

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: P331611-940

Luminaire Tested: **S122DIW-S1005D1440U940-4F0-1E-UDD-D**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P331611-940
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-S1005D1440U940-4F0-1E-UDD-D
Description: DEFINE 2 DIRECT-INDIRECT WALL MOUNT LED LUMINAIRE
DOWNLIGHT 1005 LUMENS PER FOOT, DROP SATIN WHITE DIFFUSER
UPLIGHT 1440 LUMENS PER FOOT, NO LENS
Light Source: -
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 8738.0 lumens
Efficiency: N/A
Efficacy: 105.4 lumens/watt
Spacing Criteria (0/90/45): 1.21 / 1.32 / 1.42
Luminous Opening: Rectangular w/ Sides (W: 0.17' x L: 4' x H: 0.08')
CIE Type: Semi-Indirect

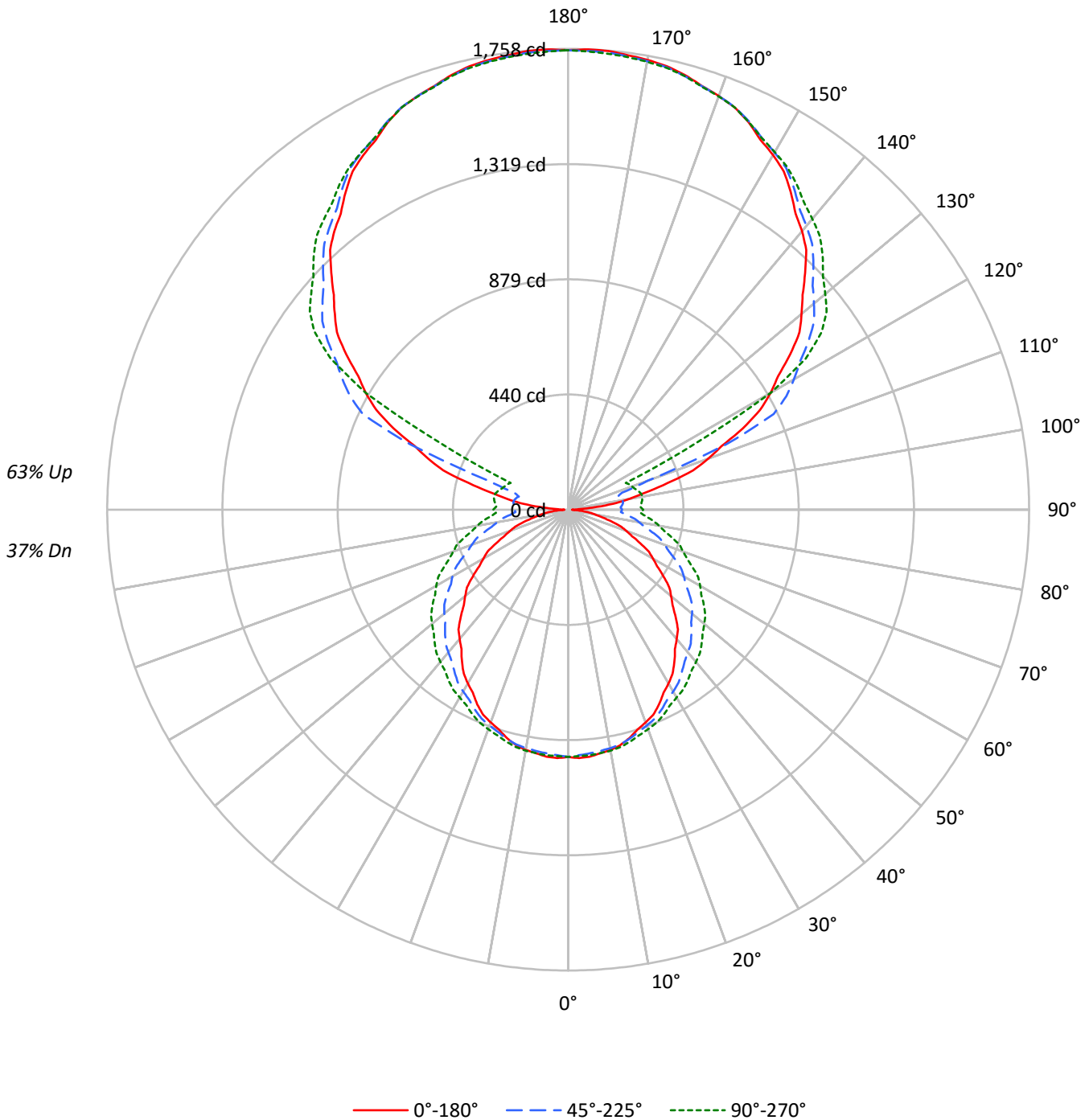
Input Watts (W): 82.9
Input Voltage (V): 120
Input Current (A_{in}): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



