	67	61	77	69	63	58	60	55	51	52	48	45	44	42	39	35
4	76	66	58	52	71	61	54	49	54	48	44	46	42	39	40	37	34	31
5	70	59	51	45	65	55	48	42	48	42	38	42	37	34	36	33	30	27
6	65	53	45	39	60	50	42	37	44	38	33	38	33	30	33	29	26	24
7	60	48	40	34	56	45	38	33	40	34	30	35	30	27	30	26	24	21
8	56	43	36	30	52	41	34	29	36	30	26	32	27	24	28	24	21	19
9	52	40	32	27	48	38	31	26	33	28	24	29	25	21	26	22	19	17
10	49	37	29	24	45	35	28	23	31	25	21	27	23	19	24	20	18	16

**AVERAGE LUMINANCE (cd/sqm):**

	0°	45°	90°
0°	15012	15012	15012
5°	15046	14862	14955
10°	14952	14684	14684
15°	14780	14375	14269
20°	14545	13970	13713
25°	14243	13495	13153
30°	13951	12995	12450
35°	13626	12476	11745
40°	13235	11884	10984
45°	12875	11298	10209
50°	12465	10623	9388
55°	12024	9920	8497
60°	11541	9150	7585
65°	11096	8187	6692
70°	10452	7124	5681
75°	9638	5908	4619
80°	8405	4500	4235
85°	7123	4085	3825



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	174.7	2.3
10°-20°	487.1	6.5
20°-30°	703.4	9.4
30°-40°	797.3	10.6
40°-50°	770.0	10.3
50°-60°	640.3	8.5
60°-70°	442.1	5.9
70°-80°	224.1	3.0
80°-90°	60.9	0.8
90°-100°	75.9	1.0
100°-110°	224.9	3.0
110°-120°	381.7	5.1
120°-130°	503.2	6.7
130°-140°	565.2	7.5
140°-150°	555.4	7.4
150°-160°	467.1	6.2
160°-170°	310.8	4.1
170°-180°	108.8	1.5
0°-30°	1365.2	18.2
0°-40°	2162.6	28.9
0°-60°	3572.8	47.7
0°-90°	4299.9	57.4
90°-120°	682.4	9.1
90°-150°	2306.2	30.8
90°-180°	3193.0	42.6
0°-180°	7492.8	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	1860	1860	1860	1860	1860	
5°	1857	1850	1834	1847	1845	176
15°	1768	1754	1720	1717	1707	498
25°	1599	1572	1515	1491	1477	736
35°	1383	1336	1266	1219	1192	864
45°	1128	1073	990	922	894	869
55°	854	795	705	633	604	764
65°	581	518	429	370	350	573
75°	309	256	189	158	148	326
85°	77	50	44	41	41	87
90°	3	12	20	25	27	7
95°	53	61	68	70	70	59
105°	207	208	212	214	217	220
115°	388	388	386	385	384	383
125°	565	565	564	562	561	504
135°	729	734	734	732	730	564
145°	886	889	890	889	886	554
155°	1015	1015	1014	1017	1014	467
165°	1105	1102	1100	1105	1102	311
175°	1149	1145	1144	1149	1144	109
180°	1151	1151	1151	1151	1151	



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**CANDELA DISTRIBUTION (FULL):**

