

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: P331823

Luminaire Tested: **S122RDIW-S675D1440U835-4F0-1E-UDD-F**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P331823
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: S122RDIW-S675D1440U835-4F0-1E-UDD-F
Description: DEFINE 2 DIRECT-INDIRECT WALL MOUNT LED LUMINAIRE
DOWNLIGHT 675 LUMENS PER FOOT, FLUSH SATIN WHITE DIFFUSER, REGRESSED
HOUSING
UPLIGHT 1440 LUMENS PER FOOT, NO LENS
Light Source: -
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 8085.0 lumens
Efficiency: N/A
Efficacy: 118.7 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: Semi-Indirect

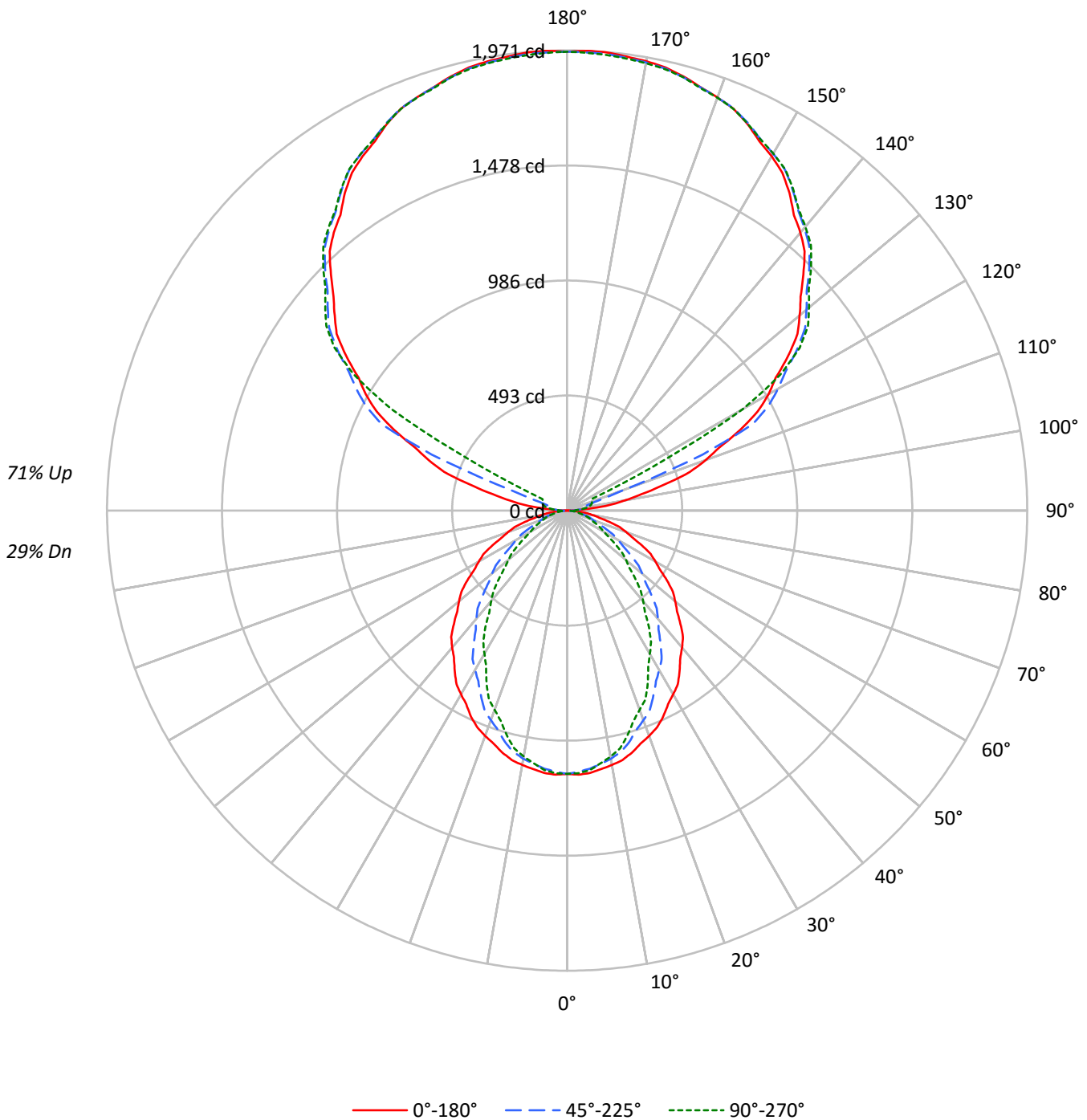
Input Watts (W): 68.1
Input Voltage (V): 120
Input Current (A_{in}): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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	102	102	102	102	91	91	91	91	72	72	72	53	53	53	37	37	37	29
1	93	89	86	82	83	80	77	74	63	61	59	47	46	45	33	32	31	25
2	85	78	72	68	76	70	65	61	55	52	49	42	40	38	29	28	27	21
3	78	69	62	57	69	62	56	51	49	45	42	37	34	32	26	24	23	18
4	71	61	54	48	64	55	49	44	44	39	36	33	30	28	23	22	20	16
5	65	54	47	41	58	49	43	38	39	34	31	30	27	24	21	19	18	14
6	60	49	41	36	54	44	37	33	35	30	27	27	24	21	19	17	16	12
7	56	44	36	31	50	40	33	29	32	27	24	25	21	19	18	16	14	11
8	52	40	32	27	46	36	30	25	29	24	21	22	19	17	16	14	13	10
9	48	36	29	24	43	33	27	22	27	22	19	21	17	15	15	13	11	9
10	45	33	26	22	40	30	24	20	24	20	17	19	16	14	14	12	10	8

