

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: P331859-830

Luminaire Tested: **S122RDIW-S1005D1240U830-4F0-1E-UDD-F**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P331859-830
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-S1005D1240U830-4F0-1E-UDD-F
Description: DEFINE 2 DIRECT-INDIRECT WALL MOUNT LED LUMINAIRE
DOWNLIGHT 1005 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: 7956.3 lumens
Efficiency: N/A
Efficacy: 104.4 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: General Diffuse

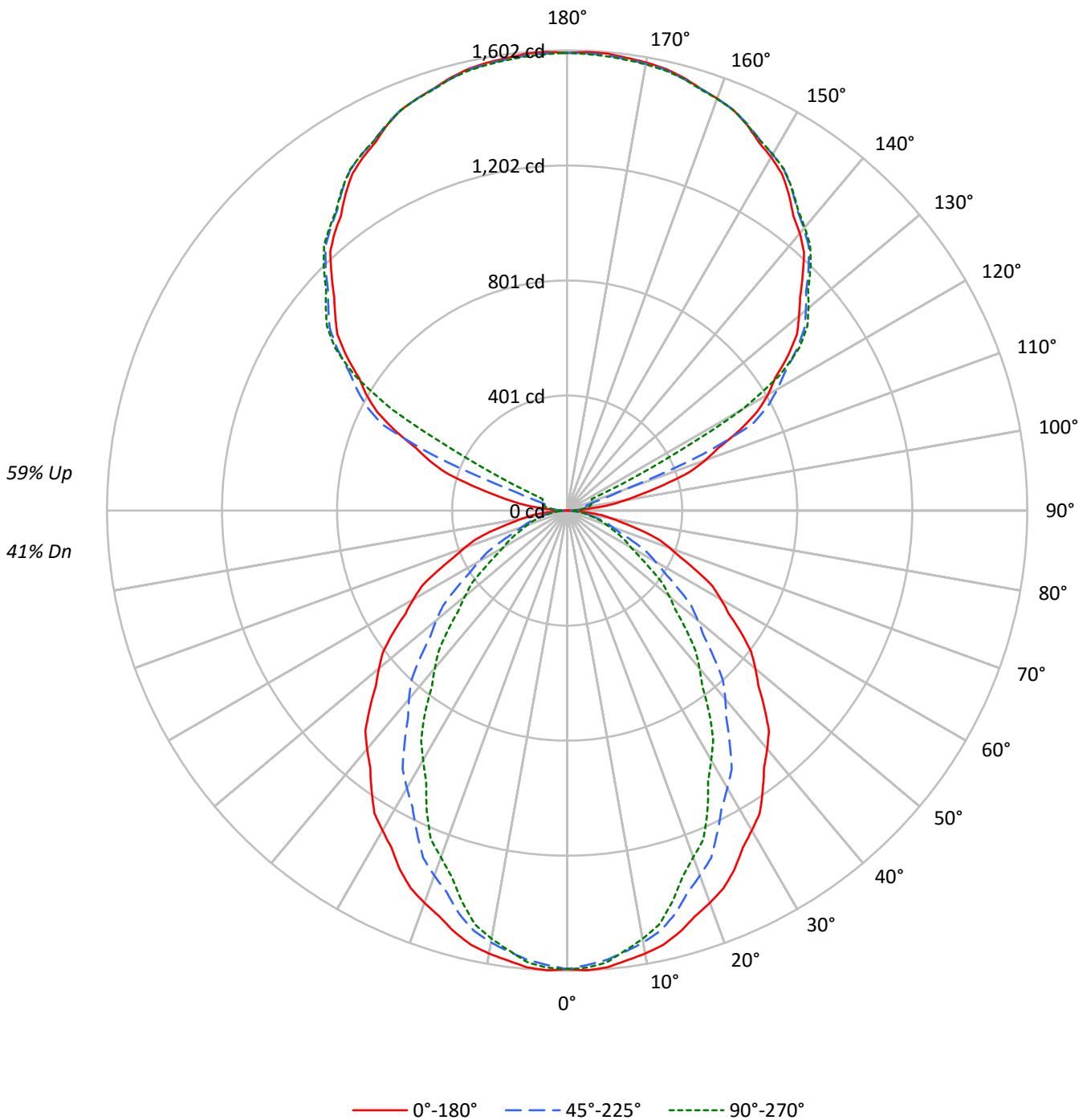
Input Watts (W): 76.2
Input Voltage (V): 120
Input Current (A_{in}): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



