

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: P331819-840

Luminaire Tested: **S122RDIW-S675D1240U840-4F0-1E-UDD-F**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P331819-840
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-S675D1240U840-4F0-1E-UDD-F
Description: DEFINE 2 DIRECT-INDIRECT WALL MOUNT LED LUMINAIRE
DOWNLIGHT 675 LUMENS PER FOOT, FLUSH SATIN WHITE DIFFUSER, REGRESSED
HOUSING
UPLIGHT 1240 LUMENS PER FOOT, NO LENS
Light Source: -
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 7350.2 lumens
Efficiency: N/A
Efficacy: 119.7 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

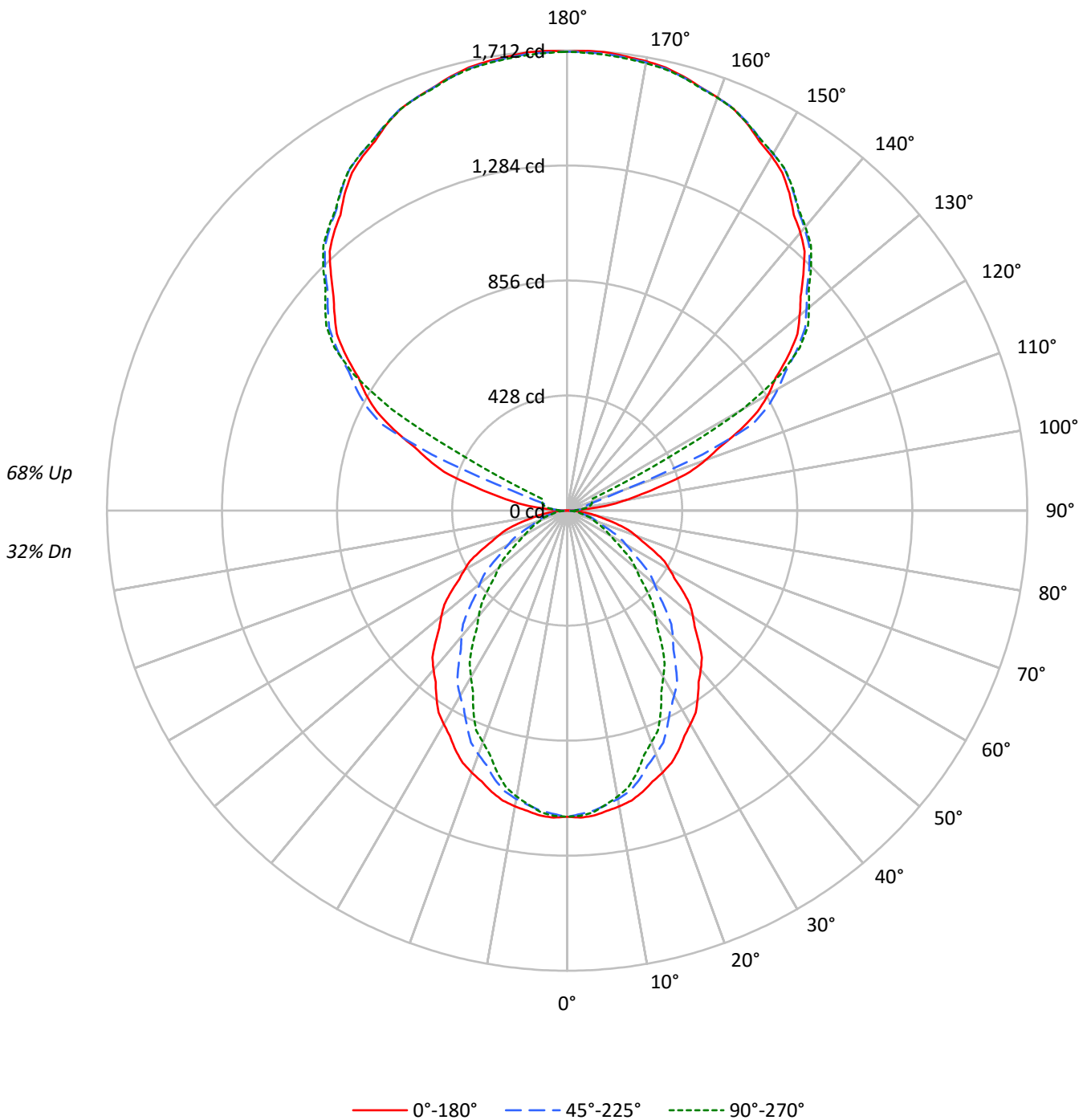
Input Watts (W): 61.4
Input Voltage (V): 120
Input Current (A_{in}): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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	103	103	103	103	93	93	93	93	73	73	73	56	56	56	40	40	40	32
1	94	90	86	83	84	81	78	75	65	62	61	49	48	47	35	35	34	27
2	86	79	73	68	77	71	66	62	57	54	51	44	41	40	31	30	29	24
3	78	70	63	57	70	63	57	52	50	46	43	39	36	34	28	26	25	20
4	72	62	54	48	64	56	49	44	45	40	37	35	32	29	25	23	22	18
5	66	55	47	42	59	50	43	38	40	35	32	31	28	25	23	21	19	16
6	61	49	42	36	55	45	38	33	36	31	28	28	25	22	21	19	17	14
7	56	44	37	32	50	40	34	29	33	28	24	26	22	20	19	17	15	12
8	52	40	33	28	47	37	30	26	30	25	22	24	20	18	18	15	14	11
9	48	37	30	25	44	34	27	23	27	23	19	22	18	16	16	14	12	10
10	45	34	27	22	41	31	25	21	25	21	17	20	17	14	15	13	11	9

