

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: P333070-840

Luminaire Tested: **S124RDIW-S795D1340U840-4F0-1E-UDD-F1**

Issue Date: 3/3/2020

**Test Information**

Test Method: LM-79-08  
Report Number: P333070-840  
REPORT IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-1807-864-10,  
Test Lab: INNOVATION CENTER  
Issue Date: 3/3/2020  
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)  
Product Line: NEO-RAY  
Catalog Number: S124RDIW-S795D1340U840-4F0-1E-UDD-F1  
Description: DEFINE 4 DIRECT-INDIRECT WALL MOUNT LED LUMINAIRE  
DOWNLIGHT 795 LUMENS PER FOOT, FLUSH SATIN WHITE DIFFUSER, REGRESSED  
HOUSING  
UPLIGHT 1340 LUMENS PER FOOT, FLUSH SATIN WHITE DIFFUSER  
Light Source: -  
Ballast/Driver: ELECTRONIC DRIVER

**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 7944.5 lumens  
Efficiency: N/A  
Efficacy: 129.4 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: General Diffuse

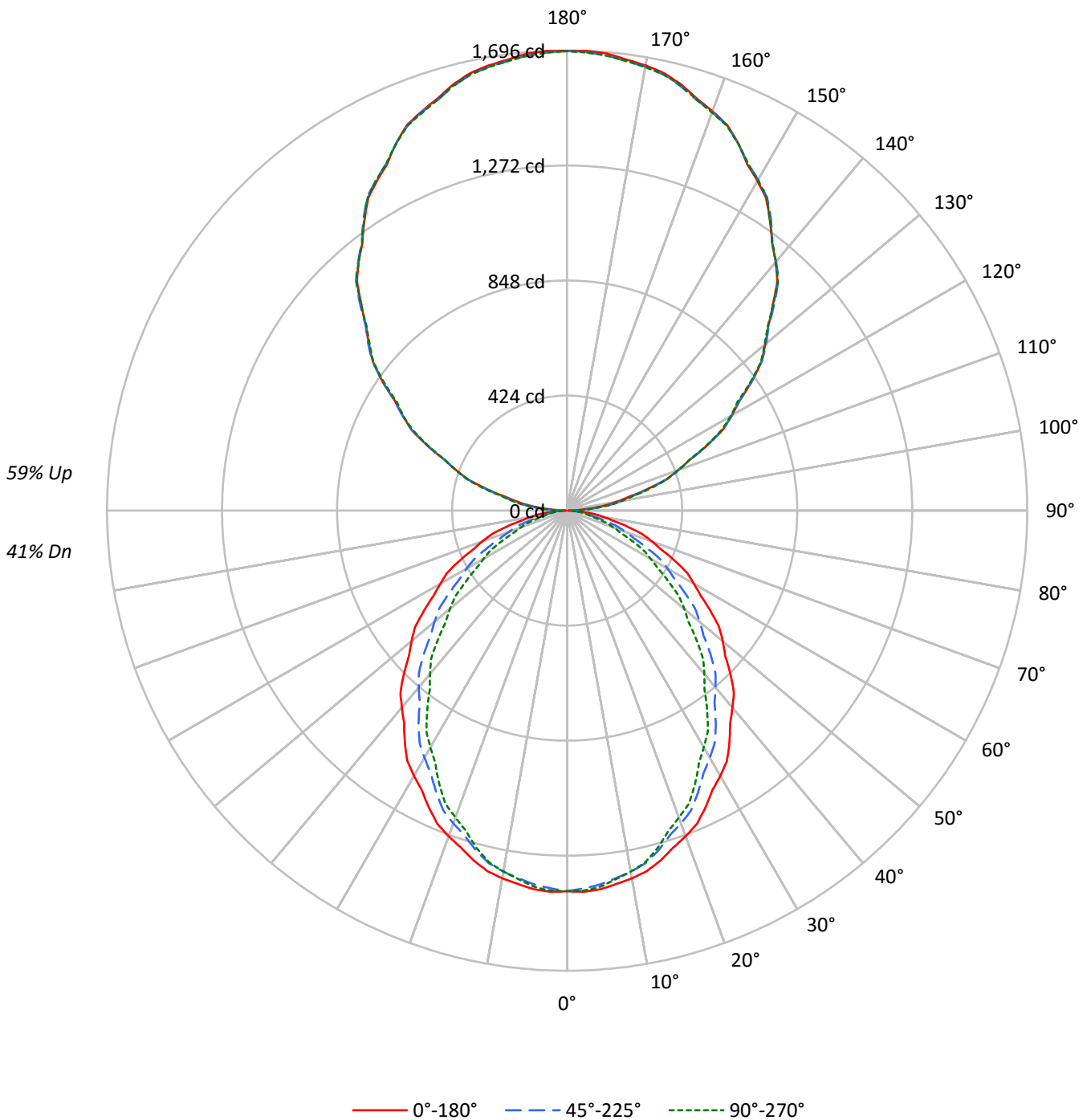
Input Watts (W): 61.4  
Input Voltage (V): 120  
Input Current (A<sub>in</sub>): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 25 FT



