

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: P331823-935

Luminaire Tested: **S122RDIW-S675D1440U935-4F0-1E-UDD-F**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P331823-935
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-S675D1440U935-4F0-1E-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: 6961.2 lumens
Efficiency: N/A
Efficacy: 102.2 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

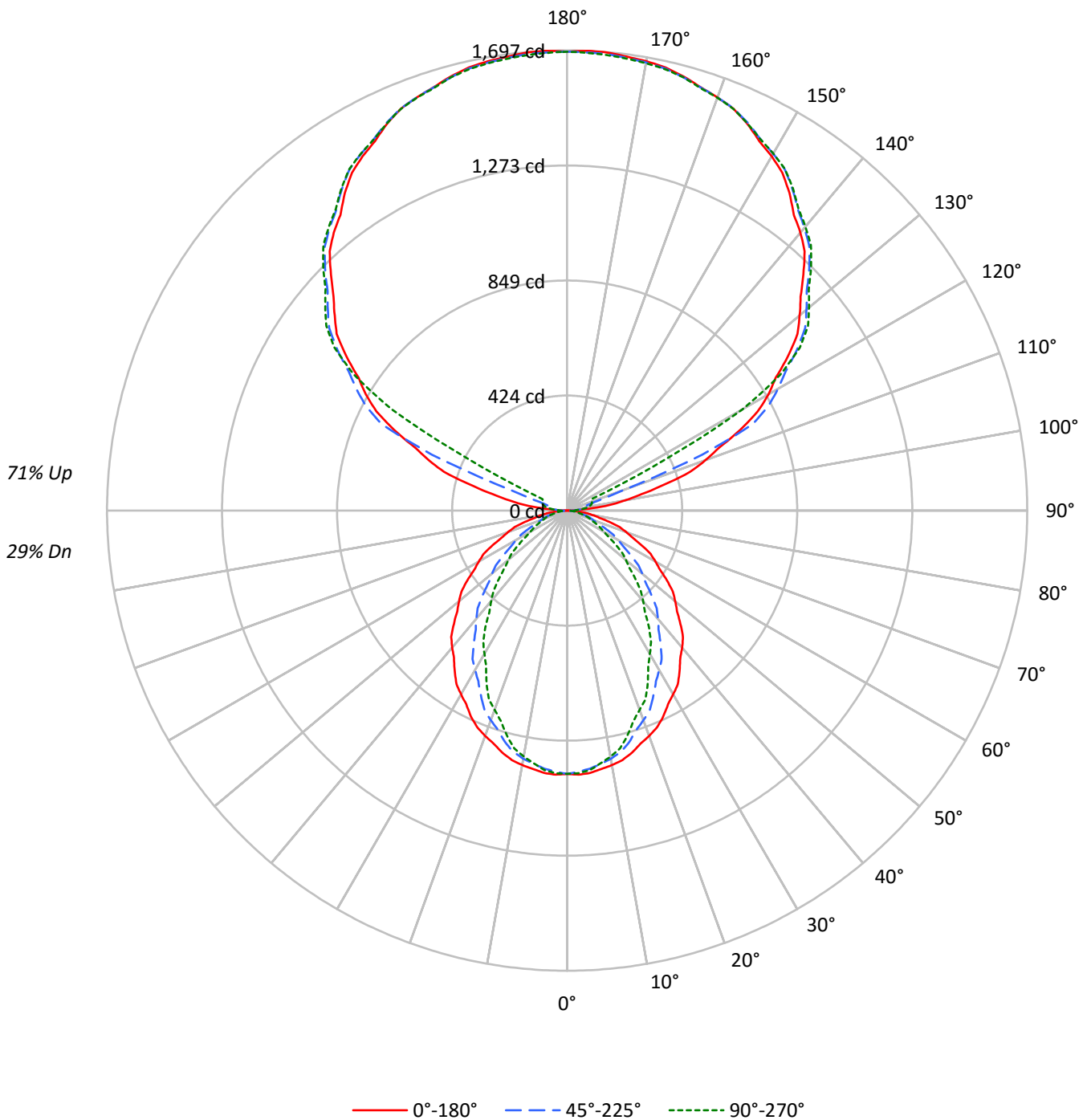
Input Watts (W): 68.1
Input Voltage (V): 120
Input Current (A_{in}): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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°	15681	15681	15681
5°	15741	15486	15571
10°	15621	15231	15101
15°	15442	14780	14355
20°	15192	14136	13426
25°	14938	13402	12527
30°	14585	12652	11373
35°	14241	11832	10360
40°	13894	10985	9187
45°	13486	10035	8127
50°	13069	9075	7086
55°	12645	8042	6086
60°	12148	6952	5050
65°	11584	5841	4604
70°	10914	4810	4230
75°	10087	4386	3949
80°	8908	3924	3598
85°	7003	3094	3094



