

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: P331863-830

Luminaire Tested: **S122RDIW-S1005D1440U830-4F0-1E-UDD-F**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P331863-830
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-S1005D1440U830-4F0-1E-UDD-F
Description: DEFINE 2 DIRECT-INDIRECT WALL MOUNT LED LUMINAIRE
DOWNLIGHT 1005 LUMENS PER FOOT, FLUSH SATIN WHITE DIFFUSER, REGRESSED
HOUSING
UPLIGHT 1440 LUMENS PER FOOT, NO LENS
Light Source: -
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 8716.5 lumens
Efficiency: N/A
Efficacy: 105.1 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

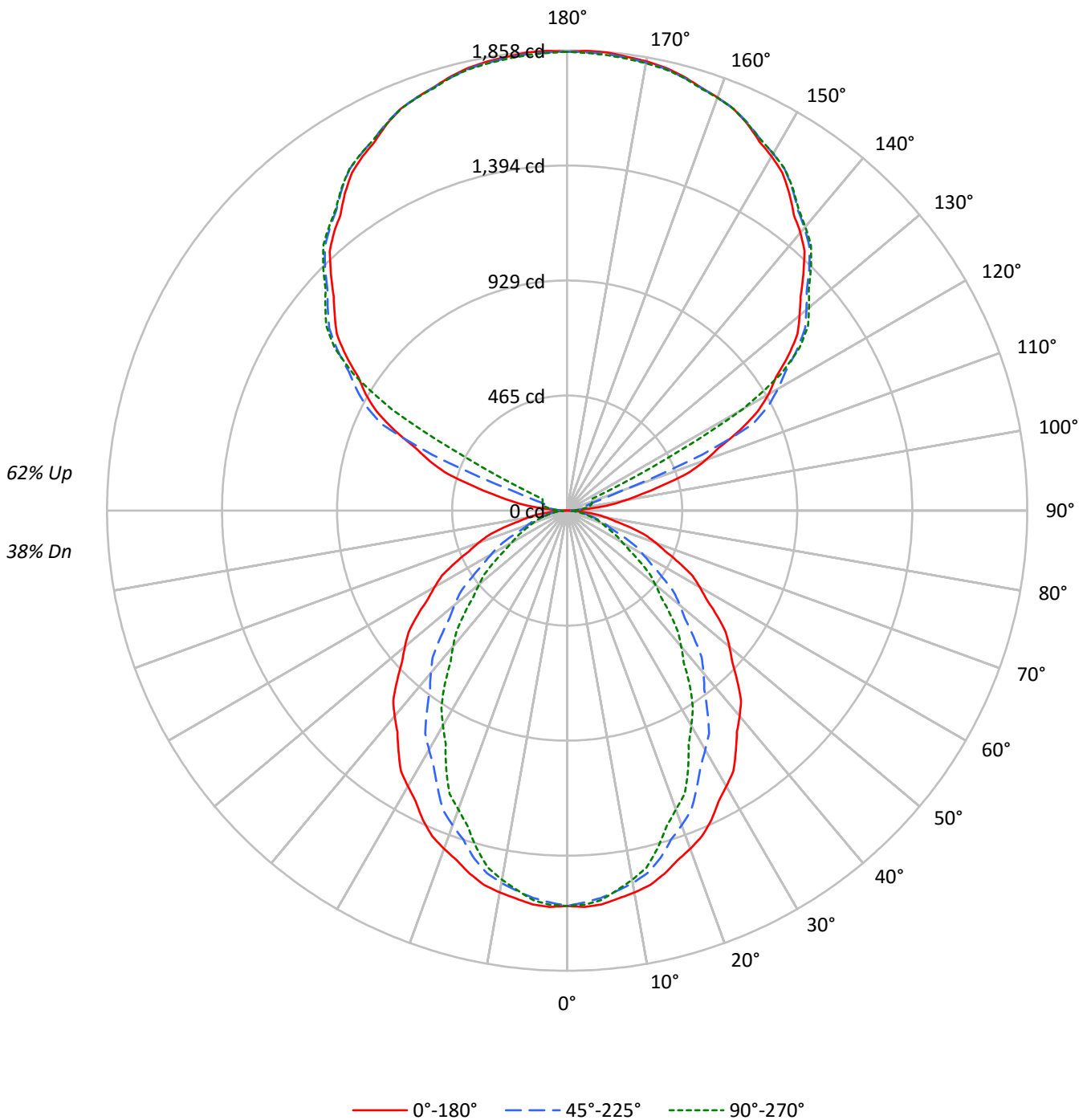
Input Watts (W): 82.9
Input Voltage (V): 120
Input Current (A_{in}): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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	104	104	104	104	95	95	95	95	77	77	77	60	60	60	45	45	45	38				
1	95	91	88	84	86	83	80	77	67	65	63	53	52	51	40	39	39	32				
2	87	80	74	69	79	73	68	64	60	56	53	47	45	43	36	34	33	28				
3	80	71	64	58	72	64	59	54	53	49	45	42	39	37	32	30	28	24				
4	73	63	55	49	66	57	51	46	47	42	39	38	34	32	29	27	25	21				
5	67	56	48	42	61	51	44	39	42	37	33	34	30	28	26	24	22	18				
6	62	50	43	37	56	46	39	34	38	33	29	31	27	24	24	21	19	16				
7	57	45	38	32	52	42	35	30	35	30	26	28	24	22	22	19	17	15				
8	53	41	34	29	48	38	31	27	32	27	23	26	22	19	20	18	16	13				
9	49	38	30	26	45	35	28	24	29	24	21	24	20	17	19	16	14	12				
10	46	35	28	23	42	32	26	21	27	22	19	22	18	16	17	15	13	11				