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	18392	18392	18392
5°	18462	18162	18263
10°	18321	17864	17713
15°	18111	17336	16836
20°	17819	16579	15747
25°	17521	15720	14694
30°	17107	14838	13340
35°	16703	13878	12151
40°	16297	12886	10777
45°	15819	11768	9533
50°	15330	10643	8312
55°	14829	9433	7139
60°	14247	8157	5926
65°	13589	6854	5398
70°	12798	5646	4961
75°	11834	5147	4629
80°	10451	4603	4212
85°	8207	3631	3631



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	106.6	1.5
10°-20°	292.8	4.0
20°-30°	411.1	5.6
30°-40°	448.3	6.1
40°-50°	412.2	5.6
50°-60°	323.8	4.4
60°-70°	211.1	2.9
70°-80°	108.8	1.5
80°-90°	32.4	0.4
90°-100°	56.9	0.8
100°-110°	208.8	2.8
110°-120°	558.2	7.6
120°-130°	921.5	12.5
130°-140°	980.0	13.3
140°-150°	910.9	12.4
150°-160°	732.3	10.0
160°-170°	471.9	6.4
170°-180°	162.4	2.2
0°-30°	810.5	11.0
0°-40°	1258.9	17.1
0°-60°	1994.8	27.1
0°-90°	2347.2	31.9
90°-120°	824.0	11.2
90°-150°	3636.4	49.5
90°-180°	5003.0	68.1
0°-180°	7350.2	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1139	1139	1139	1139	1139	
5°	1139	1134	1121	1129	1127	108
15°	1084	1071	1037	1018	1007	305
25°	984	949	882	842	825	452
35°	847	793	704	642	616	530
45°	693	622	515	445	418	535
55°	527	445	335	276	254	471
65°	356	272	179	146	141	352
75°	190	120	82	76	74	201
85°	44	24	20	20	20	52
90°	1	15	25	31	33	6
95°	80	42	48	54	53	98
105°	376	392	75	88	94	401
115°	710	732	762	217	101	699
125°	1004	1021	1044	1052	1056	895
135°	1243	1262	1274	1285	1284	959
145°	1442	1442	1461	1469	1464	901
155°	1587	1578	1591	1598	1589	731
165°	1673	1666	1669	1677	1669	472
175°	1711	1703	1705	1712	1701	163
180°	1707	1707	1707	1707	1707	



