

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: P331545-840

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

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P331545-840
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-D
Description: DEFINE 2 DIRECT-INDIRECT WALL MOUNT LED LUMINAIRE
DOWNLIGHT 675 LUMENS PER FOOT, DROP SATIN WHITE DIFFUSER
UPLIGHT 1240 LUMENS PER FOOT, NO LENS
Light Source: -
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 7721.1 lumens
Efficiency: N/A
Efficacy: 125.8 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

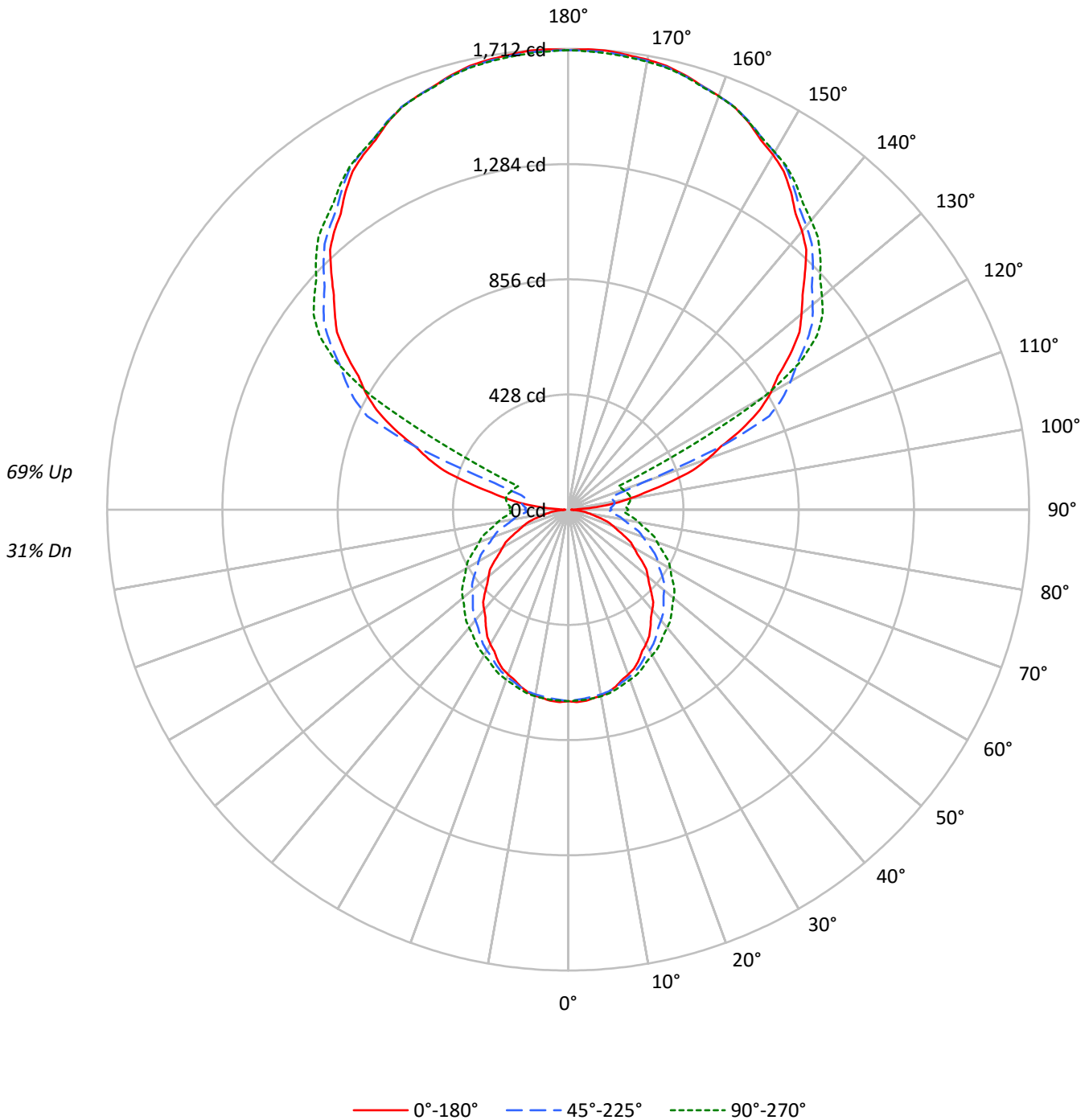
Input Watts (W): 61.4
Input Voltage (V): 120
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



