

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: P331824-840

Luminaire Tested: **S122RDIW-S675D1440U840-4F0-1E-UDD-F1**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P331824-840
REPORT IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-1807-864-8,
Test Lab: INNOVATION CENTER
Issue Date: 3/3/2020
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: NEO-RAY
Catalog Number: S122RDIW-S675D1440U840-4F0-1E-UDD-F1
Description: DEFINE 2 DIRECT-INDIRECT WALL MOUNT LED LUMINAIRE
DOWNLIGHT 675 LUMENS PER FOOT, FLUSH SATIN WHITE DIFFUSER, REGRESSED
HOUSING
UPLIGHT 1440 LUMENS PER FOOT, FLUSH SATIN WHITE DIFFUSER
Light Source: -
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 7394.7 lumens
Efficiency: N/A
Efficacy: 108.6 lumens/watt
Spacing Criteria (0/90/45): 1.2 / 0.99 / 1.16
Luminous Opening: Rectangular (W 0.17' x L: 4' x H: 0')
CIE Type: Semi-Indirect

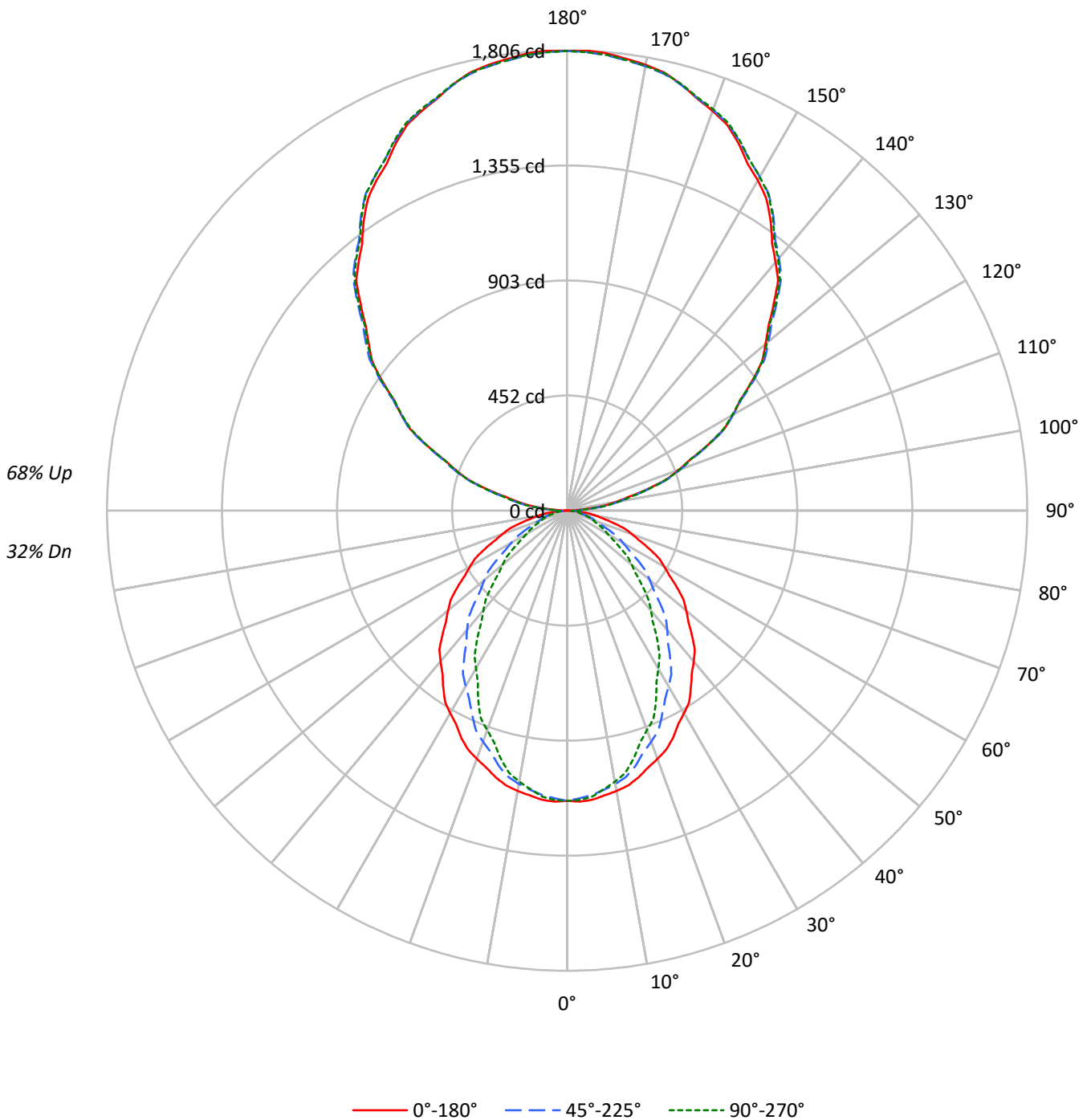
Input Watts (W): 68.1
Input Voltage (V): 120
Input Current (A_{in}): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



