

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: P331859-840

Luminaire Tested: **S122RDIW-S1005D1240U840-4F0-1E-UDD-F**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P331859-840
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-S1005D1240U840-4F0-1E-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: 8524.6 lumens
Efficiency: N/A
Efficacy: 111.9 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

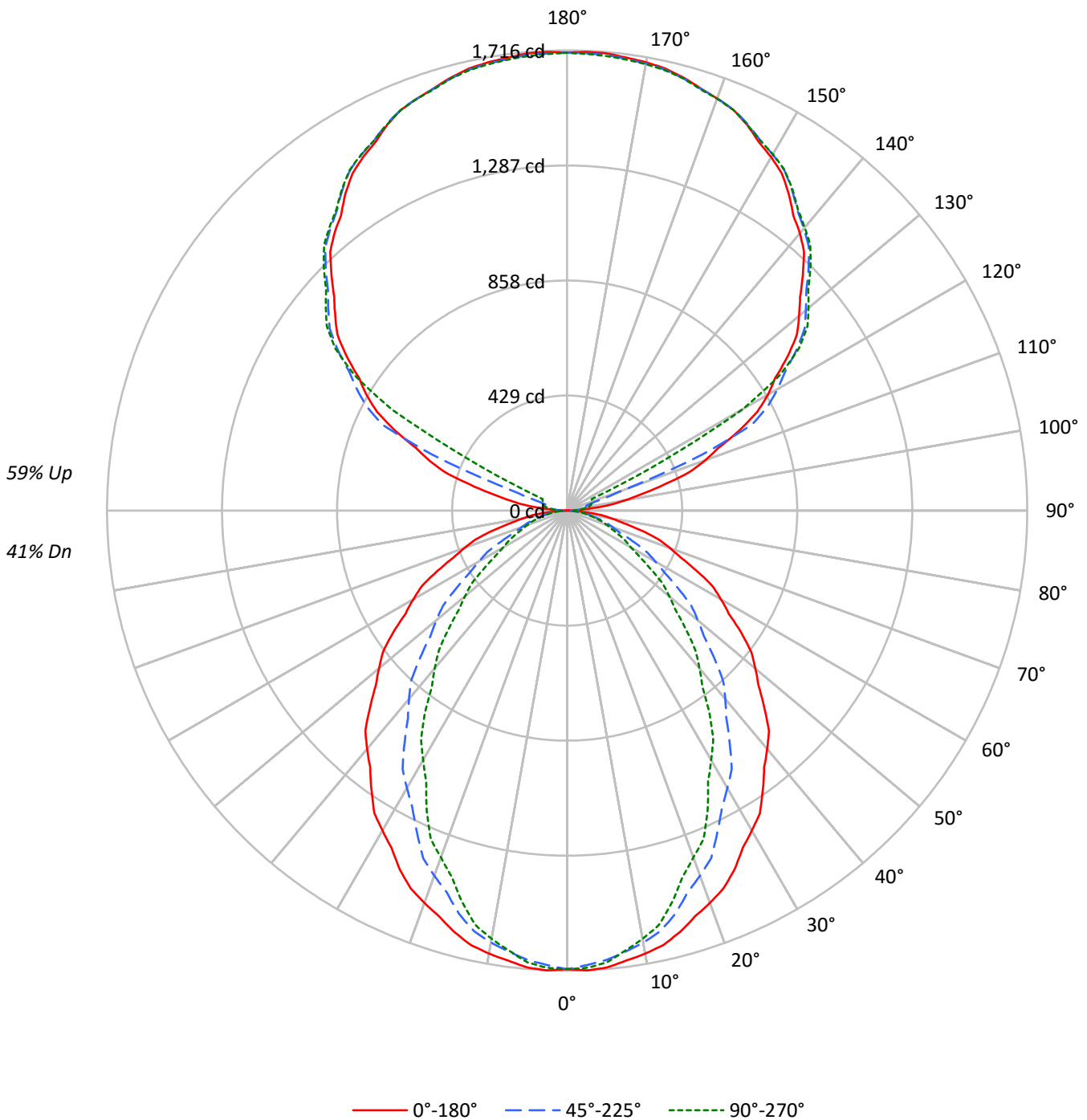
Input Watts (W): 76.2
Input Voltage (V): 120
Input Current (A_{in}): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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	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°	27611	27611	27611
5°	27716	27266	27417
10°	27506	26820	26591
15°	27189	26024	25275
20°	26751	24890	23639
25°	26302	23599	22057
30°	25682	22275	20025
35°	25074	20834	18242
40°	24464	19344	16179
45°	23749	17671	14312
50°	23016	15978	12479
55°	22261	14159	10716
60°	21390	12245	8896
65°	20397	10288	8103
70°	19218	8478	7449
75°	17767	7723	6949
80°	15676	6908	6332
85°	12338	5446	5446



