

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: P331547-840

Luminaire Tested: **S122DIW-S675D1240U840-4F0-1E-UDD-F**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P331547-840
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-S675D1240U840-4F0-1E-UDD-F
Description: DEFINE 2 DIRECT-INDIRECT WALL MOUNT LED LUMINAIRE
DOWNLIGHT 675 LUMENS PER FOOT, FLUSH SATIN WHITE DIFFUSER
UPLIGHT 1240 LUMENS PER FOOT, NO LENS
Light Source: -
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 7735.0 lumens
Efficiency: N/A
Efficacy: 126.0 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: Semi-Indirect

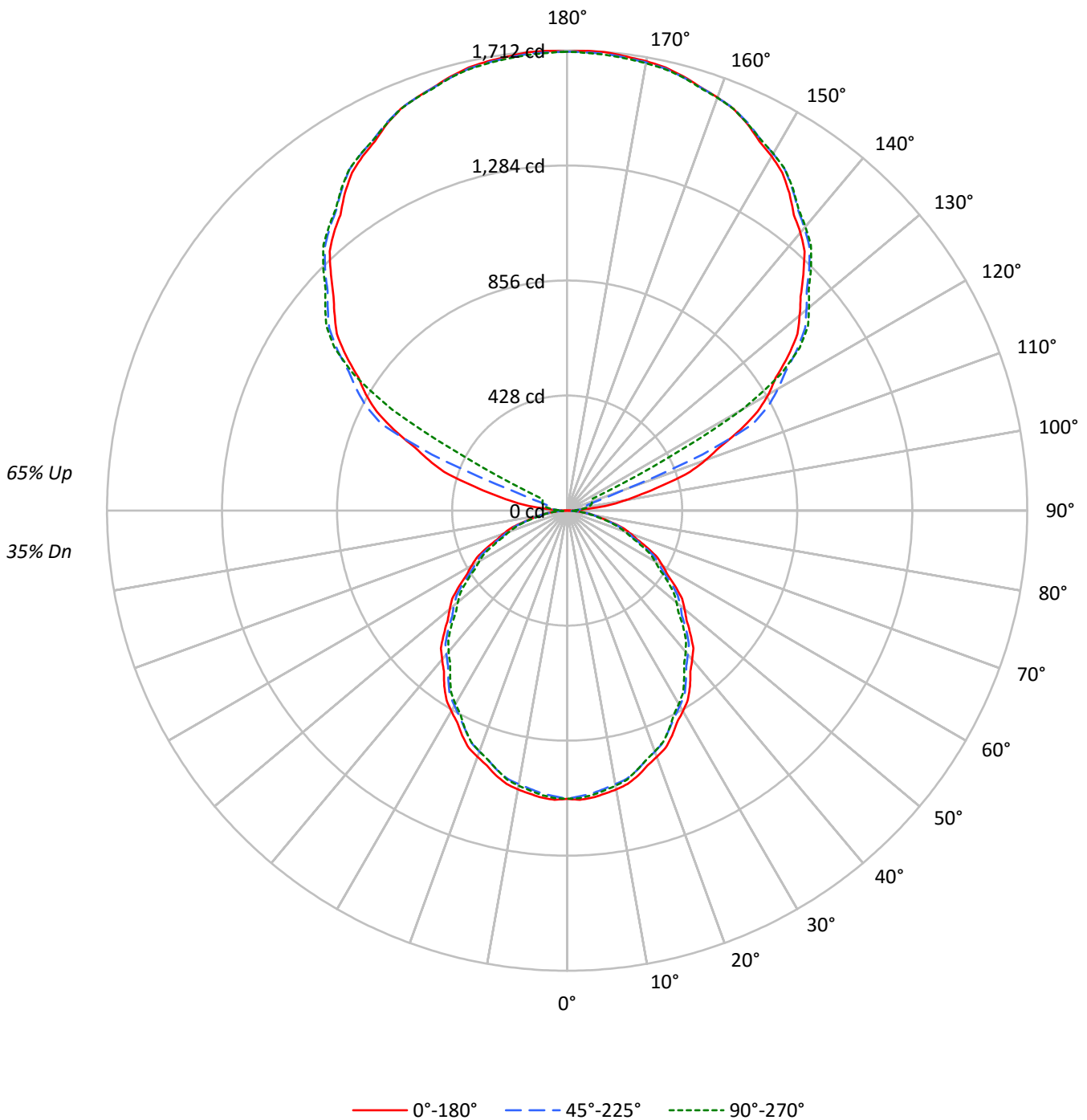
Input Watts (W): 61.4
Input Voltage (V): 120
Input Current (A_{in}): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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	104	104	104	104	94	94	94	94	75	75	75	58	58	58	43	43	43	35
1	94	90	86	83	85	82	79	76	66	64	62	51	50	48	38	37	36	30
2	86	79	73	68	78	71	66	62	58	54	51	45	42	40	33	32	30	25
3	78	69	62	56	71	63	57	52	51	46	43	40	37	34	29	27	26	21
4	72	61	53	48	65	56	49	44	45	40	36	35	32	29	26	24	22	18
5	66	54	46	41	59	50	43	37	40	35	31	32	28	25	24	21	19	16
6	60	49	41	35	54	44	37	32	36	31	27	29	25	22	21	19	17	14
7	56	44	36	31	50	40	33	28	33	28	24	26	22	19	20	17	15	12
8	52	40	32	27	47	36	30	25	30	25	21	24	20	17	18	15	13	11
9	48	36	29	24	43	33	27	22	27	22	19	22	18	15	17	14	12	10
10	45	33	26	21	41	30	24	20	25	20	17	20	16	14	15	13	11	9