TEST NUMBER: P331859-830

CATALOG NUMBER: S122RDIW-S1005D1240U830-4F0-1E-UDD-F

Luminous Intensity Polar Plot





TEST NUMBER: P331859-830

CATALOG NUMBER: S122RDIW-S1005D1240U830-4F0-1E-UDD-F

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	105	105	105	105	96	96	96	96	79	79	79	63	63	63	48	48	48	41
1	96	92	88	85	88	84	81	78	69	67	65	56	54	53	43	42	41	36
2	88	81	75	70	80	74	69	65	61	58	55	49	47	45	38	37	35	30
3	80	71	64	59	73	65	59	55	54	50	46	44	41	38	34	32	31	26
4	74	63	56	50	67	58	52	47	48	44	40	39	36	33	31	29	27	23
5	68	57	49	43	62	52	45	40	44	38	35	36	32	29	28	26	24	20
6	63	51	43	37	57	47	40	35	39	34	30	32	28	26	26	23	21	18
7	58	46	38	33	53	42	36	31	36	31	27	29	26	23	24	21	19	16
8	54	42	34	29	49	39	32	27	33	28	24	27	23	20	22	19	17	14
9	50	38	31	26	46	35	29	25	30	25	21	25	21	18	20	17	15	13
10	47	35	28	23	43	33	26	22	28	23	19	23	19	17	19	16	14	12

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	25770	25770	25770
5°	25869	25449	25590
10°	25671	25032	24819
15°	25377	24289	23590
20°	24967	23230	22063
25°	24549	22026	20587
30°	23968	20789	18690
35°	23402	19446	17026
40°	22835	18054	15099
45°	22165	16493	13358
50°	21481	14913	11645
55°	20777	13216	10001
60°	19963	11428	8302
65°	19037	9605	7561
70°	17934	7912	6954
75°	16581	7211	6488
80°	14635	6453	5904
85°	11504	5076	5076



TEST NUMBER: P331859-830

CATALOG NUMBER: S122RDIW-S1005D1240U830-4F0-1E-UDD-F

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	149.4	1.9
10°-20°	410.2	5.2
20°-30°	576.1	7.2
30°-40°	628.2	7.9
40°-50°	577.6	7.3
50°-60°	453.6	5.7
60°-70°	295.8	3.7
70°-80°	152.5	1.9
80°-90°	43.5	0.5
90°-100°	53.1	0.7
100°-110°	194.9	2.4
110°-120°	521.0	6.5
120°-130°	860.1	10.8
130°-140°	914.7	11.5
140°-150°	850.1	10.7
150°-160°	683.5	8.6
160°-170°	440.5	5.5
170°-180°	151.6	1.9
0°-30°	1135.7	14.3
0°-40°	1763.9	22.2
0°-60°	2795.1	35.1
0°-90°	3286.8	41.3
90°-120°	769.1	9.7
90°-150°	3394.0	42.7
90°-180°	4670.0	58.7
0°-180°	7956.3	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1596	1596	1596	1596	1596	
5°	1596	1588	1570	1582	1579	151
15°	1518	1500	1453	1426	1411	427
25°	1378	1329	1236	1179	1156	633
35°	1187	1111	987	899	864	743
45°	971	871	722	623	585	749
55°	738	623	470	386	355	659
65°	498	381	251	205	198	494
75°	266	168	116	106	104	281
85°	62	33	27	27	27	73
90°	1	14	23	29	31	6
95°	75	39	45	50	50	92
105°	350	366	70	83	88	375
115°	663	683	711	203	94	653
125°	937	953	974	982	986	835
135°	1160	1178	1189	1200	1198	896
145°	1346	1346	1364	1371	1366	841
155°	1482	1472	1485	1491	1483	682
165°	1561	1555	1558	1565	1558	441
175°	1597	1589	1591	1598	1588	152
180°	1593	1593	1593	1593	1593	