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
0°	1859.6	1859.6	1859.6	1859.6	1859.6	1859.6	1859.6	1859.6	1859.6	1859.6	1859.6
2.5°	1864.1	1863.1	1862.2	1861.1	1860.1	1858.2	1855.5	1852.6	1849.9	1847.1	1849.9
5°	1856.7	1855.5	1854.2	1853.0	1851.7	1849.1	1845.4	1841.6	1837.8	1834.0	1837.1
7.5°	1840.0	1838.6	1837.3	1835.9	1834.6	1831.5	1826.6	1821.7	1816.7	1811.8	1813.8
10°	1824.0	1822.4	1820.9	1819.3	1817.7	1814.0	1808.4	1802.7	1797.0	1791.3	1792.5
12.5°	1803.5	1801.7	1799.8	1798.0	1796.2	1791.9	1785.2	1778.5	1771.7	1765.1	1765.9
15°	1768.4	1765.6	1762.8	1760.0	1757.1	1751.7	1743.8	1735.9	1728.0	1720.0	1719.4
17.5°	1726.1	1721.9	1717.8	1713.7	1709.6	1702.8	1693.3	1683.8	1674.3	1664.8	1663.0
20°	1693.0	1688.9	1684.8	1680.7	1676.6	1669.1	1658.4	1647.6	1636.8	1626.1	1623.5
22.5°	1656.5	1652.0	1647.3	1642.7	1638.1	1630.0	1618.5	1607.0	1595.4	1583.9	1580.1
25°	1599.0	1593.3	1587.6	1582.0	1576.3	1566.9	1554.0	1541.0	1528.0	1515.0	1509.7
27.5°	1538.6	1531.5	1524.4	1517.2	1510.0	1499.6	1485.7	1471.9	1457.9	1444.1	1437.4
30°	1496.6	1488.6	1480.7	1472.7	1464.9	1453.5	1438.6	1423.7	1408.9	1394.0	1386.1
32.5°	1452.1	1443.1	1434.2	1425.3	1416.4	1404.3	1388.8	1373.5	1358.1	1342.7	1333.6
35°	1382.6	1372.4	1362.4	1352.2	1342.1	1329.1	1313.3	1297.5	1281.7	1265.9	1255.1
37.5°	1308.3	1297.8	1287.4	1276.9	1266.5	1252.5	1235.0	1217.5	1200.0	1182.4	1170.4
40°	1255.9	1245.5	1235.0	1224.6	1214.1	1199.9	1181.9	1163.8	1145.8	1127.7	1114.5
42.5°	1205.8	1194.8	1183.8	1172.9	1162.0	1147.1	1128.3	1109.5	1090.7	1071.9	1058.4
45°	1127.7	1116.0	1104.3	1092.6	1080.9	1065.5	1046.6	1027.6	1008.6	989.6	974.1
47.5°	1047.1	1035.0	1023.0	1010.8	998.8	982.8	963.1	943.3	923.6	903.9	887.8
50°	992.5	980.1	967.8	955.5	943.1	926.8	906.5	886.3	866.0	845.8	830.0
52.5°	936.7	924.5	912.5	900.4	888.3	871.8	851.1	830.4	809.6	788.8	772.8
55°	854.3	841.7	829.0	816.4	803.7	787.1	766.5	746.0	725.4	704.8	688.4
57.5°	772.8	759.7	746.5	733.4	720.2	703.6	683.3	663.0	642.7	622.5	605.8
60°	714.8	702.1	689.5	676.8	664.1	647.7	627.5	607.3	586.9	566.7	550.3
62.5°	662.4	649.3	636.1	622.9	609.8	592.8	572.0	551.3	530.5	509.8	494.5
65°	580.9	567.3	553.8	540.1	526.6	509.6	489.4	469.1	448.9	428.6	415.0
67.5°	496.3	483.3	470.3	457.3	444.3	428.3	409.5	390.7	371.9	353.1	341.4
70°	442.8	429.5	416.3	403.0	389.7	374.0	356.0	338.0	319.9	301.8	291.4
72.5°	385.8	373.9	361.9	349.8	337.8	323.2	306.2	289.2	272.2	255.1	246.2
75°	309.0	297.3	285.5	273.8	262.2	248.9	234.0	219.1	204.3	189.4	182.1
77.5°	231.0	221.1	211.1	201.2	191.2	180.2	168.2	156.2	144.2	132.2	127.9
80°	180.8	171.7	162.5	153.3	144.1	134.8	125.3	115.8	106.3	96.8	95.9
82.5°	137.6	129.1	120.7	112.3	103.9	96.9	91.5	86.1	80.6	75.2	74.5
85°	76.9	70.5	64.2	57.9	51.5	48.0	47.0	46.0	45.1	44.1	43.5
87.5°	26.8	25.1	23.5	21.9	20.3	19.6	19.7	19.7	19.8	19.9	19.9
90°	2.7	4.8	7.0	9.2	11.4	13.3	14.8	16.4	18.0	19.6	20.8
92.5°	19.1	21.6	24.0	26.5	29.0	30.9	31.9	33.0	34.2	35.2	35.9
95°	53.4	55.2	57.0	58.8	60.5	62.1	63.5	64.9	66.3	67.7	68.2
97.5°	93.3	94.7	96.1	97.6	99.0	100.5	102.1	103.7	105.4	107.0	107.7
100°	124.6	125.4	126.2	127.0	127.8	129.0	130.8	132.6	134.4	136.2	136.6
102.5°	157.4	157.7	158.0	158.3	158.6	159.6	161.2	162.8	164.4	166.1	166.7
105°	207.4	207.6	207.8	207.9	208.2	208.7	209.5	210.3	211.1	211.9	212.4
107.5°	259.9	260.1	260.4	260.6	260.8	261.0	261.2	261.3	261.4	261.5	262.1
110°	295.5	295.9	296.3	296.7	297.1	297.2	296.9	296.8	296.6	296.4	296.0