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CANDELA DISTRIBUTION (FULL):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
0°	1139.1	1139.1	1139.1	1139.1	1139.1	1139.1	1139.1	1139.1	1139.1	1139.1	1139.1
2.5°	1143.3	1142.4	1141.5	1140.5	1139.6	1138.1	1136.1	1134.1	1132.2	1130.1	1132.0
5°	1139.1	1138.0	1136.9	1135.7	1134.6	1132.6	1129.5	1126.6	1123.6	1120.6	1122.7
7.5°	1127.4	1126.0	1124.6	1123.2	1121.8	1119.2	1115.8	1112.4	1108.8	1105.4	1105.9
10°	1117.5	1115.9	1114.3	1112.7	1111.1	1108.0	1103.4	1098.8	1094.3	1089.6	1089.0
12.5°	1105.1	1103.2	1101.2	1099.2	1097.2	1093.4	1087.5	1081.7	1075.7	1069.9	1068.6
15°	1083.5	1081.0	1078.4	1075.9	1073.4	1068.2	1060.5	1052.7	1044.9	1037.1	1032.8
17.5°	1056.9	1053.1	1049.2	1045.3	1041.5	1034.6	1024.6	1014.6	1004.6	994.6	989.5
20°	1037.1	1032.5	1027.9	1023.4	1018.8	1010.8	999.3	987.8	976.4	964.9	959.2
22.5°	1015.6	1010.6	1005.4	1000.3	995.1	986.1	973.2	960.3	947.4	934.4	927.1
25°	983.5	976.1	968.9	961.5	954.2	942.9	927.9	912.7	897.6	882.4	873.0
27.5°	944.7	936.8	928.8	920.8	912.8	900.3	883.3	866.3	849.2	832.1	821.2
30°	917.6	908.8	900.1	891.4	882.7	869.2	850.8	832.5	814.2	795.9	784.2
32.5°	891.1	880.9	870.8	860.6	850.4	836.0	817.3	798.6	779.9	761.2	747.9
35°	847.4	835.8	824.0	812.3	800.7	784.8	764.6	744.5	724.3	704.1	689.6
37.5°	803.8	790.8	778.0	765.2	752.3	735.2	713.8	692.3	670.8	649.2	633.4
40°	773.2	759.4	745.7	732.0	718.2	700.2	678.0	655.8	633.6	611.4	595.1
42.5°	741.8	727.4	712.9	698.4	684.0	665.2	642.3	619.4	596.3	573.4	556.5
45°	692.8	677.4	662.1	646.7	631.4	611.7	587.6	563.6	539.5	515.4	499.2
47.5°	644.9	628.6	612.4	596.1	579.9	559.4	534.5	509.7	484.8	460.0	443.8
50°	610.3	594.0	577.7	561.5	545.2	524.5	499.3	474.1	448.9	423.7	407.9
52.5°	576.5	559.5	542.5	525.5	508.5	487.7	463.0	438.4	413.7	389.1	373.9
55°	526.8	509.0	491.1	473.2	455.3	434.0	409.3	384.6	359.8	335.1	321.3
57.5°	475.8	457.6	439.2	420.9	402.5	381.5	357.7	334.0	310.1	286.4	273.8
60°	441.2	422.9	404.6	386.3	367.9	347.0	323.4	299.7	276.2	252.6	240.9
62.5°	407.4	389.1	370.7	352.4	334.1	313.7	291.2	268.7	246.2	223.7	212.6
65°	355.7	337.1	318.5	300.0	281.4	261.9	241.3	220.7	200.0	179.4	171.6
67.5°	305.8	287.3	268.9	250.5	232.1	213.6	195.0	176.5	157.9	139.4	135.8
70°	271.1	253.3	235.4	217.5	199.7	182.8	167.0	151.2	135.4	119.6	117.2
72.5°	238.1	221.0	203.9	186.7	169.6	154.7	142.0	129.3	116.6	103.9	102.0
75°	189.7	173.7	157.6	141.6	125.5	113.6	105.8	98.1	90.3	82.5	80.9
77.5°	142.1	127.9	113.9	99.9	85.8	76.9	73.1	69.4	65.6	61.9	60.9
80°	112.4	100.7	89.0	77.4	65.6	58.7	56.4	54.0	51.8	49.5	48.6
82.5°	85.1	76.0	67.0	57.8	48.7	43.3	41.8	40.2	38.7	37.2	36.6
85°	44.3	39.5	34.7	29.9	25.0	22.3	21.6	21.0	20.3	19.6	19.6
87.5°	13.4	12.6	11.7	10.9	10.0	9.8	10.2	10.7	11.1	11.5	11.6
90°	1.2	4.2	7.3	10.3	13.3	16.0	18.1	20.3	22.5	24.7	26.1
92.5°	24.9	24.6	24.4	24.1	23.8	24.2	25.3	26.5	27.6	28.7	29.4
95°	80.3	71.2	62.2	53.1	44.0	40.5	42.4	44.3	46.3	48.2	49.6
97.5°	159.4	133.8	108.3	82.8	57.3	46.7	51.1	55.5	60.1	64.5	65.5
100°	218.6	181.1	143.4	105.8	68.3	51.7	56.5	61.1	65.7	70.4	72.6
102.5°	283.9	275.9	267.9	260.0	252.1	228.5	189.5	150.5	111.4	72.4	75.2
105°	375.6	383.7	392.0	400.2	408.5	375.2	300.2	225.2	150.3	75.3	78.4
107.5°	480.1	486.7	493.3	500.0	506.6	465.0	375.2	285.3	195.4	105.5	102.4
110°	547.2	553.0	558.8	564.5	570.3	533.5	454.2	374.9	295.5	216.2	188.7



