

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: P331824-830

Luminaire Tested: **S122RDIW-S675D1440U830-4F0-1E-UDD-F1**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P331824-830
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-S675D1440U830-4F0-1E-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: 6901.7 lumens
Efficiency: N/A
Efficacy: 101.3 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

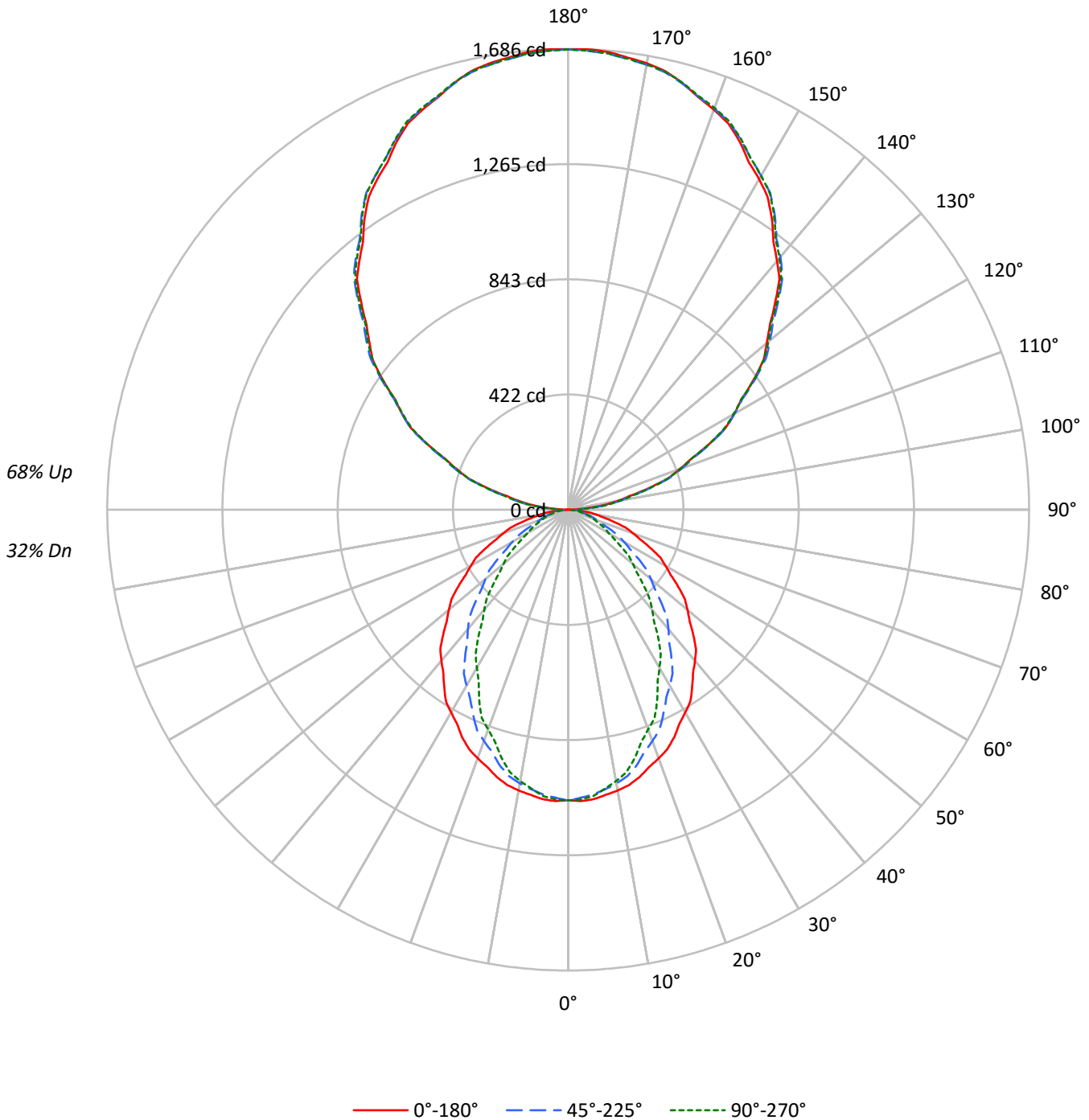
Input Watts (W): 68.1
Input Voltage (V): 120
Input Current (A_{in}): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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	50	30	10	0	
RCR																						
0	103	103	103	103	92	92	92	92	73	73	73	56	56	56	39	39	39	32				
1	94	90	86	83	84	81	78	75	64	62	60	49	48	47	35	34	34	27				
2	86	79	73	68	77	71	66	62	57	53	51	44	41	39	31	30	29	23				
3	78	69	63	57	70	63	57	52	50	46	43	39	36	34	28	26	25	20				
4	72	62	54	48	64	56	49	44	45	40	37	35	32	29	25	23	22	18				
5	66	55	47	42	59	50	43	38	40	35	32	31	28	25	23	21	19	15				
6	61	49	42	36	55	45	38	33	36	31	28	28	25	22	21	19	17	14				
7	56	44	37	32	50	40	34	29	33	28	24	26	22	20	19	17	15	12				
8	52	40	33	28	47	37	30	26	30	25	22	24	20	18	18	15	14	11				
9	48	37	30	25	44	34	27	23	27	23	19	22	18	16	16	14	12	10				
10	45	34	27	22	41	31	25	21	25	21	17	20	17	14	15	13	11	9				

