

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: P333073-840

Luminaire Tested: **S124RDIW-S795D1560U840-4F0-1E-UDD-F**

Issue Date: 3/3/2020

**Test Information**

Test Method: LM-79-08  
Report Number: P333073-840  
REPORT IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-1807-864-6,  
Test Lab: INNOVATION CENTER  
Issue Date: 3/3/2020  
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)  
Product Line: NEO-RAY  
Catalog Number: S124RDIW-S795D1560U840-4F0-1E-UDD-F  
Description: DEFINE 4 DIRECT-INDIRECT WALL MOUNT LED LUMINAIRE  
DOWNLIGHT 795 LUMENS PER FOOT, FLUSH SATIN WHITE DIFFUSER, REGRESSED  
HOUSING  
UPLIGHT 1560 LUMENS PER FOOT, NO LENS  
Light Source: -  
Ballast/Driver: ELECTRONIC DRIVER

**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 9545.5 lumens  
Efficiency: N/A  
Efficacy: 140.2 lumens/watt  
Spacing Criteria (0/90/45): 1.2 / 1.09 / 1.24  
Luminous Opening: Rectangular (W 0.33' x L: 4' x H: 0')  
CIE Type: Semi-Indirect

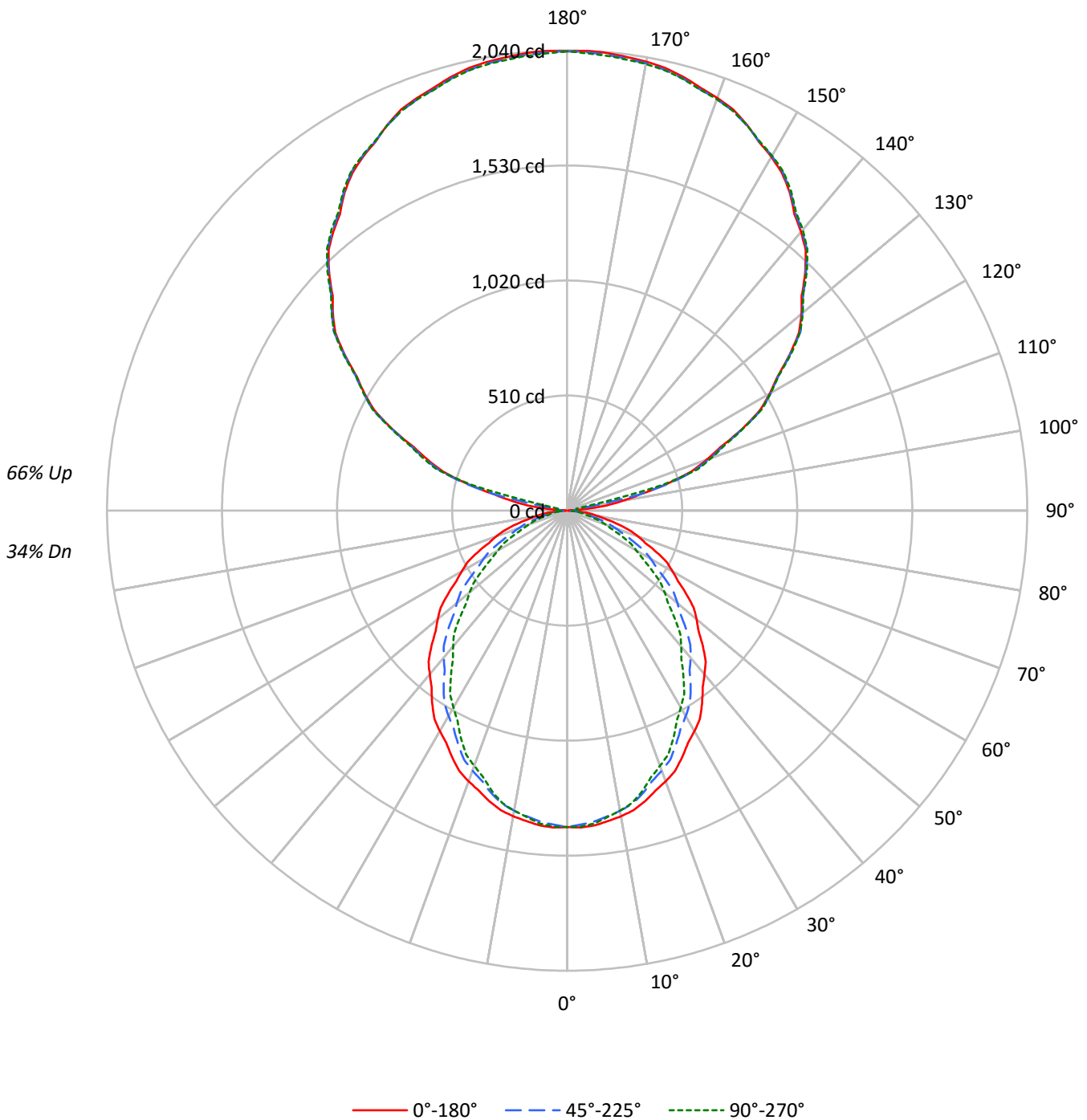
Input Watts (W): 68.1  
Input Voltage (V): 120  
Input Current (A<sub>in</sub>): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 25 FT