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



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	149.4	1.7
10°-20°	410.2	4.7
20°-30°	576.1	6.6
30°-40°	628.2	7.2
40°-50°	577.6	6.6
50°-60°	453.6	5.2
60°-70°	295.8	3.4
70°-80°	152.5	1.7
80°-90°	44.1	0.5
90°-100°	61.8	0.7
100°-110°	226.6	2.6
110°-120°	605.8	6.9
120°-130°	1000.0	11.5
130°-140°	1063.4	12.2
140°-150°	988.4	11.3
150°-160°	794.7	9.1
160°-170°	512.1	5.9
170°-180°	176.3	2.0
0°-30°	1135.7	13.0
0°-40°	1763.9	20.2
0°-60°	2795.1	32.1
0°-90°	3287.4	37.7
90°-120°	894.2	10.3
90°-150°	3946.0	45.3
90°-180°	5429.0	62.3
0°-180°	8716.5	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	16	27	33	36	7
95°	87	46	52	58	58	107
105°	408	425	82	96	102	435
115°	771	794	827	236	110	759
125°	1090	1108	1133	1142	1146	971
135°	1349	1369	1382	1395	1393	1041
145°	1564	1564	1586	1594	1589	978
155°	1723	1712	1726	1734	1724	793
165°	1815	1808	1811	1819	1811	513
175°	1857	1848	1850	1858	1846	177
180°	1853	1853	1853	1853	1853	



TEST NUMBER: P331863-830

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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	17.3	15.9	14.5	13.2	12.7	13.2	13.7	14.1	14.6	14.6
90°	1.3	4.6	7.9	11.2	14.4	17.2	19.7	22.1	24.4	26.8	28.3
92.5°	27.1	26.8	26.5	26.2	25.9	26.3	27.5	28.7	29.9	31.1	31.9
95°	87.1	77.3	67.5	57.7	47.8	43.9	46.0	48.1	50.2	52.3	53.7
97.5°	173.0	145.2	117.5	89.8	62.1	50.7	55.5	60.3	65.1	69.9	71.2
100°	237.2	196.4	155.6	114.8	74.0	56.2	61.2	66.3	71.4	76.4	78.8
102.5°	308.0	299.4	290.8	282.1	273.5	248.0	205.7	163.2	120.9	78.5	81.6
105°	407.6	416.4	425.4	434.3	443.3	407.1	325.7	244.4	163.1	81.8	85.0
107.5°	520.9	528.1	535.4	542.5	549.8	504.6	407.1	309.5	212.0	114.5	111.1
110°	593.9	600.1	606.3	612.7	618.9	578.9	492.9	406.8	320.7	234.6	204.8