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	18213	18213	18213
5°	18282	17985	18084
10°	18143	17690	17539
15°	17934	17167	16672
20°	17646	16417	15593
25°	17350	15567	14549
30°	16940	14693	13209
35°	16539	13742	12033
40°	16136	12760	10671
45°	15664	11654	9439
50°	15179	10540	8231
55°	14686	9340	7068
60°	14108	8076	5867
65°	13456	6785	5345
70°	12675	5589	4914
75°	11715	5097	4585
80°	10349	4556	4175
85°	8133	3594	3594



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	105.6	1.3
10°-20°	289.9	3.6
20°-30°	407.1	5.0
30°-40°	443.9	5.5
40°-50°	408.2	5.0
50°-60°	320.6	4.0
60°-70°	209.0	2.6
70°-80°	107.8	1.3
80°-90°	32.8	0.4
90°-100°	65.6	0.8
100°-110°	240.4	3.0
110°-120°	642.7	7.9
120°-130°	1060.9	13.1
130°-140°	1128.3	14.0
140°-150°	1048.7	13.0
150°-160°	843.1	10.4
160°-170°	543.3	6.7
170°-180°	187.0	2.3
0°-30°	802.6	9.9
0°-40°	1246.6	15.4
0°-60°	1975.3	24.4
0°-90°	2324.9	28.8
90°-120°	948.7	11.7
90°-150°	4186.6	51.8
90°-180°	5760.0	71.2
0°-180°	8085.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1128	1128	1128	1128	1128	
5°	1128	1122	1110	1118	1116	107
15°	1073	1060	1027	1008	997	302
25°	974	939	874	833	817	448
35°	839	785	697	635	610	525
45°	686	615	510	441	413	529
55°	522	440	332	273	251	466
65°	352	269	178	145	140	349
75°	188	118	82	75	74	199
85°	44	23	19	19	19	52
90°	1	17	28	35	38	6
95°	92	49	56	62	61	113
105°	432	451	87	102	108	462
115°	818	843	878	250	117	805
125°	1156	1175	1202	1211	1216	1031
135°	1431	1453	1466	1480	1478	1105
145°	1660	1660	1682	1692	1685	1038
155°	1828	1816	1832	1839	1829	842
165°	1926	1918	1921	1930	1921	544
175°	1970	1961	1963	1971	1958	187
180°	1966	1966	1966	1966	1966	