TEST NUMBER: P333073-840

CATALOG NUMBER: S124RDIW-S795D1560U840-4F0-1E-UDD-F

### Luminous Intensity Polar Plot





TEST NUMBER: P333073-840

CATALOG NUMBER: S124RDIW-S795D1560U840-4F0-1E-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	103	103	103	103	93	93	93	93	74	74	74	57	57	57	41	41	41	34
1	94	90	87	83	85	82	78	76	65	63	61	51	49	48	37	36	35	29
2	86	79	73	68	77	71	67	62	57	54	51	45	42	40	33	31	30	25
3	79	69	62	57	71	63	57	52	51	47	43	40	37	34	29	27	26	21
4	72	62	54	48	65	56	49	44	45	40	37	35	32	29	26	24	22	18
5	66	55	47	41	59	50	43	38	40	35	32	32	28	25	24	21	19	16
6	61	49	41	36	55	45	38	33	36	31	28	29	25	22	21	19	17	14
7	56	44	37	31	51	40	34	29	33	28	24	26	22	20	20	17	15	12
8	52	40	33	27	47	37	30	25	30	25	22	24	20	18	18	16	14	11
9	48	37	29	24	44	33	27	23	27	23	19	22	18	16	17	14	12	10
10	45	33	26	22	41	31	24	20	25	21	17	20	17	14	15	13	11	9

**AVERAGE LUMINANCE (cd/sqm):**

	0°	45°	90°
0°	11326	11326	11326
5°	11351	11212	11281
10°	11280	11077	11077
15°	11150	10845	10764
20°	10972	10539	10345
25°	10745	10180	9922
30°	10523	9803	9392
35°	10279	9411	8861
40°	9985	8965	8286
45°	9712	8524	7702
50°	9403	8013	7082
55°	9071	7484	6410
60°	8707	6902	5724
65°	8373	6178	5049
70°	7886	5375	4286
75°	7271	4457	3484
80°	6341	3394	3199
85°	5372	3084	2881