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**CANDELA DISTRIBUTION (continued):**

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
112.5°	332.5	332.6	332.7	332.8	332.9	332.7	332.3	332.0	331.6	331.3	331.2
115°	388.1	388.1	388.1	388.1	388.1	387.9	387.4	387.1	386.6	386.3	386.1
117.5°	440.4	440.6	440.7	440.9	441.0	441.0	440.7	440.4	440.1	439.9	439.2
120°	475.3	476.1	476.9	477.7	478.5	478.6	478.0	477.3	476.8	476.2	475.2
122.5°	511.6	511.9	512.2	512.6	512.8	512.9	512.6	512.3	512.0	511.8	511.1
125°	565.2	565.2	565.2	565.2	565.2	565.1	564.9	564.7	564.5	564.3	563.9
127.5°	613.8	614.4	614.9	615.5	616.2	616.3	616.0	615.6	615.4	615.0	614.7
130°	647.9	648.5	649.2	649.7	650.3	650.6	650.6	650.6	650.6	650.6	650.2
132.5°	682.9	683.3	683.7	684.1	684.6	684.7	684.6	684.4	684.2	684.1	683.7
135°	729.0	730.1	731.3	732.5	733.7	734.3	734.3	734.3	734.3	734.3	733.9
137.5°	779.2	779.7	780.2	780.8	781.4	781.8	782.1	782.5	782.7	783.1	782.6
140°	812.6	813.0	813.4	813.8	814.2	814.4	814.4	814.4	814.4	814.4	814.2
142.5°	843.2	843.6	844.0	844.5	844.8	844.9	844.8	844.6	844.5	844.3	844.3
145°	885.6	886.4	887.2	888.0	888.8	889.2	889.5	889.7	889.8	890.0	889.8
147.5°	927.6	928.5	929.5	930.5	931.4	931.8	931.7	931.5	931.3	931.2	931.0
150°	953.2	954.0	954.8	955.6	956.4	956.8	956.8	956.8	956.8	956.8	956.8
152.5°	977.5	977.9	978.4	978.9	979.4	979.6	979.8	980.0	980.2	980.3	980.8
155°	1014.7	1014.7	1014.7	1014.7	1014.7	1014.6	1014.3	1014.1	1014.0	1013.8	1014.6
157.5°	1046.0	1045.6	1045.3	1044.9	1044.6	1044.4	1044.3	1044.3	1044.3	1044.2	1044.8
160°	1064.5	1064.3	1064.1	1063.9	1063.7	1063.5	1063.3	1063.1	1062.9	1062.7	1063.3
162.5°	1081.6	1081.1	1080.6	1080.0	1079.5	1079.1	1079.0	1078.8	1078.6	1078.3	1079.4
165°	1104.6	1103.9	1103.4	1102.8	1102.2	1101.7	1101.3	1100.9	1100.5	1100.1	1101.3
167.5°	1122.2	1121.3	1120.5	1119.7	1118.8	1118.5	1118.5	1118.6	1118.6	1118.7	1119.8
170°	1132.1	1131.1	1130.2	1129.2	1128.2	1127.7	1128.0	1128.2	1128.4	1128.5	1129.8
172.5°	1139.2	1138.4	1137.6	1136.8	1136.0	1135.5	1135.6	1135.6	1135.7	1135.7	1137.0
175°	1149.1	1148.1	1147.1	1146.1	1145.1	1144.5	1144.3	1144.1	1143.9	1143.7	1145.1
177.5°	1152.3	1151.5	1150.7	1149.9	1149.1	1148.7	1148.7	1148.7	1148.7	1148.7	1149.8
180°	1150.8	1150.8	1150.8	1150.8	1150.8	1150.8	1150.8	1150.8	1150.8	1150.8	1150.8