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	17166	17166	17166
5°	17232	16951	17045
10°	17100	16674	16531
15°	16904	16181	15714
20°	16632	15474	14698
25°	16352	14672	13714
30°	15966	13848	12450
35°	15589	12952	11341
40°	15209	12026	10058
45°	14764	10985	8896
50°	14307	9934	7759
55°	13841	8802	6663
60°	13298	7611	5532
65°	12684	6395	5039
70°	11948	5268	4631
75°	11042	4803	4323
80°	9754	4296	3933
85°	7669	3390	3390



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	99.5	1.4
10°-20°	273.3	4.0
20°-30°	383.7	5.6
30°-40°	418.4	6.1
40°-50°	384.7	5.6
50°-60°	302.2	4.4
60°-70°	197.0	2.9
70°-80°	101.6	1.5
80°-90°	33.1	0.5
90°-100°	106.7	1.5
100°-110°	331.4	4.8
110°-120°	566.4	8.2
120°-130°	744.9	10.8
130°-140°	836.1	12.1
140°-150°	819.8	11.9
150°-160°	687.6	10.0
160°-170°	456.0	6.6
170°-180°	159.4	2.3
0°-30°	756.5	11.0
0°-40°	1174.9	17.0
0°-60°	1861.8	27.0
0°-90°	2193.5	31.8
90°-120°	1004.5	14.6
90°-150°	3405.2	49.3
90°-180°	4708.0	68.2
0°-180°	6901.7	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1063	1063	1063	1063	1063	
5°	1063	1058	1046	1054	1052	101
15°	1011	999	968	950	940	285
25°	918	885	824	786	770	422
35°	791	740	657	599	575	495
45°	647	580	481	415	390	499
55°	492	415	313	257	237	439
65°	332	254	167	136	132	329
75°	177	112	77	71	69	187
85°	41	22	18	18	18	49
90°	1	19	50	47	48	6
95°	74	87	91	91	88	85
105°	306	310	313	315	316	323
115°	568	576	574	572	568	562
125°	827	839	836	831	830	739
135°	1070	1085	1088	1087	1083	826
145°	1299	1309	1317	1318	1313	811
155°	1485	1489	1493	1500	1496	683
165°	1616	1614	1614	1623	1617	455
175°	1681	1677	1674	1683	1675	160
180°	1684	1684	1684	1684	1684	