TEST NUMBER: P333073-840

CATALOG NUMBER: S124RDIW-S795D1560U840-4F0-1E-UDD-F

**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	131.8	1.4
10°-20°	367.5	3.8
20°-30°	530.6	5.6
30°-40°	601.5	6.3
40°-50°	580.8	6.1
50°-60°	483.0	5.1
60°-70°	333.5	3.5
70°-80°	169.1	1.8
80°-90°	49.2	0.5
90°-100°	69.6	0.7
100°-110°	444.0	4.7
110°-120°	849.4	8.9
120°-130°	1078.3	11.3
130°-140°	1153.7	12.1
140°-150°	1078.8	11.3
150°-160°	870.0	9.1
160°-170°	561.1	5.9
170°-180°	193.4	2.0
0°-30°	1029.9	10.8
0°-40°	1631.4	17.1
0°-60°	2695.2	28.2
0°-90°	3247.1	34.0
90°-120°	1363.1	14.3
90°-150°	4673.9	49.0
90°-180°	6298.0	66.0
0°-180°	9545.5	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	1403	1403	1403	1403	1403	
5°	1401	1396	1384	1394	1392	133
15°	1334	1324	1298	1295	1288	376
25°	1206	1186	1143	1125	1114	556
35°	1043	1008	955	919	899	651
45°	851	810	747	696	675	656
55°	644	600	532	478	455	576
65°	438	391	323	279	264	433
75°	233	193	143	119	112	246
85°	58	38	33	31	31	65
90°	4	21	34	42	46	7
95°	84	35	34	42	44	108
105°	458	468	475	485	434	480
115°	856	860	859	862	862	842
125°	1203	1209	1206	1211	1212	1074
135°	1492	1491	1497	1500	1503	1149
145°	1721	1725	1726	1727	1730	1075
155°	1887	1888	1884	1889	1885	870
165°	1990	1983	1983	1994	1981	562
175°	2036	2028	2028	2040	2024	194
180°	2036	2036	2036	2036	2036	