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**CANDELA DISTRIBUTION (continued):**

	55°	60°	65°	70°	75°	80°	85°	90°
0°	1859.6	1859.6	1859.6	1859.6	1859.6	1859.6	1859.6	1859.6
2.5°	1852.6	1855.5	1858.2	1859.5	1859.2	1858.9	1858.7	1858.5
5°	1840.3	1843.4	1846.6	1847.9	1847.3	1846.6	1846.0	1845.4
7.5°	1815.8	1817.8	1819.9	1820.3	1819.4	1818.4	1817.3	1816.3
10°	1793.8	1795.0	1796.4	1796.4	1795.0	1793.8	1792.5	1791.3
12.5°	1766.6	1767.4	1768.1	1767.5	1765.9	1764.1	1762.3	1760.5
15°	1718.8	1718.1	1717.5	1716.1	1713.9	1711.6	1709.5	1707.3
17.5°	1661.3	1659.5	1657.7	1655.2	1651.8	1648.4	1645.1	1641.7
20°	1621.0	1618.5	1616.0	1612.7	1608.6	1604.5	1600.3	1596.2
22.5°	1576.4	1572.5	1568.8	1565.2	1561.8	1558.4	1555.1	1551.8
25°	1504.2	1498.9	1493.5	1489.2	1486.0	1482.9	1479.7	1476.6
27.5°	1430.8	1424.2	1417.6	1411.9	1407.4	1402.8	1398.3	1393.7
30°	1378.1	1370.3	1362.4	1355.8	1350.8	1345.8	1340.7	1335.6
32.5°	1324.4	1315.2	1306.0	1299.0	1294.2	1289.4	1284.6	1279.8
35°	1244.3	1233.6	1222.8	1214.6	1208.9	1203.2	1197.5	1191.8
37.5°	1158.3	1146.3	1134.3	1125.4	1119.7	1114.0	1108.4	1102.7
40°	1101.2	1087.9	1074.6	1065.1	1059.4	1053.6	1048.0	1042.3
42.5°	1044.8	1031.3	1017.7	1008.0	1002.0	996.1	990.2	984.2
45°	958.6	943.1	927.6	916.9	911.3	905.6	899.9	894.2
47.5°	871.7	855.7	839.6	828.4	822.2	815.9	809.6	803.3
50°	814.1	798.3	782.5	771.6	765.6	759.6	753.6	747.5
52.5°	756.7	740.7	724.5	713.4	707.1	700.9	694.6	688.3
55°	671.9	655.5	639.0	627.8	621.8	615.7	609.8	603.7
57.5°	589.2	572.4	555.7	545.1	540.6	535.9	531.4	526.8
60°	533.8	517.4	500.9	490.2	485.1	480.0	474.9	469.8
62.5°	479.4	464.2	449.0	439.3	435.3	431.3	427.2	423.2
65°	401.4	387.8	374.2	365.4	361.7	357.8	354.1	350.3
67.5°	329.8	318.0	306.3	298.4	294.2	290.0	285.8	281.6
70°	281.0	270.5	260.1	253.3	250.1	247.0	243.8	240.7
72.5°	237.3	228.4	219.5	213.6	210.6	207.8	204.8	201.9
75°	174.9	167.6	160.2	155.7	153.8	151.9	150.0	148.1
77.5°	123.7	119.4	115.2	112.8	112.2	111.6	111.1	110.5
80°	95.0	94.0	93.0	92.4	92.1	91.8	91.5	91.1
82.5°	73.8	73.1	72.4	71.9	71.6	71.2	71.0	70.6
85°	42.9	42.3	41.6	41.3	41.3	41.3	41.3	41.3
87.5°	19.8	19.8	19.8	20.0	20.3	20.6	21.0	21.3
90°	21.9	23.2	24.3	25.1	25.5	25.9	26.3	26.7
92.5°	36.6	37.4	38.1	38.6	38.8	39.1	39.3	39.5
95°	68.8	69.5	70.0	70.4	70.4	70.4	70.4	70.4
97.5°	108.4	109.1	109.9	110.2	110.2	110.2	110.2	110.2
100°	137.0	137.3	137.8	137.9	137.9	137.9	137.9	137.9
102.5°	167.2	167.7	168.3	168.6	168.8	169.0	169.2	169.2
105°	213.0	213.7	214.2	214.8	215.3	216.0	216.6	217.1
107.5°	262.6	263.1	263.7	263.9	263.9	263.9	263.9	263.8
110°	295.6	295.2	294.8	294.9	295.5	296.0	296.7	297.3