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CANDELA DISTRIBUTION (FULL):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
0°	1128.0	1128.0	1128.0	1128.0	1128.0	1128.0	1128.0	1128.0	1128.0	1128.0	1128.0
2.5°	1132.1	1131.2	1130.3	1129.4	1128.5	1127.0	1125.0	1123.0	1121.1	1119.1	1120.9
5°	1128.0	1126.9	1125.8	1124.6	1123.5	1121.5	1118.5	1115.6	1112.6	1109.7	1111.7
7.5°	1116.4	1115.0	1113.6	1112.2	1110.8	1108.3	1104.9	1101.5	1098.0	1094.6	1095.1
10°	1106.6	1105.0	1103.4	1101.8	1100.2	1097.2	1092.6	1088.1	1083.6	1079.0	1078.4
12.5°	1094.3	1092.4	1090.4	1088.5	1086.5	1082.7	1076.9	1071.1	1065.2	1059.4	1058.2
15°	1072.9	1070.4	1067.9	1065.4	1062.9	1057.8	1050.1	1042.4	1034.7	1027.0	1022.7
17.5°	1046.6	1042.8	1039.0	1035.1	1031.3	1024.5	1014.6	1004.7	994.8	984.9	979.8
20°	1027.0	1022.4	1017.9	1013.4	1008.8	1000.9	989.5	978.2	966.9	955.5	949.8
22.5°	1005.7	1000.7	995.6	990.5	985.4	976.5	963.7	950.9	938.1	925.3	918.0
25°	973.9	966.6	959.4	952.1	944.9	933.7	918.8	903.8	888.8	873.8	864.5
27.5°	935.5	927.6	919.7	911.8	903.9	891.5	874.7	857.8	840.9	824.0	813.2
30°	908.6	899.9	891.3	882.7	874.1	860.7	842.5	824.4	806.2	788.1	776.5
32.5°	882.4	872.3	862.3	852.2	842.1	827.8	809.3	790.8	772.3	753.8	740.6
35°	839.1	827.6	816.0	804.4	792.9	777.1	757.1	737.2	717.2	697.2	682.9
37.5°	795.9	783.1	770.4	757.7	745.0	728.0	706.8	685.5	664.2	642.9	627.2
40°	765.6	752.0	738.4	724.8	711.2	693.4	671.4	649.4	627.4	605.4	589.3
42.5°	734.6	720.3	705.9	691.6	677.3	658.7	636.0	613.3	590.5	567.8	551.1
45°	686.0	670.8	655.6	640.4	625.2	605.7	581.9	558.1	534.2	510.4	494.3
47.5°	638.6	622.5	606.4	590.3	574.2	553.9	529.3	504.7	480.1	455.5	439.5
50°	604.3	588.2	572.1	556.0	539.9	519.4	494.4	469.5	444.5	419.6	403.9
52.5°	570.9	554.0	537.2	520.4	503.5	482.9	458.5	434.1	409.7	385.3	370.2
55°	521.7	504.0	486.3	468.6	450.9	429.8	405.3	380.8	356.3	331.8	318.2
57.5°	471.2	453.1	434.9	416.8	398.6	377.8	354.2	330.7	307.1	283.6	271.1
60°	436.9	418.8	400.6	382.5	364.3	343.6	320.2	296.8	273.5	250.1	238.5
62.5°	403.4	385.3	367.1	349.0	330.8	310.6	288.4	266.1	243.8	221.5	210.5
65°	352.2	333.8	315.4	297.1	278.7	259.3	238.9	218.5	198.0	177.6	169.9
67.5°	302.8	284.5	266.3	248.1	229.8	211.5	193.1	174.8	156.4	138.0	134.5
70°	268.5	250.8	233.1	215.4	197.7	181.0	165.4	149.7	134.1	118.4	116.1
72.5°	235.8	218.8	201.9	184.9	167.9	153.2	140.6	128.0	115.5	102.9	101.0
75°	187.8	172.0	156.1	140.2	124.3	112.5	104.8	97.1	89.4	81.7	80.1
77.5°	140.7	126.7	112.8	98.9	85.0	76.1	72.4	68.7	65.0	61.3	60.3
80°	111.3	99.7	88.1	76.6	65.0	58.1	55.8	53.5	51.3	49.0	48.1
82.5°	84.3	75.3	66.3	57.2	48.2	42.9	41.4	39.8	38.3	36.8	36.2
85°	43.9	39.1	34.4	29.6	24.8	22.1	21.4	20.8	20.1	19.4	19.4
87.5°	13.4	12.6	11.8	11.1	10.3	10.2	10.7	11.2	11.7	12.2	12.4
90°	1.4	4.9	8.4	11.9	15.3	18.3	20.9	23.4	25.9	28.4	30.0
92.5°	28.7	28.4	28.1	27.8	27.5	27.9	29.2	30.5	31.7	33.0	33.8
95°	92.4	82.0	71.6	61.2	50.7	46.6	48.8	51.0	53.3	55.5	57.0
97.5°	183.5	154.1	124.7	95.3	65.9	53.8	58.9	64.0	69.1	74.2	75.5
100°	251.7	208.4	165.1	121.8	78.5	59.6	64.9	70.3	75.7	81.1	83.6
102.5°	326.8	317.7	308.5	299.3	290.2	263.1	218.2	173.2	128.3	83.3	86.6
105°	432.4	441.8	451.3	460.8	470.3	431.9	345.6	259.3	173.0	86.8	90.2
107.5°	552.7	560.3	568.0	575.6	583.3	535.4	431.9	328.4	224.9	121.5	117.9
110°	630.1	636.7	643.3	650.0	656.6	614.2	522.9	431.6	340.2	248.9	217.3