TEST NUMBER: P333073-840

CATALOG NUMBER: S124RDIW-S795D1560U840-4F0-1E-UDD-F

**CANDELA DISTRIBUTION (FULL):**

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
0°	1402.9	1402.9	1402.9	1402.9	1402.9	1402.9	1402.9	1402.9	1402.9	1402.9	1402.9
2.5°	1406.3	1405.5	1404.7	1404.0	1403.2	1401.8	1399.7	1397.7	1395.5	1393.4	1395.5
5°	1400.7	1399.8	1398.8	1397.9	1396.8	1395.0	1392.1	1389.3	1386.3	1383.5	1385.9
7.5°	1388.1	1387.0	1386.0	1385.0	1384.0	1381.7	1378.0	1374.2	1370.5	1366.8	1368.3
10°	1376.0	1374.8	1373.6	1372.4	1371.2	1368.5	1364.2	1359.9	1355.6	1351.3	1352.2
12.5°	1360.5	1359.2	1357.8	1356.3	1355.0	1351.8	1346.8	1341.6	1336.6	1331.5	1332.1
15°	1334.1	1332.0	1329.8	1327.7	1325.5	1321.5	1315.5	1309.5	1303.5	1297.6	1297.1
17.5°	1302.1	1299.0	1295.9	1292.8	1289.7	1284.5	1277.4	1270.2	1263.0	1255.9	1254.6
20°	1277.2	1274.0	1271.0	1267.9	1264.8	1259.2	1251.0	1242.9	1234.8	1226.7	1224.8
22.5°	1249.7	1246.2	1242.7	1239.2	1235.8	1229.6	1220.9	1212.2	1203.6	1194.9	1192.0
25°	1206.3	1201.9	1197.7	1193.4	1189.1	1182.0	1172.3	1162.5	1152.7	1142.9	1138.8
27.5°	1160.7	1155.4	1149.9	1144.6	1139.1	1131.3	1120.7	1110.3	1099.8	1089.4	1084.4
30°	1128.9	1123.0	1117.0	1111.1	1105.1	1096.5	1085.3	1074.1	1062.8	1051.6	1045.6
32.5°	1095.4	1088.7	1082.0	1075.2	1068.5	1059.3	1047.7	1036.1	1024.5	1012.9	1006.0
35°	1043.0	1035.4	1027.7	1020.1	1012.5	1002.7	990.8	978.8	966.8	954.9	946.8
37.5°	986.9	979.1	971.2	963.3	955.4	944.9	931.7	918.5	905.2	892.0	882.9
40°	947.5	939.6	931.7	923.8	915.9	905.1	891.5	878.0	864.3	850.7	840.7
42.5°	909.6	901.3	893.1	884.8	876.6	865.4	851.2	837.0	822.8	808.6	798.4
45°	850.7	841.9	833.0	824.3	815.4	803.9	789.5	775.2	760.8	746.6	734.9
47.5°	789.9	780.8	771.7	762.5	753.5	741.4	726.6	711.7	696.8	681.9	669.7
50°	748.7	739.4	730.0	720.7	711.4	699.1	683.9	668.6	653.3	638.0	626.1
52.5°	706.6	697.5	688.3	679.2	670.1	657.7	642.1	626.4	610.8	595.1	583.0
55°	644.5	634.9	625.4	615.8	606.3	593.8	578.2	562.7	547.2	531.7	519.3
57.5°	583.1	573.1	563.2	553.3	543.3	530.7	515.4	500.2	484.9	469.6	457.1
60°	539.3	529.7	520.2	510.6	501.0	488.7	473.3	458.1	442.8	427.5	415.1
62.5°	499.7	489.8	479.9	469.9	460.0	447.2	431.5	415.9	400.2	384.6	373.0
65°	438.3	428.0	417.7	407.5	397.2	384.5	369.1	353.9	338.6	323.4	313.1
67.5°	374.5	364.7	354.8	345.0	335.1	323.2	308.9	294.8	280.5	266.4	257.5
70°	334.1	324.1	314.0	304.0	294.0	282.2	268.5	254.9	241.4	227.7	219.8
72.5°	291.1	282.1	273.0	263.9	254.8	243.9	231.1	218.1	205.3	192.5	185.7
75°	233.1	224.3	215.4	206.6	197.7	187.7	176.5	165.3	154.1	142.9	137.3
77.5°	174.2	166.7	159.3	151.8	144.2	135.9	126.9	117.9	108.8	99.7	96.4
80°	136.4	129.5	122.6	115.6	108.8	101.7	94.5	87.4	80.2	73.0	72.3
82.5°	103.8	97.5	91.1	84.7	78.4	73.1	69.1	64.9	60.8	56.8	56.1
85°	58.0	53.2	48.5	43.7	38.9	36.2	35.4	34.7	34.0	33.3	32.8
87.5°	20.7	19.9	19.1	18.3	17.6	17.4	17.7	18.1	18.4	18.7	19.0
90°	4.5	8.3	12.0	15.8	19.5	22.7	25.3	28.1	30.8	33.5	35.5
92.5°	19.2	19.4	19.6	19.8	20.0	21.4	24.1	26.9	29.6	32.3	34.3
95°	83.7	72.2	60.8	49.3	37.8	32.1	32.5	32.8	33.1	33.5	35.5
97.5°	177.8	185.0	192.2	199.4	206.6	191.3	153.5	115.7	78.0	40.2	40.4
100°	249.7	255.9	262.0	268.0	274.1	253.8	207.1	160.4	113.7	67.1	61.3
102.5°	330.1	334.7	339.1	343.6	348.0	347.2	341.1	335.1	328.9	322.9	260.7
105°	458.4	460.4	462.4	464.5	466.6	468.4	470.1	471.8	473.4	475.1	478.2
107.5°	577.4	578.6	579.6	580.6	581.6	583.2	585.5	587.8	590.1	592.4	593.9
110°	657.9	658.9	659.9	661.0	662.0	663.5	665.5	667.5	669.5	671.6	672.3