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	90.9	1.3
10°-20°	249.6	3.6
20°-30°	350.5	5.0
30°-40°	382.2	5.5
40°-50°	351.5	5.0
50°-60°	276.0	4.0
60°-70°	180.0	2.6
70°-80°	92.8	1.3
80°-90°	28.2	0.4
90°-100°	56.5	0.8
100°-110°	207.0	3.0
110°-120°	553.4	7.9
120°-130°	913.5	13.1
130°-140°	971.4	14.0
140°-150°	902.9	13.0
150°-160°	726.0	10.4
160°-170°	467.8	6.7
170°-180°	161.0	2.3
0°-30°	691.1	9.9
0°-40°	1073.3	15.4
0°-60°	1700.8	24.4
0°-90°	2001.8	28.8
90°-120°	816.8	11.7
90°-150°	3604.6	51.8
90°-180°	4959.0	71.2
0°-180°	6961.2	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	971	971	971	971	971	
5°	971	966	956	963	961	92
15°	924	913	884	868	859	260
25°	838	809	752	718	703	385
35°	722	676	600	547	526	452
45°	591	530	440	379	356	456
55°	449	379	286	235	216	401
65°	303	232	153	125	120	300
75°	162	102	70	64	63	171
85°	38	20	17	17	17	45
90°	1	14	24	30	33	5
95°	80	42	48	53	53	97
105°	372	388	75	88	93	398
115°	704	725	756	215	100	693
125°	996	1012	1035	1043	1047	887
135°	1232	1251	1262	1274	1272	951
145°	1429	1429	1449	1456	1451	893
155°	1574	1564	1577	1584	1575	725
165°	1658	1651	1654	1662	1654	468
175°	1696	1688	1690	1697	1686	161
180°	1692	1692	1692	1692	1692	