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CANDELA DISTRIBUTION (continued):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
112.5°	610.5	615.6	620.7	625.8	631.0	623.7	604.1	584.5	564.9	545.2	445.1
115°	710.3	715.0	719.6	724.3	729.0	734.8	741.6	748.5	755.4	762.2	635.1
117.5°	799.5	804.8	809.9	815.2	820.4	825.4	830.0	834.8	839.5	844.2	813.4
120°	864.7	868.9	872.9	877.1	881.2	885.8	890.7	895.6	900.6	905.4	908.8
122.5°	920.1	924.4	928.8	933.1	937.5	942.3	947.7	953.0	958.5	963.8	965.7
125°	1004.3	1007.8	1011.5	1015.0	1018.5	1023.0	1028.2	1033.4	1038.6	1043.9	1045.8
127.5°	1080.7	1084.6	1088.5	1092.6	1096.5	1100.4	1104.3	1108.2	1112.1	1116.0	1118.8
130°	1129.1	1133.5	1137.9	1142.3	1146.7	1150.3	1153.4	1156.4	1159.4	1162.5	1165.5
132.5°	1178.5	1182.2	1186.0	1189.7	1193.5	1196.8	1199.8	1202.9	1205.9	1208.9	1211.4
135°	1242.7	1247.1	1251.5	1255.9	1260.3	1263.7	1266.2	1268.7	1271.1	1273.6	1276.4
137.5°	1307.7	1310.8	1313.8	1317.0	1320.0	1322.9	1325.8	1328.6	1331.3	1334.1	1336.9
140°	1350.2	1352.4	1354.6	1356.8	1359.0	1361.6	1364.6	1367.7	1370.7	1373.7	1376.1
142.5°	1385.8	1387.8	1389.8	1391.7	1393.7	1396.4	1399.9	1403.3	1406.7	1410.3	1412.5
145°	1441.6	1441.4	1441.1	1440.8	1440.6	1442.7	1447.4	1452.1	1456.7	1461.4	1463.3
147.5°	1490.3	1489.2	1488.2	1487.1	1486.1	1487.9	1492.5	1497.1	1501.8	1506.3	1507.8
150°	1522.0	1520.0	1518.1	1516.1	1514.2	1515.5	1519.8	1524.3	1528.6	1533.1	1534.7
152.5°	1548.6	1546.5	1544.3	1542.2	1540.0	1541.1	1545.2	1549.4	1553.6	1557.7	1559.4
155°	1587.4	1584.9	1582.5	1579.9	1577.5	1577.9	1581.2	1584.5	1587.8	1591.1	1592.8
157.5°	1617.8	1615.7	1613.6	1611.5	1609.4	1609.5	1611.8	1614.2	1616.5	1618.8	1620.6
160°	1635.6	1634.0	1632.2	1630.6	1629.0	1629.0	1630.6	1632.2	1634.0	1635.6	1637.2
162.5°	1651.4	1649.7	1648.1	1646.5	1644.8	1644.7	1646.1	1647.5	1649.0	1650.4	1652.2
165°	1672.6	1671.0	1669.3	1667.7	1666.1	1665.7	1666.5	1667.3	1668.1	1668.9	1670.8
167.5°	1688.5	1686.8	1685.2	1683.5	1681.8	1681.4	1682.2	1682.9	1683.7	1684.5	1686.4
170°	1697.4	1695.7	1694.0	1692.4	1690.7	1690.2	1690.7	1691.3	1691.8	1692.4	1694.4
172.5°	1703.2	1701.6	1700.0	1698.3	1696.7	1696.2	1696.7	1697.2	1697.8	1698.3	1700.2
175°	1710.9	1709.0	1707.1	1705.2	1703.2	1702.5	1703.1	1703.6	1704.2	1704.8	1706.7
177.5°	1712.1	1710.6	1709.1	1707.6	1706.0	1705.4	1705.6	1705.8	1706.0	1706.3	1707.8
180°	1707.2	1707.2	1707.2	1707.2	1707.2	1707.2	1707.2	1707.2	1707.2	1707.2	1707.2



