

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: P331613-930

Luminaire Tested: **S122DIW-S1005D1440U930-4F0-1E-UDD-F**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P331613-930
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: S122DIW-S1005D1440U930-4F0-1E-UDD-F
Description: DEFINE 2 DIRECT-INDIRECT WALL MOUNT LED LUMINAIRE
DOWNLIGHT 1005 LUMENS PER FOOT, FLUSH SATIN WHITE DIFFUSER
UPLIGHT 1440 LUMENS PER FOOT, NO LENS
Light Source: -
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 8006.1 lumens
Efficiency: N/A
Efficacy: 96.6 lumens/watt
Spacing Criteria (0/90/45): 1.2 / 1.16 / 1.3
Luminous Opening: Rectangular (W 0.17' x L: 4' x H: 0')
CIE Type: General Diffuse

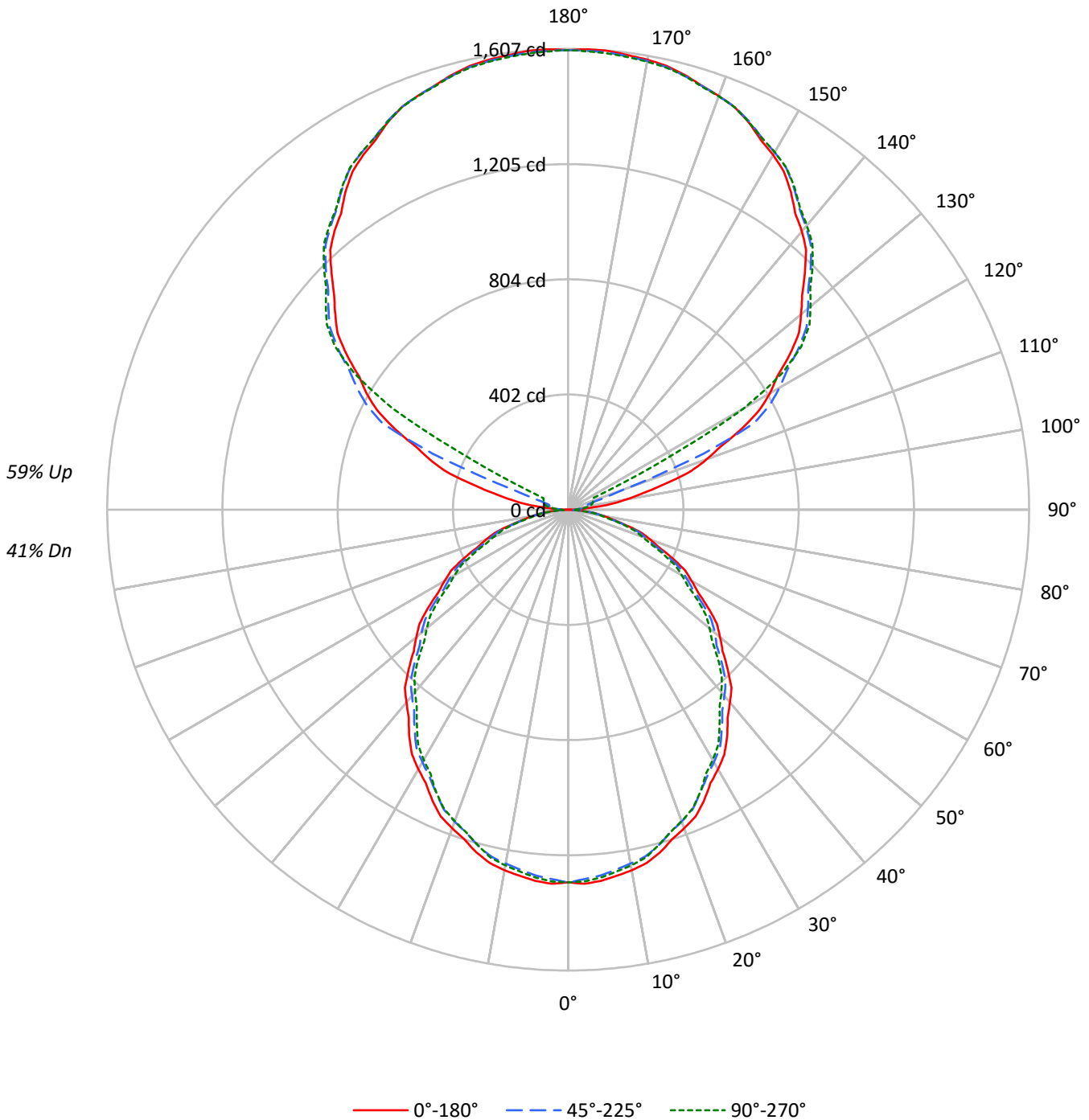
Input Watts (W): 82.9
Input Voltage (V): 120
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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	79	79	79		63	63	63		48	48	48	41
1	96	92	88	84	87	84	80	77	69	66	64		55	54	52		43	42	41	35
2	87	80	74	69	79	73	68	63	60	57	53		48	46	44		37	36	34	29
3	80	70	63	57	72	64	58	53	53	49	45		43	40	37		33	31	29	25
4	73	62	54	48	66	57	50	45	47	42	38		38	34	32		30	27	25	21
5	67	55	47	41	61	51	44	38	42	37	33		34	30	27		27	24	22	18
6	61	50	42	36	56	46	38	33	38	33	29		31	27	24		24	21	19	16
7	57	45	37	31	52	41	34	29	34	29	25		28	24	21		22	19	17	14
8	53	40	33	28	48	37	31	26	31	26	22		26	22	19		20	17	15	13
9	49	37	30	25	45	34	27	23	29	24	20		24	20	17		19	16	14	12
10	46	34	27	22	42	31	25	21	26	21	18		22	18	15		17	15	13	11