TEST NUMBER: P331824-840

CATALOG NUMBER: S122RDIW-S675D1440U840-4F0-1E-UDD-F1

Luminous Intensity Polar Plot





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COEFFICIENT OF UTILIZATION - ZONAL CAVITY METHOD:

RF	20				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	56	56	56	39	39	39	39	39	39	32
1	94	90	86	83	84	81	78	75	64	62	60	49	48	47	35	34	34	34	34	34	27
2	86	79	73	68	77	71	66	62	57	53	51	44	41	39	31	30	29	29	29	29	23
3	78	69	63	57	70	63	57	52	50	46	43	39	36	34	28	26	25	25	25	25	20
4	72	62	54	48	64	56	49	44	45	40	37	35	32	29	25	23	22	22	22	22	18
5	66	55	47	42	59	50	43	38	40	35	32	31	28	25	23	21	19	19	19	19	15
6	61	49	42	36	55	45	38	33	36	31	28	28	25	22	21	19	17	17	17	17	14
7	56	44	37	32	50	40	34	29	33	28	24	26	22	20	19	17	15	15	15	15	12
8	52	40	33	28	47	37	30	26	30	25	22	24	20	18	18	15	14	14	14	14	11
9	48	37	30	25	44	34	27	23	27	23	19	22	18	16	16	14	12	12	12	12	10
10	45	34	27	22	41	31	25	21	25	21	17	20	17	14	15	13	11	11	11	11	9

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	18392	18392	18392
5°	18462	18162	18263
10°	18321	17864	17713
15°	18111	17336	16836
20°	17819	16579	15747
25°	17521	15720	14694
30°	17107	14838	13340
35°	16703	13878	12151
40°	16297	12886	10777
45°	15819	11768	9533
50°	15330	10643	8312
55°	14829	9433	7139
60°	14247	8157	5926
65°	13589	6854	5398
70°	12798	5646	4961
75°	11834	5147	4629
80°	10451	4603	4212
85°	8207	3631	3631



TEST NUMBER: P331824-840

CATALOG NUMBER: S122RDIW-S675D1440U840-4F0-1E-UDD-F1

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	106.6	1.4
10°-20°	292.8	4.0
20°-30°	411.1	5.6
30°-40°	448.3	6.1
40°-50°	412.2	5.6
50°-60°	323.8	4.4
60°-70°	211.1	2.9
70°-80°	108.8	1.5
80°-90°	35.4	0.5
90°-100°	114.3	1.5
100°-110°	355.0	4.8
110°-120°	606.9	8.2
120°-130°	798.1	10.8
130°-140°	895.8	12.1
140°-150°	878.3	11.9
150°-160°	736.7	10.0
160°-170°	488.6	6.6
170°-180°	170.8	2.3
0°-30°	810.5	11.0
0°-40°	1258.9	17.0
0°-60°	1994.8	27.0
0°-90°	2350.2	31.8
90°-120°	1076.2	14.6
90°-150°	3648.4	49.3
90°-180°	5045.0	68.2
0°-180°	7394.7	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1139	1139	1139	1139	1139	
5°	1139	1134	1121	1129	1127	108
15°	1084	1071	1037	1018	1007	305
25°	984	949	882	842	825	452
35°	847	793	704	642	616	530
45°	693	622	515	445	418	535
55°	527	445	335	276	254	471
65°	356	272	179	146	141	352
75°	190	120	82	76	74	201
85°	44	24	20	20	20	52
90°	2	21	53	50	52	6
95°	79	94	98	97	94	91
105°	327	332	335	338	338	346
115°	609	617	615	613	609	602
125°	886	899	895	891	889	791
135°	1146	1162	1166	1165	1160	885
145°	1392	1402	1411	1412	1407	869
155°	1591	1596	1600	1607	1603	732
165°	1731	1730	1730	1739	1732	488
175°	1801	1797	1793	1803	1795	171
180°	1804	1804	1804	1804	1804	