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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	0
RCR																		
0	105	105	105	105	96	96	96	96	78	78	78	62	62	62	48	48	48	41
1	96	92	88	85	87	84	81	78	69	67	65	55	54	52	42	42	41	35
2	88	80	74	69	80	73	68	64	61	57	54	49	46	44	38	36	35	30
3	80	71	64	58	73	65	59	54	54	49	45	43	40	37	34	31	30	25
4	73	63	55	49	66	58	51	46	48	43	39	39	35	32	30	28	26	22
5	67	56	48	42	61	51	44	39	43	38	34	35	31	28	27	25	22	19
6	62	50	42	37	56	46	39	34	38	33	29	31	27	25	25	22	20	17
7	57	45	38	32	52	42	35	30	35	30	26	29	25	22	23	20	18	15
8	53	41	34	28	48	38	31	27	32	27	23	26	22	19	21	18	16	13
9	49	37	30	25	45	35	28	24	29	24	21	24	20	17	19	16	14	12
10	46	34	27	23	42	32	25	21	27	22	18	22	18	16	18	15	13	11

**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



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	131.8	1.7
10°-20°	367.5	4.6
20°-30°	530.6	6.7
30°-40°	601.5	7.6
40°-50°	580.8	7.3
50°-60°	483.0	6.1
60°-70°	333.5	4.2
70°-80°	169.1	2.1
80°-90°	48.4	0.6
90°-100°	111.7	1.4
100°-110°	330.9	4.2
110°-120°	561.6	7.1
120°-130°	740.5	9.3
130°-140°	831.6	10.5
140°-150°	817.2	10.3
150°-160°	687.3	8.7
160°-170°	457.3	5.8
170°-180°	160.1	2.0
0°-30°	1029.9	13.0
0°-40°	1631.4	20.5
0°-60°	2695.2	33.9
0°-90°	3246.2	40.9
90°-120°	1004.2	12.6
90°-150°	3393.5	42.7
90°-180°	4698.0	59.1
0°-180°	7944.5	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	18	29	36	39	8
95°	79	90	100	103	104	87
105°	305	307	312	316	320	324
115°	571	571	568	567	566	563
125°	832	832	830	828	825	741
135°	1073	1080	1080	1078	1074	830
145°	1303	1308	1310	1308	1304	815
155°	1493	1493	1492	1496	1492	687
165°	1625	1621	1619	1626	1621	458
175°	1691	1685	1683	1691	1683	160
180°	1693	1693	1693	1693	1693	



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**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°	20.5	19.7	18.8	17.9	17.0	16.7	17.0	17.3	17.5	17.8	18.0
90°	3.9	7.2	10.3	13.5	16.8	19.5	21.8	24.1	26.5	28.8	30.6
92.5°	28.1	31.7	35.3	39.0	42.7	45.3	47.0	48.6	50.2	51.9	52.9
95°	78.6	81.2	83.8	86.4	89.1	91.4	93.4	95.4	97.5	99.6	100.4
97.5°	137.2	139.4	141.5	143.5	145.6	147.8	150.3	152.7	155.0	157.4	158.4
100°	183.4	184.5	185.7	186.8	188.0	189.9	192.5	195.1	197.7	200.4	201.0
102.5°	231.6	232.1	232.5	233.0	233.4	234.8	237.2	239.6	242.0	244.4	245.2
105°	305.2	305.5	305.8	306.0	306.3	307.0	308.2	309.4	310.5	311.7	312.6
107.5°	382.4	382.7	383.1	383.4	383.8	384.1	384.3	384.5	384.7	384.8	385.6
110°	434.8	435.4	436.0	436.6	437.2	437.3	437.0	436.7	436.5	436.2	435.6