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	20980	20980	20980
5°	21060	20757	20879
10°	20935	20546	20649
15°	20677	20279	20259
20°	20309	19880	19859
25°	19946	19388	19388
30°	19475	18938	18776
35°	19036	18398	18126
40°	18487	17856	17513
45°	17945	17317	16890
50°	17357	16759	16164
55°	16743	16110	15510
60°	16059	15332	14767
65°	15320	14560	13891
70°	14389	13624	12977
75°	13094	12545	12239
80°	11623	11269	10693
85°	9485	9040	8096



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	122.2	1.5
10°-20°	343.8	4.3
20°-30°	505.4	6.3
30°-40°	587.0	7.3
40°-50°	586.4	7.3
50°-60°	511.4	6.4
60°-70°	378.1	4.7
70°-80°	214.2	2.7
80°-90°	61.5	0.8
90°-100°	53.5	0.7
100°-110°	196.0	2.4
110°-120°	524.0	6.5
120°-130°	865.0	10.8
130°-140°	919.9	11.5
140°-150°	855.0	10.7
150°-160°	687.4	8.6
160°-170°	443.0	5.5
170°-180°	152.5	1.9
0°-30°	971.4	12.1
0°-40°	1558.4	19.5
0°-60°	2656.1	33.2
0°-90°	3309.9	41.3
90°-120°	773.5	9.7
90°-150°	3413.3	42.6
90°-180°	4696.0	58.7
0°-180°	8006.1	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1299	1299	1299	1299	1299	
5°	1299	1294	1281	1290	1288	123
15°	1237	1229	1213	1218	1212	348
25°	1120	1109	1088	1090	1088	515
35°	966	953	933	926	920	603
45°	786	777	758	745	740	606
55°	595	587	572	558	551	532
65°	401	393	381	370	364	397
75°	210	207	201	194	196	224
85°	51	50	49	45	44	59
90°	1	14	23	29	31	6
95°	75	40	45	51	50	92
105°	352	368	71	83	88	377
115°	667	687	715	204	95	656
125°	943	958	980	988	991	840
135°	1166	1185	1196	1206	1205	901
145°	1353	1353	1372	1379	1374	846
155°	1490	1481	1494	1500	1491	686
165°	1570	1564	1566	1574	1566	443
175°	1606	1598	1600	1607	1597	153
180°	1602	1602	1602	1602	1602	