TEST NUMBER: P333073-840

CATALOG NUMBER: S124RDIW-S795D1560U840-4F0-1E-UDD-F

**CANDELA DISTRIBUTION (continued):**

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
112.5°	735.9	737.7	739.5	741.3	743.2	744.6	745.5	746.5	747.4	748.4	748.2
115°	855.9	856.9	857.9	858.9	859.9	860.3	859.9	859.6	859.3	858.9	859.6
117.5°	964.0	965.3	966.7	968.1	969.5	970.5	971.2	972.0	972.7	973.4	973.3
120°	1037.1	1038.4	1039.9	1041.2	1042.5	1043.0	1042.7	1042.4	1042.0	1041.7	1042.4
122.5°	1105.3	1106.1	1106.9	1107.7	1108.6	1109.2	1109.7	1110.1	1110.6	1111.2	1111.6
125°	1203.2	1204.5	1205.8	1207.2	1208.5	1208.8	1208.2	1207.5	1206.8	1206.2	1207.2
127.5°	1295.7	1296.1	1296.4	1296.7	1297.1	1298.0	1299.6	1301.1	1302.6	1304.2	1304.0
130°	1355.4	1355.7	1356.0	1356.5	1356.8	1357.5	1358.5	1359.5	1360.5	1361.5	1361.8
132.5°	1410.2	1410.8	1411.5	1412.1	1412.7	1413.6	1414.9	1416.1	1417.4	1418.8	1419.1
135°	1492.5	1492.1	1491.8	1491.5	1491.1	1491.6	1493.0	1494.3	1495.7	1497.0	1497.7
137.5°	1565.3	1565.4	1565.5	1565.7	1565.8	1566.6	1568.1	1569.6	1571.0	1572.6	1573.3
140°	1612.8	1613.5	1614.2	1614.8	1615.5	1616.2	1616.8	1617.5	1618.2	1618.8	1619.9
142.5°	1655.4	1656.6	1657.9	1659.1	1660.3	1661.1	1661.5	1661.9	1662.3	1662.7	1663.4
145°	1720.9	1721.9	1722.9	1723.9	1725.0	1725.5	1725.5	1725.5	1725.5	1725.5	1725.8
147.5°	1773.0	1774.8	1776.8	1778.7	1780.6	1781.3	1781.0	1780.7	1780.3	1780.0	1780.3
150°	1810.8	1812.1	1813.4	1814.8	1816.1	1816.6	1816.3	1816.0	1815.6	1815.3	1815.3
152.5°	1842.4	1843.5	1844.6	1845.6	1846.7	1847.0	1846.3	1845.7	1845.1	1844.5	1845.1
155°	1886.9	1887.2	1887.5	1887.9	1888.2	1887.9	1886.9	1885.9	1884.9	1883.8	1885.2
157.5°	1924.4	1924.2	1924.0	1923.8	1923.6	1922.9	1921.7	1920.6	1919.5	1918.2	1920.1
160°	1946.3	1945.3	1944.3	1943.3	1942.3	1941.6	1941.2	1940.9	1940.6	1940.2	1942.3
162.5°	1965.8	1964.5	1963.2	1962.0	1960.7	1959.8	1959.4	1959.1	1958.8	1958.4	1960.5
165°	1990.4	1988.7	1987.1	1985.4	1983.7	1982.9	1982.9	1982.9	1982.9	1982.9	1985.5
167.5°	2009.9	2008.2	2006.4	2004.7	2002.9	2002.0	2001.8	2001.6	2001.4	2001.1	2004.1
170°	2020.9	2018.9	2016.8	2014.8	2012.8	2012.0	2012.3	2012.7	2013.0	2013.3	2016.0
172.5°	2028.2	2026.2	2024.2	2022.2	2020.1	2019.2	2019.6	2019.9	2020.2	2020.6	2023.3
175°	2036.1	2034.1	2032.1	2030.0	2028.0	2027.2	2027.5	2027.8	2028.2	2028.5	2031.5
177.5°	2039.8	2037.9	2036.0	2034.1	2032.3	2031.5	2032.1	2032.7	2033.2	2033.7	2035.9
180°	2036.1	2036.1	2036.1	2036.1	2036.1	2036.1	2036.1	2036.1	2036.1	2036.1	2036.1



