

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: P331864-840

Luminaire Tested: **S122RDIW-S1005D1440U840-4F0-1E-UDD-F1**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P331864-840
REPORT IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-1807-864-8,
Test Lab: INNOVATION CENTER
Issue Date: 3/3/2020
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: NEO-RAY
Catalog Number: S122RDIW-S1005D1440U840-4F0-1E-UDD-F1
Description: DEFINE 2 DIRECT-INDIRECT WALL MOUNT LED LUMINAIRE
DOWNLIGHT 1005 LUMENS PER FOOT, FLUSH SATIN WHITE DIFFUSER, REGRESSED
HOUSING
UPLIGHT 1440 LUMENS PER FOOT, FLUSH SATIN WHITE DIFFUSER
Light Source: -
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 8569.1 lumens
Efficiency: N/A
Efficacy: 103.4 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

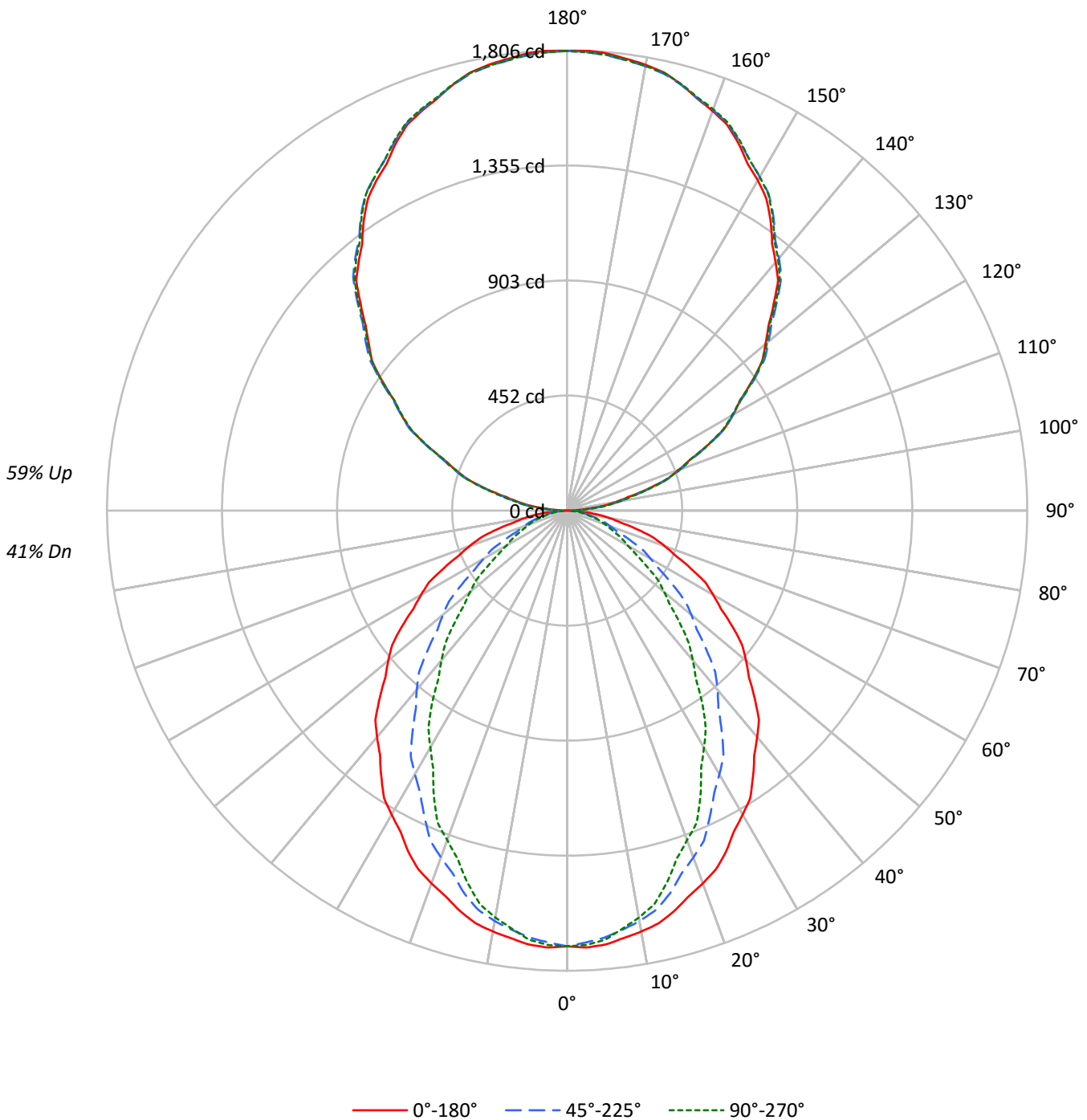
Input Watts (W): 82.9
Input Voltage (V): 120
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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Luminous Intensity Polar Plot