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CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
0°	1139.1	1139.1	1139.1	1139.1	1139.1	1139.1	1139.1	1139.1
2.5°	1133.8	1135.6	1137.4	1138.1	1137.8	1137.4	1137.1	1136.7
5°	1124.7	1126.8	1128.8	1129.5	1128.8	1128.1	1127.5	1126.8
7.5°	1106.5	1107.1	1107.7	1107.4	1106.2	1105.1	1103.9	1102.7
10°	1088.3	1087.6	1086.9	1085.9	1084.5	1083.2	1081.8	1080.4
12.5°	1067.4	1066.2	1064.9	1063.2	1060.9	1058.6	1056.3	1054.0
15°	1028.4	1024.0	1019.7	1016.3	1014.1	1011.8	1009.5	1007.2
17.5°	984.3	979.1	973.9	969.4	965.4	961.5	957.6	953.6
20°	953.5	947.8	942.0	936.6	931.6	926.6	921.5	916.5
22.5°	919.7	912.3	904.9	899.4	895.5	891.8	888.1	884.3
25°	863.6	854.2	844.9	838.5	835.1	831.6	828.2	824.8
27.5°	810.2	799.3	788.4	780.1	774.7	769.2	763.8	758.3
30°	772.5	760.8	749.1	740.2	734.0	727.8	721.6	715.5
32.5°	734.6	721.2	707.9	698.3	692.5	686.7	680.9	675.1
35°	675.3	660.9	646.4	636.6	631.6	626.5	621.6	616.5
37.5°	617.4	601.6	585.7	574.8	569.1	563.3	557.5	551.8
40°	578.8	562.5	546.2	535.1	529.2	523.2	517.3	511.3
42.5°	539.8	522.9	506.1	494.8	489.1	483.3	477.6	471.7
45°	482.9	466.7	450.4	439.5	434.0	428.5	423.0	417.5
47.5°	427.7	411.5	395.3	384.8	379.7	374.8	369.7	364.8
50°	392.1	376.3	360.5	350.1	345.4	340.5	335.8	330.9
52.5°	358.6	343.3	328.0	318.2	313.8	309.3	304.9	300.4
55°	307.6	293.8	280.0	271.0	266.7	262.3	257.9	253.6
57.5°	261.2	248.6	236.0	227.8	224.2	220.6	216.8	213.2
60°	229.2	217.5	205.8	198.1	194.5	190.9	187.1	183.5
62.5°	201.5	190.3	179.2	172.5	170.3	168.1	165.9	163.7
65°	163.8	156.0	148.2	144.0	143.3	142.6	141.9	141.3
67.5°	132.2	128.7	125.1	122.9	122.2	121.5	120.8	120.0
70°	115.0	112.7	110.4	108.9	107.9	106.9	106.0	105.1
72.5°	100.1	98.2	96.2	95.0	94.4	93.9	93.3	92.8
75°	79.3	77.7	76.0	75.1	74.9	74.7	74.4	74.2
77.5°	60.0	59.1	58.2	57.6	57.2	56.9	56.5	56.0
80°	47.7	46.8	45.8	45.3	45.3	45.3	45.3	45.3
82.5°	36.1	35.4	34.9	34.6	34.6	34.6	34.6	34.6
85°	19.6	19.6	19.6	19.6	19.6	19.6	19.6	19.6
87.5°	11.7	11.8	11.9	12.0	12.1	12.2	12.3	12.4
90°	27.5	28.8	30.2	31.2	31.7	32.2	32.8	33.3
92.5°	30.1	30.8	31.5	32.0	32.3	32.7	33.0	33.3
95°	50.9	52.3	53.6	54.2	53.9	53.6	53.4	53.1
97.5°	66.7	67.8	68.9	69.6	69.9	70.3	70.6	70.9
100°	74.8	77.0	79.2	80.6	81.1	81.7	82.2	82.8
102.5°	78.1	81.0	83.8	85.6	86.3	87.2	88.0	88.7
105°	81.4	84.4	87.5	89.5	90.6	91.7	92.8	93.9
107.5°	99.4	96.2	93.2	92.2	93.3	94.4	95.5	96.6
110°	161.3	133.8	106.3	93.2	94.3	95.4	96.5	97.6