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CANDELA DISTRIBUTION (continued):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
112.5°	702.9	708.7	714.6	720.5	726.4	718.0	695.5	672.9	650.3	627.8	512.5
115°	817.8	823.2	828.5	833.9	839.3	845.9	853.8	861.7	869.6	877.5	731.2
117.5°	920.5	926.5	932.5	938.5	944.5	950.2	955.6	961.1	966.5	972.0	936.6
120°	995.6	1000.3	1005.0	1009.8	1014.5	1019.7	1025.4	1031.1	1036.8	1042.5	1046.3
122.5°	1059.3	1064.3	1069.3	1074.3	1079.3	1084.9	1091.0	1097.2	1103.4	1109.6	1111.9
125°	1156.3	1160.4	1164.5	1168.6	1172.7	1177.8	1183.8	1189.8	1195.8	1201.8	1204.0
127.5°	1244.2	1248.7	1253.3	1257.8	1262.4	1266.9	1271.4	1275.9	1280.4	1284.9	1288.1
130°	1299.9	1305.0	1310.0	1315.1	1320.2	1324.4	1327.9	1331.4	1334.8	1338.3	1341.8
132.5°	1356.8	1361.1	1365.4	1369.7	1374.0	1377.9	1381.4	1384.8	1388.3	1391.8	1394.8
135°	1430.8	1435.8	1440.9	1445.9	1451.0	1454.9	1457.8	1460.6	1463.5	1466.3	1469.5
137.5°	1505.6	1509.1	1512.7	1516.2	1519.7	1523.1	1526.3	1529.6	1532.8	1536.0	1539.1
140°	1554.5	1557.0	1559.6	1562.1	1564.6	1567.6	1571.1	1574.6	1578.1	1581.5	1584.4
142.5°	1595.5	1597.7	1600.0	1602.3	1604.6	1607.7	1611.7	1615.7	1619.6	1623.6	1626.2
145°	1659.8	1659.4	1659.1	1658.8	1658.5	1661.0	1666.4	1671.8	1677.1	1682.5	1684.7
147.5°	1715.8	1714.6	1713.4	1712.2	1711.0	1713.0	1718.3	1723.7	1729.0	1734.3	1735.9
150°	1752.2	1750.0	1747.8	1745.6	1743.3	1744.8	1749.8	1754.9	1759.9	1765.0	1766.9
152.5°	1782.9	1780.5	1778.0	1775.5	1773.1	1774.2	1779.0	1783.8	1788.6	1793.4	1795.3
155°	1827.6	1824.7	1821.9	1819.0	1816.2	1816.7	1820.5	1824.3	1828.1	1831.8	1833.7
157.5°	1862.6	1860.2	1857.8	1855.4	1853.0	1853.1	1855.7	1858.4	1861.0	1863.7	1865.9
160°	1883.0	1881.1	1879.3	1877.4	1875.5	1875.5	1877.4	1879.3	1881.1	1883.0	1884.9
162.5°	1901.2	1899.4	1897.5	1895.6	1893.7	1893.5	1895.2	1896.8	1898.5	1900.1	1902.3
165°	1925.7	1923.8	1921.9	1920.0	1918.1	1917.7	1918.6	1919.5	1920.5	1921.4	1923.7
167.5°	1943.9	1942.0	1940.1	1938.2	1936.3	1935.8	1936.7	1937.6	1938.5	1939.4	1941.6
170°	1954.2	1952.3	1950.4	1948.5	1946.6	1945.9	1946.6	1947.2	1947.8	1948.5	1950.7
172.5°	1961.0	1959.1	1957.2	1955.3	1953.4	1952.8	1953.4	1954.0	1954.7	1955.3	1957.5
175°	1969.8	1967.6	1965.4	1963.2	1961.0	1960.2	1960.8	1961.4	1962.1	1962.7	1964.9
177.5°	1971.2	1969.5	1967.7	1965.9	1964.1	1963.4	1963.6	1963.9	1964.1	1964.4	1966.2
180°	1965.5	1965.5	1965.5	1965.5	1965.5	1965.5	1965.5	1965.5	1965.5	1965.5	1965.5