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	160.1	1.9
10°-20°	439.5	5.2
20°-30°	617.2	7.2
30°-40°	673.0	7.9
40°-50°	618.8	7.3
50°-60°	486.0	5.7
60°-70°	316.9	3.7
70°-80°	163.4	1.9
80°-90°	46.6	0.5
90°-100°	56.9	0.7
100°-110°	208.8	2.4
110°-120°	558.2	6.5
120°-130°	921.5	10.8
130°-140°	980.0	11.5
140°-150°	910.9	10.7
150°-160°	732.3	8.6
160°-170°	471.9	5.5
170°-180°	162.4	1.9
0°-30°	1216.8	14.3
0°-40°	1889.8	22.2
0°-60°	2994.7	35.1
0°-90°	3521.6	41.3
90°-120°	824.0	9.7
90°-150°	3636.4	42.7
90°-180°	5003.0	58.7
0°-180°	8524.6	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1710	1710	1710	1710	1710	
5°	1710	1702	1682	1695	1692	162
15°	1627	1608	1557	1528	1512	458
25°	1476	1424	1325	1264	1238	679
35°	1272	1190	1057	963	926	796
45°	1040	933	774	668	627	803
55°	791	668	503	414	381	706
65°	534	408	269	219	212	529
75°	285	180	124	114	111	301
85°	67	36	29	29	29	78
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°	1710.1	1710.1	1710.1	1710.1	1710.1	1710.1	1710.1	1710.1	1710.1	1710.1	1710.1
2.5°	1716.4	1715.0	1713.5	1712.2	1710.8	1708.6	1705.6	1702.6	1699.6	1696.6	1699.3
5°	1710.1	1708.4	1706.7	1705.0	1703.2	1700.2	1695.7	1691.2	1686.8	1682.3	1685.4
7.5°	1692.5	1690.4	1688.3	1686.1	1683.9	1680.3	1675.1	1669.8	1664.7	1659.4	1660.3
10°	1677.7	1675.3	1672.8	1670.4	1668.0	1663.3	1656.5	1649.6	1642.7	1635.9	1634.9
12.5°	1659.1	1656.1	1653.1	1650.2	1647.3	1641.3	1632.5	1623.8	1615.0	1606.2	1604.3
15°	1626.6	1622.8	1619.0	1615.2	1611.4	1603.7	1592.1	1580.3	1568.6	1556.9	1550.4
17.5°	1586.6	1580.8	1575.1	1569.3	1563.6	1553.2	1538.1	1523.2	1508.1	1493.2	1485.4
20°	1556.9	1550.0	1543.2	1536.3	1529.4	1517.4	1500.2	1483.0	1465.8	1448.6	1440.0
22.5°	1524.7	1517.0	1509.3	1501.7	1493.9	1480.4	1461.0	1441.6	1422.2	1402.8	1391.7
25°	1476.4	1465.4	1454.4	1443.4	1432.4	1415.6	1392.9	1370.2	1347.5	1324.7	1310.7
27.5°	1418.3	1406.3	1394.3	1382.4	1370.4	1351.6	1326.1	1300.4	1274.9	1249.3	1232.8
30°	1377.5	1364.3	1351.3	1338.2	1325.1	1304.8	1277.3	1249.8	1222.3	1194.8	1177.2
32.5°	1337.8	1322.5	1307.3	1292.0	1276.7	1255.1	1227.0	1198.9	1170.8	1142.8	1122.8
35°	1272.1	1254.7	1237.1	1219.5	1202.0	1178.1	1147.8	1117.6	1087.3	1057.0	1035.4
37.5°	1206.6	1187.3	1168.0	1148.7	1129.5	1103.8	1071.5	1039.3	1006.9	974.7	950.9
40°	1160.7	1140.1	1119.4	1098.8	1078.2	1051.2	1017.8	984.5	951.1	917.8	893.3
42.5°	1113.7	1092.0	1070.3	1048.4	1026.7	998.7	964.2	929.7	895.2	860.8	835.6
45°	1040.1	1016.9	993.9	970.9	947.9	918.3	882.1	846.1	809.9	773.9	749.4
47.5°	968.2	943.8	919.4	894.9	870.5	839.7	802.4	765.1	727.8	690.5	666.3
50°	916.3	891.8	867.4	842.9	818.5	787.4	749.6	711.8	673.9	636.1	612.4
52.5°	865.5	839.9	814.5	788.9	763.4	732.2	695.1	658.1	621.1	584.1	561.2
55°	790.8	764.1	737.2	710.3	683.6	651.6	614.4	577.2	540.2	503.0	482.3
57.5°	714.4	686.9	659.3	631.9	604.3	572.7	537.0	501.3	465.6	429.9	411.0
60°	662.4	634.9	607.3	579.9	552.3	520.9	485.4	450.0	414.5	379.2	361.6