TEST NUMBER: P331611-940

CATALOG NUMBER: S122DIW-S1005D1440U940-4F0-1E-UDD-D

Luminous Intensity Polar Plot





TEST NUMBER: P331611-940

CATALOG NUMBER: S122DIW-S1005D1440U940-4F0-1E-UDD-D

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	104	104	104	104	94	94	94	94	76	76	76	59	59	59	44	44	44	37
1	94	89	85	81	85	81	77	74	65	62	60	50	49	47	37	36	35	29
2	85	77	71	65	76	70	64	60	56	52	49	44	41	38	32	30	28	23
3	77	67	60	54	69	61	54	49	49	44	40	38	35	32	28	26	24	19
4	70	59	51	45	63	54	47	41	43	38	34	34	30	27	25	22	20	16
5	64	53	44	38	58	48	41	35	39	33	29	30	26	23	22	19	17	14
6	59	47	39	33	53	43	35	30	35	29	25	27	23	20	20	17	15	12
7	55	42	34	29	49	38	31	26	31	26	22	24	21	18	18	15	13	10
8	50	38	30	25	45	35	28	23	28	23	19	22	18	16	17	14	12	9
9	47	35	27	22	42	32	25	20	26	21	17	20	17	14	15	13	11	8
10	44	32	25	20	39	29	23	18	24	19	15	19	15	12	14	11	10	8

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	15224	15224	15224
5°	15300	14656	14600
10°	15203	14222	14063
15°	14994	13763	13496
20°	14728	13272	12952
25°	14466	12799	12457
30°	14098	12312	11962
35°	13725	11842	11611
40°	13332	11442	11262
45°	12960	11082	10962
50°	12561	10760	10668
55°	12143	10411	10368
60°	11628	10049	10051
65°	11095	9625	9675
70°	10498	9170	9268
75°	9730	8725	8894
80°	8523	8267	8514
85°	7361	7873	8218



TEST NUMBER: P331611-940

CATALOG NUMBER: S122DIW-S1005D1440U940-4F0-1E-UDD-D

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	89.3	1.0
10°-20°	256.2	2.9
20°-30°	388.3	4.4
30°-40°	472.9	5.4
40°-50°	508.8	5.8
50°-60°	494.1	5.7
60°-70°	431.4	4.9
70°-80°	332.1	3.8
80°-90°	227.2	2.6
90°-100°	212.0	2.4
100°-110°	326.5	3.7
110°-120°	647.2	7.4
120°-130°	987.4	11.3
130°-140°	1023.4	11.7
140°-150°	938.1	10.7
150°-160°	751.8	8.6
160°-170°	484.5	5.5
170°-180°	166.8	1.9
0°-30°	733.8	8.4
0°-40°	1206.7	13.8
0°-60°	2209.5	25.3
0°-90°	3200.2	36.6
90°-120°	1185.7	13.6
90°-150°	4134.7	47.3
90°-180°	5538.0	63.4
0°-180°	8738.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	943	943	943	943	943	
5°	946	941	933	941	940	90
15°	902	904	905	916	916	254
25°	820	830	842	858	862	377
35°	706	730	756	785	795	441
45°	579	617	664	705	720	447
55°	444	495	564	612	631	397
65°	303	371	451	505	525	301
75°	168	245	332	389	409	178
85°	49	134	221	277	298	53
90°	15	108	206	264	286	13
95°	93	120	207	262	280	110
105°	392	450	195	254	277	420
115°	735	774	864	344	242	723
125°	1034	1053	1118	1162	1180	922
135°	1277	1298	1323	1362	1372	987
145°	1480	1480	1500	1516	1518	926
155°	1630	1620	1633	1640	1631	751
165°	1717	1710	1713	1721	1713	485
175°	1756	1748	1750	1758	1746	167
180°	1753	1753	1753	1753	1753	