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	17312	17312	17312
5°	17378	17126	17227
10°	17274	16952	17038
15°	17060	16732	16715
20°	16756	16402	16385
25°	16456	15998	15998
30°	16067	15627	15491
35°	15707	15179	14954
40°	15253	14731	14450
45°	14805	14289	13935
50°	14320	13828	13335
55°	13813	13292	12797
60°	13249	12649	12184
65°	12642	12015	11461
70°	11877	11240	10707
75°	10805	10356	10100
80°	9586	9298	8815
85°	7836	7447	6688



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	100.8	1.3
10°-20°	283.7	3.7
20°-30°	417.0	5.4
30°-40°	484.3	6.3
40°-50°	483.8	6.3
50°-60°	421.9	5.5
60°-70°	312.0	4.0
70°-80°	176.7	2.3
80°-90°	51.7	0.7
90°-100°	56.9	0.7
100°-110°	208.8	2.7
110°-120°	558.2	7.2
120°-130°	921.5	11.9
130°-140°	980.0	12.7
140°-150°	910.9	11.8
150°-160°	732.3	9.5
160°-170°	471.9	6.1
170°-180°	162.4	2.1
0°-30°	801.5	10.4
0°-40°	1285.8	16.6
0°-60°	2191.5	28.3
0°-90°	2731.9	35.3
90°-120°	824.0	10.7
90°-150°	3636.4	47.0
90°-180°	5003.0	64.7
0°-180°	7735.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1072	1072	1072	1072	1072	
5°	1072	1068	1057	1064	1063	102
15°	1021	1014	1001	1005	1000	287
25°	924	915	898	900	898	425
35°	797	786	770	764	759	497
45°	648	641	626	615	610	500
55°	491	484	472	460	455	439
65°	331	324	314	305	300	327
75°	173	171	166	160	162	185
85°	42	41	40	37	36	48
90°	1	15	25	31	33	6
95°	80	42	48	54	53	98
105°	376	392	75	88	94	401
115°	710	732	762	217	101	699
125°	1004	1021	1044	1052	1056	895
135°	1243	1262	1274	1285	1284	959
145°	1442	1442	1461	1469	1464	901
155°	1587	1578	1591	1598	1589	731
165°	1673	1666	1669	1677	1669	472
175°	1711	1703	1705	1712	1701	163
180°	1707	1707	1707	1707	1707	



