

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: P331843

Luminaire Tested: **S122RDIW-S865D1440U835-4F0-1E-UDD-F**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P331843
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-S865D1440U835-4F0-1E-UDD-F
Description: DEFINE 2 DIRECT-INDIRECT WALL MOUNT LED LUMINAIRE
DOWNLIGHT 865 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: 8780.7 lumens
Efficiency: N/A
Efficacy: 114.6 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

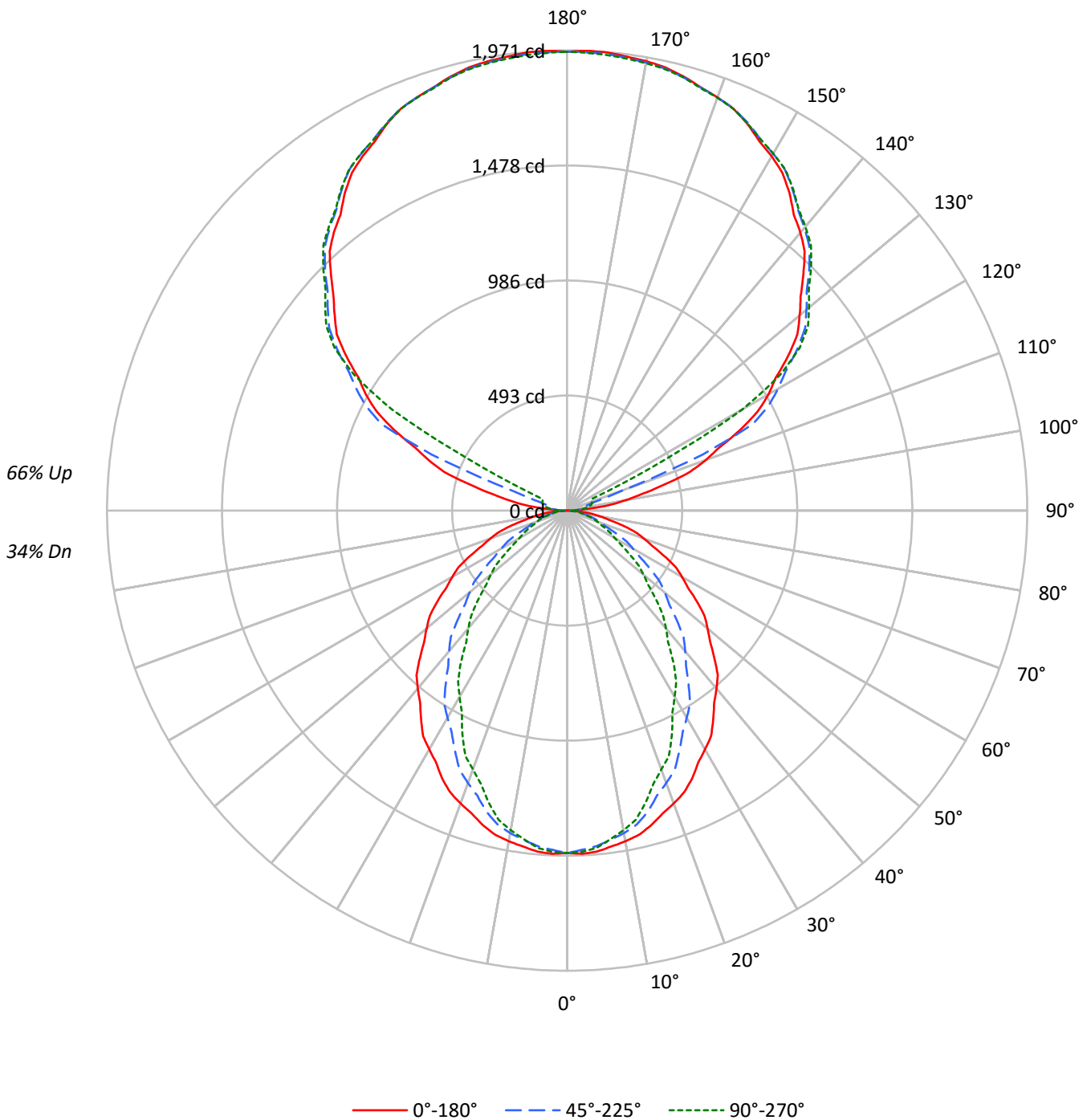
Input Watts (W): 76.6
Input Voltage (V): 120
Input Current (A_{in}): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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Luminous Intensity Polar Plot