TEST NUMBER: P331611-940

CATALOG NUMBER: S122DIW-S1005D1440U940-4F0-1E-UDD-D

CANDELA DISTRIBUTION (FULL):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
0°	942.9	942.9	942.9	942.9	942.9	942.9	942.9	942.9	942.9	942.9	942.9
2.5°	948.4	947.7	946.9	946.2	945.5	944.2	942.5	940.8	939.1	937.5	938.7
5°	945.7	944.8	943.9	942.9	942.0	940.7	938.9	937.0	935.2	933.4	935.2
7.5°	937.2	936.6	935.9	935.4	934.8	933.8	932.4	930.9	929.6	928.2	930.3
10°	930.7	930.1	929.4	928.8	928.2	927.5	926.6	925.6	924.7	923.8	926.2
12.5°	919.7	919.8	920.0	920.1	920.2	919.9	919.3	918.6	917.9	917.2	919.7
15°	902.0	902.6	903.1	903.7	904.4	904.6	904.6	904.6	904.6	904.6	907.4
17.5°	879.0	880.3	881.5	882.8	884.0	885.2	886.2	887.2	888.1	889.1	892.0
20°	863.7	865.2	866.7	868.3	869.8	871.1	872.4	873.5	874.8	876.0	879.3
22.5°	847.3	849.0	850.8	852.6	854.3	856.0	857.7	859.4	861.1	862.8	866.2
25°	819.9	822.1	824.2	826.3	828.5	830.9	833.6	836.3	839.1	841.8	845.4
27.5°	787.1	790.6	794.1	797.5	801.0	804.3	807.5	810.7	814.0	817.3	821.8
30°	765.3	769.2	773.2	777.1	781.0	785.1	789.0	792.9	796.8	800.8	805.7
32.5°	741.2	745.6	750.1	754.6	758.9	763.5	768.2	772.8	777.6	782.2	787.8
35°	706.5	711.7	716.8	722.0	727.2	732.6	738.4	744.1	749.9	755.7	762.4
37.5°	668.8	674.8	680.7	686.6	692.6	699.3	706.8	714.3	721.8	729.2	736.6
40°	643.6	650.3	657.0	663.7	670.4	677.8	686.0	694.2	702.4	710.6	718.5
42.5°	619.6	626.2	632.9	639.6	646.3	654.3	663.8	673.2	682.6	692.1	700.6
45°	579.4	587.6	595.8	604.0	612.2	621.6	632.3	642.9	653.5	664.1	673.6
47.5°	539.8	548.8	557.7	566.6	575.5	586.2	598.7	611.1	623.6	636.0	645.9
50°	512.5	521.9	531.3	540.7	550.1	561.7	575.3	589.0	602.6	616.4	626.7
52.5°	486.2	496.1	506.0	515.9	525.8	538.0	552.3	566.8	581.1	595.6	606.1
55°	444.2	455.0	466.0	477.0	487.9	501.2	517.0	532.8	548.6	564.4	575.3
57.5°	402.6	414.9	427.2	439.6	451.9	466.1	482.2	498.3	514.4	530.5	542.2
60°	373.1	386.1	399.2	412.2	425.3	440.5	457.8	475.1	492.4	509.7	521.3
62.5°	346.9	360.3	373.9	387.4	401.0	416.4	433.7	451.0	468.4	485.7	497.9
65°	303.4	318.3	333.1	348.0	362.9	379.3	397.3	415.1	433.0	450.9	463.4
67.5°	263.5	279.0	294.5	310.1	325.7	342.6	361.0	379.3	397.6	416.0	428.6
70°	235.1	250.8	266.6	282.4	298.2	315.5	334.4	353.2	372.0	390.8	403.9
72.5°	208.8	225.1	241.4	257.6	273.9	291.6	310.7	329.8	348.8	367.9	380.7
75°	168.1	185.1	202.1	219.1	236.1	254.3	273.8	293.2	312.6	332.1	345.1
77.5°	128.8	146.5	164.3	182.1	199.9	218.6	238.4	258.2	277.9	297.7	310.7
80°	102.5	121.0	139.6	158.1	176.6	195.7	215.4	235.2	254.9	274.6	287.4
82.5°	80.6	98.9	117.2	135.5	153.7	172.9	192.9	212.9	232.8	252.8	265.6
85°	49.2	68.0	86.9	105.7	124.5	143.7	163.1	182.5	202.0	221.4	234.2
87.5°	27.0	45.7	64.5	83.2	101.9	121.2	141.1	161.0	180.8	200.7	213.5
90°	14.9	35.7	56.4	77.0	97.8	119.0	140.7	162.4	184.0	205.7	219.3
92.5°	38.2	54.3	70.4	86.6	102.6	120.6	140.4	160.3	180.1	200.0	212.6
95°	93.4	98.4	103.3	108.3	113.2	125.8	146.1	166.2	186.5	206.6	219.5
97.5°	173.2	159.6	146.2	132.6	119.1	123.4	145.4	167.5	189.6	211.6	224.0
100°	234.1	206.7	179.3	151.9	124.6	121.7	143.6	165.3	187.2	208.9	222.5
102.5°	299.9	302.0	304.1	306.2	308.3	297.6	274.0	250.4	226.9	203.3	217.2
105°	392.4	409.7	426.9	444.2	461.5	439.4	378.4	317.2	256.0	194.9	208.7
107.5°	499.4	513.3	527.1	541.0	554.8	523.3	446.0	368.9	291.8	214.6	221.7
110°	567.3	579.3	591.3	603.2	615.3	588.0	521.4	454.9	388.3	321.7	303.3



