

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: P332798-840

Luminaire Tested: **S124DIW-S795D1340U840-4F0-1E-UDD-F1**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P332798-840
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: S124DIW-S795D1340U840-4F0-1E-UDD-F1
Description: DEFINE 4 DIRECT-INDIRECT WALL MOUNT LED LUMINAIRE
DOWNLIGHT 795 LUMENS PER FOOT, FLUSH SATIN WHITE DIFFUSER
UPLIGHT 1340 LUMENS PER FOOT, FLUSH SATIN WHITE DIFFUSER
Light Source: -
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 8143.4 lumens
Efficiency: N/A
Efficacy: 132.6 lumens/watt
Spacing Criteria (0/90/45): 1.2 / 1.17 / 1.3
Luminous Opening: Rectangular (W 0.33' x L: 4' x H: 0')
CIE Type: General Diffuse

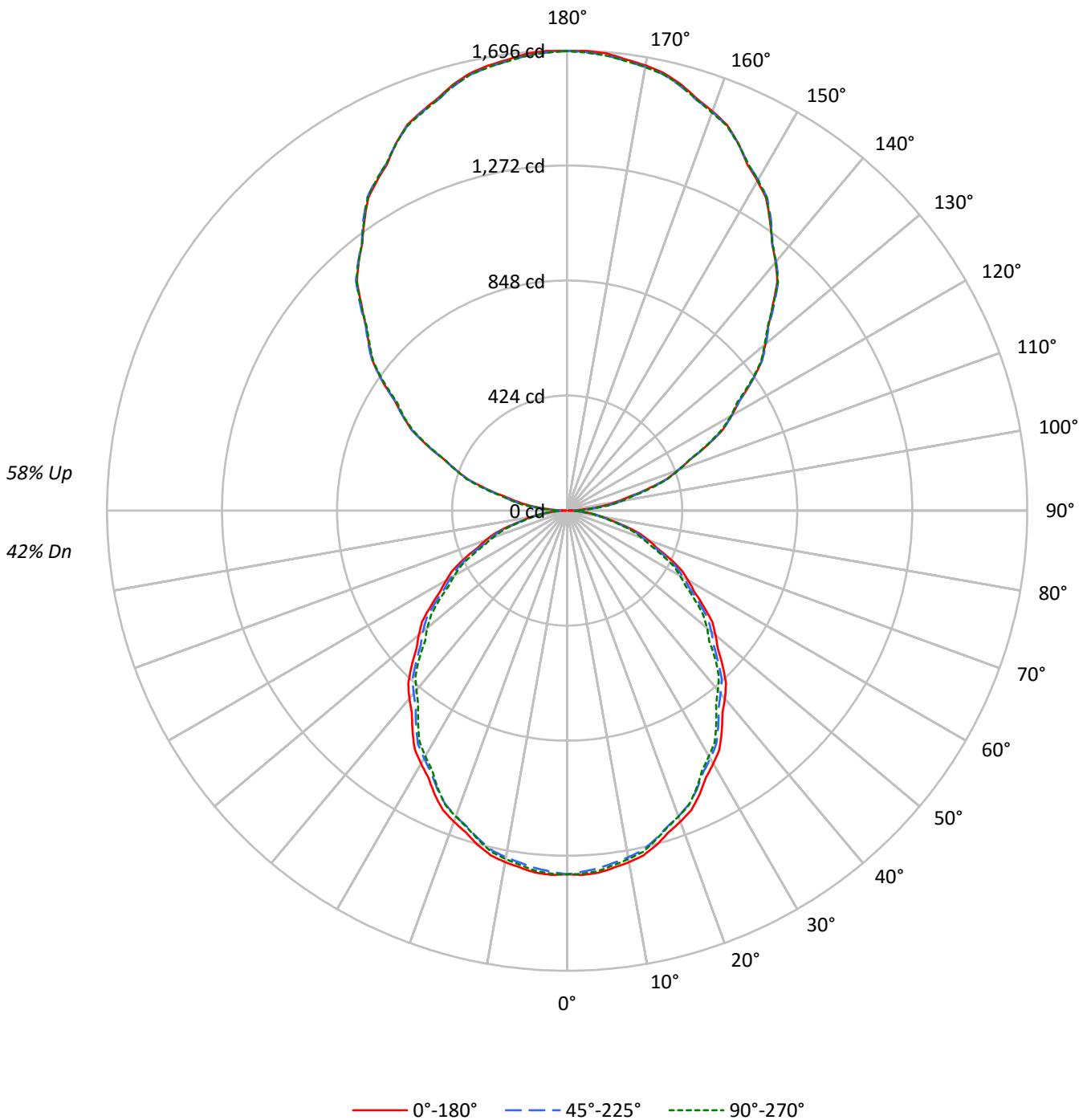
Input Watts (W): 61.4
Input Voltage (V): 120
Input Current (A_{in}): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