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COEFFICIENT OF UTILIZATION - ZONAL CAVITY METHOD:

RF	20									20									20									20										
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	103	103	103	103	93	93	93	93	75	75	75	58	58	58	42	42	42	34																				
1	95	91	87	84	85	82	79	76	66	64	62	51	50	48	37	37	36	30																				
2	86	79	74	69	78	72	67	63	58	55	52	45	43	41	33	32	31	25																				
3	79	70	63	58	71	64	58	53	51	47	44	40	37	35	30	28	26	22																				
4	72	62	55	49	65	56	50	45	46	41	38	36	33	30	27	25	23	19																				
5	66	55	48	42	60	50	44	39	41	36	32	32	29	26	24	22	20	17																				
6	61	50	42	36	55	45	39	34	37	32	28	29	26	23	22	20	18	15																				
7	57	45	37	32	51	41	34	30	34	29	25	27	23	21	20	18	16	13																				
8	53	41	33	28	47	37	31	26	31	26	22	25	21	18	19	16	15	12																				
9	49	37	30	25	44	34	28	23	28	23	20	23	19	17	17	15	13	11																				
10	46	34	27	22	41	31	25	21	26	21	18	21	17	15	16	14	12	10																				

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	23675	23675	23675
5°	23765	23378	23506
10°	23582	22996	22799
15°	23311	22313	21670
20°	22936	21340	20270
25°	22552	20236	18912
30°	22018	19099	17169
35°	21498	17864	15640
40°	20976	16585	13873
45°	20361	15150	12271
50°	19733	13700	10698
55°	19088	12141	9188
60°	18338	10498	7627
65°	17490	8821	6946
70°	16475	7265	6387
75°	15234	6625	5958
80°	13445	5923	5430
85°	10578	4668	4668



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	137.2	1.6
10°-20°	376.8	4.3
20°-30°	529.2	6.0
30°-40°	577.1	6.6
40°-50°	530.6	6.0
50°-60°	416.7	4.7
60°-70°	271.7	3.1
70°-80°	140.1	1.6
80°-90°	41.2	0.5
90°-100°	65.6	0.7
100°-110°	240.4	2.7
110°-120°	642.7	7.3
120°-130°	1060.9	12.1
130°-140°	1128.3	12.8
140°-150°	1048.7	11.9
150°-160°	843.1	9.6
160°-170°	543.3	6.2
170°-180°	187.0	2.1
0°-30°	1043.3	11.9
0°-40°	1620.3	18.5
0°-60°	2567.6	29.2
0°-90°	3020.6	34.4
90°-120°	948.7	10.8
90°-150°	4186.6	47.7
90°-180°	5760.0	65.6
0°-180°	8780.7	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1466	1466	1466	1466	1466	
5°	1466	1459	1442	1453	1450	139
15°	1395	1378	1335	1310	1296	393
25°	1266	1221	1136	1083	1062	582
35°	1091	1020	906	826	794	682
45°	892	800	664	573	537	688
55°	678	572	431	355	326	606
65°	458	350	231	188	182	454
75°	244	154	106	97	96	258
85°	57	31	25	25	25	67
90°	1	17	28	35	38	7
95°	92	49	56	62	61	113
105°	432	451	87	102	108	462
115°	818	843	878	250	117	805
125°	1156	1175	1202	1211	1216	1031
135°	1431	1453	1466	1480	1478	1105
145°	1660	1660	1682	1692	1685	1038
155°	1828	1816	1832	1839	1829	842
165°	1926	1918	1921	1930	1921	544
175°	1970	1961	1963	1971	1958	187
180°	1966	1966	1966	1966	1966	