TEST NUMBER: P333007-940

CATALOG NUMBER: S124RDIP-S1195D1035U940-4F0-1E-UDD-F1

**CANDELA DISTRIBUTION (continued):**

	55°	60°	65°	70°	75°	80°	85°	90°
112.5°	331.1	331.0	331.0	331.0	331.1	331.2	331.4	331.4
115°	385.8	385.7	385.5	385.3	385.1	384.9	384.7	384.5
117.5°	438.5	437.8	437.2	436.7	436.2	435.9	435.4	435.1
120°	474.2	473.2	472.3	471.9	472.3	472.7	473.1	473.5
122.5°	510.4	509.8	509.1	508.4	507.7	506.9	506.2	505.5
125°	563.5	563.1	562.7	562.3	562.0	561.5	561.2	560.7
127.5°	614.2	613.9	613.4	613.1	612.8	612.4	612.2	611.8
130°	649.9	649.4	649.1	648.5	647.6	646.8	646.0	645.2
132.5°	683.3	682.9	682.5	682.2	681.8	681.5	681.2	680.9
135°	733.5	733.1	732.7	732.2	731.6	731.0	730.4	729.9
137.5°	782.0	781.5	781.0	780.8	781.0	781.0	781.1	781.3
140°	814.0	813.8	813.6	813.4	813.2	813.0	812.8	812.6
142.5°	844.2	844.2	844.2	844.1	844.1	844.0	844.0	843.9
145°	889.7	889.5	889.2	888.9	888.2	887.7	887.1	886.4
147.5°	930.9	930.7	930.5	930.3	930.1	930.0	929.8	929.6
150°	956.8	956.8	956.8	956.7	956.5	956.3	956.1	955.9
152.5°	981.2	981.7	982.2	982.2	981.7	981.1	980.6	980.1
155°	1015.4	1016.1	1016.9	1016.9	1016.1	1015.4	1014.6	1013.8
157.5°	1045.4	1046.0	1046.6	1046.5	1045.9	1045.2	1044.6	1043.8
160°	1063.9	1064.5	1065.1	1064.9	1063.9	1062.9	1061.9	1061.0
162.5°	1080.5	1081.6	1082.6	1082.7	1081.7	1080.8	1079.8	1078.7
165°	1102.5	1103.7	1104.8	1105.0	1104.3	1103.5	1102.7	1101.9
167.5°	1121.0	1122.2	1123.4	1123.4	1122.1	1120.9	1119.6	1118.5
170°	1131.0	1132.1	1133.4	1133.2	1131.8	1130.4	1129.1	1127.7
172.5°	1138.4	1139.7	1141.1	1141.0	1139.7	1138.3	1136.9	1135.5
175°	1146.5	1147.9	1149.2	1149.2	1147.9	1146.5	1145.1	1143.7
177.5°	1150.9	1152.0	1153.2	1153.1	1151.8	1150.5	1149.2	1148.0
180°	1150.8	1150.8	1150.8	1150.8	1150.8	1150.8	1150.8	1150.8

(END OF REPORT)