TEST NUMBER: P331611-940

CATALOG NUMBER: S122DIW-S1005D1440U940-4F0-1E-UDD-D

CANDELA DISTRIBUTION (continued):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
112.5°	632.2	642.6	652.9	663.3	673.6	675.8	669.9	663.9	657.9	651.9	558.8
115°	734.7	742.8	751.0	759.1	767.2	781.7	802.4	823.0	843.7	864.5	743.2
117.5°	824.9	832.4	840.0	847.5	855.1	867.5	885.0	902.5	920.0	937.5	914.9
120°	891.9	897.3	902.8	908.2	913.6	925.0	942.2	959.4	976.6	993.8	1005.8
122.5°	948.7	953.6	958.6	963.5	968.4	979.4	996.3	1013.3	1030.2	1047.1	1057.4
125°	1033.8	1037.5	1041.2	1044.8	1048.5	1057.8	1072.9	1088.0	1103.0	1118.1	1128.3
127.5°	1112.1	1115.9	1119.7	1123.5	1127.2	1135.0	1146.8	1158.7	1170.5	1182.3	1192.8
130°	1161.9	1166.1	1170.3	1174.5	1178.8	1185.5	1195.1	1204.5	1214.0	1223.4	1233.9
132.5°	1212.6	1216.1	1219.7	1223.2	1226.7	1232.5	1240.5	1248.6	1256.6	1264.6	1274.3
135°	1277.2	1281.7	1286.2	1290.8	1295.2	1300.3	1305.8	1311.4	1317.0	1322.6	1331.8
137.5°	1343.9	1347.0	1350.1	1353.2	1356.3	1359.9	1364.1	1368.3	1372.6	1376.8	1385.2
140°	1387.5	1389.5	1391.4	1393.4	1395.3	1398.2	1401.9	1405.6	1409.3	1413.0	1420.4
142.5°	1424.1	1425.8	1427.5	1429.2	1430.9	1433.7	1437.3	1441.0	1444.7	1448.3	1454.6
145°	1480.1	1479.7	1479.4	1479.2	1478.9	1481.1	1485.9	1490.8	1495.5	1500.3	1504.1
147.5°	1530.0	1528.9	1527.9	1526.8	1525.7	1527.5	1532.2	1537.0	1541.8	1546.5	1548.2
150°	1562.5	1560.5	1558.5	1556.6	1554.5	1555.9	1560.3	1564.9	1569.3	1573.9	1575.6
152.5°	1589.8	1587.7	1585.5	1583.2	1581.1	1582.1	1586.4	1590.6	1594.9	1599.2	1600.9
155°	1629.7	1627.1	1624.6	1622.0	1619.5	1620.0	1623.4	1626.7	1630.1	1633.4	1635.1
157.5°	1660.9	1658.8	1656.6	1654.5	1652.3	1652.4	1654.7	1657.2	1659.5	1661.9	1663.8
160°	1679.1	1677.4	1675.8	1674.1	1672.4	1672.4	1674.1	1675.8	1677.4	1679.1	1680.8
162.5°	1695.3	1693.7	1692.0	1690.3	1688.6	1688.5	1690.0	1691.4	1692.9	1694.3	1696.3
165°	1717.2	1715.5	1713.8	1712.1	1710.4	1710.0	1710.8	1711.6	1712.5	1713.3	1715.4
167.5°	1733.4	1731.7	1730.0	1728.3	1726.6	1726.2	1727.0	1727.8	1728.6	1729.4	1731.3
170°	1742.6	1740.9	1739.2	1737.5	1735.8	1735.2	1735.8	1736.3	1736.9	1737.5	1739.5
172.5°	1748.6	1747.0	1745.3	1743.6	1741.9	1741.3	1741.9	1742.4	1743.0	1743.6	1745.5
175°	1756.5	1754.5	1752.6	1750.6	1748.6	1747.9	1748.5	1749.0	1749.6	1750.2	1752.1
177.5°	1757.7	1756.2	1754.6	1753.0	1751.4	1750.8	1751.0	1751.2	1751.4	1751.7	1753.3
180°	1752.7	1752.7	1752.7	1752.7	1752.7	1752.7	1752.7	1752.7	1752.7	1752.7	1752.7