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CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
0°	1128.0	1128.0	1128.0	1128.0	1128.0	1128.0	1128.0	1128.0
2.5°	1122.7	1124.5	1126.3	1127.0	1126.7	1126.3	1126.0	1125.6
5°	1113.7	1115.8	1117.8	1118.5	1117.8	1117.1	1116.5	1115.8
7.5°	1095.7	1096.3	1096.9	1096.6	1095.4	1094.3	1093.1	1091.9
10°	1077.7	1077.0	1076.3	1075.3	1073.9	1072.6	1071.2	1069.8
12.5°	1057.0	1055.8	1054.5	1052.8	1050.5	1048.3	1046.0	1043.7
15°	1018.4	1014.0	1009.7	1006.4	1004.2	1001.9	999.6	997.4
17.5°	974.7	969.5	964.4	959.9	956.0	952.1	948.2	944.3
20°	944.2	938.5	932.8	927.5	922.5	917.5	912.5	907.5
22.5°	910.7	903.4	896.1	890.6	886.8	883.1	879.4	875.7
25°	855.2	845.9	836.6	830.3	826.9	823.5	820.1	816.7
27.5°	802.3	791.5	780.7	772.5	767.1	761.7	756.3	750.9
30°	765.0	753.4	741.8	733.0	726.8	720.7	714.6	708.5
32.5°	727.4	714.2	701.0	691.5	685.7	680.0	674.2	668.5
35°	668.7	654.4	640.1	630.4	625.4	620.4	615.5	610.5
37.5°	611.4	595.7	580.0	569.2	563.5	557.8	552.1	546.4
40°	573.1	557.0	540.9	529.9	524.0	518.1	512.2	506.3
42.5°	534.5	517.8	501.2	490.0	484.3	478.6	472.9	467.1
45°	478.2	462.1	446.0	435.2	429.8	424.3	418.9	413.4
47.5°	423.5	407.5	391.4	381.0	376.0	371.1	366.1	361.2
50°	388.3	372.6	357.0	346.7	342.0	337.2	332.5	327.7
52.5°	355.1	339.9	324.8	315.1	310.7	306.3	301.9	297.5
55°	304.6	290.9	277.3	268.4	264.1	259.7	255.4	251.1
57.5°	258.6	246.2	233.7	225.6	222.0	218.4	214.7	211.1
60°	227.0	215.4	203.8	196.2	192.6	189.0	185.3	181.7
62.5°	199.5	188.4	177.4	170.8	168.6	166.5	164.3	162.1
65°	162.2	154.5	146.8	142.6	141.9	141.2	140.5	139.9
67.5°	130.9	127.4	123.9	121.7	121.0	120.3	119.6	118.8
70°	113.9	111.6	109.3	107.8	106.8	105.9	105.0	104.1
72.5°	99.1	97.2	95.3	94.1	93.5	93.0	92.4	91.9
75°	78.5	76.9	75.3	74.4	74.2	74.0	73.7	73.5
77.5°	59.4	58.5	57.6	57.0	56.6	56.3	55.9	55.5
80°	47.2	46.3	45.4	44.9	44.9	44.9	44.9	44.9
82.5°	35.7	35.1	34.6	34.3	34.3	34.3	34.3	34.3
85°	19.4	19.4	19.4	19.4	19.4	19.4	19.4	19.4
87.5°	12.5	12.6	12.8	12.9	13.0	13.1	13.3	13.4
90°	31.6	33.2	34.8	35.9	36.5	37.1	37.8	38.4
92.5°	34.6	35.5	36.3	36.9	37.3	37.6	38.0	38.4
95°	58.6	60.2	61.8	62.4	62.1	61.8	61.5	61.2
97.5°	76.8	78.0	79.3	80.1	80.5	80.9	81.3	81.6
100°	86.1	88.7	91.2	92.8	93.4	94.0	94.7	95.3
102.5°	89.9	93.2	96.5	98.6	99.5	100.3	101.2	102.1
105°	93.7	97.2	100.7	103.0	104.3	105.6	106.8	108.1
107.5°	114.4	110.8	107.3	106.2	107.4	108.7	110.0	111.2
110°	185.7	154.1	122.5	107.3	108.6	109.8	111.1	112.4