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CANDELA DISTRIBUTION (FULL):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
0°	1072.2	1072.2	1072.2	1072.2	1072.2	1072.2	1072.2	1072.2	1072.2	1072.2	1072.2
2.5°	1077.1	1076.2	1075.3	1074.4	1073.5	1072.0	1070.0	1067.9	1065.9	1063.9	1065.7
5°	1072.2	1071.3	1070.4	1069.4	1068.5	1066.8	1064.3	1061.8	1059.2	1056.7	1058.5
7.5°	1062.7	1061.3	1059.9	1058.4	1057.0	1055.0	1052.5	1049.9	1047.3	1044.7	1046.5
10°	1053.6	1052.0	1050.4	1048.7	1047.2	1045.0	1042.3	1039.6	1036.7	1034.0	1035.8
12.5°	1041.3	1039.9	1038.3	1036.9	1035.5	1033.5	1030.7	1027.9	1025.2	1022.5	1023.8
15°	1020.6	1019.3	1017.8	1016.5	1015.1	1012.9	1010.0	1006.9	1004.0	1001.0	1002.0
17.5°	994.2	992.8	991.5	990.1	988.8	986.5	983.5	980.5	977.4	974.4	975.5
20°	975.2	973.9	972.5	971.1	969.8	967.5	964.2	961.1	957.9	954.6	955.3
22.5°	956.2	954.3	952.4	950.5	948.6	946.1	943.1	940.1	937.1	934.0	934.1
25°	923.7	921.9	920.1	918.2	916.4	913.5	909.6	905.7	901.8	898.0	898.4
27.5°	886.6	884.9	883.3	881.6	880.0	877.7	874.5	871.5	868.4	865.4	864.6
30°	861.8	860.0	858.2	856.4	854.5	851.9	848.5	845.1	841.6	838.2	837.5
32.5°	835.5	833.9	832.5	831.0	829.6	827.1	823.4	819.8	816.2	812.5	811.3
35°	796.9	794.7	792.3	790.0	787.7	784.8	781.1	777.4	773.8	770.1	768.7
37.5°	753.4	751.3	749.3	747.3	745.4	742.5	738.8	735.2	731.5	727.8	726.1
40°	723.7	721.9	720.0	718.2	716.4	713.7	709.9	706.3	702.7	698.9	696.9
42.5°	694.9	693.0	691.2	689.3	687.5	684.8	681.1	677.4	673.8	670.1	667.8
45°	648.4	646.8	645.2	643.7	642.1	639.5	636.1	632.7	629.2	625.8	623.3
47.5°	602.3	600.8	599.3	597.7	596.2	593.7	590.1	586.5	583.0	579.4	576.7
50°	570.1	569.0	567.8	566.6	565.5	563.3	560.2	556.9	553.7	550.5	547.3
52.5°	538.8	537.2	535.7	534.2	532.7	530.5	527.5	524.4	521.4	518.4	515.7
55°	490.7	489.4	488.0	486.6	485.2	483.1	480.4	477.7	474.9	472.2	469.4
57.5°	442.4	441.4	440.3	439.2	438.1	436.1	433.0	430.0	427.0	423.9	421.2
60°	410.3	409.4	408.5	407.6	406.7	404.6	401.4	398.2	395.0	391.7	389.2
62.5°	379.0	377.5	376.1	374.6	373.1	371.1	368.7	366.2	363.8	361.2	358.9
65°	330.9	329.5	328.2	326.8	325.4	323.6	321.3	319.0	316.7	314.5	312.4
67.5°	282.1	280.9	279.8	278.7	277.6	276.1	274.0	272.0	269.9	267.8	266.2
70°	251.6	250.6	249.7	248.8	247.9	246.4	244.3	242.3	240.2	238.1	236.5
72.5°	220.3	219.2	218.3	217.4	216.5	215.4	214.1	212.8	211.5	210.1	208.5
75°	173.2	172.7	172.3	171.8	171.4	170.6	169.5	168.2	167.1	166.0	164.6
77.5°	131.2	130.4	129.6	128.8	128.1	127.4	126.9	126.4	126.0	125.5	124.9
80°	103.1	102.9	102.6	102.4	102.2	101.8	101.4	100.9	100.5	100.0	99.3
82.5°	76.7	76.6	76.6	76.5	76.5	76.3	76.0	75.8	75.5	75.2	74.4
85°	42.3	42.0	41.8	41.6	41.3	41.1	40.9	40.7	40.4	40.2	39.5
87.5°	15.0	15.3	15.6	15.9	16.1	16.2	16.3	16.4	16.5	16.5	16.3
90°	1.2	4.2	7.3	10.3	13.3	16.0	18.1	20.3	22.5	24.7	26.1
92.5°	24.9	24.6	24.4	24.1	23.8	24.2	25.3	26.5	27.6	28.7	29.4
95°	80.3	71.2	62.2	53.1	44.0	40.5	42.4	44.3	46.3	48.2	49.6
97.5°	159.4	133.8	108.3	82.8	57.3	46.7	51.1	55.5	60.1	64.5	65.5
100°	218.6	181.1	143.4	105.8	68.3	51.7	56.5	61.1	65.7	70.4	72.6
102.5°	283.9	275.9	267.9	260.0	252.1	228.5	189.5	150.5	111.4	72.4	75.2
105°	375.6	383.7	392.0	400.2	408.5	375.2	300.2	225.2	150.3	75.3	78.4
107.5°	480.1	486.7	493.3	500.0	506.6	465.0	375.2	285.3	195.4	105.5	102.4
110°	547.2	553.0	558.8	564.5	570.3	533.5	454.2	374.9	295.5	216.2	188.7