TEST NUMBER: P331859-830

CATALOG NUMBER: S122RDIW-S1005D1240U830-4F0-1E-UDD-F

CANDELA DISTRIBUTION (FULL):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
0°	1596.1	1596.1	1596.1	1596.1	1596.1	1596.1	1596.1	1596.1	1596.1	1596.1	1596.1
2.5°	1601.9	1600.6	1599.3	1598.1	1596.8	1594.7	1591.9	1589.1	1586.3	1583.5	1586.0
5°	1596.1	1594.5	1592.9	1591.3	1589.7	1586.9	1582.6	1578.5	1574.3	1570.2	1573.0
7.5°	1579.7	1577.7	1575.7	1573.7	1571.7	1568.3	1563.4	1558.5	1553.7	1548.8	1549.6
10°	1565.8	1563.6	1561.3	1559.1	1556.8	1552.5	1546.1	1539.6	1533.2	1526.8	1525.9
12.5°	1548.5	1545.7	1542.9	1540.2	1537.5	1531.9	1523.7	1515.5	1507.3	1499.1	1497.3
15°	1518.2	1514.6	1511.1	1507.5	1504.0	1496.8	1485.9	1475.0	1464.1	1453.1	1447.1
17.5°	1480.8	1475.5	1470.1	1464.7	1459.3	1449.6	1435.6	1421.6	1407.6	1393.6	1386.4
20°	1453.1	1446.7	1440.3	1433.9	1427.5	1416.3	1400.1	1384.1	1368.1	1352.0	1344.0
22.5°	1423.1	1415.9	1408.7	1401.6	1394.3	1381.7	1363.6	1345.5	1327.4	1309.3	1298.9
25°	1378.0	1367.7	1357.4	1347.2	1336.9	1321.3	1300.0	1278.8	1257.6	1236.4	1223.3
27.5°	1323.7	1312.6	1301.4	1290.2	1279.0	1261.5	1237.7	1213.7	1189.9	1166.0	1150.7
30°	1285.6	1273.4	1261.2	1249.0	1236.8	1217.9	1192.1	1166.5	1140.9	1115.1	1098.7
32.5°	1248.6	1234.4	1220.1	1205.9	1191.6	1171.4	1145.2	1119.0	1092.8	1066.6	1047.9
35°	1187.3	1171.0	1154.6	1138.2	1121.9	1099.6	1071.3	1043.1	1014.8	986.6	966.4
37.5°	1126.1	1108.1	1090.1	1072.1	1054.2	1030.2	1000.0	970.0	939.8	909.7	887.5
40°	1083.4	1064.1	1044.8	1025.6	1006.4	981.1	950.0	918.9	887.7	856.6	833.8
42.5°	1039.4	1019.2	998.9	978.5	958.3	932.1	899.9	867.7	835.6	803.4	779.9
45°	970.7	949.1	927.7	906.2	884.7	857.1	823.3	789.7	755.9	722.3	699.5
47.5°	903.6	880.9	858.1	835.3	812.5	783.7	748.9	714.1	679.3	644.5	621.9
50°	855.2	832.4	809.5	786.7	763.9	734.9	699.6	664.3	629.0	593.7	571.6
52.5°	807.8	783.9	760.2	736.3	712.5	683.3	648.8	614.3	579.7	545.2	523.8
55°	738.1	713.1	688.1	663.0	638.0	608.1	573.4	538.8	504.2	469.5	450.2
57.5°	666.8	641.1	615.4	589.7	564.0	534.5	501.2	467.9	434.6	401.2	383.6
60°	618.2	592.6	566.8	541.2	515.5	486.2	453.1	420.0	386.9	353.9	337.5
62.5°	570.9	545.2	519.5	493.8	468.2	439.5	408.0	376.5	345.0	313.5	297.8
65°	498.3	472.3	446.4	420.4	394.4	366.9	338.0	309.2	280.2	251.4	240.4
67.5°	428.4	402.7	376.8	351.0	325.2	299.3	273.3	247.3	221.3	195.3	190.3
70°	379.9	354.9	329.8	304.8	279.7	256.2	234.0	211.9	189.7	167.6	164.4
72.5°	333.7	309.6	285.7	261.6	237.6	216.7	199.0	181.2	163.3	145.6	142.9
75°	265.8	243.3	220.8	198.4	175.9	159.2	148.3	137.4	126.5	115.6	113.3
77.5°	199.1	179.4	159.7	140.0	120.2	107.7	102.5	97.2	91.9	86.7	85.4
80°	157.4	141.1	124.7	108.3	92.0	82.2	79.0	75.8	72.6	69.4	68.1
82.5°	119.3	106.5	93.8	81.0	68.2	60.7	58.5	56.4	54.2	52.0	51.3
85°	62.1	55.3	48.6	41.8	35.2	31.3	30.3	29.4	28.4	27.4	27.4
87.5°	18.8	17.2	15.7	14.2	12.7	12.3	12.6	13.0	13.5	13.9	13.9
90°	1.1	4.0	6.8	9.6	12.4	14.9	16.9	18.9	21.0	23.1	24.3
92.5°	23.3	23.0	22.8	22.5	22.2	22.6	23.7	24.7	25.7	26.8	27.4
95°	74.9	66.4	58.1	49.6	41.1	37.8	39.6	41.4	43.2	45.0	46.3
97.5°	148.7	124.9	101.0	77.3	53.4	43.5	47.7	51.8	56.1	60.2	61.2
100°	204.1	169.0	133.8	98.8	63.7	48.3	52.7	57.0	61.4	65.7	67.8
102.5°	264.9	257.5	250.1	242.7	235.3	213.3	176.8	140.4	104.0	67.6	70.2
105°	350.5	358.2	365.9	373.5	381.3	350.2	280.2	210.2	140.3	70.3	73.1
107.5°	448.1	454.2	460.4	466.7	472.9	434.0	350.2	266.3	182.4	98.5	95.6
110°	510.8	516.1	521.5	526.9	532.3	497.9	424.0	349.9	275.8	201.8	176.2