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CANDELA DISTRIBUTION (FULL):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
0°	971.2	971.2	971.2	971.2	971.2	971.2	971.2	971.2	971.2	971.2	971.2
2.5°	974.7	974.0	973.2	972.4	971.6	970.3	968.6	966.9	965.3	963.5	965.1
5°	971.2	970.3	969.3	968.3	967.3	965.6	963.0	960.5	957.9	955.5	957.2
7.5°	961.2	960.0	958.8	957.6	956.4	954.2	951.3	948.4	945.4	942.5	942.9
10°	952.8	951.4	950.0	948.6	947.3	944.7	940.7	936.9	933.0	929.0	928.5
12.5°	942.2	940.6	938.8	937.2	935.5	932.2	927.2	922.2	917.1	912.1	911.1
15°	923.8	921.6	919.5	917.3	915.2	910.8	904.1	897.5	890.9	884.2	880.5
17.5°	901.1	897.9	894.6	891.2	887.9	882.1	873.6	865.0	856.5	848.0	843.6
20°	884.2	880.3	876.4	872.5	868.6	861.8	852.0	842.2	832.5	822.7	817.8
22.5°	865.9	861.6	857.2	852.8	848.4	840.8	829.7	818.7	807.7	796.7	790.4
25°	838.5	832.2	826.0	819.8	813.6	803.9	791.1	778.2	765.3	752.3	744.3
27.5°	805.5	798.7	791.9	785.1	778.3	767.6	753.1	738.6	724.0	709.5	700.2
30°	782.3	774.8	767.4	760.0	752.6	741.1	725.4	709.8	694.1	678.6	668.6
32.5°	759.7	751.1	742.4	733.7	725.0	712.7	696.8	680.9	665.0	649.0	637.7
35°	722.5	712.6	702.6	692.6	682.7	669.1	651.9	634.7	617.5	600.3	588.0
37.5°	685.3	674.2	663.3	652.4	641.4	626.8	608.6	590.2	571.9	553.5	540.0
40°	659.2	647.5	635.8	624.1	612.3	597.0	578.1	559.1	540.2	521.2	507.4
42.5°	632.5	620.2	607.8	595.5	583.2	567.1	547.6	528.1	508.4	488.9	474.5
45°	590.6	577.6	564.5	551.4	538.3	521.5	501.0	480.5	459.9	439.5	425.6
47.5°	549.8	536.0	522.1	508.2	494.4	476.9	455.7	434.5	413.4	392.2	378.4
50°	520.3	506.4	492.6	478.7	464.9	447.2	425.7	404.2	382.7	361.3	347.8
52.5°	491.5	477.0	462.5	448.1	433.5	415.8	394.8	373.8	352.8	331.7	318.7
55°	449.2	433.9	418.7	403.5	388.2	370.1	349.0	327.9	306.8	285.7	274.0
57.5°	405.7	390.1	374.4	358.9	343.2	325.3	305.0	284.7	264.4	244.2	233.4
60°	376.2	360.6	344.9	329.3	313.7	295.8	275.7	255.5	235.5	215.3	205.3
62.5°	347.3	331.7	316.1	300.5	284.8	267.4	248.3	229.1	209.9	190.7	181.2
65°	303.2	287.4	271.6	255.8	240.0	223.3	205.7	188.1	170.5	152.9	146.3
67.5°	260.7	245.0	229.3	213.6	197.9	182.1	166.3	150.5	134.7	118.8	115.8
70°	231.2	215.9	200.7	185.5	170.2	155.8	142.4	128.9	115.5	101.9	100.0
72.5°	203.0	188.4	173.8	159.2	144.6	131.9	121.1	110.2	99.4	88.6	87.0
75°	161.7	148.1	134.4	120.7	107.0	96.9	90.2	83.6	77.0	70.3	69.0
77.5°	121.1	109.1	97.1	85.2	73.2	65.5	62.3	59.2	56.0	52.8	51.9
80°	95.8	85.8	75.9	66.0	56.0	50.0	48.0	46.1	44.2	42.2	41.4
82.5°	72.6	64.8	57.1	49.2	41.5	36.9	35.6	34.3	33.0	31.7	31.2
85°	37.8	33.7	29.6	25.5	21.4	19.0	18.4	17.9	17.3	16.7	16.7
87.5°	11.5	10.8	10.2	9.6	8.9	8.8	9.2	9.6	10.1	10.5	10.7
90°	1.2	4.2	7.2	10.2	13.2	15.8	18.0	20.1	22.3	24.5	25.8
92.5°	24.7	24.5	24.2	23.9	23.7	24.0	25.1	26.3	27.3	28.4	29.1
95°	79.6	70.6	61.6	52.7	43.7	40.1	42.0	43.9	45.9	47.8	49.1
97.5°	158.0	132.7	107.4	82.1	56.7	46.3	50.7	55.1	59.5	63.9	65.0
100°	216.7	179.4	142.2	104.9	67.6	51.3	55.9	60.5	65.2	69.8	72.0
102.5°	281.4	273.5	265.6	257.7	249.9	226.5	187.9	149.1	110.5	71.7	74.6
105°	372.3	380.4	388.6	396.7	404.9	371.9	297.6	223.3	149.0	74.7	77.7
107.5°	475.9	482.4	489.0	495.6	502.2	461.0	371.9	282.8	193.6	104.6	101.5
110°	542.5	548.2	553.9	559.6	565.3	528.8	450.2	371.6	292.9	214.3	187.1