TEST NUMBER: P331611-940

CATALOG NUMBER: S122DIW-S1005D1440U940-4F0-1E-UDD-D

CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
0°	942.9	942.9	942.9	942.9	942.9	942.9	942.9	942.9
2.5°	939.9	941.1	942.4	942.7	942.2	941.7	941.2	940.8
5°	937.0	938.9	940.7	941.4	941.1	940.8	940.5	940.2
7.5°	932.6	934.8	936.9	937.9	937.5	937.3	936.9	936.7
10°	928.6	931.1	933.5	934.6	934.2	934.0	933.7	933.4
12.5°	922.1	924.5	926.9	928.0	927.7	927.4	927.1	926.8
15°	910.2	912.8	915.6	916.9	916.5	916.2	915.9	915.6
17.5°	894.8	897.7	900.5	902.0	902.0	902.0	902.0	902.0
20°	882.6	886.0	889.3	891.0	891.0	891.0	891.0	891.0
22.5°	869.5	872.9	876.2	878.2	878.6	879.1	879.6	880.1
25°	849.1	852.7	856.4	858.6	859.6	860.5	861.4	862.3
27.5°	826.4	831.1	835.7	838.3	839.0	839.6	840.3	841.0
30°	810.6	815.4	820.3	823.1	824.0	824.9	825.9	826.8
32.5°	793.4	799.0	804.6	808.2	809.9	811.5	813.2	814.8
35°	769.1	775.8	782.5	786.8	789.0	791.1	793.3	795.3
37.5°	744.0	751.4	758.8	763.7	765.9	768.2	770.4	772.7
40°	726.4	734.3	742.2	747.5	750.3	753.0	755.7	758.5
42.5°	709.3	717.9	726.6	732.2	734.9	737.7	740.4	743.2
45°	683.0	692.4	701.8	708.0	711.1	714.1	717.1	720.1
47.5°	655.7	665.5	675.4	682.0	685.3	688.7	692.0	695.4
50°	636.9	647.3	657.6	664.5	667.8	671.1	674.5	677.8
52.5°	616.7	627.2	637.8	644.9	648.5	652.1	655.7	659.2
55°	586.3	597.2	608.1	615.5	619.5	623.5	627.4	631.3
57.5°	554.1	565.9	577.7	585.5	589.5	593.5	597.5	601.5
60°	532.8	544.4	555.9	563.8	568.0	572.3	576.6	580.8
62.5°	510.2	522.5	534.8	542.9	546.9	550.9	554.9	558.9
65°	475.9	488.3	500.8	509.0	512.9	516.8	520.8	524.8
67.5°	441.1	453.7	466.3	474.7	478.8	482.9	487.1	491.2
70°	417.0	430.0	443.1	451.4	455.0	458.7	462.4	466.0
72.5°	393.5	406.4	419.1	427.8	432.1	436.5	440.9	445.2
75°	358.2	371.2	384.3	392.8	396.7	400.7	404.7	408.6
77.5°	323.6	336.6	349.6	358.3	362.5	366.8	371.0	375.2
80°	300.1	313.0	325.7	334.2	338.5	342.7	347.0	351.2
82.5°	278.3	291.1	303.8	312.2	316.2	320.2	324.2	328.2
85°	246.9	259.7	272.4	280.9	285.2	289.4	293.6	297.9
87.5°	226.1	238.8	251.5	259.8	263.8	267.8	271.8	275.8
90°	232.8	246.4	260.0	268.9	273.0	277.2	281.5	285.7
92.5°	225.2	237.9	250.5	258.9	262.8	266.8	270.8	274.7
95°	232.6	245.5	258.4	266.5	269.9	273.3	276.7	280.0
97.5°	236.3	248.7	261.1	269.2	273.1	277.1	281.0	284.9
100°	235.9	249.4	262.9	271.6	275.5	279.4	283.3	287.2
102.5°	231.1	245.1	259.0	268.0	272.2	276.3	280.4	284.5
105°	222.3	236.0	249.8	258.9	263.4	267.9	272.3	276.8
107.5°	228.7	235.8	242.8	248.6	253.1	257.5	262.0	266.4
110°	284.8	266.3	247.8	240.9	245.3	249.8	254.2	258.7