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COEFFICIENT OF UTILIZATION - ZONAL CAVITY METHOD:

RF	20									20									20									20										
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	50	30	10	0														
RCR																																						
0	105	105	105	105	96	96	96	96	78	78	78	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	35																				
2	88	81	75	70	80	74	69	65	61	58	54	49	47	45	38	37	35	30																				
3	80	71	64	59	73	65	59	55	54	50	46	44	41	38	34	32	30	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	43	38	34	35	32	29	28	25	23	20																				
6	62	51	43	37	57	47	40	35	39	34	30	32	28	25	26	23	21	18																				
7	58	46	38	33	53	42	36	31	36	30	27	29	25	23	23	21	19	16																				
8	54	42	34	29	49	39	32	27	33	27	24	27	23	20	22	19	17	14																				
9	50	38	31	26	46	35	29	24	30	25	21	25	21	18	20	17	15	13																				
10	47	35	28	23	43	32	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	5.1
20°-30°	617.2	7.2
30°-40°	673.0	7.9
40°-50°	618.8	7.2
50°-60°	486.0	5.7
60°-70°	316.9	3.7
70°-80°	163.4	1.9
80°-90°	49.6	0.6
90°-100°	114.3	1.3
100°-110°	355.0	4.1
110°-120°	606.9	7.1
120°-130°	798.1	9.3
130°-140°	895.8	10.5
140°-150°	878.3	10.2
150°-160°	736.7	8.6
160°-170°	488.6	5.7
170°-180°	170.8	2.0
0°-30°	1216.8	14.2
0°-40°	1889.8	22.1
0°-60°	2994.7	34.9
0°-90°	3524.6	41.1
90°-120°	1076.2	12.6
90°-150°	3648.4	42.6
90°-180°	5045.0	58.9
0°-180°	8569.1	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°	2	21	53	50	52	7
95°	79	94	98	97	94	91
105°	327	332	335	338	338	346
115°	609	617	615	613	609	602
125°	886	899	895	891	889	791
135°	1146	1162	1166	1165	1160	885
145°	1392	1402	1411	1412	1407	869
155°	1591	1596	1600	1607	1603	732
165°	1731	1730	1730	1739	1732	488
175°	1801	1797	1793	1803	1795	171
180°	1804	1804	1804	1804	1804	



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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	18.7	17.4	16.0	14.5	14.6	16.1	17.6	19.1	20.6	20.2
90°	1.5	5.6	9.6	13.7	17.8	23.5	31.0	38.4	45.8	53.3	52.6
92.5°	27.1	30.1	33.0	36.1	39.0	41.4	43.1	44.9	46.7	48.4	48.6
95°	79.2	82.5	85.9	89.3	92.7	94.7	95.4	96.0	96.7	97.5	97.5
97.5°	144.6	147.6	150.6	153.6	156.5	158.6	160.0	161.3	162.5	163.8	163.8
100°	193.4	196.0	198.7	201.5	204.2	206.0	207.0	208.0	209.0	210.1	210.1
102.5°	244.5	246.7	248.8	251.0	253.2	254.9	256.2	257.4	258.7	260.0	260.3
105°	327.3	328.3	329.3	330.3	331.3	332.2	333.0	333.6	334.3	335.0	335.6
107.5°	410.7	412.2	413.7	415.3	416.7	417.5	417.5	417.5	417.5	417.5	417.7
110°	464.3	466.4	468.4	470.4	472.4	473.5	473.5	473.5	473.5	473.5	473.5