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CANDELA DISTRIBUTION (continued):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
112.5°	605.2	610.2	615.3	620.4	625.4	618.2	598.8	579.4	559.9	540.5	441.3
115°	704.1	708.8	713.3	718.0	722.6	728.3	735.1	741.9	748.7	755.5	629.6
117.5°	792.6	797.7	802.9	808.0	813.2	818.1	822.8	827.5	832.2	836.9	806.4
120°	857.2	861.3	865.3	869.4	873.5	878.0	882.9	887.8	892.7	897.6	900.9
122.5°	912.1	916.4	920.7	925.0	929.3	934.1	939.4	944.7	950.0	955.4	957.3
125°	995.6	999.1	1002.6	1006.2	1009.7	1014.1	1019.3	1024.4	1029.6	1034.7	1036.6
127.5°	1071.3	1075.1	1079.1	1083.0	1086.9	1090.8	1094.7	1098.5	1102.4	1106.3	1109.1
130°	1119.2	1123.6	1127.9	1132.3	1136.7	1140.3	1143.3	1146.3	1149.3	1152.3	1155.3
132.5°	1168.2	1171.9	1175.6	1179.3	1183.0	1186.4	1189.4	1192.3	1195.3	1198.3	1200.9
135°	1231.9	1236.2	1240.6	1244.9	1249.3	1252.7	1255.2	1257.6	1260.1	1262.5	1265.2
137.5°	1296.3	1299.3	1302.4	1305.4	1308.5	1311.4	1314.1	1317.0	1319.7	1322.5	1325.2
140°	1338.4	1340.6	1342.8	1345.0	1347.1	1349.7	1352.7	1355.7	1358.7	1361.7	1364.2
142.5°	1373.7	1375.6	1377.6	1379.6	1381.6	1384.2	1387.7	1391.1	1394.5	1397.9	1400.2
145°	1429.1	1428.7	1428.5	1428.2	1428.0	1430.1	1434.8	1439.4	1444.0	1448.6	1450.5
147.5°	1477.3	1476.3	1475.2	1474.2	1473.2	1474.9	1479.5	1484.1	1488.7	1493.2	1494.6
150°	1508.6	1506.8	1504.9	1503.0	1501.0	1502.3	1506.6	1511.0	1515.3	1519.7	1521.3
152.5°	1535.1	1533.0	1530.9	1528.7	1526.6	1527.6	1531.7	1535.9	1540.0	1544.1	1545.8
155°	1573.6	1571.1	1568.7	1566.2	1563.7	1564.2	1567.5	1570.7	1574.0	1577.2	1578.8
157.5°	1603.7	1601.6	1599.6	1597.5	1595.4	1595.5	1597.8	1600.1	1602.3	1604.6	1606.5
160°	1621.3	1619.6	1618.1	1616.4	1614.8	1614.8	1616.4	1618.1	1619.6	1621.3	1622.9
162.5°	1636.9	1635.4	1633.7	1632.1	1630.5	1630.3	1631.8	1633.1	1634.6	1636.0	1637.9
165°	1658.0	1656.4	1654.8	1653.1	1651.5	1651.1	1651.9	1652.7	1653.6	1654.3	1656.3
167.5°	1673.7	1672.1	1670.4	1668.8	1667.2	1666.7	1667.5	1668.3	1669.0	1669.8	1671.7
170°	1682.6	1680.9	1679.3	1677.7	1676.0	1675.4	1676.0	1676.5	1677.1	1677.7	1679.6
172.5°	1688.4	1686.8	1685.1	1683.5	1681.9	1681.4	1681.9	1682.4	1683.0	1683.5	1685.4
175°	1696.0	1694.1	1692.2	1690.3	1688.4	1687.7	1688.2	1688.8	1689.4	1689.9	1691.8
177.5°	1697.2	1695.7	1694.2	1692.6	1691.1	1690.5	1690.7	1690.9	1691.1	1691.3	1692.9
180°	1692.3	1692.3	1692.3	1692.3	1692.3	1692.3	1692.3	1692.3	1692.3	1692.3	1692.3