TEST NUMBER: P331823

CATALOG NUMBER: S122RDIW-S675D1440U835-4F0-1E-UDD-F

CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
112.5°	397.2	281.9	166.6	109.4	110.5	111.5	112.5	113.5
115°	584.9	438.5	292.2	207.6	184.9	162.1	139.4	116.6
117.5°	901.2	865.8	830.4	775.3	700.5	625.7	550.9	476.2
120°	1050.1	1053.9	1057.7	1038.2	995.6	952.9	910.2	867.6
122.5°	1114.2	1116.5	1118.7	1115.7	1107.4	1099.2	1090.9	1082.6
125°	1206.2	1208.4	1210.6	1212.2	1213.2	1214.1	1215.1	1216.0
127.5°	1291.3	1294.5	1297.7	1299.5	1299.6	1299.8	1300.0	1300.2
130°	1345.3	1348.8	1352.2	1353.8	1353.5	1353.2	1352.9	1352.5
132.5°	1397.7	1400.7	1403.7	1405.0	1404.7	1404.4	1404.1	1403.7
135°	1472.6	1475.8	1479.0	1480.2	1479.6	1479.0	1478.3	1477.7
137.5°	1542.2	1545.3	1548.4	1549.4	1548.3	1547.3	1546.2	1545.1
140°	1587.2	1590.1	1592.9	1593.5	1592.0	1590.4	1588.8	1587.2
142.5°	1628.8	1631.4	1634.0	1634.5	1632.9	1631.3	1629.8	1628.2
145°	1686.9	1689.1	1691.4	1691.7	1690.1	1688.5	1686.9	1685.4
147.5°	1737.6	1739.2	1740.9	1741.0	1739.7	1738.4	1737.0	1735.7
150°	1768.8	1770.7	1772.6	1772.7	1771.2	1769.6	1768.0	1766.4
152.5°	1797.2	1799.1	1801.0	1800.9	1798.8	1796.8	1794.7	1792.6
155°	1835.6	1837.5	1839.4	1839.1	1836.6	1834.1	1831.5	1829.0
157.5°	1868.0	1870.1	1872.3	1872.1	1869.7	1867.2	1864.7	1862.3
160°	1886.8	1888.7	1890.6	1890.5	1888.3	1886.0	1883.8	1881.6
162.5°	1904.4	1906.6	1908.7	1908.4	1905.7	1903.0	1900.3	1897.6
165°	1925.9	1928.1	1930.3	1930.3	1928.1	1925.9	1923.7	1921.4
167.5°	1943.8	1946.0	1948.2	1947.9	1945.1	1942.2	1939.4	1936.5
170°	1952.9	1955.1	1957.3	1957.0	1954.2	1951.3	1948.5	1945.6
172.5°	1959.7	1961.9	1964.1	1963.8	1961.0	1958.1	1955.3	1952.4
175°	1967.1	1969.3	1971.5	1971.1	1967.9	1964.7	1961.6	1958.4
177.5°	1967.9	1969.7	1971.5	1971.2	1968.9	1966.7	1964.4	1962.1
180°	1965.5	1965.5	1965.5	1965.5	1965.5	1965.5	1965.5	1965.5

(END OF REPORT)