TEST NUMBER: P331545-840

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

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	50	30	10	0	
RCR																						
0	103	103	103	103	92	92	92	92	73	73	73	55	55	55	39	39	39	39	39	39	31	
1	93	88	84	80	83	79	76	72	62	60	58	47	45	44	33	32	31	33	32	31	24	
2	84	76	70	65	75	69	63	59	54	50	47	41	38	36	28	27	25	28	27	25	20	
3	76	67	59	53	68	60	54	48	47	43	39	36	33	30	25	23	21	25	23	21	16	
4	70	59	51	45	62	53	46	41	42	37	33	32	28	25	22	20	18	22	20	18	14	
5	64	52	44	38	57	47	40	35	37	32	28	28	25	22	20	17	15	20	17	15	12	
6	58	46	38	33	52	42	35	30	33	28	24	25	22	19	18	15	13	18	15	13	10	
7	54	42	34	28	48	38	31	26	30	25	21	23	19	16	16	14	12	16	14	12	9	
8	50	38	30	25	45	34	27	23	27	22	19	21	17	15	15	12	11	15	12	11	8	
9	46	34	27	22	41	31	25	20	25	20	16	19	15	13	14	11	9	14	11	9	7	
10	43	31	24	19	39	28	22	18	23	18	15	18	14	12	13	10	8	13	10	8	6	

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	11485	11485	11485
5°	11541	11055	11013
10°	11469	10729	10608
15°	11310	10384	10181
20°	11112	10013	9772
25°	10913	9655	9399
30°	10635	9288	9023
35°	10355	8933	8760
40°	10057	8630	8496
45°	9777	8361	8270
50°	9476	8116	8048
55°	9160	7855	7822
60°	8770	7583	7583
65°	8367	7262	7299
70°	7917	6920	6990
75°	7339	6581	6708
80°	6436	6238	6424
85°	5566	5939	6199



TEST NUMBER: P331545-840

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

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	67.4	0.9
10°-20°	193.3	2.5
20°-30°	292.9	3.8
30°-40°	356.7	4.6
40°-50°	383.8	5.0
50°-60°	372.7	4.8
60°-70°	325.4	4.2
70°-80°	250.5	3.2
80°-90°	172.4	2.2
90°-100°	172.8	2.2
100°-110°	293.4	3.8
110°-120°	614.1	8.0
120°-130°	952.7	12.3
130°-140°	993.1	12.9
140°-150°	913.1	11.8
150°-160°	732.3	9.5
160°-170°	471.9	6.1
170°-180°	162.4	2.1
0°-30°	553.6	7.2
0°-40°	910.3	11.8
0°-60°	1666.8	21.6
0°-90°	2415.2	31.3
90°-120°	1080.3	14.0
90°-150°	3939.2	51.0
90°-180°	5306.0	68.7
0°-180°	7721.1	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	711	711	711	711	711	
5°	713	710	704	710	709	68
15°	680	682	682	691	691	192
25°	618	626	635	647	651	284
35°	533	551	570	592	600	333
45°	437	465	501	532	543	337
55°	335	373	426	462	476	299
65°	229	280	340	381	396	227
75°	127	185	250	293	308	134
85°	37	101	167	209	225	40
90°	12	85	161	206	223	11
95°	89	100	167	210	223	105
105°	381	428	164	212	230	407
115°	714	749	824	309	205	703
125°	1006	1025	1079	1114	1128	897
135°	1244	1264	1285	1317	1325	961
145°	1442	1442	1461	1475	1475	902
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	