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CANDELA DISTRIBUTION (FULL):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
0°	1299.4	1299.4	1299.4	1299.4	1299.4	1299.4	1299.4	1299.4	1299.4	1299.4	1299.4
2.5°	1305.5	1304.3	1303.3	1302.1	1301.0	1299.3	1296.8	1294.4	1291.9	1289.5	1291.7
5°	1299.4	1298.4	1297.2	1296.1	1295.0	1292.9	1289.9	1286.8	1283.8	1280.7	1283.0
7.5°	1287.9	1286.2	1284.5	1282.8	1281.1	1278.6	1275.5	1272.4	1269.3	1266.2	1268.4
10°	1276.9	1275.0	1273.1	1271.1	1269.2	1266.6	1263.2	1259.9	1256.5	1253.2	1255.5
12.5°	1262.0	1260.2	1258.5	1256.8	1255.1	1252.5	1249.2	1245.9	1242.6	1239.3	1240.8
15°	1237.0	1235.3	1233.6	1232.0	1230.3	1227.7	1224.1	1220.4	1216.8	1213.2	1214.4
17.5°	1205.0	1203.3	1201.7	1200.0	1198.3	1195.6	1192.0	1188.3	1184.6	1181.0	1182.3
20°	1182.0	1180.3	1178.7	1177.0	1175.3	1172.6	1168.7	1164.8	1160.9	1157.0	1157.8
22.5°	1159.0	1156.7	1154.4	1152.0	1149.7	1146.7	1143.0	1139.4	1135.7	1132.0	1132.2
25°	1119.6	1117.3	1115.1	1112.9	1110.7	1107.2	1102.4	1097.7	1093.0	1088.3	1088.8
27.5°	1074.6	1072.5	1070.6	1068.5	1066.6	1063.7	1060.0	1056.2	1052.6	1048.8	1048.0
30°	1044.6	1042.4	1040.1	1037.9	1035.7	1032.5	1028.3	1024.2	1020.0	1015.8	1015.0
32.5°	1012.6	1010.8	1009.0	1007.2	1005.4	1002.4	998.0	993.6	989.2	984.8	983.3
35°	965.8	963.0	960.3	957.5	954.7	951.1	946.6	942.2	937.8	933.4	931.7
37.5°	913.1	910.7	908.2	905.8	903.4	899.9	895.4	891.0	886.6	882.2	880.0
40°	877.1	874.9	872.7	870.5	868.2	865.0	860.5	856.1	851.6	847.2	844.7
42.5°	842.1	839.9	837.7	835.5	833.2	829.9	825.5	821.0	816.6	812.1	809.4
45°	785.9	784.0	782.0	780.1	778.1	775.1	770.9	766.8	762.6	758.4	755.4
47.5°	729.9	728.1	726.3	724.5	722.6	719.5	715.2	710.9	706.5	702.2	699.0
50°	691.0	689.6	688.2	686.8	685.4	682.7	678.9	675.0	671.1	667.2	663.3
52.5°	653.0	651.2	649.3	647.5	645.6	642.9	639.2	635.5	631.9	628.3	625.0
55°	594.8	593.0	591.4	589.8	588.1	585.5	582.3	578.9	575.6	572.3	568.9
57.5°	536.3	534.9	533.6	532.3	530.9	528.5	524.8	521.1	517.5	513.8	510.5
60°	497.3	496.2	495.0	494.0	492.8	490.3	486.5	482.6	478.7	474.8	471.7
62.5°	459.3	457.5	455.8	454.0	452.2	449.8	446.8	443.8	440.8	437.8	435.0
65°	401.0	399.4	397.8	396.1	394.4	392.2	389.4	386.6	383.8	381.1	378.6
67.5°	341.9	340.6	339.2	337.9	336.6	334.6	332.1	329.6	327.1	324.7	322.7
70°	304.8	303.8	302.6	301.6	300.4	298.6	296.1	293.6	291.1	288.6	286.7
72.5°	266.8	265.8	264.6	263.6	262.4	261.1	259.5	257.9	256.2	254.6	252.7
75°	209.9	209.4	208.8	208.2	207.7	206.7	205.3	203.9	202.5	201.1	199.5
77.5°	158.9	158.0	157.0	156.1	155.2	154.4	153.8	153.3	152.7	152.2	151.3
80°	125.0	124.7	124.4	124.1	123.8	123.4	122.9	122.3	121.7	121.2	120.3
82.5°	92.9	92.9	92.9	92.8	92.7	92.5	92.2	91.9	91.6	91.2	90.2
85°	51.2	51.0	50.7	50.4	50.1	49.8	49.6	49.2	49.0	48.8	47.9
87.5°	18.3	18.3	18.5	18.6	18.8	18.8	18.8	18.7	18.7	18.7	18.3
90°	1.1	4.0	6.8	9.7	12.5	14.9	17.0	19.1	21.1	23.2	24.5
92.5°	23.4	23.2	22.9	22.7	22.4	22.7	23.8	24.9	25.8	26.9	27.6
95°	75.3	66.9	58.4	49.9	41.3	38.0	39.8	41.6	43.5	45.2	46.5
97.5°	149.6	125.6	101.7	77.7	53.7	43.9	48.0	52.2	56.3	60.5	61.6
100°	205.2	169.9	134.6	99.3	64.0	48.6	52.9	57.3	61.7	66.1	68.2
102.5°	266.4	259.0	251.5	244.0	236.6	214.5	177.9	141.2	104.6	67.9	70.6
105°	352.5	360.2	367.9	375.7	383.4	352.1	281.8	211.4	141.0	70.8	73.5
107.5°	450.6	456.8	463.1	469.3	475.6	436.5	352.1	267.7	183.4	99.1	96.1
110°	513.7	519.1	524.5	529.9	535.3	500.8	426.3	351.9	277.4	202.9	177.2