TEST NUMBER: P332798-840

CATALOG NUMBER: S124DIW-S795D1340U840-4F0-1E-UDD-F1

Luminous Intensity Polar Plot





TEST NUMBER: P332798-840

CATALOG NUMBER: S124DIW-S795D1340U840-4F0-1E-UDD-F1

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	79	79	79	63	63	63	49	49	49	42
1	96	92	88	84	88	84	81	78	69	67	65	56	54	53	43	42	41	36
2	87	80	74	69	80	73	68	64	61	57	54	49	46	44	38	36	35	30
3	80	70	63	57	72	64	58	53	53	49	45	43	40	37	34	31	30	25
4	73	62	54	48	66	57	50	45	47	42	38	38	35	32	30	28	25	22
5	67	55	47	41	61	51	44	39	42	37	33	35	31	28	27	24	22	19
6	62	50	42	36	56	46	39	33	38	33	29	31	27	24	25	22	20	16
7	57	45	37	31	52	41	34	29	35	29	25	28	24	21	22	20	17	15
8	53	41	33	28	48	37	31	26	31	26	22	26	22	19	21	18	16	13
9	49	37	30	25	45	34	28	23	29	24	20	24	20	17	19	16	14	12
10	46	34	27	22	42	31	25	21	27	21	18	22	18	15	18	15	13	11

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	10823	10823	10823
5°	10855	10724	10802
10°	10787	10637	10690
15°	10657	10486	10513
20°	10483	10299	10308
25°	10286	10085	10056
30°	10043	9833	9743
35°	9792	9570	9443
40°	9531	9271	9101
45°	9259	8977	8805
50°	8959	8715	8446
55°	8633	8376	8103
60°	8307	7995	7753
65°	7941	7633	7324
70°	7530	7152	6871
75°	6903	6569	6400
80°	6141	5890	5742
85°	5372	5169	5067



TEST NUMBER: P332798-840

CATALOG NUMBER: S124DIW-S795D1340U840-4F0-1E-UDD-F1

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	126.2	1.6
10°-20°	355.7	4.4
20°-30°	523.5	6.4
30°-40°	608.6	7.5
40°-50°	608.7	7.5
50°-60°	532.4	6.5
60°-70°	395.4	4.9
70°-80°	224.6	2.8
80°-90°	69.9	0.9
90°-100°	111.7	1.4
100°-110°	330.9	4.1
110°-120°	561.6	6.9
120°-130°	740.5	9.1
130°-140°	831.6	10.2
140°-150°	817.2	10.0
150°-160°	687.3	8.4
160°-170°	457.3	5.6
170°-180°	160.1	2.0
0°-30°	1005.5	12.3
0°-40°	1614.1	19.8
0°-60°	2755.2	33.8
0°-90°	3445.1	42.3
90°-120°	1004.2	12.3
90°-150°	3393.5	41.7
90°-180°	4698.0	57.7
0°-180°	8143.4	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1341	1341	1341	1341	1341	
5°	1340	1335	1323	1334	1333	127
15°	1275	1270	1255	1260	1258	359
25°	1155	1147	1132	1133	1129	531
35°	994	986	971	964	958	621
45°	811	803	786	775	771	625
55°	613	609	595	583	576	549
65°	416	410	400	389	383	411
75°	221	216	211	206	205	235
85°	58	58	56	56	55	64
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	