TEST NUMBER: P331545-840

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

CANDELA DISTRIBUTION (FULL):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
0°	711.3	711.3	711.3	711.3	711.3	711.3	711.3	711.3	711.3	711.3	711.3
2.5°	715.5	714.9	714.4	713.8	713.3	712.4	711.0	709.7	708.5	707.2	708.1
5°	713.4	712.7	712.1	711.3	710.6	709.6	708.2	706.9	705.5	704.1	705.5
7.5°	707.0	706.5	706.1	705.6	705.2	704.4	703.4	702.3	701.3	700.2	701.9
10°	702.1	701.6	701.1	700.6	700.2	699.6	698.9	698.3	697.6	696.9	698.7
12.5°	693.8	693.9	694.0	694.1	694.2	694.0	693.5	693.0	692.5	692.0	693.8
15°	680.4	680.9	681.4	681.8	682.3	682.5	682.5	682.5	682.5	682.5	684.5
17.5°	663.1	664.1	665.0	666.0	666.9	667.8	668.5	669.2	669.9	670.8	672.9
20°	651.6	652.7	653.8	655.0	656.1	657.1	658.0	659.0	659.9	660.9	663.4
22.5°	639.1	640.5	641.9	643.2	644.5	645.8	647.1	648.3	649.6	651.0	653.5
25°	618.5	620.2	621.8	623.4	625.0	626.8	628.8	631.0	633.0	635.0	637.8
27.5°	593.8	596.4	599.1	601.7	604.3	606.8	609.3	611.7	614.1	616.5	620.0
30°	577.3	580.3	583.3	586.2	589.3	592.2	595.2	598.1	601.2	604.1	607.7
32.5°	559.2	562.5	565.8	569.2	572.6	576.0	579.6	583.0	586.5	590.1	594.3
35°	533.0	536.8	540.8	544.6	548.6	552.7	557.0	561.4	565.7	570.1	575.1
37.5°	504.5	509.1	513.5	518.0	522.5	527.6	533.2	538.9	544.4	550.1	555.7
40°	485.5	490.6	495.6	500.7	505.7	511.3	517.6	523.7	529.9	536.0	542.0
42.5°	467.5	472.4	477.5	482.5	487.6	493.6	500.8	507.9	514.9	522.1	528.6
45°	437.1	443.3	449.5	455.7	461.8	469.0	477.0	485.0	493.0	501.0	508.2
47.5°	407.2	413.9	420.7	427.4	434.1	442.2	451.6	461.0	470.4	479.8	487.3
50°	386.6	393.7	400.8	407.9	415.0	423.7	434.0	444.3	454.6	464.9	472.7
52.5°	366.8	374.3	381.7	389.2	396.7	405.9	416.7	427.6	438.4	449.3	457.3
55°	335.1	343.3	351.5	359.8	368.0	378.1	390.0	401.9	413.8	425.8	434.0
57.5°	303.7	313.1	322.3	331.6	340.9	351.6	363.8	375.9	388.1	400.2	409.1
60°	281.4	291.2	301.1	311.0	320.8	332.3	345.4	358.4	371.4	384.6	393.2
62.5°	261.7	271.9	282.1	292.3	302.6	314.2	327.2	340.2	353.4	366.4	375.7
65°	228.8	240.0	251.4	262.6	273.8	286.1	299.6	313.2	326.7	340.2	349.6
67.5°	198.7	210.5	222.3	234.0	245.7	258.4	272.3	286.1	299.9	313.8	323.3
70°	177.3	189.2	201.2	213.1	225.0	238.0	252.3	266.4	280.6	294.9	304.7
72.5°	157.5	169.8	182.1	194.4	206.6	219.9	234.4	248.7	263.2	277.5	287.2
75°	126.8	139.7	152.5	165.3	178.1	191.9	206.5	221.2	235.8	250.5	260.3
77.5°	97.1	110.6	124.0	137.3	150.8	165.0	179.9	194.8	209.6	224.5	234.4
80°	77.4	91.3	105.2	119.3	133.2	147.6	162.6	177.4	192.3	207.2	216.8
82.5°	60.8	74.6	88.4	102.2	116.0	130.4	145.5	160.6	175.6	190.8	200.4
85°	37.2	51.3	65.5	79.7	93.9	108.4	123.0	137.6	152.4	167.0	176.6
87.5°	20.5	34.7	49.0	63.2	77.5	92.2	107.2	122.4	137.4	152.6	162.2
90°	11.5	27.9	44.1	60.5	76.7	93.3	110.2	127.0	143.9	160.8	171.4
92.5°	34.4	46.6	58.7	70.7	82.8	96.4	111.7	126.9	142.1	157.3	167.0
95°	88.6	90.3	92.0	93.7	95.3	104.0	119.8	135.4	151.1	166.7	176.8
97.5°	166.5	150.6	134.7	118.8	102.8	103.6	121.3	138.9	156.5	174.2	183.8
100°	225.9	196.7	167.6	138.5	109.4	103.5	121.0	138.6	156.0	173.5	184.2
102.5°	290.2	290.0	289.8	289.6	289.4	276.0	249.4	222.9	196.3	169.8	180.9
105°	380.7	395.6	410.4	425.4	440.2	416.2	353.1	290.0	227.0	164.0	175.0
107.5°	485.0	497.0	508.9	520.9	532.8	499.6	421.1	342.6	264.2	185.7	190.4
110°	551.4	561.7	572.1	582.4	592.8	563.9	495.7	427.7	359.5	291.4	271.4