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CANDELA DISTRIBUTION (continued):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
112.5°	662.5	668.0	673.5	679.1	684.7	676.7	655.5	634.2	612.9	591.7	483.1
115°	770.8	775.9	780.9	786.0	791.1	797.3	804.7	812.2	819.6	827.1	689.2
117.5°	867.6	873.3	878.9	884.6	890.2	895.6	900.7	905.9	911.0	916.2	882.8
120°	938.4	942.8	947.3	951.8	956.2	961.1	966.5	971.9	977.2	982.6	986.2
122.5°	998.4	1003.1	1007.9	1012.6	1017.3	1022.6	1028.3	1034.2	1040.0	1045.8	1048.0
125°	1089.9	1093.7	1097.6	1101.5	1105.3	1110.1	1115.8	1121.4	1127.1	1132.7	1134.8
127.5°	1172.7	1177.0	1181.3	1185.5	1189.9	1194.1	1198.3	1202.6	1206.8	1211.1	1214.1
130°	1225.2	1230.0	1234.7	1239.5	1244.3	1248.3	1251.6	1254.9	1258.1	1261.4	1264.7
132.5°	1278.8	1282.9	1286.9	1291.0	1295.1	1298.7	1302.0	1305.2	1308.5	1311.8	1314.7
135°	1348.6	1353.3	1358.1	1362.8	1367.6	1371.3	1374.0	1376.7	1379.4	1382.1	1385.1
137.5°	1419.1	1422.4	1425.8	1429.1	1432.4	1435.6	1438.6	1441.7	1444.7	1447.7	1450.7
140°	1465.2	1467.5	1470.0	1472.3	1474.7	1477.5	1480.8	1484.1	1487.4	1490.6	1493.4
142.5°	1503.8	1505.9	1508.1	1510.2	1512.4	1515.3	1519.1	1522.9	1526.5	1530.3	1532.8
145°	1564.4	1564.1	1563.8	1563.5	1563.2	1565.6	1570.7	1575.7	1580.7	1585.8	1587.9
147.5°	1617.2	1616.1	1615.0	1613.8	1612.7	1614.6	1619.6	1624.7	1629.7	1634.7	1636.2
150°	1651.5	1649.4	1647.4	1645.3	1643.1	1644.5	1649.3	1654.1	1658.8	1663.6	1665.4
152.5°	1680.5	1678.2	1675.8	1673.5	1671.2	1672.3	1676.8	1681.3	1685.8	1690.4	1692.1
155°	1722.6	1719.9	1717.2	1714.5	1711.8	1712.3	1715.9	1719.5	1723.1	1726.5	1728.3
157.5°	1755.6	1753.3	1751.1	1748.8	1746.5	1746.6	1749.1	1751.6	1754.1	1756.6	1758.7
160°	1774.8	1773.0	1771.3	1769.5	1767.7	1767.7	1769.5	1771.3	1773.0	1774.8	1776.6
162.5°	1792.0	1790.3	1788.5	1786.7	1784.9	1784.7	1786.3	1787.8	1789.4	1790.9	1793.0
165°	1815.1	1813.3	1811.5	1809.7	1807.9	1807.5	1808.4	1809.2	1810.2	1811.0	1813.2
167.5°	1832.2	1830.4	1828.6	1826.8	1825.0	1824.6	1825.4	1826.3	1827.1	1828.0	1830.0
170°	1841.9	1840.1	1838.3	1836.5	1834.8	1834.1	1834.8	1835.3	1835.9	1836.5	1838.6
172.5°	1848.3	1846.5	1844.7	1843.0	1841.2	1840.6	1841.2	1841.7	1842.4	1843.0	1845.0
175°	1856.6	1854.5	1852.5	1850.4	1848.3	1847.6	1848.1	1848.7	1849.4	1849.9	1852.0
177.5°	1857.9	1856.3	1854.6	1852.9	1851.2	1850.6	1850.8	1851.1	1851.2	1851.5	1853.2
180°	1852.6	1852.6	1852.6	1852.6	1852.6	1852.6	1852.6	1852.6	1852.6	1852.6	1852.6