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CANDELA DISTRIBUTION (FULL):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
0°	1466.3	1466.3	1466.3	1466.3	1466.3	1466.3	1466.3	1466.3	1466.3	1466.3	1466.3
2.5°	1471.6	1470.4	1469.2	1468.0	1466.9	1465.0	1462.4	1459.8	1457.2	1454.6	1457.0
5°	1466.3	1464.8	1463.3	1461.8	1460.4	1457.7	1453.9	1450.1	1446.2	1442.4	1445.0
7.5°	1451.1	1449.3	1447.5	1445.7	1443.8	1440.7	1436.2	1431.7	1427.2	1422.7	1423.5
10°	1438.4	1436.3	1434.3	1432.2	1430.1	1426.2	1420.3	1414.4	1408.5	1402.6	1401.7
12.5°	1422.5	1419.9	1417.4	1414.9	1412.3	1407.3	1399.7	1392.2	1384.6	1377.1	1375.5
15°	1394.6	1391.4	1388.1	1384.9	1381.6	1375.0	1365.0	1355.0	1344.9	1334.9	1329.3
17.5°	1360.4	1355.4	1350.5	1345.5	1340.6	1331.7	1318.8	1305.9	1293.1	1280.2	1273.6
20°	1334.9	1329.0	1323.1	1317.2	1311.3	1301.0	1286.2	1271.5	1256.8	1242.0	1234.6
22.5°	1307.3	1300.7	1294.1	1287.5	1280.9	1269.3	1252.6	1236.0	1219.4	1202.7	1193.2
25°	1265.9	1256.5	1247.0	1237.6	1228.2	1213.7	1194.2	1174.8	1155.3	1135.9	1123.8
27.5°	1216.0	1205.7	1195.5	1185.2	1175.0	1158.9	1136.9	1115.0	1093.0	1071.1	1057.0
30°	1181.0	1169.8	1158.6	1147.4	1136.2	1118.8	1095.2	1071.6	1048.0	1024.4	1009.4
32.5°	1147.0	1133.9	1120.8	1107.7	1094.6	1076.1	1052.0	1027.9	1003.9	979.8	962.7
35°	1090.7	1075.7	1060.7	1045.6	1030.6	1010.1	984.1	958.2	932.3	906.3	887.7
37.5°	1034.5	1018.0	1001.5	984.9	968.4	946.3	918.7	891.0	863.4	835.7	815.2
40°	995.2	977.5	959.8	942.1	924.4	901.3	872.7	844.1	815.5	786.9	765.9
42.5°	954.9	936.2	917.6	899.0	880.3	856.2	826.7	797.1	767.6	738.0	716.4
45°	891.7	871.9	852.2	832.4	812.7	787.3	756.4	725.4	694.4	663.5	642.5
47.5°	830.1	809.2	788.3	767.3	746.4	719.9	688.0	656.0	624.0	592.1	571.3
50°	785.6	764.6	743.7	722.7	701.8	675.1	642.7	610.2	577.8	545.4	525.0
52.5°	742.0	720.1	698.3	676.4	654.5	627.7	596.0	564.2	532.5	500.8	481.1
55°	678.1	655.1	632.1	609.1	586.1	558.6	526.8	494.9	463.1	431.3	413.6
57.5°	612.5	588.9	565.3	541.7	518.2	491.1	460.4	429.8	399.2	368.6	352.4
60°	567.9	544.3	520.8	497.2	473.6	446.6	416.2	385.8	355.5	325.1	310.1
62.5°	524.4	500.8	477.2	453.6	430.0	403.8	374.8	345.9	316.9	287.9	273.6
65°	457.8	433.9	410.0	386.1	362.3	337.0	310.5	284.0	257.4	230.9	220.9
67.5°	393.6	369.9	346.2	322.4	298.7	274.9	251.1	227.2	203.3	179.4	174.8
70°	349.0	326.0	303.0	280.0	257.0	235.3	215.0	194.6	174.3	153.9	151.0
72.5°	306.5	284.5	262.4	240.4	218.3	199.1	182.8	166.4	150.1	133.8	131.3
75°	244.2	223.5	202.9	182.2	161.6	146.3	136.2	126.2	116.2	106.2	104.1
77.5°	182.9	164.7	146.6	128.5	110.4	99.0	94.1	89.3	84.5	79.6	78.4
80°	144.6	129.6	114.6	99.5	84.5	75.5	72.5	69.6	66.6	63.7	62.5
82.5°	109.6	97.9	86.1	74.4	62.7	55.8	53.8	51.8	49.8	47.8	47.1
85°	57.1	50.9	44.7	38.5	32.3	28.8	27.9	27.0	26.1	25.2	25.2
87.5°	17.3	16.1	14.9	13.7	12.5	12.2	12.7	13.2	13.7	14.2	14.3
90°	1.4	4.9	8.4	11.9	15.3	18.3	20.9	23.4	25.9	28.4	30.0
92.5°	28.7	28.4	28.1	27.8	27.5	27.9	29.2	30.5	31.7	33.0	33.8
95°	92.4	82.0	71.6	61.2	50.7	46.6	48.8	51.0	53.3	55.5	57.0
97.5°	183.5	154.1	124.7	95.3	65.9	53.8	58.9	64.0	69.1	74.2	75.5
100°	251.7	208.4	165.1	121.8	78.5	59.6	64.9	70.3	75.7	81.1	83.6
102.5°	326.8	317.7	308.5	299.3	290.2	263.1	218.2	173.2	128.3	83.3	86.6
105°	432.4	441.8	451.3	460.8	470.3	431.9	345.6	259.3	173.0	86.8	90.2
107.5°	552.7	560.3	568.0	575.6	583.3	535.4	431.9	328.4	224.9	121.5	117.9
110°	630.1	636.7	643.3	650.0	656.6	614.2	522.9	431.6	340.2	248.9	217.3