TEST NUMBER: P331824-840

CATALOG NUMBER: S122RDIW-S675D1440U840-4F0-1E-UDD-F1

CANDELA DISTRIBUTION (FULL):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
0°	1139.1	1139.1	1139.1	1139.1	1139.1	1139.1	1139.1	1139.1	1139.1	1139.1	1139.1
2.5°	1143.3	1142.4	1141.5	1140.5	1139.6	1138.1	1136.1	1134.1	1132.2	1130.1	1132.0
5°	1139.1	1138.0	1136.9	1135.7	1134.6	1132.6	1129.5	1126.6	1123.6	1120.6	1122.7
7.5°	1127.4	1126.0	1124.6	1123.2	1121.8	1119.2	1115.8	1112.4	1108.8	1105.4	1105.9
10°	1117.5	1115.9	1114.3	1112.7	1111.1	1108.0	1103.4	1098.8	1094.3	1089.6	1089.0
12.5°	1105.1	1103.2	1101.2	1099.2	1097.2	1093.4	1087.5	1081.7	1075.7	1069.9	1068.6
15°	1083.5	1081.0	1078.4	1075.9	1073.4	1068.2	1060.5	1052.7	1044.9	1037.1	1032.8
17.5°	1056.9	1053.1	1049.2	1045.3	1041.5	1034.6	1024.6	1014.6	1004.6	994.6	989.5
20°	1037.1	1032.5	1027.9	1023.4	1018.8	1010.8	999.3	987.8	976.4	964.9	959.2
22.5°	1015.6	1010.6	1005.4	1000.3	995.1	986.1	973.2	960.3	947.4	934.4	927.1
25°	983.5	976.1	968.9	961.5	954.2	942.9	927.9	912.7	897.6	882.4	873.0
27.5°	944.7	936.8	928.8	920.8	912.8	900.3	883.3	866.3	849.2	832.1	821.2
30°	917.6	908.8	900.1	891.4	882.7	869.2	850.8	832.5	814.2	795.9	784.2
32.5°	891.1	880.9	870.8	860.6	850.4	836.0	817.3	798.6	779.9	761.2	747.9
35°	847.4	835.8	824.0	812.3	800.7	784.8	764.6	744.5	724.3	704.1	689.6
37.5°	803.8	790.8	778.0	765.2	752.3	735.2	713.8	692.3	670.8	649.2	633.4
40°	773.2	759.4	745.7	732.0	718.2	700.2	678.0	655.8	633.6	611.4	595.1
42.5°	741.8	727.4	712.9	698.4	684.0	665.2	642.3	619.4	596.3	573.4	556.5
45°	692.8	677.4	662.1	646.7	631.4	611.7	587.6	563.6	539.5	515.4	499.2
47.5°	644.9	628.6	612.4	596.1	579.9	559.4	534.5	509.7	484.8	460.0	443.8
50°	610.3	594.0	577.7	561.5	545.2	524.5	499.3	474.1	448.9	423.7	407.9
52.5°	576.5	559.5	542.5	525.5	508.5	487.7	463.0	438.4	413.7	389.1	373.9
55°	526.8	509.0	491.1	473.2	455.3	434.0	409.3	384.6	359.8	335.1	321.3
57.5°	475.8	457.6	439.2	420.9	402.5	381.5	357.7	334.0	310.1	286.4	273.8
60°	441.2	422.9	404.6	386.3	367.9	347.0	323.4	299.7	276.2	252.6	240.9
62.5°	407.4	389.1	370.7	352.4	334.1	313.7	291.2	268.7	246.2	223.7	212.6
65°	355.7	337.1	318.5	300.0	281.4	261.9	241.3	220.7	200.0	179.4	171.6
67.5°	305.8	287.3	268.9	250.5	232.1	213.6	195.0	176.5	157.9	139.4	135.8
70°	271.1	253.3	235.4	217.5	199.7	182.8	167.0	151.2	135.4	119.6	117.2
72.5°	238.1	221.0	203.9	186.7	169.6	154.7	142.0	129.3	116.6	103.9	102.0
75°	189.7	173.7	157.6	141.6	125.5	113.6	105.8	98.1	90.3	82.5	80.9
77.5°	142.1	127.9	113.9	99.9	85.8	76.9	73.1	69.4	65.6	61.9	60.9
80°	112.4	100.7	89.0	77.4	65.6	58.7	56.4	54.0	51.8	49.5	48.6
82.5°	85.1	76.0	67.0	57.8	48.7	43.3	41.8	40.2	38.7	37.2	36.6
85°	44.3	39.5	34.7	29.9	25.0	22.3	21.6	21.0	20.3	19.6	19.6
87.5°	13.5	12.8	12.2	11.5	10.9	11.3	12.8	14.2	15.8	17.3	17.0
90°	1.5	5.6	9.6	13.7	17.8	23.5	31.0	38.4	45.8	53.3	52.6
92.5°	27.1	30.1	33.0	36.1	39.0	41.4	43.1	44.9	46.7	48.4	48.6
95°	79.2	82.5	85.9	89.3	92.7	94.7	95.4	96.0	96.7	97.5	97.5
97.5°	144.6	147.6	150.6	153.6	156.5	158.6	160.0	161.3	162.5	163.8	163.8
100°	193.4	196.0	198.7	201.5	204.2	206.0	207.0	208.0	209.0	210.1	210.1
102.5°	244.5	246.7	248.8	251.0	253.2	254.9	256.2	257.4	258.7	260.0	260.3
105°	327.3	328.3	329.3	330.3	331.3	332.2	333.0	333.6	334.3	335.0	335.6
107.5°	410.7	412.2	413.7	415.3	416.7	417.5	417.5	417.5	417.5	417.5	417.7
110°	464.3	466.4	468.4	470.4	472.4	473.5	473.5	473.5	473.5	473.5	473.5