TEST NUMBER: P331859-830

CATALOG NUMBER: S122RDIW-S1005D1240U830-4F0-1E-UDD-F

CANDELA DISTRIBUTION (continued):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
112.5°	569.8	574.6	579.3	584.1	588.9	582.1	563.8	545.5	527.3	508.9	415.5
115°	663.0	667.3	671.7	676.0	680.4	685.8	692.2	698.6	705.0	711.4	592.8
117.5°	746.2	751.1	755.9	760.8	765.7	770.3	774.7	779.1	783.5	788.0	759.2
120°	807.1	811.0	814.7	818.6	822.5	826.7	831.3	835.9	840.6	845.1	848.2
122.5°	858.8	862.8	866.9	870.9	875.0	879.5	884.5	889.5	894.6	899.6	901.4
125°	937.4	940.7	944.1	947.3	950.6	954.8	959.7	964.5	969.4	974.3	976.1
127.5°	1008.6	1012.3	1016.0	1019.7	1023.4	1027.1	1030.7	1034.3	1037.9	1041.6	1044.2
130°	1053.9	1057.9	1062.1	1066.1	1070.3	1073.7	1076.5	1079.3	1082.1	1085.0	1087.8
132.5°	1099.9	1103.4	1106.9	1110.4	1113.9	1117.0	1119.8	1122.7	1125.5	1128.3	1130.7
135°	1159.9	1163.9	1168.1	1172.1	1176.3	1179.5	1181.8	1184.1	1186.4	1188.7	1191.3
137.5°	1220.5	1223.4	1226.2	1229.2	1232.0	1234.7	1237.4	1240.0	1242.6	1245.2	1247.7
140°	1260.2	1262.3	1264.3	1266.3	1268.4	1270.8	1273.7	1276.5	1279.3	1282.1	1284.4
142.5°	1293.5	1295.2	1297.1	1298.9	1300.8	1303.3	1306.6	1309.8	1313.0	1316.3	1318.3
145°	1345.5	1345.3	1345.0	1344.7	1344.5	1346.5	1350.9	1355.3	1359.6	1364.0	1365.7
147.5°	1390.9	1390.0	1389.0	1388.0	1387.0	1388.7	1393.0	1397.3	1401.7	1405.9	1407.3
150°	1420.5	1418.7	1416.9	1415.0	1413.2	1414.5	1418.5	1422.7	1426.7	1430.9	1432.4
152.5°	1445.4	1443.4	1441.3	1439.4	1437.4	1438.3	1442.2	1446.1	1450.0	1453.9	1455.5
155°	1481.6	1479.2	1477.0	1474.6	1472.3	1472.7	1475.8	1478.8	1482.0	1485.1	1486.6
157.5°	1510.0	1508.0	1506.0	1504.1	1502.1	1502.2	1504.4	1506.6	1508.7	1510.9	1512.6
160°	1526.5	1525.0	1523.4	1521.9	1520.4	1520.4	1521.9	1523.4	1525.0	1526.5	1528.0
162.5°	1541.3	1539.7	1538.2	1536.7	1535.1	1535.0	1536.3	1537.7	1539.1	1540.4	1542.1
165°	1561.1	1559.6	1558.0	1556.5	1555.0	1554.6	1555.4	1556.1	1556.9	1557.6	1559.4
167.5°	1575.9	1574.3	1572.8	1571.3	1569.7	1569.3	1570.1	1570.7	1571.5	1572.2	1574.0
170°	1584.2	1582.6	1581.1	1579.6	1578.0	1577.5	1578.0	1578.6	1579.0	1579.6	1581.4
172.5°	1589.7	1588.2	1586.7	1585.1	1583.6	1583.1	1583.6	1584.0	1584.6	1585.1	1586.9
175°	1596.9	1595.1	1593.3	1591.5	1589.7	1589.0	1589.6	1590.1	1590.6	1591.1	1592.9
177.5°	1598.0	1596.6	1595.2	1593.7	1592.2	1591.7	1591.9	1592.0	1592.2	1592.5	1593.9
180°	1593.4	1593.4	1593.4	1593.4	1593.4	1593.4	1593.4	1593.4	1593.4	1593.4	1593.4