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**CANDELA DISTRIBUTION (continued):**

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
112.5°	489.3	489.4	489.5	489.7	489.8	489.6	489.1	488.5	488.0	487.5	487.4
115°	571.0	571.0	571.0	571.0	571.0	570.8	570.2	569.6	569.0	568.4	568.2
117.5°	648.0	648.2	648.5	648.7	648.9	648.8	648.4	648.0	647.6	647.2	646.2
120°	699.3	700.5	701.7	702.9	704.0	704.2	703.3	702.5	701.6	700.6	699.2
122.5°	752.8	753.3	753.8	754.2	754.7	754.7	754.3	753.9	753.5	753.1	752.0
125°	831.6	831.6	831.6	831.6	831.6	831.5	831.2	830.9	830.6	830.3	829.7
127.5°	903.1	904.0	904.9	905.7	906.7	906.9	906.4	905.9	905.4	904.9	904.4
130°	953.4	954.3	955.2	956.0	956.9	957.4	957.4	957.4	957.4	957.4	956.7
132.5°	1004.8	1005.4	1006.0	1006.7	1007.3	1007.5	1007.3	1007.0	1006.8	1006.6	1006.0
135°	1072.6	1074.4	1076.1	1077.8	1079.6	1080.5	1080.5	1080.5	1080.5	1080.5	1079.9
137.5°	1146.5	1147.3	1148.1	1148.9	1149.7	1150.4	1150.8	1151.3	1151.8	1152.3	1151.4
140°	1195.8	1196.3	1196.9	1197.5	1198.1	1198.3	1198.3	1198.3	1198.3	1198.3	1198.1
142.5°	1240.8	1241.3	1241.9	1242.5	1243.1	1243.2	1243.0	1242.8	1242.6	1242.3	1242.3
145°	1303.1	1304.3	1305.5	1306.7	1307.8	1308.5	1308.8	1309.1	1309.4	1309.7	1309.4
147.5°	1364.9	1366.3	1367.8	1369.2	1370.5	1371.1	1370.9	1370.7	1370.4	1370.2	1370.0
150°	1402.7	1403.8	1405.0	1406.1	1407.3	1407.9	1407.9	1407.9	1407.9	1407.9	1407.9
152.5°	1438.2	1439.0	1439.7	1440.4	1441.1	1441.6	1441.8	1442.0	1442.3	1442.5	1443.2
155°	1493.0	1493.0	1493.0	1493.0	1493.0	1492.9	1492.6	1492.3	1492.0	1491.8	1492.9
157.5°	1539.1	1538.6	1538.1	1537.5	1537.0	1536.7	1536.7	1536.6	1536.6	1536.5	1537.4
160°	1566.4	1566.1	1565.8	1565.5	1565.2	1564.9	1564.6	1564.4	1564.1	1563.8	1564.6
162.5°	1591.5	1590.7	1590.0	1589.2	1588.5	1588.0	1587.7	1587.4	1587.1	1586.8	1588.4
165°	1625.3	1624.5	1623.6	1622.7	1621.8	1621.1	1620.5	1619.9	1619.3	1618.7	1620.5
167.5°	1651.2	1650.0	1648.8	1647.6	1646.4	1645.8	1645.9	1645.9	1646.0	1646.0	1647.8
170°	1665.9	1664.5	1663.0	1661.5	1660.1	1659.5	1659.8	1660.1	1660.4	1660.6	1662.4
172.5°	1676.4	1675.2	1674.0	1672.7	1671.5	1670.9	1671.0	1671.0	1671.1	1671.1	1673.1
175°	1690.8	1689.3	1687.9	1686.5	1685.0	1684.1	1683.8	1683.5	1683.2	1682.9	1685.0
177.5°	1695.5	1694.4	1693.1	1692.0	1690.8	1690.3	1690.3	1690.3	1690.3	1690.3	1691.9
180°	1693.4	1693.4	1693.4	1693.4	1693.4	1693.4	1693.4	1693.4	1693.4	1693.4	1693.4