TEST NUMBER: P331819-840

CATALOG NUMBER: S122RDIW-S675D1240U840-4F0-1E-UDD-F

CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
112.5°	345.0	244.9	144.7	95.0	95.9	96.8	97.7	98.6
115°	508.0	380.9	253.8	180.4	160.6	140.9	121.1	101.3
117.5°	782.7	751.9	721.2	673.4	608.4	543.5	478.6	413.5
120°	912.1	915.3	918.7	901.8	864.7	827.7	790.6	753.6
122.5°	967.8	969.8	971.7	969.1	961.9	954.7	947.6	940.3
125°	1047.7	1049.7	1051.6	1052.9	1053.7	1054.6	1055.4	1056.2
127.5°	1121.6	1124.4	1127.2	1128.7	1128.8	1129.0	1129.1	1129.3
130°	1168.5	1171.5	1174.5	1175.9	1175.6	1175.4	1175.1	1174.8
132.5°	1214.1	1216.6	1219.2	1220.3	1220.1	1219.8	1219.5	1219.3
135°	1279.1	1281.8	1284.6	1285.7	1285.2	1284.6	1284.0	1283.5
137.5°	1339.5	1342.2	1344.9	1345.7	1344.8	1343.9	1343.0	1342.0
140°	1378.7	1381.1	1383.6	1384.1	1382.7	1381.4	1380.0	1378.7
142.5°	1414.7	1417.0	1419.3	1419.7	1418.4	1416.9	1415.5	1414.2
145°	1465.2	1467.1	1469.1	1469.4	1467.9	1466.6	1465.2	1463.9
147.5°	1509.2	1510.7	1512.1	1512.2	1511.1	1509.8	1508.7	1507.6
150°	1536.3	1538.0	1539.6	1539.7	1538.4	1537.0	1535.6	1534.3
152.5°	1561.0	1562.7	1564.4	1564.3	1562.5	1560.6	1558.8	1557.0
155°	1594.4	1596.1	1597.7	1597.4	1595.2	1593.1	1590.8	1588.6
157.5°	1622.6	1624.4	1626.3	1626.1	1624.0	1621.8	1619.7	1617.5
160°	1638.9	1640.5	1642.1	1642.0	1640.1	1638.2	1636.3	1634.4
162.5°	1654.2	1656.0	1657.9	1657.6	1655.3	1652.8	1650.5	1648.2
165°	1672.7	1674.7	1676.6	1676.6	1674.7	1672.7	1670.8	1668.9
167.5°	1688.3	1690.2	1692.1	1691.9	1689.4	1687.0	1684.5	1682.0
170°	1696.3	1698.2	1700.1	1699.8	1697.4	1694.9	1692.4	1689.9
172.5°	1702.1	1704.0	1706.0	1705.8	1703.2	1700.8	1698.3	1695.9
175°	1708.6	1710.5	1712.4	1712.0	1709.3	1706.6	1703.7	1701.0
177.5°	1709.3	1710.8	1712.4	1712.1	1710.2	1708.2	1706.3	1704.2
180°	1707.2	1707.2	1707.2	1707.2	1707.2	1707.2	1707.2	1707.2

(END OF REPORT)