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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°	14.7	14.7	14.8	14.9	15.0	15.1	15.2	15.4
90°	29.8	31.3	32.8	33.8	34.4	35.0	35.6	36.2
92.5°	32.6	33.5	34.2	34.8	35.2	35.4	35.8	36.2
95°	55.2	56.7	58.2	58.8	58.5	58.2	58.0	57.7
97.5°	72.4	73.5	74.7	75.5	75.9	76.3	76.6	76.9
100°	81.2	83.6	86.0	87.5	88.0	88.6	89.3	89.8
102.5°	84.7	87.8	91.0	92.9	93.8	94.5	95.4	96.2
105°	88.3	91.6	94.9	97.1	98.3	99.5	100.7	101.9
107.5°	107.8	104.4	101.1	100.1	101.2	102.5	103.7	104.8
110°	175.0	145.2	115.5	101.1	102.4	103.5	104.7	105.9



TEST NUMBER: P331863-830

CATALOG NUMBER: S122RDIW-S1005D1440U830-4F0-1E-UDD-F

CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
112.5°	374.4	265.7	157.0	103.1	104.2	105.1	106.0	107.0
115°	551.3	413.3	275.4	195.7	174.3	152.8	131.4	109.9
117.5°	849.4	816.1	782.7	730.8	660.3	589.7	519.2	448.8
120°	989.8	993.3	996.9	978.5	938.4	898.1	857.9	817.7
122.5°	1050.2	1052.3	1054.4	1051.6	1043.8	1036.0	1028.2	1020.4
125°	1136.9	1139.0	1141.0	1142.6	1143.5	1144.3	1145.3	1146.1
127.5°	1217.1	1220.1	1223.1	1224.8	1224.9	1225.1	1225.3	1225.5
130°	1268.0	1271.3	1274.5	1276.0	1275.7	1275.4	1275.2	1274.8
132.5°	1317.4	1320.2	1323.0	1324.3	1324.0	1323.7	1323.4	1323.0
135°	1388.0	1391.0	1394.0	1395.2	1394.6	1394.0	1393.4	1392.8
137.5°	1453.6	1456.5	1459.4	1460.4	1459.3	1458.4	1457.4	1456.3
140°	1496.0	1498.7	1501.4	1501.9	1500.5	1499.0	1497.5	1496.0
142.5°	1535.2	1537.7	1540.1	1540.6	1539.1	1537.6	1536.2	1534.6
145°	1590.0	1592.0	1594.2	1594.5	1593.0	1591.5	1590.0	1588.6
147.5°	1637.8	1639.3	1640.9	1641.0	1639.7	1638.5	1637.2	1636.0
150°	1667.2	1669.0	1670.8	1670.8	1669.4	1667.9	1666.4	1664.9
152.5°	1693.9	1695.7	1697.5	1697.4	1695.4	1693.6	1691.6	1689.6
155°	1730.1	1731.9	1733.7	1733.4	1731.1	1728.7	1726.3	1723.9
157.5°	1760.7	1762.6	1764.7	1764.5	1762.3	1759.9	1757.6	1755.3
160°	1778.4	1780.2	1782.0	1781.9	1779.8	1777.6	1775.6	1773.5
162.5°	1795.0	1797.1	1799.0	1798.7	1796.2	1793.7	1791.1	1788.6
165°	1815.2	1817.3	1819.4	1819.4	1817.3	1815.2	1813.2	1811.0
167.5°	1832.1	1834.2	1836.3	1836.0	1833.3	1830.6	1828.0	1825.2
170°	1840.7	1842.8	1844.8	1844.6	1841.9	1839.2	1836.5	1833.8
172.5°	1847.1	1849.2	1851.2	1851.0	1848.3	1845.6	1843.0	1840.2
175°	1854.1	1856.1	1858.2	1857.8	1854.8	1851.8	1848.9	1845.9
177.5°	1854.8	1856.5	1858.2	1857.9	1855.8	1853.7	1851.5	1849.4
180°	1852.6	1852.6	1852.6	1852.6	1852.6	1852.6	1852.6	1852.6

(END OF REPORT)