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CANDELA DISTRIBUTION (continued):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
112.5°	573.1	577.8	582.6	587.4	592.2	585.4	567.0	548.6	530.2	511.8	417.8
115°	666.8	671.2	675.5	679.9	684.3	689.7	696.1	702.5	709.0	715.4	596.1
117.5°	750.5	755.4	760.3	765.2	770.1	774.7	779.1	783.6	788.0	792.5	763.6
120°	811.7	815.5	819.4	823.3	827.1	831.4	836.0	840.7	845.3	849.9	853.0
122.5°	863.6	867.7	871.8	875.9	880.0	884.5	889.5	894.5	899.6	904.7	906.5
125°	942.7	946.1	949.4	952.8	956.1	960.3	965.2	970.0	974.9	979.8	981.6
127.5°	1014.4	1018.1	1021.8	1025.5	1029.2	1032.9	1036.6	1040.2	1043.9	1047.6	1050.2
130°	1059.8	1064.0	1068.0	1072.2	1076.4	1079.8	1082.6	1085.5	1088.3	1091.1	1094.0
132.5°	1106.2	1109.7	1113.2	1116.7	1120.2	1123.4	1126.3	1129.0	1131.9	1134.7	1137.2
135°	1166.5	1170.6	1174.8	1178.8	1183.0	1186.2	1188.5	1190.8	1193.2	1195.5	1198.1
137.5°	1227.5	1230.4	1233.3	1236.2	1239.0	1241.8	1244.4	1247.1	1249.7	1252.3	1254.8
140°	1267.4	1269.4	1271.5	1273.6	1275.6	1278.1	1280.9	1283.8	1286.6	1289.4	1291.8
142.5°	1300.8	1302.6	1304.5	1306.4	1308.2	1310.8	1314.0	1317.3	1320.5	1323.7	1325.8
145°	1353.2	1352.9	1352.7	1352.4	1352.2	1354.2	1358.6	1363.0	1367.3	1371.7	1373.5
147.5°	1398.9	1397.9	1396.9	1396.0	1395.0	1396.6	1400.9	1405.3	1409.7	1414.0	1415.3
150°	1428.6	1426.8	1425.0	1423.2	1421.3	1422.5	1426.6	1430.8	1434.8	1439.0	1440.6
152.5°	1453.6	1451.6	1449.6	1447.6	1445.6	1446.5	1450.4	1454.3	1458.2	1462.2	1463.7
155°	1490.0	1487.7	1485.4	1483.0	1480.7	1481.2	1484.3	1487.4	1490.4	1493.5	1495.0
157.5°	1518.6	1516.6	1514.7	1512.7	1510.7	1510.8	1513.0	1515.2	1517.3	1519.5	1521.3
160°	1535.2	1533.7	1532.2	1530.6	1529.1	1529.1	1530.6	1532.2	1533.7	1535.2	1536.8
162.5°	1550.0	1548.6	1547.0	1545.5	1543.9	1543.8	1545.2	1546.5	1547.8	1549.2	1550.9
165°	1570.0	1568.5	1566.9	1565.4	1563.8	1563.5	1564.2	1565.0	1565.8	1566.5	1568.4
167.5°	1584.9	1583.3	1581.8	1580.2	1578.7	1578.3	1579.0	1579.7	1580.5	1581.2	1583.0
170°	1593.3	1591.7	1590.2	1588.6	1587.1	1586.5	1587.1	1587.6	1588.0	1588.6	1590.4
172.5°	1598.8	1597.3	1595.7	1594.2	1592.6	1592.1	1592.6	1593.1	1593.7	1594.2	1595.9
175°	1606.0	1604.2	1602.4	1600.6	1598.8	1598.1	1598.6	1599.1	1599.7	1600.2	1602.0
177.5°	1607.1	1605.7	1604.3	1602.8	1601.3	1600.8	1600.9	1601.2	1601.3	1601.6	1603.0
180°	1602.5	1602.5	1602.5	1602.5	1602.5	1602.5	1602.5	1602.5	1602.5	1602.5	1602.5