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CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
0°	971.2	971.2	971.2	971.2	971.2	971.2	971.2	971.2
2.5°	966.6	968.2	969.7	970.3	970.1	969.7	969.5	969.1
5°	958.9	960.7	962.4	963.0	962.4	961.8	961.3	960.7
7.5°	943.4	943.9	944.4	944.2	943.1	942.2	941.2	940.1
10°	927.9	927.3	926.7	925.8	924.6	923.5	922.3	921.1
12.5°	910.1	909.0	907.9	906.5	904.5	902.6	900.6	898.6
15°	876.8	873.1	869.4	866.5	864.6	862.6	860.7	858.8
17.5°	839.2	834.7	830.3	826.5	823.1	819.8	816.4	813.0
20°	813.0	808.0	803.1	798.6	794.3	790.0	785.7	781.4
22.5°	784.1	777.8	771.5	766.8	763.5	760.3	757.2	754.0
25°	736.3	728.3	720.3	714.9	712.0	709.0	706.1	703.2
27.5°	690.8	681.5	672.2	665.1	660.5	655.8	651.2	646.5
30°	658.7	648.7	638.7	631.1	625.8	620.5	615.3	610.0
32.5°	626.3	614.9	603.6	595.4	590.4	585.5	580.5	575.6
35°	575.8	563.4	551.1	542.8	538.5	534.2	529.9	525.6
37.5°	526.4	512.9	499.4	490.1	485.2	480.3	475.4	470.5
40°	493.4	479.6	465.7	456.2	451.2	446.1	441.0	435.9
42.5°	460.2	445.8	431.5	421.9	417.0	412.1	407.2	402.2
45°	411.7	397.9	384.0	374.7	370.1	365.3	360.7	355.9
47.5°	364.6	350.9	337.0	328.0	323.7	319.5	315.2	311.0
50°	334.3	320.8	307.4	298.5	294.5	290.3	286.3	282.1
52.5°	305.7	292.7	279.7	271.3	267.5	263.7	259.9	256.1
55°	262.3	250.5	238.8	231.1	227.4	223.6	219.9	216.2
57.5°	222.7	212.0	201.2	194.2	191.1	188.0	184.9	181.8
60°	195.4	185.5	175.5	168.9	165.8	162.7	159.5	156.4
62.5°	171.8	162.2	152.7	147.1	145.2	143.4	141.5	139.6
65°	139.7	133.0	126.4	122.8	122.2	121.6	121.0	120.5
67.5°	112.7	109.7	106.7	104.8	104.2	103.6	103.0	102.3
70°	98.1	96.1	94.1	92.8	92.0	91.2	90.4	89.6
72.5°	85.3	83.7	82.1	81.0	80.5	80.1	79.6	79.1
75°	67.6	66.2	64.8	64.1	63.9	63.7	63.5	63.3
77.5°	51.1	50.4	49.6	49.1	48.7	48.5	48.1	47.8
80°	40.6	39.9	39.1	38.7	38.7	38.7	38.7	38.7
82.5°	30.7	30.2	29.8	29.5	29.5	29.5	29.5	29.5
85°	16.7	16.7	16.7	16.7	16.7	16.7	16.7	16.7
87.5°	10.8	10.8	11.0	11.1	11.2	11.3	11.5	11.5
90°	27.2	28.6	30.0	30.9	31.4	31.9	32.5	33.1
92.5°	29.8	30.6	31.3	31.8	32.1	32.4	32.7	33.1
95°	50.5	51.8	53.2	53.7	53.5	53.2	53.0	52.7
97.5°	66.1	67.2	68.3	69.0	69.3	69.7	70.0	70.3
100°	74.1	76.4	78.5	79.9	80.4	80.9	81.5	82.1
102.5°	77.4	80.2	83.1	84.9	85.7	86.4	87.1	87.9
105°	80.7	83.7	86.7	88.7	89.8	90.9	92.0	93.1
107.5°	98.5	95.4	92.4	91.4	92.5	93.6	94.7	95.7
110°	159.9	132.7	105.5	92.4	93.5	94.5	95.7	96.8