TEST NUMBER: P331545-840

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

CANDELA DISTRIBUTION (continued):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
112.5°	614.6	623.6	632.6	641.5	650.5	650.5	641.6	632.6	623.7	614.8	521.9
115°	714.5	721.6	728.8	736.0	743.2	755.4	772.5	789.7	806.9	824.0	703.8
117.5°	802.6	809.5	816.4	823.2	830.0	840.6	854.9	869.1	883.3	897.7	873.6
120°	867.8	872.8	877.9	882.9	888.0	897.6	911.6	925.7	939.9	953.9	963.6
122.5°	923.1	927.9	932.6	937.3	942.0	951.3	965.3	979.4	993.3	1007.3	1015.5
125°	1006.4	1010.0	1013.5	1017.1	1020.7	1028.7	1041.3	1053.8	1066.3	1078.9	1087.0
127.5°	1082.7	1086.4	1090.1	1093.9	1097.6	1104.4	1114.2	1124.0	1133.8	1143.7	1152.2
130°	1131.1	1135.3	1139.4	1143.7	1147.8	1153.8	1161.6	1169.4	1177.3	1185.1	1193.7
132.5°	1180.5	1184.1	1187.6	1191.0	1194.6	1199.7	1206.4	1213.2	1219.9	1226.6	1234.6
135°	1243.7	1248.2	1252.5	1257.0	1261.3	1265.9	1270.7	1275.5	1280.2	1285.0	1292.5
137.5°	1308.8	1311.8	1314.8	1317.9	1320.9	1324.2	1328.1	1331.9	1335.7	1339.5	1346.5
140°	1351.2	1353.2	1355.1	1357.2	1359.1	1361.8	1365.3	1368.8	1372.3	1375.7	1381.9
142.5°	1386.8	1388.6	1390.3	1392.1	1393.8	1396.4	1400.0	1403.5	1407.1	1410.7	1415.8
145°	1441.6	1441.4	1441.1	1440.8	1440.6	1442.7	1447.4	1452.1	1456.7	1461.4	1464.7
147.5°	1490.3	1489.2	1488.2	1487.1	1486.1	1487.9	1492.5	1497.1	1501.8	1506.3	1507.9
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