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CANDELA DISTRIBUTION (continued):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
112.5°	702.9	708.7	714.6	720.5	726.4	718.0	695.5	672.9	650.3	627.8	512.5
115°	817.8	823.2	828.5	833.9	839.3	845.9	853.8	861.7	869.6	877.5	731.2
117.5°	920.5	926.5	932.5	938.5	944.5	950.2	955.6	961.1	966.5	972.0	936.6
120°	995.6	1000.3	1005.0	1009.8	1014.5	1019.7	1025.4	1031.1	1036.8	1042.5	1046.3
122.5°	1059.3	1064.3	1069.3	1074.3	1079.3	1084.9	1091.0	1097.2	1103.4	1109.6	1111.9
125°	1156.3	1160.4	1164.5	1168.6	1172.7	1177.8	1183.8	1189.8	1195.8	1201.8	1204.0
127.5°	1244.2	1248.7	1253.3	1257.8	1262.4	1266.9	1271.4	1275.9	1280.4	1284.9	1288.1
130°	1299.9	1305.0	1310.0	1315.1	1320.2	1324.4	1327.9	1331.4	1334.8	1338.3	1341.8
132.5°	1356.8	1361.1	1365.4	1369.7	1374.0	1377.9	1381.4	1384.8	1388.3	1391.8	1394.8
135°	1430.8	1435.8	1440.9	1445.9	1451.0	1454.9	1457.8	1460.6	1463.5	1466.3	1469.5
137.5°	1505.6	1509.1	1512.7	1516.2	1519.7	1523.1	1526.3	1529.6	1532.8	1536.0	1539.1
140°	1554.5	1557.0	1559.6	1562.1	1564.6	1567.6	1571.1	1574.6	1578.1	1581.5	1584.4
142.5°	1595.5	1597.7	1600.0	1602.3	1604.6	1607.7	1611.7	1615.7	1619.6	1623.6	1626.2
145°	1659.8	1659.4	1659.1	1658.8	1658.5	1661.0	1666.4	1671.8	1677.1	1682.5	1684.7
147.5°	1715.8	1714.6	1713.4	1712.2	1711.0	1713.0	1718.3	1723.7	1729.0	1734.3	1735.9
150°	1752.2	1750.0	1747.8	1745.6	1743.3	1744.8	1749.8	1754.9	1759.9	1765.0	1766.9
152.5°	1782.9	1780.5	1778.0	1775.5	1773.1	1774.2	1779.0	1783.8	1788.6	1793.4	1795.3
155°	1827.6	1824.7	1821.9	1819.0	1816.2	1816.7	1820.5	1824.3	1828.1	1831.8	1833.7
157.5°	1862.6	1860.2	1857.8	1855.4	1853.0	1853.1	1855.7	1858.4	1861.0	1863.7	1865.9
160°	1883.0	1881.1	1879.3	1877.4	1875.5	1875.5	1877.4	1879.3	1881.1	1883.0	1884.9
162.5°	1901.2	1899.4	1897.5	1895.6	1893.7	1893.5	1895.2	1896.8	1898.5	1900.1	1902.3
165°	1925.7	1923.8	1921.9	1920.0	1918.1	1917.7	1918.6	1919.5	1920.5	1921.4	1923.7
167.5°	1943.9	1942.0	1940.1	1938.2	1936.3	1935.8	1936.7	1937.6	1938.5	1939.4	1941.6
170°	1954.2	1952.3	1950.4	1948.5	1946.6	1945.9	1946.6	1947.2	1947.8	1948.5	1950.7
172.5°	1961.0	1959.1	1957.2	1955.3	1953.4	1952.8	1953.4	1954.0	1954.7	1955.3	1957.5
175°	1969.8	1967.6	1965.4	1963.2	1961.0	1960.2	1960.8	1961.4	1962.1	1962.7	1964.9
177.5°	1971.2	1969.5	1967.7	1965.9	1964.1	1963.4	1963.6	1963.9	1964.1	1964.4	1966.2
180°	1965.5	1965.5	1965.5	1965.5	1965.5	1965.5	1965.5	1965.5	1965.5	1965.5	1965.5