TEST NUMBER: P331859-830

CATALOG NUMBER: S122RDIW-S1005D1240U830-4F0-1E-UDD-F

CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
0°	1596.1	1596.1	1596.1	1596.1	1596.1	1596.1	1596.1	1596.1
2.5°	1588.6	1591.1	1593.7	1594.7	1594.2	1593.7	1593.2	1592.7
5°	1575.9	1578.9	1581.7	1582.6	1581.7	1580.7	1579.8	1578.9
7.5°	1550.4	1551.2	1552.1	1551.7	1550.0	1548.3	1546.7	1545.0
10°	1524.8	1523.9	1523.0	1521.5	1519.6	1517.7	1515.7	1513.8
12.5°	1495.6	1493.8	1492.1	1489.7	1486.5	1483.3	1480.1	1476.9
15°	1441.0	1434.8	1428.7	1424.1	1420.9	1417.7	1414.5	1411.3
17.5°	1379.1	1371.9	1364.6	1358.2	1352.7	1347.2	1341.6	1336.1
20°	1336.0	1327.9	1319.9	1312.4	1305.3	1298.3	1291.2	1284.1
22.5°	1288.6	1278.3	1267.9	1260.1	1254.9	1249.6	1244.3	1239.1
25°	1210.1	1197.0	1183.8	1174.9	1170.0	1165.2	1160.4	1155.6
27.5°	1135.3	1119.9	1104.6	1093.1	1085.4	1077.8	1070.2	1062.5
30°	1082.4	1066.0	1049.6	1037.2	1028.5	1019.8	1011.2	1002.5
32.5°	1029.3	1010.6	991.8	978.5	970.3	962.1	953.9	945.8
35°	946.1	926.0	905.7	892.0	885.0	877.9	870.8	863.8
37.5°	865.2	842.9	820.6	805.4	797.4	789.3	781.2	773.1
40°	811.0	788.2	765.4	749.9	741.5	733.1	724.8	716.4
42.5°	756.3	732.7	709.2	693.3	685.2	677.1	669.1	661.0
45°	676.7	653.8	631.0	615.9	608.1	600.4	592.7	585.0
47.5°	599.2	576.6	553.8	539.0	532.1	525.1	518.0	511.0
50°	549.4	527.3	505.1	490.6	483.9	477.1	470.4	463.6
52.5°	502.4	481.0	459.7	445.8	439.6	433.4	427.2	420.9
55°	430.9	411.7	392.4	379.8	373.6	367.5	361.5	355.3
57.5°	366.0	348.3	330.6	319.2	314.1	309.0	303.9	298.7
60°	321.1	304.8	288.4	277.7	272.5	267.4	262.2	257.1
62.5°	282.3	266.6	251.1	241.7	238.7	235.5	232.4	229.4
65°	229.5	218.6	207.6	201.7	200.8	199.8	198.9	197.9
67.5°	185.3	180.3	175.2	172.2	171.3	170.2	169.2	168.1
70°	161.2	158.0	154.8	152.5	151.2	149.9	148.6	147.3
72.5°	140.3	137.5	134.8	133.1	132.3	131.6	130.7	130.0
75°	111.0	108.9	106.6	105.3	105.0	104.6	104.3	104.0
77.5°	84.1	82.8	81.5	80.6	80.1	79.6	79.1	78.6
80°	66.7	65.5	64.2	63.5	63.5	63.5	63.5	63.5
82.5°	50.4	49.7	48.9	48.5	48.5	48.5	48.5	48.5
85°	27.4	27.4	27.4	27.4	27.4	27.4	27.4	27.4
87.5°	13.9	13.9	13.9	13.9	14.0	14.1	14.2	14.3
90°	25.6	26.9	28.2	29.1	29.6	30.1	30.6	31.1
92.5°	28.1	28.7	29.4	29.9	30.2	30.5	30.8	31.1
95°	47.5	48.8	50.0	50.6	50.3	50.0	49.9	49.6
97.5°	62.2	63.2	64.3	64.9	65.2	65.6	65.9	66.2
100°	69.8	71.8	73.9	75.2	75.7	76.3	76.7	77.3
102.5°	72.9	75.6	78.2	79.9	80.6	81.3	82.1	82.8
105°	76.0	78.8	81.6	83.5	84.5	85.6	86.6	87.7
107.5°	92.7	89.8	87.0	86.1	87.1	88.1	89.2	90.2
110°	150.5	124.9	99.2	87.0	88.0	89.1	90.1	91.0