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CANDELA DISTRIBUTION (continued):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
112.5°	610.5	615.6	620.7	625.8	631.0	623.7	604.1	584.5	564.9	545.2	445.1
115°	710.3	715.0	719.6	724.3	729.0	734.8	741.6	748.5	755.4	762.2	635.1
117.5°	799.5	804.8	809.9	815.2	820.4	825.4	830.0	834.8	839.5	844.2	813.4
120°	864.7	868.9	872.9	877.1	881.2	885.8	890.7	895.6	900.6	905.4	908.8
122.5°	920.1	924.4	928.8	933.1	937.5	942.3	947.7	953.0	958.5	963.8	965.7
125°	1004.3	1007.8	1011.5	1015.0	1018.5	1023.0	1028.2	1033.4	1038.6	1043.9	1045.8
127.5°	1080.7	1084.6	1088.5	1092.6	1096.5	1100.4	1104.3	1108.2	1112.1	1116.0	1118.8
130°	1129.1	1133.5	1137.9	1142.3	1146.7	1150.3	1153.4	1156.4	1159.4	1162.5	1165.5
132.5°	1178.5	1182.2	1186.0	1189.7	1193.5	1196.8	1199.8	1202.9	1205.9	1208.9	1211.4
135°	1242.7	1247.1	1251.5	1255.9	1260.3	1263.7	1266.2	1268.7	1271.1	1273.6	1276.4
137.5°	1307.7	1310.8	1313.8	1317.0	1320.0	1322.9	1325.8	1328.6	1331.3	1334.1	1336.9
140°	1350.2	1352.4	1354.6	1356.8	1359.0	1361.6	1364.6	1367.7	1370.7	1373.7	1376.1
142.5°	1385.8	1387.8	1389.8	1391.7	1393.7	1396.4	1399.9	1403.3	1406.7	1410.3	1412.5
145°	1441.6	1441.4	1441.1	1440.8	1440.6	1442.7	1447.4	1452.1	1456.7	1461.4	1463.3
147.5°	1490.3	1489.2	1488.2	1487.1	1486.1	1487.9	1492.5	1497.1	1501.8	1506.3	1507.8
150°	1522.0	1520.0	1518.1	1516.1	1514.2	1515.5	1519.8	1524.3	1528.6	1533.1	1534.7
152.5°	1548.6	1546.5	1544.3	1542.2	1540.0	1541.1	1545.2	1549.4	1553.6	1557.7	1559.4
155°	1587.4	1584.9	1582.5	1579.9	1577.5	1577.9	1581.2	1584.5	1587.8	1591.1	1592.8
157.5°	1617.8	1615.7	1613.6	1611.5	1609.4	1609.5	1611.8	1614.2	1616.5	1618.8	1620.6
160°	1635.6	1634.0	1632.2	1630.6	1629.0	1629.0	1630.6	1632.2	1634.0	1635.6	1637.2
162.5°	1651.4	1649.7	1648.1	1646.5	1644.8	1644.7	1646.1	1647.5	1649.0	1650.4	1652.2
165°	1672.6	1671.0	1669.3	1667.7	1666.1	1665.7	1666.5	1667.3	1668.1	1668.9	1670.8
167.5°	1688.5	1686.8	1685.2	1683.5	1681.8	1681.4	1682.2	1682.9	1683.7	1684.5	1686.4
170°	1697.4	1695.7	1694.0	1692.4	1690.7	1690.2	1690.7	1691.3	1691.8	1692.4	1694.4
172.5°	1703.2	1701.6	1700.0	1698.3	1696.7	1696.2	1696.7	1697.2	1697.8	1698.3	1700.2
175°	1710.9	1709.0	1707.1	1705.2	1703.2	1702.5	1703.1	1703.6	1704.2	1704.8	1706.7
177.5°	1712.1	1710.6	1709.1	1707.6	1706.0	1705.4	1705.6	1705.8	1706.0	1706.3	1707.8
180°	1707.2	1707.2	1707.2	1707.2	1707.2	1707.2	1707.2	1707.2	1707.2	1707.2	1707.2