TEST NUMBER: P331824-840

CATALOG NUMBER: S122RDIW-S675D1440U840-4F0-1E-UDD-F1

CANDELA DISTRIBUTION (continued):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
112.5°	522.8	524.8	526.8	528.9	530.9	531.8	531.5	531.3	531.0	530.7	529.9
115°	608.9	611.0	613.0	615.1	617.1	617.7	617.1	616.4	615.7	615.1	614.7
117.5°	694.9	697.5	700.2	703.0	705.7	706.1	704.2	702.3	700.3	698.5	697.7
120°	752.0	754.8	757.5	760.2	763.0	763.0	760.2	757.5	754.8	752.0	752.0
122.5°	804.5	807.7	810.9	814.2	817.5	818.1	816.3	814.4	812.4	810.5	809.7
125°	886.1	889.1	892.1	895.1	898.3	899.3	898.3	897.3	896.3	895.1	894.1
127.5°	965.5	969.4	973.2	977.1	981.0	982.3	981.1	979.9	978.7	977.4	976.1
130°	1015.4	1019.9	1024.3	1028.6	1033.1	1034.9	1034.2	1033.6	1032.9	1032.2	1031.6
132.5°	1071.5	1075.1	1078.6	1082.3	1085.8	1087.7	1087.8	1087.9	1088.1	1088.2	1086.7
135°	1146.4	1150.1	1153.9	1157.5	1161.2	1163.5	1164.2	1164.9	1165.5	1166.2	1165.9
137.5°	1225.3	1228.3	1231.3	1234.4	1237.4	1239.4	1240.3	1241.1	1242.0	1242.9	1242.6
140°	1272.7	1275.8	1278.9	1281.9	1285.0	1287.3	1289.0	1290.7	1292.4	1294.0	1294.0
142.5°	1321.5	1324.5	1327.6	1330.6	1333.6	1335.7	1336.9	1338.1	1339.2	1340.4	1340.6
145°	1391.5	1393.9	1396.2	1398.6	1401.0	1403.2	1405.2	1407.2	1409.3	1411.3	1411.6
147.5°	1453.9	1456.7	1459.6	1462.5	1465.3	1467.4	1468.7	1470.1	1471.5	1472.8	1473.6
150°	1496.5	1498.5	1500.7	1502.7	1504.7	1506.3	1507.7	1509.0	1510.5	1511.8	1512.8
152.5°	1534.3	1536.3	1538.3	1540.3	1542.5	1544.3	1545.9	1547.5	1549.1	1550.7	1552.1
155°	1590.9	1592.0	1593.0	1594.0	1595.0	1596.0	1597.0	1598.0	1599.0	1600.0	1601.7
157.5°	1639.3	1640.0	1640.7	1641.4	1642.0	1642.7	1643.4	1644.0	1644.6	1645.2	1647.4
160°	1668.6	1669.3	1669.9	1670.6	1671.3	1671.8	1672.1	1672.4	1672.8	1673.1	1675.2
162.5°	1695.4	1695.6	1695.7	1695.8	1696.0	1696.2	1696.5	1696.9	1697.2	1697.5	1699.8
165°	1731.0	1730.7	1730.3	1730.0	1729.7	1729.5	1729.5	1729.5	1729.5	1729.5	1731.8
167.5°	1760.8	1759.8	1758.8	1757.8	1756.8	1756.3	1756.2	1756.2	1756.1	1756.0	1758.4
170°	1776.7	1775.6	1774.6	1773.6	1772.6	1771.9	1771.6	1771.3	1770.9	1770.6	1772.9
172.5°	1787.7	1786.7	1785.6	1784.6	1783.6	1782.9	1782.6	1782.2	1781.9	1781.5	1783.9
175°	1801.0	1800.0	1799.0	1798.0	1797.0	1796.1	1795.4	1794.7	1794.1	1793.4	1795.8
177.5°	1806.5	1805.7	1804.9	1804.1	1803.3	1802.6	1802.0	1801.5	1801.0	1800.4	1802.0
180°	1804.1	1804.1	1804.1	1804.1	1804.1	1804.1	1804.1	1804.1	1804.1	1804.1	1804.1