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CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
0°	1466.3	1466.3	1466.3	1466.3	1466.3	1466.3	1466.3	1466.3
2.5°	1459.3	1461.7	1464.0	1465.0	1464.5	1464.0	1463.6	1463.1
5°	1447.7	1450.3	1453.0	1453.9	1453.0	1452.1	1451.2	1450.3
7.5°	1424.3	1425.0	1425.8	1425.4	1423.9	1422.4	1420.8	1419.3
10°	1400.8	1399.9	1399.0	1397.7	1395.9	1394.2	1392.4	1390.6
12.5°	1373.9	1372.3	1370.7	1368.5	1365.5	1362.6	1359.6	1356.7
15°	1323.7	1318.1	1312.5	1308.2	1305.3	1302.3	1299.4	1296.4
17.5°	1266.9	1260.2	1253.6	1247.7	1242.6	1237.6	1232.5	1227.4
20°	1227.3	1219.9	1212.5	1205.6	1199.1	1192.6	1186.1	1179.7
22.5°	1183.8	1174.3	1164.8	1157.6	1152.8	1147.9	1143.1	1138.3
25°	1111.7	1099.6	1087.5	1079.2	1074.8	1070.4	1066.0	1061.6
27.5°	1042.9	1028.8	1014.7	1004.2	997.2	990.1	983.1	976.1
30°	994.3	979.3	964.2	952.7	944.8	936.8	928.9	920.9
32.5°	945.5	928.3	911.2	898.8	891.4	883.9	876.4	868.9
35°	869.1	850.6	832.0	819.5	813.0	806.5	800.0	793.5
37.5°	794.8	774.3	753.9	739.9	732.5	725.0	717.6	710.2
40°	745.0	724.1	703.1	688.8	681.2	673.5	665.8	658.2
42.5°	694.8	673.1	651.5	636.9	629.5	622.1	614.6	607.2
45°	621.6	600.7	579.7	565.7	558.6	551.6	544.5	537.4
47.5°	550.4	529.6	508.8	495.2	488.8	482.3	475.9	469.5
50°	504.7	484.3	464.0	450.7	444.5	438.3	432.1	425.9
52.5°	461.5	441.9	422.2	409.6	403.8	398.1	392.4	386.7
55°	395.9	378.2	360.5	348.8	343.2	337.6	332.0	326.4
57.5°	336.2	320.0	303.8	293.3	288.6	283.8	279.1	274.4
60°	295.0	280.0	264.9	255.1	250.3	245.6	240.9	236.2
62.5°	259.3	245.0	230.6	222.0	219.2	216.4	213.5	210.7
65°	210.8	200.8	190.8	185.3	184.4	183.6	182.7	181.8
67.5°	170.2	165.6	161.0	158.2	157.3	156.3	155.4	154.5
70°	148.0	145.1	142.1	140.1	138.9	137.7	136.5	135.3
72.5°	128.8	126.3	123.8	122.3	121.5	120.8	120.1	119.4
75°	102.0	100.0	97.9	96.7	96.4	96.1	95.8	95.5
77.5°	77.3	76.1	74.9	74.1	73.6	73.1	72.7	72.2
80°	61.3	60.2	59.0	58.4	58.4	58.4	58.4	58.4
82.5°	46.4	45.6	44.9	44.6	44.6	44.6	44.6	44.6
85°	25.2	25.2	25.2	25.2	25.2	25.2	25.2	25.2
87.5°	14.3	14.4	14.5	14.6	14.7	14.9	15.0	15.1
90°	31.6	33.2	34.8	35.9	36.5	37.1	37.8	38.4
92.5°	34.6	35.5	36.3	36.9	37.3	37.6	38.0	38.4
95°	58.6	60.2	61.8	62.4	62.1	61.8	61.5	61.2
97.5°	76.8	78.0	79.3	80.1	80.5	80.9	81.3	81.6
100°	86.1	88.7	91.2	92.8	93.4	94.0	94.7	95.3
102.5°	89.9	93.2	96.5	98.6	99.5	100.3	101.2	102.1
105°	93.7	97.2	100.7	103.0	104.3	105.6	106.8	108.1
107.5°	114.4	110.8	107.3	106.2	107.4	108.7	110.0	111.2
110°	185.7	154.1	122.5	107.3	108.6	109.8	111.1	112.4