TEST NUMBER: P331859-830

CATALOG NUMBER: S122RDIW-S1005D1240U830-4F0-1E-UDD-F

CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
112.5°	322.0	228.6	135.1	88.7	89.5	90.4	91.1	92.0
115°	474.1	355.5	236.9	168.3	149.9	131.5	113.0	94.5
117.5°	730.6	701.8	673.2	628.5	567.9	507.3	446.7	386.0
120°	851.3	854.3	857.4	841.7	807.1	772.5	737.9	703.3
122.5°	903.2	905.1	906.9	904.5	897.8	891.1	884.4	877.6
125°	977.9	979.7	981.5	982.7	983.4	984.3	985.1	985.8
127.5°	1046.8	1049.4	1052.1	1053.5	1053.6	1053.8	1053.9	1054.0
130°	1090.6	1093.4	1096.2	1097.5	1097.2	1097.0	1096.7	1096.5
132.5°	1133.1	1135.5	1137.9	1139.0	1138.8	1138.5	1138.2	1138.0
135°	1193.8	1196.4	1199.0	1200.0	1199.5	1199.0	1198.4	1198.0
137.5°	1250.2	1252.7	1255.3	1256.0	1255.2	1254.3	1253.5	1252.5
140°	1286.8	1289.0	1291.4	1291.8	1290.5	1289.3	1288.0	1286.8
142.5°	1320.4	1322.6	1324.6	1325.0	1323.8	1322.5	1321.2	1319.9
145°	1367.5	1369.3	1371.1	1371.4	1370.1	1368.9	1367.5	1366.3
147.5°	1408.6	1409.9	1411.3	1411.4	1410.3	1409.2	1408.2	1407.1
150°	1433.9	1435.5	1437.0	1437.1	1435.9	1434.5	1433.2	1432.0
152.5°	1457.0	1458.5	1460.1	1460.0	1458.3	1456.6	1454.9	1453.2
155°	1488.1	1489.7	1491.2	1490.9	1488.8	1486.9	1484.8	1482.7
157.5°	1514.4	1516.1	1517.9	1517.7	1515.7	1513.7	1511.7	1509.7
160°	1529.7	1531.2	1532.7	1532.6	1530.8	1529.0	1527.2	1525.4
162.5°	1543.9	1545.6	1547.4	1547.1	1544.9	1542.7	1540.5	1538.3
165°	1561.2	1563.0	1564.8	1564.8	1563.0	1561.2	1559.4	1557.6
167.5°	1575.7	1577.5	1579.3	1579.1	1576.8	1574.5	1572.2	1569.9
170°	1583.2	1585.0	1586.8	1586.5	1584.2	1581.9	1579.6	1577.3
172.5°	1588.7	1590.4	1592.2	1592.0	1589.7	1587.4	1585.1	1582.8
175°	1594.7	1596.5	1598.3	1597.9	1595.3	1592.8	1590.2	1587.6
177.5°	1595.3	1596.8	1598.3	1598.0	1596.2	1594.3	1592.5	1590.6
180°	1593.4	1593.4	1593.4	1593.4	1593.4	1593.4	1593.4	1593.4

(END OF REPORT)