TEST NUMBER: P331824-840

CATALOG NUMBER: S122RDIW-S675D1440U840-4F0-1E-UDD-F1

CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
0°	1139.1	1139.1	1139.1	1139.1	1139.1	1139.1	1139.1	1139.1
2.5°	1133.8	1135.6	1137.4	1138.1	1137.8	1137.4	1137.1	1136.7
5°	1124.7	1126.8	1128.8	1129.5	1128.8	1128.1	1127.5	1126.8
7.5°	1106.5	1107.1	1107.7	1107.4	1106.2	1105.1	1103.9	1102.7
10°	1088.3	1087.6	1086.9	1085.9	1084.5	1083.2	1081.8	1080.4
12.5°	1067.4	1066.2	1064.9	1063.2	1060.9	1058.6	1056.3	1054.0
15°	1028.4	1024.0	1019.7	1016.3	1014.1	1011.8	1009.5	1007.2
17.5°	984.3	979.1	973.9	969.4	965.4	961.5	957.6	953.6
20°	953.5	947.8	942.0	936.6	931.6	926.6	921.5	916.5
22.5°	919.7	912.3	904.9	899.4	895.5	891.8	888.1	884.3
25°	863.6	854.2	844.9	838.5	835.1	831.6	828.2	824.8
27.5°	810.2	799.3	788.4	780.1	774.7	769.2	763.8	758.3
30°	772.5	760.8	749.1	740.2	734.0	727.8	721.6	715.5
32.5°	734.6	721.2	707.9	698.3	692.5	686.7	680.9	675.1
35°	675.3	660.9	646.4	636.6	631.6	626.5	621.6	616.5
37.5°	617.4	601.6	585.7	574.8	569.1	563.3	557.5	551.8
40°	578.8	562.5	546.2	535.1	529.2	523.2	517.3	511.3
42.5°	539.8	522.9	506.1	494.8	489.1	483.3	477.6	471.7
45°	482.9	466.7	450.4	439.5	434.0	428.5	423.0	417.5
47.5°	427.7	411.5	395.3	384.8	379.7	374.8	369.7	364.8
50°	392.1	376.3	360.5	350.1	345.4	340.5	335.8	330.9
52.5°	358.6	343.3	328.0	318.2	313.8	309.3	304.9	300.4
55°	307.6	293.8	280.0	271.0	266.7	262.3	257.9	253.6
57.5°	261.2	248.6	236.0	227.8	224.2	220.6	216.8	213.2
60°	229.2	217.5	205.8	198.1	194.5	190.9	187.1	183.5
62.5°	201.5	190.3	179.2	172.5	170.3	168.1	165.9	163.7
65°	163.8	156.0	148.2	144.0	143.3	142.6	141.9	141.3
67.5°	132.2	128.7	125.1	122.9	122.2	121.5	120.8	120.0
70°	115.0	112.7	110.4	108.9	107.9	106.9	106.0	105.1
72.5°	100.1	98.2	96.2	95.0	94.4	93.9	93.3	92.8
75°	79.3	77.7	76.0	75.1	74.9	74.7	74.4	74.2
77.5°	60.0	59.1	58.2	57.6	57.2	56.9	56.5	56.0
80°	47.7	46.8	45.8	45.3	45.3	45.3	45.3	45.3
82.5°	36.1	35.4	34.9	34.6	34.6	34.6	34.6	34.6
85°	19.6	19.6	19.6	19.6	19.6	19.6	19.6	19.6
87.5°	16.7	16.3	16.0	15.9	16.0	16.0	16.1	16.2
90°	51.9	51.3	50.6	50.4	50.8	51.1	51.4	51.8
92.5°	48.7	48.8	49.0	49.1	49.1	49.2	49.3	49.3
95°	97.5	97.5	97.5	97.0	96.4	95.7	95.0	94.4
97.5°	163.8	163.8	163.8	163.8	163.7	163.6	163.6	163.5
100°	210.1	210.1	210.1	210.0	209.5	209.2	208.9	208.5
102.5°	260.5	260.8	261.2	261.1	260.7	260.4	260.0	259.7
105°	336.3	337.0	337.6	338.0	338.0	338.0	338.0	338.0
107.5°	418.0	418.3	418.5	417.9	416.4	414.8	413.2	411.6
110°	473.5	473.5	473.5	472.9	471.9	470.9	469.9	468.9