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CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
0°	1072.2	1072.2	1072.2	1072.2	1072.2	1072.2	1072.2	1072.2
2.5°	1067.5	1069.4	1071.3	1072.0	1071.6	1071.3	1070.9	1070.6
5°	1060.4	1062.2	1064.0	1064.7	1064.3	1063.8	1063.4	1062.9
7.5°	1048.4	1050.3	1052.1	1052.7	1052.2	1051.8	1051.3	1050.8
10°	1037.6	1039.6	1041.4	1041.9	1041.3	1040.6	1039.9	1039.2
12.5°	1025.0	1026.3	1027.6	1027.9	1027.4	1027.0	1026.5	1026.0
15°	1002.9	1003.8	1004.7	1004.6	1003.4	1002.3	1001.2	1000.0
17.5°	976.5	977.5	978.7	978.7	977.5	976.4	975.3	974.2
20°	956.0	956.7	957.4	957.3	956.3	955.4	954.5	953.6
22.5°	934.3	934.4	934.5	934.3	933.8	933.2	932.7	932.2
25°	898.9	899.3	899.8	899.8	899.3	898.9	898.4	898.0
27.5°	863.9	863.3	862.6	861.7	860.6	859.5	858.4	857.3
30°	836.8	836.1	835.4	834.6	833.6	832.7	831.8	830.9
32.5°	810.1	808.9	807.6	806.6	805.7	804.8	803.8	802.8
35°	767.4	766.0	764.6	763.4	762.2	761.0	759.9	758.7
37.5°	724.5	722.8	721.0	719.6	718.5	717.4	716.4	715.3
40°	694.9	692.8	690.7	689.2	688.3	687.4	686.5	685.6
42.5°	665.6	663.4	661.2	659.3	658.0	656.8	655.5	654.2
45°	620.8	618.2	615.7	614.0	613.1	612.2	611.3	610.3
47.5°	574.1	571.4	568.8	566.7	565.4	564.1	562.8	561.5
50°	544.1	540.9	537.7	535.5	534.3	533.2	532.1	530.9
52.5°	513.0	510.4	507.8	505.6	504.1	502.6	501.1	499.6
55°	466.7	463.9	461.2	459.2	458.1	457.0	455.8	454.6
57.5°	418.5	415.8	413.1	411.3	410.4	409.6	408.7	407.8
60°	386.7	384.2	381.6	380.1	379.4	378.7	378.0	377.3
62.5°	356.6	354.3	351.9	350.3	349.4	348.5	347.7	346.8
65°	310.3	308.2	306.2	304.6	303.5	302.3	301.1	300.0
67.5°	264.6	263.1	261.5	260.1	259.2	258.3	257.4	256.5
70°	234.9	233.4	231.8	230.5	229.5	228.6	227.7	226.8
72.5°	206.9	205.3	203.7	202.5	201.8	201.1	200.4	199.5
75°	163.2	161.9	160.5	160.1	160.5	161.0	161.4	161.9
77.5°	124.2	123.5	122.8	122.2	121.5	120.9	120.3	119.6
80°	98.7	98.0	97.3	96.6	96.2	95.7	95.3	94.8
82.5°	73.5	72.6	71.8	71.3	71.2	71.1	71.0	70.9
85°	38.9	38.2	37.5	37.0	36.8	36.6	36.4	36.1
87.5°	16.0	15.7	15.3	15.2	15.1	15.0	14.9	14.9
90°	27.5	28.8	30.2	31.2	31.7	32.2	32.8	33.3
92.5°	30.1	30.8	31.5	32.0	32.3	32.7	33.0	33.3
95°	50.9	52.3	53.6	54.2	53.9	53.6	53.4	53.1
97.5°	66.7	67.8	68.9	69.6	69.9	70.3	70.6	70.9
100°	74.8	77.0	79.2	80.6	81.1	81.7	82.2	82.8
102.5°	78.1	81.0	83.8	85.6	86.3	87.2	88.0	88.7
105°	81.4	84.4	87.5	89.5	90.6	91.7	92.8	93.9
107.5°	99.4	96.2	93.2	92.2	93.3	94.4	95.5	96.6
110°	161.3	133.8	106.3	93.2	94.3	95.4	96.5	97.6