TEST NUMBER: P333073-840

CATALOG NUMBER: S124RDIW-S795D1560U840-4F0-1E-UDD-F

**CANDELA DISTRIBUTION (continued):**

	55°	60°	65°	70°	75°	80°	85°	90°
0°	1402.9	1402.9	1402.9	1402.9	1402.9	1402.9	1402.9	1402.9
2.5°	1397.7	1399.7	1401.8	1402.8	1402.6	1402.4	1402.2	1402.0
5°	1388.3	1390.7	1393.1	1394.0	1393.5	1393.1	1392.6	1392.1
7.5°	1369.8	1371.4	1372.9	1373.2	1372.5	1371.7	1371.0	1370.2
10°	1353.2	1354.1	1355.1	1355.1	1354.1	1353.2	1352.2	1351.3
12.5°	1332.7	1333.2	1333.8	1333.4	1332.1	1330.8	1329.4	1328.1
15°	1296.7	1296.2	1295.7	1294.6	1292.9	1291.2	1289.6	1287.9
17.5°	1253.2	1251.9	1250.5	1248.6	1246.1	1243.5	1241.0	1238.5
20°	1222.8	1220.9	1219.0	1216.6	1213.5	1210.3	1207.2	1204.2
22.5°	1189.2	1186.3	1183.5	1180.7	1178.2	1175.7	1173.2	1170.6
25°	1134.8	1130.7	1126.7	1123.5	1121.1	1118.7	1116.3	1113.9
27.5°	1079.3	1074.4	1069.3	1065.1	1061.7	1058.2	1054.8	1051.4
30°	1039.7	1033.7	1027.7	1022.8	1019.1	1015.2	1011.4	1007.5
32.5°	999.1	992.2	985.2	980.0	976.3	972.7	969.1	965.4
35°	938.7	930.6	922.5	916.3	912.0	907.7	903.3	899.1
37.5°	873.8	864.7	855.7	849.0	844.8	840.4	836.2	831.8
40°	830.7	820.6	810.6	803.4	799.2	794.9	790.6	786.3
42.5°	788.2	778.0	767.8	760.4	755.9	751.4	747.0	742.5
45°	723.2	711.4	699.7	691.8	687.4	683.2	678.8	674.6
47.5°	657.6	645.5	633.4	624.9	620.3	615.5	610.8	606.0
50°	614.2	602.3	590.3	582.1	577.5	573.0	568.5	563.9
52.5°	570.9	558.8	546.5	538.2	533.4	528.7	524.0	519.3
55°	506.9	494.4	482.1	473.6	469.1	464.5	460.0	455.4
57.5°	444.4	431.8	419.2	411.2	407.8	404.3	400.9	397.5
60°	402.7	390.3	377.9	369.7	366.0	362.1	358.3	354.5
62.5°	361.6	350.2	338.7	331.4	328.4	325.4	322.2	319.2
65°	302.8	292.6	282.3	275.7	272.9	269.9	267.1	264.3
67.5°	248.7	239.9	231.1	225.1	222.0	218.7	215.6	212.5
70°	212.0	204.1	196.2	191.1	188.7	186.3	183.9	181.6
72.5°	179.0	172.3	165.5	161.1	159.0	156.7	154.5	152.3
75°	131.9	126.4	120.9	117.4	116.0	114.6	113.1	111.7
77.5°	93.3	90.1	86.8	85.0	84.6	84.2	83.8	83.3
80°	71.6	70.9	70.2	69.7	69.5	69.2	69.0	68.8
82.5°	55.6	55.1	54.6	54.2	54.0	53.7	53.5	53.3
85°	32.3	31.9	31.4	31.1	31.1	31.1	31.1	31.1
87.5°	19.2	19.4	19.6	19.9	20.2	20.5	20.8	21.2
90°	37.6	39.6	41.6	43.0	43.6	44.3	45.0	45.6
92.5°	36.4	38.4	40.4	41.5	41.6	41.8	41.9	42.0
95°	37.6	39.6	41.6	42.8	43.1	43.5	43.8	44.1
97.5°	40.6	40.8	41.0	41.3	41.6	42.0	42.3	42.6
100°	55.5	49.8	44.0	41.3	41.6	42.0	42.3	42.6
102.5°	198.7	136.6	74.6	43.6	43.6	43.7	43.8	43.8
105°	481.2	484.3	487.4	482.7	470.6	458.4	446.3	434.0
107.5°	595.4	596.9	598.3	599.8	601.1	602.3	603.6	604.9
110°	673.0	673.7	674.3	675.2	676.2	677.2	678.2	679.2