TEST NUMBER: P331824-840

CATALOG NUMBER: S122RDIW-S675D1440U840-4F0-1E-UDD-F1

CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
112.5°	529.1	528.3	527.5	526.6	525.9	525.2	524.4	523.7
115°	614.4	614.0	613.7	613.0	612.0	611.0	610.0	608.9
117.5°	696.9	696.1	695.3	694.3	693.3	692.3	691.3	690.2
120°	752.0	752.0	752.0	751.5	750.5	749.5	748.5	747.5
122.5°	808.9	808.1	807.3	806.5	805.8	805.1	804.3	803.5
125°	893.1	892.1	891.1	890.5	890.1	889.8	889.5	889.1
127.5°	974.9	973.7	972.5	971.4	970.3	969.2	968.2	967.0
130°	1030.9	1030.2	1029.5	1028.4	1027.1	1025.8	1024.4	1023.1
132.5°	1085.3	1083.8	1082.3	1081.0	1079.9	1078.8	1077.7	1076.6
135°	1165.5	1165.2	1164.9	1164.2	1163.2	1162.2	1161.1	1160.1
137.5°	1242.3	1242.1	1241.8	1241.0	1239.7	1238.3	1237.0	1235.6
140°	1294.0	1294.0	1294.0	1293.4	1292.0	1290.7	1289.3	1288.0
142.5°	1340.9	1341.2	1341.4	1340.9	1339.6	1338.2	1336.9	1335.4
145°	1412.0	1412.3	1412.6	1412.1	1410.8	1409.5	1408.1	1406.7
147.5°	1474.3	1475.0	1475.8	1475.5	1474.2	1472.9	1471.7	1470.4
150°	1513.8	1514.8	1515.8	1515.8	1514.8	1513.8	1512.8	1511.8
152.5°	1553.3	1554.6	1555.9	1555.9	1554.6	1553.3	1552.1	1550.7
155°	1603.5	1605.2	1606.8	1607.2	1606.2	1605.2	1604.2	1603.2
157.5°	1649.7	1652.0	1654.4	1654.7	1653.0	1651.4	1649.8	1648.2
160°	1677.2	1679.2	1681.2	1681.6	1680.2	1678.9	1677.6	1676.2
162.5°	1702.1	1704.5	1706.7	1707.1	1705.5	1703.8	1702.2	1700.5
165°	1734.2	1736.6	1739.0	1739.3	1737.6	1736.0	1734.2	1732.5
167.5°	1760.7	1763.1	1765.4	1765.7	1764.0	1762.2	1760.5	1758.7
170°	1775.3	1777.7	1780.1	1780.2	1778.2	1776.2	1774.1	1772.1
172.5°	1786.2	1788.7	1791.0	1791.2	1789.2	1787.2	1785.1	1783.1
175°	1798.2	1800.5	1802.9	1803.1	1801.0	1799.0	1797.0	1794.9
177.5°	1803.7	1805.3	1807.0	1807.0	1805.3	1803.7	1802.0	1800.4
180°	1804.1	1804.1	1804.1	1804.1	1804.1	1804.1	1804.1	1804.1

(END OF REPORT)