TEST NUMBER: P332798-840

CATALOG NUMBER: S124DIW-S795D1340U840-4F0-1E-UDD-F1

CANDELA DISTRIBUTION (FULL):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
0°	1340.6	1340.6	1340.6	1340.6	1340.6	1340.6	1340.6	1340.6	1340.6	1340.6	1340.6
2.5°	1344.0	1343.4	1342.8	1342.3	1341.7	1340.4	1338.3	1336.2	1334.0	1332.0	1333.8
5°	1339.5	1338.6	1337.6	1336.7	1335.6	1333.8	1331.2	1328.6	1326.0	1323.3	1326.0
7.5°	1327.1	1326.1	1325.1	1324.1	1323.2	1321.3	1318.4	1315.5	1312.5	1309.6	1311.7
10°	1315.9	1314.9	1313.9	1313.0	1312.0	1310.0	1306.9	1303.8	1300.7	1297.6	1299.5
12.5°	1301.2	1300.3	1299.3	1298.4	1297.5	1295.3	1292.0	1288.7	1285.5	1282.1	1284.2
15°	1275.1	1274.0	1273.1	1272.1	1271.2	1269.0	1265.4	1261.8	1258.2	1254.7	1256.1
17.5°	1243.4	1242.2	1241.0	1239.9	1238.7	1236.4	1233.0	1229.6	1226.2	1222.8	1223.8
20°	1220.2	1219.0	1217.9	1216.7	1215.5	1213.0	1209.5	1205.9	1202.3	1198.8	1199.5
22.5°	1195.4	1193.8	1192.1	1190.6	1189.0	1186.5	1182.9	1179.3	1175.7	1172.2	1173.5
25°	1154.7	1153.1	1151.3	1149.7	1148.0	1145.5	1142.2	1138.8	1135.5	1132.2	1132.4
27.5°	1108.3	1106.6	1104.9	1103.2	1101.5	1099.0	1095.9	1092.9	1089.7	1086.6	1086.0
30°	1077.4	1075.5	1073.6	1071.7	1069.8	1067.2	1064.1	1061.1	1057.9	1054.8	1053.9
32.5°	1044.7	1043.0	1041.3	1039.6	1037.8	1035.3	1032.1	1028.7	1025.5	1022.2	1021.1
35°	993.6	991.9	990.3	988.6	986.9	984.4	981.1	977.8	974.4	971.1	969.4
37.5°	939.7	938.2	936.6	935.1	933.5	931.0	927.5	923.8	920.3	916.7	914.8
40°	904.4	902.5	900.6	898.7	896.8	894.0	890.5	886.9	883.3	879.7	877.4
42.5°	866.7	865.5	864.3	863.2	862.0	859.5	855.6	851.6	847.6	843.6	840.9
45°	811.0	809.3	807.7	806.0	804.4	801.5	797.8	794.0	790.1	786.3	783.7
47.5°	752.8	751.6	750.5	749.3	748.2	745.9	742.4	738.8	735.3	731.7	728.7
50°	713.3	712.3	711.3	710.3	709.4	707.3	704.0	700.6	697.2	693.9	690.5
52.5°	674.6	673.5	672.3	671.2	669.9	667.6	664.1	660.6	657.0	653.5	650.6
55°	613.4	612.6	611.9	611.2	610.5	608.4	605.1	601.8	598.4	595.1	592.2
57.5°	554.9	554.1	553.3	552.5	551.7	549.6	546.3	543.0	539.8	536.4	533.7
60°	514.5	513.3	512.1	511.0	509.8	507.6	504.5	501.4	498.3	495.2	493.0
62.5°	475.0	474.0	473.0	472.0	471.0	468.9	465.5	462.2	459.0	455.7	453.7
65°	415.7	414.5	413.3	412.1	410.9	409.1	406.8	404.3	401.9	399.6	397.2
67.5°	356.0	354.9	353.8	352.6	351.6	349.9	347.6	345.3	343.1	340.7	338.4
70°	319.0	317.4	315.7	314.0	312.4	310.5	308.6	306.7	304.8	303.0	301.0
72.5°	279.5	277.8	276.2	274.5	272.8	271.2	269.7	268.1	266.6	265.1	263.6
75°	221.3	220.0	218.9	217.7	216.5	215.3	214.1	212.9	211.8	210.6	209.5
77.5°	165.6	165.1	164.6	164.1	163.5	162.8	161.7	160.7	159.6	158.5	158.2
80°	132.1	131.4	130.7	130.0	129.3	128.7	128.2	127.7	127.2	126.7	126.2
82.5°	99.5	99.2	98.8	98.5	98.2	98.0	97.9	97.8	97.7	97.6	97.3
85°	58.0	58.0	58.0	58.0	58.0	57.8	57.3	56.9	56.4	55.8	55.8
87.5°	23.1	23.5	24.0	24.4	24.9	25.2	25.5	25.9	26.2	26.4	26.8
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