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CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
0°	1299.4	1299.4	1299.4	1299.4	1299.4	1299.4	1299.4	1299.4
2.5°	1293.9	1296.1	1298.4	1299.3	1298.8	1298.4	1297.9	1297.5
5°	1285.2	1287.4	1289.6	1290.5	1289.9	1289.3	1288.7	1288.2
7.5°	1270.6	1272.8	1275.1	1275.9	1275.3	1274.7	1274.1	1273.5
10°	1257.7	1259.9	1262.1	1262.8	1262.0	1261.1	1260.3	1259.5
12.5°	1242.4	1243.9	1245.5	1245.9	1245.3	1244.7	1244.1	1243.5
15°	1215.4	1216.6	1217.6	1217.6	1216.2	1214.8	1213.4	1212.0
17.5°	1183.6	1184.9	1186.1	1186.1	1184.7	1183.4	1182.1	1180.7
20°	1158.7	1159.5	1160.3	1160.2	1159.1	1158.0	1156.9	1155.8
22.5°	1132.4	1132.5	1132.7	1132.5	1131.8	1131.1	1130.4	1129.8
25°	1089.4	1090.0	1090.5	1090.5	1090.0	1089.4	1088.8	1088.3
27.5°	1047.2	1046.3	1045.5	1044.4	1043.1	1041.7	1040.4	1039.1
30°	1014.2	1013.3	1012.5	1011.5	1010.4	1009.3	1008.2	1007.1
32.5°	981.9	980.3	978.8	977.5	976.4	975.3	974.2	973.1
35°	930.0	928.4	926.7	925.2	923.8	922.4	921.0	919.6
37.5°	878.0	876.0	873.9	872.2	870.9	869.5	868.2	866.9
40°	842.1	839.7	837.1	835.4	834.2	833.2	832.0	830.9
42.5°	806.7	804.0	801.3	799.2	797.6	796.1	794.5	792.9
45°	752.4	749.3	746.2	744.1	743.0	741.9	740.8	739.7
47.5°	695.8	692.5	689.3	686.9	685.3	683.7	682.1	680.4
50°	659.4	655.6	651.7	649.1	647.7	646.3	644.9	643.5
52.5°	621.8	618.6	615.4	612.9	611.0	609.2	607.3	605.5
55°	565.6	562.2	559.0	556.6	555.2	553.8	552.4	551.0
57.5°	507.2	503.9	500.7	498.5	497.5	496.4	495.4	494.3
60°	468.7	465.6	462.6	460.6	459.8	459.0	458.1	457.3
62.5°	432.2	429.3	426.5	424.5	423.5	422.4	421.3	420.3
65°	376.1	373.6	371.1	369.2	367.8	366.4	365.0	363.6
67.5°	320.7	318.8	316.8	315.3	314.2	313.1	312.0	310.9
70°	284.7	282.8	280.9	279.3	278.2	277.1	276.0	274.9
72.5°	250.8	248.8	246.9	245.5	244.6	243.7	242.8	241.9
75°	197.9	196.2	194.5	194.0	194.5	195.0	195.6	196.2
77.5°	150.5	149.7	148.9	148.1	147.2	146.5	145.7	145.0
80°	119.5	118.7	117.9	117.2	116.6	116.1	115.5	115.0
82.5°	89.1	88.1	87.0	86.4	86.3	86.2	86.1	85.9
85°	47.0	46.2	45.4	44.8	44.6	44.3	44.0	43.7
87.5°	17.9	17.4	17.0	16.7	16.6	16.5	16.4	16.2
90°	25.8	27.1	28.4	29.3	29.8	30.2	30.8	31.3
92.5°	28.2	28.9	29.6	30.1	30.4	30.7	31.0	31.3
95°	47.8	49.1	50.4	50.9	50.6	50.4	50.1	49.9
97.5°	62.6	63.6	64.7	65.3	65.6	66.0	66.3	66.5
100°	70.2	72.3	74.4	75.7	76.1	76.6	77.2	77.7
102.5°	73.3	76.0	78.7	80.4	81.1	81.8	82.5	83.2
105°	76.4	79.2	82.1	84.0	85.0	86.1	87.1	88.1
107.5°	93.3	90.3	87.5	86.6	87.6	88.6	89.7	90.7
110°	151.4	125.6	99.9	87.5	88.5	89.5	90.6	91.6