TEST NUMBER: P331545-840

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

CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
0°	711.3	711.3	711.3	711.3	711.3	711.3	711.3	711.3
2.5°	709.0	709.9	710.8	711.1	710.7	710.4	710.0	709.7
5°	706.9	708.2	709.6	710.2	709.9	709.7	709.5	709.2
7.5°	703.5	705.2	706.8	707.5	707.3	707.0	706.8	706.6
10°	700.5	702.4	704.3	705.0	704.8	704.6	704.4	704.1
12.5°	695.6	697.4	699.3	700.0	699.8	699.6	699.4	699.1
15°	686.6	688.6	690.7	691.7	691.5	691.2	690.9	690.7
17.5°	675.0	677.2	679.3	680.4	680.4	680.4	680.4	680.4
20°	665.9	668.4	670.9	672.2	672.2	672.2	672.2	672.2
22.5°	656.0	658.5	661.0	662.5	662.8	663.2	663.6	663.9
25°	640.6	643.3	646.0	647.7	648.4	649.1	649.8	650.6
27.5°	623.5	626.9	630.5	632.4	632.9	633.4	633.9	634.4
30°	611.5	615.1	618.7	621.0	621.7	622.4	623.0	623.7
32.5°	598.5	602.8	606.9	609.7	611.0	612.2	613.4	614.6
35°	580.2	585.2	590.3	593.6	595.2	596.8	598.3	600.0
37.5°	561.3	566.8	572.5	576.1	577.8	579.5	581.2	582.9
40°	548.0	553.9	559.9	563.9	565.9	568.0	570.1	572.2
42.5°	535.0	541.6	548.1	552.4	554.4	556.5	558.6	560.6
45°	515.2	522.3	529.5	534.1	536.4	538.8	541.0	543.3
47.5°	494.6	502.1	509.5	514.4	516.9	519.5	522.0	524.5
50°	480.5	488.3	496.1	501.3	503.8	506.3	508.8	511.3
52.5°	465.2	473.2	481.2	486.6	489.2	491.9	494.6	497.4
55°	442.2	450.5	458.8	464.3	467.4	470.3	473.3	476.3
57.5°	418.0	426.9	435.8	441.7	444.7	447.8	450.8	453.8
60°	401.9	410.6	419.4	425.4	428.5	431.7	434.9	438.2
62.5°	384.9	394.2	403.4	409.6	412.5	415.6	418.6	421.6
65°	359.0	368.4	377.8	384.0	387.0	389.9	392.9	395.9
67.5°	332.8	342.2	351.7	358.1	361.1	364.3	367.4	370.5
70°	314.6	324.4	334.3	340.5	343.3	346.1	348.8	351.5
72.5°	296.9	306.5	316.2	322.7	326.0	329.3	332.5	335.9
75°	270.2	280.0	289.9	296.3	299.3	302.3	305.3	308.2
77.5°	244.2	254.0	263.8	270.2	273.5	276.7	279.8	283.1
80°	226.4	236.1	245.7	252.2	255.3	258.5	261.8	265.0
82.5°	210.0	219.5	229.2	235.5	238.5	241.6	244.6	247.6
85°	186.2	195.9	205.5	211.9	215.1	218.3	221.6	224.7
87.5°	171.8	181.5	191.1	197.4	200.5	203.5	206.5	209.5
90°	181.9	192.4	203.0	209.8	213.2	216.4	219.7	223.1
92.5°	176.7	186.4	196.1	202.5	205.6	208.6	211.7	214.8
95°	186.9	196.9	207.0	213.3	215.8	218.2	220.8	223.2
97.5°	193.3	202.9	212.5	218.7	221.8	224.8	227.8	231.0
100°	194.8	205.5	216.2	223.1	226.1	229.2	232.3	235.3
102.5°	192.0	203.2	214.3	221.6	224.8	228.1	231.4	234.7
105°	186.1	197.1	208.1	215.5	219.1	222.8	226.3	229.9
107.5°	194.9	199.5	204.2	208.3	212.0	215.5	219.1	222.8
110°	251.2	231.1	211.0	202.7	206.3	210.0	213.6	217.2



TEST NUMBER: P331545-840

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

CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
112.5°	429.1	336.3	243.5	198.8	202.2	205.6	209.0	212.4
115°	583.6	463.3	343.2	274.4	257.1	239.9	222.7	205.4
117.5°	849.7	825.8	801.7	758.5	695.9	633.3	570.7	508.1
120°	973.4	983.1	992.8	980.4	945.8	911.3	876.8	842.2
122.5°	1023.7	1032.0	1040.2	1041.7	1036.7	1031.7	1026.6	1021.6
125°	1095.1	1103.2	1111.4	1116.8	1119.7	1122.6	1125.5	1128.3
127.5°	1160.5	1169.0	1177.5	1182.9	1185.1	1187.2	1189.4	1191.6
130°	1202.1	1210.7	1219.2	1224.3	1225.8	1227.4	1228.9	1230.4
132.5°	1242.4	1250.3	1258.2	1262.9	1264.5	1266.1	1267.6	1269.2
135°	1300.1	1307.7	1315.1	1319.6	1320.9	1322.2	1323.4	1324.7
137.5°	1353.3	1360.2	1367.2	1370.9	1371.5	1372.1	1372.8	1373.4
140°	1388.1	1394.1	1400.3	1403.4	1403.4	1403.4	1403.4	1403.4
142.5°	1421.0	1426.2	1431.4	1433.9	1433.7	1433.5	1433.4	1433.2
145°	1467.9	1471.3	1474.6	1476.1	1475.9	1475.6	1475.4	1475.2
147.5°	1509.5	1511.2	1512.8	1513.3	1512.7	1512.1	1511.5	1510.9
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)