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**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°	18.1	18.3	18.4	18.7	19.0	19.3	19.6	19.9
90°	32.3	34.0	35.7	37.0	37.6	38.2	38.7	39.3
92.5°	53.9	55.0	56.0	56.8	57.1	57.5	57.8	58.2
95°	101.3	102.2	103.0	103.5	103.5	103.5	103.5	103.5
97.5°	159.6	160.6	161.6	162.2	162.2	162.2	162.2	162.2
100°	201.6	202.2	202.7	203.0	203.0	203.0	203.0	203.0
102.5°	246.0	246.8	247.6	248.1	248.4	248.6	248.8	249.1
105°	313.5	314.4	315.2	316.1	316.9	317.8	318.7	319.5
107.5°	386.4	387.2	388.1	388.4	388.4	388.3	388.3	388.2
110°	434.9	434.3	433.8	433.9	434.8	435.7	436.6	437.5





TEST NUMBER: P333070-840

CATALOG NUMBER: S124RDIW-S795D1340U840-4F0-1E-UDD-F1

**CANDELA DISTRIBUTION (continued):**

	55°	60°	65°	70°	75°	80°	85°	90°
112.5°	487.3	487.2	487.0	487.1	487.2	487.4	487.6	487.8
115°	567.8	567.5	567.2	566.9	566.6	566.3	566.0	565.8
117.5°	645.3	644.3	643.3	642.5	641.9	641.4	640.8	640.2
120°	697.8	696.3	694.9	694.4	695.0	695.6	696.2	696.7
122.5°	751.0	750.1	749.1	748.1	747.0	746.0	745.0	743.9
125°	829.2	828.6	828.0	827.4	826.9	826.3	825.7	825.1
127.5°	903.8	903.2	902.6	902.1	901.7	901.2	900.7	900.3
130°	956.2	955.6	955.0	954.2	953.0	951.8	950.7	949.5
132.5°	1005.4	1004.9	1004.3	1003.8	1003.3	1002.8	1002.4	1001.9
135°	1079.3	1078.7	1078.1	1077.4	1076.5	1075.7	1074.8	1073.9
137.5°	1150.7	1150.0	1149.2	1148.9	1149.1	1149.3	1149.4	1149.6
140°	1197.8	1197.5	1197.2	1196.9	1196.6	1196.3	1196.0	1195.8
142.5°	1242.2	1242.2	1242.1	1242.0	1242.0	1241.9	1241.9	1241.8
145°	1309.1	1308.8	1308.5	1308.0	1307.1	1306.2	1305.4	1304.4
147.5°	1369.7	1369.5	1369.3	1369.0	1368.7	1368.4	1368.2	1367.9
150°	1407.9	1407.9	1407.9	1407.8	1407.4	1407.1	1406.8	1406.6
152.5°	1443.9	1444.6	1445.3	1445.2	1444.5	1443.7	1443.0	1442.2
155°	1494.1	1495.2	1496.4	1496.4	1495.2	1494.1	1492.9	1491.8
157.5°	1538.2	1539.1	1540.0	1539.9	1538.9	1537.9	1537.0	1536.0
160°	1565.5	1566.4	1567.2	1566.9	1565.5	1564.1	1562.6	1561.2
162.5°	1589.9	1591.5	1593.1	1593.2	1591.6	1590.2	1588.8	1587.3
165°	1622.2	1624.0	1625.8	1626.1	1624.9	1623.7	1622.6	1621.3
167.5°	1649.5	1651.2	1652.9	1652.9	1651.1	1649.3	1647.6	1645.8
170°	1664.2	1665.9	1667.7	1667.5	1665.5	1663.4	1661.4	1659.4
172.5°	1675.1	1677.1	1679.1	1679.0	1677.0	1675.0	1672.9	1670.9
175°	1687.0	1689.0	1691.1	1691.1	1689.0	1687.0	1685.0	1682.9
177.5°	1693.5	1695.2	1696.8	1696.7	1694.9	1692.9	1691.1	1689.2
180°	1693.4	1693.4	1693.4	1693.4	1693.4	1693.4	1693.4	1693.4

(END OF REPORT)