TEST NUMBER: P331547-840

CATALOG NUMBER: S122DIW-S675D1240U840-4F0-1E-UDD-F

CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
112.5°	345.0	244.9	144.7	95.0	95.9	96.8	97.7	98.6
115°	508.0	380.9	253.8	180.4	160.6	140.9	121.1	101.3
117.5°	782.7	751.9	721.2	673.4	608.4	543.5	478.6	413.5
120°	912.1	915.3	918.7	901.8	864.7	827.7	790.6	753.6
122.5°	967.8	969.8	971.7	969.1	961.9	954.7	947.6	940.3
125°	1047.7	1049.7	1051.6	1052.9	1053.7	1054.6	1055.4	1056.2
127.5°	1121.6	1124.4	1127.2	1128.7	1128.8	1129.0	1129.1	1129.3
130°	1168.5	1171.5	1174.5	1175.9	1175.6	1175.4	1175.1	1174.8
132.5°	1214.1	1216.6	1219.2	1220.3	1220.1	1219.8	1219.5	1219.3
135°	1279.1	1281.8	1284.6	1285.7	1285.2	1284.6	1284.0	1283.5
137.5°	1339.5	1342.2	1344.9	1345.7	1344.8	1343.9	1343.0	1342.0
140°	1378.7	1381.1	1383.6	1384.1	1382.7	1381.4	1380.0	1378.7
142.5°	1414.7	1417.0	1419.3	1419.7	1418.4	1416.9	1415.5	1414.2
145°	1465.2	1467.1	1469.1	1469.4	1467.9	1466.6	1465.2	1463.9
147.5°	1509.2	1510.7	1512.1	1512.2	1511.1	1509.8	1508.7	1507.6
150°	1536.3	1538.0	1539.6	1539.7	1538.4	1537.0	1535.6	1534.3
152.5°	1561.0	1562.7	1564.4	1564.3	1562.5	1560.6	1558.8	1557.0
155°	1594.4	1596.1	1597.7	1597.4	1595.2	1593.1	1590.8	1588.6
157.5°	1622.6	1624.4	1626.3	1626.1	1624.0	1621.8	1619.7	1617.5
160°	1638.9	1640.5	1642.1	1642.0	1640.1	1638.2	1636.3	1634.4
162.5°	1654.2	1656.0	1657.9	1657.6	1655.3	1652.8	1650.5	1648.2
165°	1672.7	1674.7	1676.6	1676.6	1674.7	1672.7	1670.8	1668.9
167.5°	1688.3	1690.2	1692.1	1691.9	1689.4	1687.0	1684.5	1682.0
170°	1696.3	1698.2	1700.1	1699.8	1697.4	1694.9	1692.4	1689.9
172.5°	1702.1	1704.0	1706.0	1705.8	1703.2	1700.8	1698.3	1695.9
175°	1708.6	1710.5	1712.4	1712.0	1709.3	1706.6	1703.7	1701.0
177.5°	1709.3	1710.8	1712.4	1712.1	1710.2	1708.2	1706.3	1704.2
180°	1707.2	1707.2	1707.2	1707.2	1707.2	1707.2	1707.2	1707.2

(END OF REPORT)