TEST NUMBER: P331611-940

CATALOG NUMBER: S122DIW-S1005D1440U940-4F0-1E-UDD-D

CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
112.5°	465.7	372.6	279.6	235.1	239.3	243.6	247.8	252.1
115°	621.7	500.3	379.0	309.8	292.8	275.9	259.0	242.0
117.5°	892.3	869.8	847.2	804.1	740.6	677.0	613.3	549.7
120°	1017.6	1029.5	1041.3	1029.9	995.2	960.6	925.9	891.2
122.5°	1067.7	1078.0	1088.3	1091.2	1086.6	1082.1	1077.6	1073.1
125°	1138.4	1148.6	1158.8	1165.6	1169.3	1172.9	1176.4	1180.0
127.5°	1203.2	1213.5	1224.0	1230.6	1233.4	1236.3	1239.1	1242.0
130°	1244.2	1254.6	1265.0	1271.3	1273.5	1275.6	1277.7	1279.9
132.5°	1284.0	1293.7	1303.3	1309.3	1311.4	1313.6	1315.7	1317.9
135°	1341.0	1350.1	1359.3	1364.9	1366.7	1368.6	1370.5	1372.3
137.5°	1393.5	1401.9	1410.2	1414.9	1416.0	1417.1	1418.3	1419.3
140°	1427.8	1435.2	1442.6	1446.4	1446.9	1447.3	1447.7	1448.1
142.5°	1460.7	1467.0	1473.1	1476.3	1476.5	1476.7	1476.9	1477.0
145°	1507.9	1511.7	1515.5	1517.4	1517.5	1517.7	1517.8	1517.9
147.5°	1549.9	1551.6	1553.3	1553.9	1553.4	1553.0	1552.6	1552.1
150°	1577.3	1579.0	1580.6	1580.7	1579.4	1578.0	1576.5	1575.1
152.5°	1602.6	1604.3	1606.0	1605.9	1604.0	1602.2	1600.4	1598.5
155°	1636.8	1638.5	1640.2	1639.9	1637.7	1635.5	1633.2	1630.9
157.5°	1665.7	1667.6	1669.6	1669.4	1667.2	1665.0	1662.8	1660.6
160°	1682.5	1684.2	1685.9	1685.8	1683.8	1681.8	1679.8	1677.8
162.5°	1698.2	1700.1	1702.0	1701.7	1699.3	1696.9	1694.5	1692.1
165°	1717.3	1719.3	1721.3	1721.3	1719.3	1717.3	1715.4	1713.3
167.5°	1733.3	1735.3	1737.2	1737.0	1734.5	1731.9	1729.4	1726.8
170°	1741.4	1743.4	1745.3	1745.1	1742.6	1740.0	1737.5	1734.9
172.5°	1747.5	1749.4	1751.4	1751.1	1748.6	1746.1	1743.6	1741.0
175°	1754.1	1756.0	1758.0	1757.7	1754.8	1751.9	1749.2	1746.3
177.5°	1754.8	1756.4	1758.0	1757.7	1755.7	1753.7	1751.7	1749.6
180°	1752.7	1752.7	1752.7	1752.7	1752.7	1752.7	1752.7	1752.7

(END OF REPORT)