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CANDELA DISTRIBUTION (continued):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
112.5°	522.8	524.8	526.8	528.9	530.9	531.8	531.5	531.3	531.0	530.7	529.9
115°	608.9	611.0	613.0	615.1	617.1	617.7	617.1	616.4	615.7	615.1	614.7
117.5°	694.9	697.5	700.2	703.0	705.7	706.1	704.2	702.3	700.3	698.5	697.7
120°	752.0	754.8	757.5	760.2	763.0	763.0	760.2	757.5	754.8	752.0	752.0
122.5°	804.5	807.7	810.9	814.2	817.5	818.1	816.3	814.4	812.4	810.5	809.7
125°	886.1	889.1	892.1	895.1	898.3	899.3	898.3	897.3	896.3	895.1	894.1
127.5°	965.5	969.4	973.2	977.1	981.0	982.3	981.1	979.9	978.7	977.4	976.1
130°	1015.4	1019.9	1024.3	1028.6	1033.1	1034.9	1034.2	1033.6	1032.9	1032.2	1031.6
132.5°	1071.5	1075.1	1078.6	1082.3	1085.8	1087.7	1087.8	1087.9	1088.1	1088.2	1086.7
135°	1146.4	1150.1	1153.9	1157.5	1161.2	1163.5	1164.2	1164.9	1165.5	1166.2	1165.9
137.5°	1225.3	1228.3	1231.3	1234.4	1237.4	1239.4	1240.3	1241.1	1242.0	1242.9	1242.6
140°	1272.7	1275.8	1278.9	1281.9	1285.0	1287.3	1289.0	1290.7	1292.4	1294.0	1294.0
142.5°	1321.5	1324.5	1327.6	1330.6	1333.6	1335.7	1336.9	1338.1	1339.2	1340.4	1340.6
145°	1391.5	1393.9	1396.2	1398.6	1401.0	1403.2	1405.2	1407.2	1409.3	1411.3	1411.6
147.5°	1453.9	1456.7	1459.6	1462.5	1465.3	1467.4	1468.7	1470.1	1471.5	1472.8	1473.6
150°	1496.5	1498.5	1500.7	1502.7	1504.7	1506.3	1507.7	1509.0	1510.5	1511.8	1512.8
152.5°	1534.3	1536.3	1538.3	1540.3	1542.5	1544.3	1545.9	1547.5	1549.1	1550.7	1552.1
155°	1590.9	1592.0	1593.0	1594.0	1595.0	1596.0	1597.0	1598.0	1599.0	1600.0	1601.7
157.5°	1639.3	1640.0	1640.7	1641.4	1642.0	1642.7	1643.4	1644.0	1644.6	1645.2	1647.4
160°	1668.6	1669.3	1669.9	1670.6	1671.3	1671.8	1672.1	1672.4	1672.8	1673.1	1675.2
162.5°	1695.4	1695.6	1695.7	1695.8	1696.0	1696.2	1696.5	1696.9	1697.2	1697.5	1699.8
165°	1731.0	1730.7	1730.3	1730.0	1729.7	1729.5	1729.5	1729.5	1729.5	1729.5	1731.8
167.5°	1760.8	1759.8	1758.8	1757.8	1756.8	1756.3	1756.2	1756.2	1756.1	1756.0	1758.4
170°	1776.7	1775.6	1774.6	1773.6	1772.6	1771.9	1771.6	1771.3	1770.9	1770.6	1772.9
172.5°	1787.7	1786.7	1785.6	1784.6	1783.6	1782.9	1782.6	1782.2	1781.9	1781.5	1783.9
175°	1801.0	1800.0	1799.0	1798.0	1797.0	1796.1	1795.4	1794.7	1794.1	1793.4	1795.8
177.5°	1806.5	1805.7	1804.9	1804.1	1803.3	1802.6	1802.0	1801.5	1801.0	1800.4	1802.0
180°	1804.1	1804.1	1804.1	1804.1	1804.1	1804.1	1804.1	1804.1	1804.1	1804.1	1804.1