62.5°	611.7	584.1	556.6	529.1	501.6	470.9	437.2	403.3	369.6	335.9	319.1
65°	533.9	506.0	478.3	450.4	422.5	393.1	362.1	331.2	300.2	269.3	257.6
67.5°	459.0	431.4	403.7	376.1	348.4	320.6	292.9	265.0	237.1	209.2	203.9
70°	407.1	380.2	353.4	326.6	299.7	274.5	250.7	227.0	203.3	179.6	176.1
72.5°	357.5	331.7	306.1	280.3	254.6	232.2	213.2	194.1	175.0	156.0	153.1
75°	284.8	260.6	236.6	212.6	188.4	170.6	158.9	147.2	135.5	123.8	121.4
77.5°	213.3	192.2	171.1	150.0	128.8	115.4	109.8	104.1	98.5	92.9	91.5
80°	168.6	151.2	133.6	116.0	98.6	88.1	84.6	81.2	77.8	74.3	72.9
82.5°	127.8	114.1	100.5	86.7	73.1	65.0	62.7	60.4	58.1	55.7	54.9
85°	66.6	59.3	52.1	44.8	37.7	33.5	32.5	31.5	30.4	29.4	29.4
87.5°	20.1	18.5	16.9	15.2	13.6	13.1	13.5	13.9	14.4	14.8	14.8
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°	1710.1	1710.1	1710.1	1710.1	1710.1	1710.1	1710.1	1710.1
2.5°	1702.0	1704.8	1707.6	1708.6	1708.1	1707.6	1707.0	1706.5
5°	1688.5	1691.6	1694.7	1695.7	1694.7	1693.6	1692.6	1691.6
7.5°	1661.1	1662.0	1662.9	1662.5	1660.7	1658.9	1657.2	1655.4
10°	1633.8	1632.7	1631.7	1630.2	1628.1	1626.1	1624.0	1621.9
12.5°	1602.5	1600.5	1598.7	1596.1	1592.7	1589.2	1585.8	1582.4
15°	1543.9	1537.3	1530.8	1525.8	1522.4	1518.9	1515.5	1512.1
17.5°	1477.6	1469.9	1462.1	1455.2	1449.4	1443.4	1437.4	1431.6
20°	1431.4	1422.8	1414.2	1406.1	1398.6	1391.0	1383.4	1375.8
22.5°	1380.7	1369.6	1358.5	1350.1	1344.5	1338.9	1333.2	1327.6
25°	1296.6	1282.5	1268.4	1258.8	1253.5	1248.4	1243.2	1238.1
27.5°	1216.4	1199.9	1183.5	1171.1	1163.0	1154.8	1146.6	1138.4
30°	1159.7	1142.2	1124.6	1111.3	1102.0	1092.7	1083.4	1074.1
32.5°	1102.8	1082.8	1062.7	1048.3	1039.7	1030.9	1022.1	1013.4
35°	1013.7	992.1	970.4	955.7	948.2	940.6	933.0	925.5
37.5°	927.0	903.1	879.2	862.9	854.3	845.7	837.0	828.3
40°	868.9	844.4	820.1	803.4	794.5	785.5	776.6	767.6
42.5°	810.3	785.1	759.8	742.9	734.2	725.5	716.9	708.2
45°	725.0	700.5	676.1	659.8	651.6	643.3	635.0	626.8
47.5°	642.0	617.7	593.4	577.5	570.1	562.6	555.0	547.5
50°	588.7	564.9	541.2	525.6	518.5	511.2	504.0	496.8
52.5°	538.3	515.3	492.5	477.7	471.0	464.3	457.7	451.0
55°	461.7	441.1	420.4	406.9	400.3	393.7	387.3	380.7
57.5°	392.1	373.1	354.3	342.0	336.6	331.0	325.6	320.0
60°	344.1	326.6	309.0	297.5	292.0	286.5	280.9	275.5
62.5°	302.5	285.7	269.0	258.9	255.7	252.4	249.0	245.8
65°	245.9	234.2	222.5	216.1	215.1	214.1	213.1	212.1
67.5°	198.5	193.2	187.7	184.5	183.5	182.4	181.3	180.2
70°	172.7	169.3	165.8	163.4	162.0	160.6	159.3	157.8
72.5°	150.3	147.3	144.4	142.6	141.8	141.0	140.1	139.3
75°	119.0	116.6	114.2	112.8	112.5	112.1	111.8	111.4
77.5°	90.1	88.8	87.4	86.3	85.8	85.3	84.7	84.2
80°	71.5	70.2	68.8	68.1	68.1	68.1	68.1	68.1
82.5°	54.0	53.2	52.4	52.0	52.0	52.0	52.0	52.0
85°	29.4	29.4	29.4	29.4	29.4	29.4	29.4	29.4
87.5°	14.8	14.8	14.8	14.9	15.0	15.1	15.2	15.3
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: P331859-840

CATALOG NUMBER: S122RDIW-S1005D1240U840-4F0-1E-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)