TEST NUMBER: P331843

CATALOG NUMBER: S122RDIW-S865D1440U835-4F0-1E-UDD-F

CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
112.5°	397.2	281.9	166.6	109.4	110.5	111.5	112.5	113.5
115°	584.9	438.5	292.2	207.6	184.9	162.1	139.4	116.6
117.5°	901.2	865.8	830.4	775.3	700.5	625.7	550.9	476.2
120°	1050.1	1053.9	1057.7	1038.2	995.6	952.9	910.2	867.6
122.5°	1114.2	1116.5	1118.7	1115.7	1107.4	1099.2	1090.9	1082.6
125°	1206.2	1208.4	1210.6	1212.2	1213.2	1214.1	1215.1	1216.0
127.5°	1291.3	1294.5	1297.7	1299.5	1299.6	1299.8	1300.0	1300.2
130°	1345.3	1348.8	1352.2	1353.8	1353.5	1353.2	1352.9	1352.5
132.5°	1397.7	1400.7	1403.7	1405.0	1404.7	1404.4	1404.1	1403.7
135°	1472.6	1475.8	1479.0	1480.2	1479.6	1479.0	1478.3	1477.7
137.5°	1542.2	1545.3	1548.4	1549.4	1548.3	1547.3	1546.2	1545.1
140°	1587.2	1590.1	1592.9	1593.5	1592.0	1590.4	1588.8	1587.2
142.5°	1628.8	1631.4	1634.0	1634.5	1632.9	1631.3	1629.8	1628.2
145°	1686.9	1689.1	1691.4	1691.7	1690.1	1688.5	1686.9	1685.4
147.5°	1737.6	1739.2	1740.9	1741.0	1739.7	1738.4	1737.0	1735.7
150°	1768.8	1770.7	1772.6	1772.7	1771.2	1769.6	1768.0	1766.4
152.5°	1797.2	1799.1	1801.0	1800.9	1798.8	1796.8	1794.7	1792.6
155°	1835.6	1837.5	1839.4	1839.1	1836.6	1834.1	1831.5	1829.0
157.5°	1868.0	1870.1	1872.3	1872.1	1869.7	1867.2	1864.7	1862.3
160°	1886.8	1888.7	1890.6	1890.5	1888.3	1886.0	1883.8	1881.6
162.5°	1904.4	1906.6	1908.7	1908.4	1905.7	1903.0	1900.3	1897.6
165°	1925.9	1928.1	1930.3	1930.3	1928.1	1925.9	1923.7	1921.4
167.5°	1943.8	1946.0	1948.2	1947.9	1945.1	1942.2	1939.4	1936.5
170°	1952.9	1955.1	1957.3	1957.0	1954.2	1951.3	1948.5	1945.6
172.5°	1959.7	1961.9	1964.1	1963.8	1961.0	1958.1	1955.3	1952.4
175°	1967.1	1969.3	1971.5	1971.1	1967.9	1964.7	1961.6	1958.4
177.5°	1967.9	1969.7	1971.5	1971.2	1968.9	1966.7	1964.4	1962.1
180°	1965.5	1965.5	1965.5	1965.5	1965.5	1965.5	1965.5	1965.5

(END OF REPORT)