TEST NUMBER: P331823-935

CATALOG NUMBER: S122RDIW-S675D1440U935-4F0-1E-UDD-F

CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
112.5°	342.0	242.7	143.4	94.2	95.1	96.0	96.9	97.7
115°	503.6	377.5	251.6	178.7	159.2	139.6	120.0	100.4
117.5°	775.9	745.5	715.0	667.5	603.1	538.7	474.3	410.0
120°	904.1	907.4	910.7	893.9	857.2	820.4	783.7	747.0
122.5°	959.3	961.3	963.2	960.6	953.5	946.4	939.3	932.1
125°	1038.5	1040.4	1042.3	1043.7	1044.6	1045.3	1046.2	1047.0
127.5°	1111.8	1114.6	1117.3	1118.9	1119.0	1119.1	1119.3	1119.5
130°	1158.3	1161.3	1164.2	1165.6	1165.4	1165.1	1164.8	1164.5
132.5°	1203.4	1206.0	1208.6	1209.7	1209.4	1209.2	1208.9	1208.6
135°	1267.9	1270.7	1273.4	1274.5	1273.9	1273.4	1272.8	1272.3
137.5°	1327.8	1330.5	1333.2	1334.0	1333.1	1332.2	1331.3	1330.3
140°	1366.6	1369.1	1371.5	1372.0	1370.7	1369.3	1368.0	1366.6
142.5°	1402.4	1404.6	1406.9	1407.3	1405.9	1404.5	1403.3	1401.9
145°	1452.4	1454.3	1456.3	1456.6	1455.2	1453.8	1452.4	1451.1
147.5°	1496.1	1497.5	1498.9	1499.0	1497.9	1496.8	1495.6	1494.4
150°	1522.9	1524.6	1526.2	1526.3	1525.0	1523.6	1522.2	1520.9
152.5°	1547.4	1549.0	1550.7	1550.6	1548.8	1547.0	1545.2	1543.4
155°	1580.5	1582.1	1583.7	1583.5	1581.3	1579.2	1576.9	1574.8
157.5°	1608.3	1610.2	1612.1	1611.9	1609.8	1607.7	1605.5	1603.4
160°	1624.5	1626.2	1627.8	1627.7	1625.8	1623.8	1622.0	1620.1
162.5°	1639.7	1641.6	1643.4	1643.1	1640.8	1638.5	1636.2	1633.8
165°	1658.2	1660.1	1662.0	1662.0	1660.1	1658.2	1656.3	1654.3
167.5°	1673.6	1675.5	1677.4	1677.1	1674.7	1672.2	1669.8	1667.3
170°	1681.4	1683.3	1685.2	1685.0	1682.6	1680.1	1677.7	1675.2
172.5°	1687.3	1689.2	1691.1	1690.8	1688.4	1685.9	1683.5	1681.0
175°	1693.7	1695.6	1697.5	1697.1	1694.4	1691.6	1688.9	1686.2
177.5°	1694.4	1695.9	1697.5	1697.2	1695.2	1693.3	1691.3	1689.4
180°	1692.3	1692.3	1692.3	1692.3	1692.3	1692.3	1692.3	1692.3

(END OF REPORT)