TEST NUMBER: P332798-840

CATALOG NUMBER: S124DIW-S795D1340U840-4F0-1E-UDD-F1

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



TEST NUMBER: P332798-840

CATALOG NUMBER: S124DIW-S795D1340U840-4F0-1E-UDD-F1

CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
0°	1340.6	1340.6	1340.6	1340.6	1340.6	1340.6	1340.6	1340.6
2.5°	1335.7	1337.7	1339.6	1340.5	1340.3	1340.1	1339.9	1339.7
5°	1328.6	1331.2	1333.8	1334.9	1334.4	1334.0	1333.5	1333.0
7.5°	1313.8	1316.0	1318.0	1318.9	1318.7	1318.4	1318.1	1317.8
10°	1301.4	1303.3	1305.3	1306.0	1305.5	1304.9	1304.5	1304.0
12.5°	1286.4	1288.4	1290.5	1291.2	1290.6	1289.9	1289.2	1288.6
15°	1257.5	1258.9	1260.3	1260.7	1260.0	1259.3	1258.6	1257.9
17.5°	1224.7	1225.6	1226.5	1226.7	1226.2	1225.7	1225.3	1224.8
20°	1200.2	1200.9	1201.6	1201.7	1201.2	1200.8	1200.3	1199.8
22.5°	1174.7	1176.0	1177.3	1177.5	1176.6	1175.8	1174.9	1174.1
25°	1132.7	1132.9	1133.2	1132.8	1131.9	1130.8	1129.9	1128.9
27.5°	1085.5	1084.9	1084.3	1083.5	1082.3	1081.1	1079.8	1078.6
30°	1052.9	1052.0	1051.0	1050.0	1048.7	1047.5	1046.3	1045.2
32.5°	1019.9	1018.8	1017.6	1016.4	1015.2	1014.0	1012.8	1011.7
35°	967.8	966.0	964.3	962.9	961.7	960.6	959.4	958.2
37.5°	913.0	911.2	909.5	907.8	906.2	904.6	903.0	901.4
40°	874.9	872.6	870.2	868.4	867.2	866.1	864.8	863.6
42.5°	838.1	835.4	832.5	830.8	830.0	829.2	828.4	827.6
45°	781.0	778.4	775.8	774.2	773.4	772.6	771.9	771.2
47.5°	725.8	722.9	719.8	717.5	715.7	713.9	712.1	710.2
50°	687.2	683.9	680.5	678.1	676.7	675.3	673.9	672.5
52.5°	647.6	644.6	641.7	639.3	637.5	635.7	633.9	632.1
55°	589.4	586.5	583.6	581.5	580.1	578.7	577.1	575.7
57.5°	531.0	528.3	525.5	523.5	522.1	520.7	519.4	518.0
60°	490.9	488.8	486.6	484.9	483.7	482.5	481.3	480.2
62.5°	451.7	449.8	447.9	446.3	445.0	443.8	442.7	441.5
65°	394.9	392.4	390.0	388.3	387.1	385.9	384.7	383.4
67.5°	336.2	333.9	331.5	330.2	329.9	329.6	329.2	328.9
70°	299.1	297.2	295.3	294.0	293.3	292.6	291.9	291.1
72.5°	262.1	260.5	259.0	257.9	257.1	256.4	255.7	255.0
75°	208.6	207.6	206.7	206.1	205.9	205.6	205.4	205.2
77.5°	157.9	157.6	157.4	156.9	156.3	155.7	155.1	154.5
80°	125.8	125.3	124.8	124.5	124.2	124.0	123.8	123.5
82.5°	96.9	96.6	96.3	96.1	95.9	95.6	95.4	95.1
85°	55.8	55.8	55.8	55.7	55.5	55.2	55.0	54.7
87.5°	27.1	27.5	27.8	28.0	28.2	28.3	28.4	28.5
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: P332798-840

CATALOG NUMBER: S124DIW-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)