TEST NUMBER: P333073-840

CATALOG NUMBER: S124RDIW-S795D1560U840-4F0-1E-UDD-F

**CANDELA DISTRIBUTION (continued):**

	55°	60°	65°	70°	75°	80°	85°	90°
112.5°	748.1	747.9	747.8	748.4	749.7	750.9	752.2	753.6
115°	860.3	860.9	861.6	862.0	862.0	862.0	862.0	862.0
117.5°	973.2	973.0	972.9	972.8	972.6	972.5	972.4	972.2
120°	1043.0	1043.7	1044.4	1044.4	1043.7	1043.0	1042.4	1041.7
122.5°	1112.0	1112.4	1112.8	1112.6	1112.0	1111.3	1110.5	1109.9
125°	1208.2	1209.2	1210.2	1210.9	1211.2	1211.5	1211.9	1212.2
127.5°	1303.8	1303.6	1303.4	1303.1	1302.9	1302.6	1302.3	1302.1
130°	1362.2	1362.5	1362.8	1363.0	1363.0	1363.0	1363.0	1363.0
132.5°	1419.5	1419.8	1420.1	1420.2	1419.9	1419.6	1419.4	1419.1
135°	1498.3	1499.0	1499.8	1500.5	1501.1	1501.8	1502.5	1503.1
137.5°	1574.1	1574.8	1575.6	1575.8	1575.6	1575.4	1575.2	1575.0
140°	1620.9	1621.9	1623.0	1623.6	1624.0	1624.3	1624.6	1625.0
142.5°	1664.3	1665.0	1665.7	1666.1	1666.2	1666.3	1666.3	1666.4
145°	1726.2	1726.5	1726.8	1727.4	1728.0	1728.7	1729.4	1730.0
147.5°	1780.5	1780.8	1781.1	1781.4	1781.7	1782.0	1782.4	1782.7
150°	1815.3	1815.3	1815.3	1815.5	1815.8	1816.1	1816.5	1816.8
152.5°	1845.6	1846.1	1846.7	1846.8	1846.6	1846.4	1846.2	1846.0
155°	1886.5	1887.9	1889.3	1889.5	1888.4	1887.4	1886.4	1885.4
157.5°	1921.8	1923.6	1925.3	1925.3	1923.6	1921.8	1920.1	1918.2
160°	1944.3	1946.3	1948.3	1948.3	1946.3	1944.3	1942.3	1940.2
162.5°	1962.6	1964.6	1966.6	1966.4	1964.2	1961.9	1959.5	1957.2
165°	1988.2	1990.9	1993.7	1993.5	1990.4	1987.4	1984.4	1981.4
167.5°	2007.1	2010.0	2013.1	2012.9	2009.4	2006.1	2002.7	1999.3
170°	2018.7	2021.4	2024.2	2023.8	2020.4	2017.0	2013.7	2010.2
172.5°	2026.0	2028.7	2031.4	2030.9	2027.3	2023.7	2020.0	2016.3
175°	2034.6	2037.7	2040.7	2040.2	2036.1	2032.1	2028.0	2024.0
177.5°	2038.0	2040.2	2042.4	2041.8	2038.6	2035.3	2032.1	2028.8
180°	2036.1	2036.1	2036.1	2036.1	2036.1	2036.1	2036.1	2036.1

(END OF REPORT)