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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°	19.7	19.3	18.9	18.8	18.8	18.9	19.0	19.0
90°	51.9	51.3	50.6	50.4	50.8	51.1	51.4	51.8
92.5°	48.7	48.8	49.0	49.1	49.1	49.2	49.3	49.3
95°	97.5	97.5	97.5	97.0	96.4	95.7	95.0	94.4
97.5°	163.8	163.8	163.8	163.8	163.7	163.6	163.6	163.5
100°	210.1	210.1	210.1	210.0	209.5	209.2	208.9	208.5
102.5°	260.5	260.8	261.2	261.1	260.7	260.4	260.0	259.7
105°	336.3	337.0	337.6	338.0	338.0	338.0	338.0	338.0
107.5°	418.0	418.3	418.5	417.9	416.4	414.8	413.2	411.6
110°	473.5	473.5	473.5	472.9	471.9	470.9	469.9	468.9



TEST NUMBER: P331864-840

CATALOG NUMBER: S122RDIW-S1005D1440U840-4F0-1E-UDD-F1

CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
112.5°	529.1	528.3	527.5	526.6	525.9	525.2	524.4	523.7
115°	614.4	614.0	613.7	613.0	612.0	611.0	610.0	608.9
117.5°	696.9	696.1	695.3	694.3	693.3	692.3	691.3	690.2
120°	752.0	752.0	752.0	751.5	750.5	749.5	748.5	747.5
122.5°	808.9	808.1	807.3	806.5	805.8	805.1	804.3	803.5
125°	893.1	892.1	891.1	890.5	890.1	889.8	889.5	889.1
127.5°	974.9	973.7	972.5	971.4	970.3	969.2	968.2	967.0
130°	1030.9	1030.2	1029.5	1028.4	1027.1	1025.8	1024.4	1023.1
132.5°	1085.3	1083.8	1082.3	1081.0	1079.9	1078.8	1077.7	1076.6
135°	1165.5	1165.2	1164.9	1164.2	1163.2	1162.2	1161.1	1160.1
137.5°	1242.3	1242.1	1241.8	1241.0	1239.7	1238.3	1237.0	1235.6
140°	1294.0	1294.0	1294.0	1293.4	1292.0	1290.7	1289.3	1288.0
142.5°	1340.9	1341.2	1341.4	1340.9	1339.6	1338.2	1336.9	1335.4
145°	1412.0	1412.3	1412.6	1412.1	1410.8	1409.5	1408.1	1406.7
147.5°	1474.3	1475.0	1475.8	1475.5	1474.2	1472.9	1471.7	1470.4
150°	1513.8	1514.8	1515.8	1515.8	1514.8	1513.8	1512.8	1511.8
152.5°	1553.3	1554.6	1555.9	1555.9	1554.6	1553.3	1552.1	1550.7
155°	1603.5	1605.2	1606.8	1607.2	1606.2	1605.2	1604.2	1603.2
157.5°	1649.7	1652.0	1654.4	1654.7	1653.0	1651.4	1649.8	1648.2
160°	1677.2	1679.2	1681.2	1681.6	1680.2	1678.9	1677.6	1676.2
162.5°	1702.1	1704.5	1706.7	1707.1	1705.5	1703.8	1702.2	1700.5
165°	1734.2	1736.6	1739.0	1739.3	1737.6	1736.0	1734.2	1732.5
167.5°	1760.7	1763.1	1765.4	1765.7	1764.0	1762.2	1760.5	1758.7
170°	1775.3	1777.7	1780.1	1780.2	1778.2	1776.2	1774.1	1772.1
172.5°	1786.2	1788.7	1791.0	1791.2	1789.2	1787.2	1785.1	1783.1
175°	1798.2	1800.5	1802.9	1803.1	1801.0	1799.0	1797.0	1794.9
177.5°	1803.7	1805.3	1807.0	1807.0	1805.3	1803.7	1802.0	1800.4
180°	1804.1	1804.1	1804.1	1804.1	1804.1	1804.1	1804.1	1804.1

(END OF REPORT)