TEST NUMBER: P331613-930

CATALOG NUMBER: S122DIW-S1005D1440U930-4F0-1E-UDD-F

CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
112.5°	323.8	229.8	135.8	89.2	90.1	90.9	91.7	92.5
115°	476.9	357.5	238.2	169.3	150.7	132.2	113.7	95.1
117.5°	734.7	705.9	677.0	632.1	571.1	510.1	449.1	388.2
120°	856.1	859.2	862.3	846.4	811.7	776.9	742.1	707.4
122.5°	908.4	910.3	912.1	909.6	902.9	896.2	889.4	882.6
125°	983.4	985.2	987.0	988.3	989.1	989.9	990.7	991.4
127.5°	1052.8	1055.4	1058.0	1059.5	1059.6	1059.7	1059.9	1060.1
130°	1096.8	1099.7	1102.4	1103.8	1103.5	1103.3	1103.0	1102.7
132.5°	1139.5	1142.0	1144.4	1145.5	1145.3	1145.0	1144.8	1144.4
135°	1200.6	1203.2	1205.8	1206.8	1206.3	1205.8	1205.3	1204.8
137.5°	1257.4	1259.9	1262.4	1263.2	1262.3	1261.5	1260.6	1259.7
140°	1294.0	1296.4	1298.7	1299.2	1298.0	1296.7	1295.3	1294.0
142.5°	1328.0	1330.1	1332.2	1332.6	1331.3	1330.0	1328.8	1327.5
145°	1375.3	1377.1	1379.0	1379.2	1377.9	1376.6	1375.3	1374.1
147.5°	1416.7	1418.0	1419.4	1419.4	1418.4	1417.3	1416.2	1415.1
150°	1442.1	1443.7	1445.2	1445.3	1444.1	1442.8	1441.4	1440.1
152.5°	1465.3	1466.8	1468.4	1468.3	1466.6	1464.9	1463.2	1461.5
155°	1496.6	1498.1	1499.7	1499.4	1497.4	1495.3	1493.2	1491.2
157.5°	1523.0	1524.7	1526.5	1526.3	1524.4	1522.3	1520.3	1518.3
160°	1538.3	1539.9	1541.4	1541.3	1539.5	1537.7	1535.9	1534.1
162.5°	1552.7	1554.4	1556.2	1555.9	1553.7	1551.5	1549.3	1547.1
165°	1570.2	1572.0	1573.8	1573.8	1572.0	1570.2	1568.4	1566.5
167.5°	1584.8	1586.6	1588.4	1588.1	1585.8	1583.5	1581.2	1578.8
170°	1592.2	1594.0	1595.8	1595.5	1593.3	1590.9	1588.6	1586.2
172.5°	1597.7	1599.5	1601.3	1601.1	1598.8	1596.4	1594.2	1591.8
175°	1603.8	1605.6	1607.4	1607.0	1604.4	1601.8	1599.3	1596.7
177.5°	1604.4	1605.9	1607.4	1607.1	1605.2	1603.4	1601.6	1599.7
180°	1602.5	1602.5	1602.5	1602.5	1602.5	1602.5	1602.5	1602.5

(END OF REPORT)