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CANDELA DISTRIBUTION (FULL):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
0°	1063.2	1063.2	1063.2	1063.2	1063.2	1063.2	1063.2	1063.2	1063.2	1063.2	1063.2
2.5°	1067.1	1066.2	1065.4	1064.5	1063.7	1062.2	1060.4	1058.5	1056.7	1054.8	1056.5
5°	1063.2	1062.2	1061.1	1060.0	1058.9	1057.1	1054.2	1051.5	1048.7	1045.9	1047.8
7.5°	1052.3	1050.9	1049.6	1048.3	1047.0	1044.6	1041.4	1038.2	1034.9	1031.7	1032.2
10°	1043.0	1041.5	1040.0	1038.5	1037.0	1034.2	1029.8	1025.6	1021.3	1017.0	1016.4
12.5°	1031.4	1029.6	1027.7	1026.0	1024.1	1020.5	1015.0	1009.6	1004.0	998.5	997.4
15°	1011.3	1008.9	1006.5	1004.2	1001.8	997.0	989.8	982.5	975.2	968.0	963.9
17.5°	986.5	982.9	979.3	975.6	972.0	965.6	956.3	947.0	937.6	928.3	923.5
20°	968.0	963.7	959.4	955.2	950.8	943.4	932.6	922.0	911.3	900.6	895.2
22.5°	947.9	943.2	938.4	933.6	928.8	920.4	908.3	896.3	884.2	872.1	865.3
25°	917.9	911.1	904.3	897.4	890.6	880.1	866.0	851.9	837.7	823.6	814.8
27.5°	881.7	874.3	866.9	859.4	852.0	840.3	824.4	808.5	792.6	776.7	766.5
30°	856.4	848.2	840.1	832.0	823.9	811.2	794.1	777.0	759.9	742.8	731.9
32.5°	831.7	822.2	812.8	803.2	793.7	780.2	762.8	745.4	727.9	710.5	698.0
35°	790.9	780.0	769.1	758.2	747.3	732.4	713.6	694.8	676.0	657.1	643.7
37.5°	750.2	738.1	726.1	714.2	702.2	686.2	666.2	646.1	626.0	606.0	591.2
40°	721.6	708.8	696.0	683.2	670.3	653.6	632.8	612.1	591.4	570.6	555.4
42.5°	692.4	678.9	665.3	651.9	638.4	620.9	599.5	578.1	556.6	535.2	519.4
45°	646.6	632.3	617.9	603.6	589.3	570.9	548.5	526.0	503.5	481.1	465.9
47.5°	601.9	586.7	571.6	556.4	541.2	522.1	498.9	475.7	452.5	429.3	414.2
50°	569.6	554.4	539.2	524.1	508.9	489.6	466.0	442.5	419.0	395.5	380.7
52.5°	538.1	522.2	506.3	490.5	474.6	455.2	432.2	409.2	386.2	363.2	348.9
55°	491.7	475.0	458.4	441.7	425.0	405.1	382.0	358.9	335.8	312.7	299.9
57.5°	444.1	427.1	409.9	392.9	375.7	356.1	333.8	311.7	289.5	267.3	255.5
60°	411.8	394.7	377.6	360.5	343.4	323.9	301.8	279.7	257.8	235.7	224.8
62.5°	380.2	363.2	346.0	328.9	311.8	292.8	271.8	250.8	229.8	208.8	198.4
65°	332.0	314.6	297.3	280.0	262.7	244.4	225.2	205.9	186.6	167.4	160.1
67.5°	285.4	268.2	251.0	233.8	216.6	199.3	182.0	164.8	147.4	130.1	126.8
70°	253.1	236.4	219.7	203.0	186.3	170.6	155.9	141.1	126.4	111.6	109.4
72.5°	222.3	206.2	190.3	174.3	158.3	144.4	132.5	120.6	108.9	97.0	95.2
75°	177.0	162.1	147.1	132.1	117.2	106.0	98.8	91.5	84.3	77.0	75.5
77.5°	132.6	119.4	106.3	93.2	80.1	71.7	68.2	64.8	61.3	57.8	56.8
80°	104.9	94.0	83.0	72.2	61.3	54.8	52.6	50.4	48.4	46.2	45.3
82.5°	79.5	71.0	62.5	53.9	45.4	40.4	39.0	37.5	36.1	34.7	34.1
85°	41.4	36.9	32.4	27.9	23.4	20.8	20.2	19.6	18.9	18.3	18.3
87.5°	12.6	12.0	11.4	10.7	10.2	10.6	12.0	13.3	14.7	16.1	15.8
90°	1.4	5.2	9.0	12.8	16.6	22.0	28.9	35.8	42.8	49.8	49.1
92.5°	25.3	28.1	30.8	33.6	36.4	38.6	40.2	41.9	43.5	45.1	45.3
95°	73.9	77.0	80.2	83.3	86.5	88.4	89.1	89.6	90.3	91.0	91.0
97.5°	135.0	137.8	140.5	143.4	146.1	148.1	149.3	150.5	151.7	152.9	152.9
100°	180.5	182.9	185.5	188.0	190.6	192.3	193.2	194.2	195.1	196.0	196.0
102.5°	228.2	230.3	232.2	234.2	236.3	237.9	239.1	240.3	241.5	242.7	243.0
105°	305.5	306.4	307.4	308.3	309.2	310.1	310.8	311.3	312.0	312.6	313.2
107.5°	383.3	384.7	386.2	387.6	388.9	389.6	389.6	389.6	389.6	389.6	389.8
110°	433.4	435.3	437.2	439.0	440.9	442.0	442.0	442.0	442.0	442.0	442.0



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CANDELA DISTRIBUTION (continued):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
112.5°	488.0	489.8	491.7	493.6	495.5	496.3	496.1	495.9	495.6	495.3	494.6
115°	568.4	570.2	572.1	574.1	576.0	576.6	576.0	575.3	574.7	574.1	573.7
117.5°	648.6	651.0	653.6	656.1	658.6	659.0	657.2	655.4	653.7	652.0	651.2
120°	701.9	704.5	707.0	709.5	712.1	712.1	709.5	707.0	704.5	701.9	701.9
122.5°	750.8	753.8	756.9	759.9	763.0	763.6	761.9	760.1	758.3	756.5	755.7
125°	827.0	829.8	832.6	835.5	838.4	839.3	838.4	837.4	836.5	835.5	834.5
127.5°	901.2	904.7	908.3	912.0	915.6	916.8	915.7	914.5	913.4	912.3	911.1
130°	947.7	951.9	956.0	960.1	964.2	965.9	965.3	964.7	964.0	963.4	962.8
132.5°	1000.0	1003.4	1006.7	1010.1	1013.4	1015.2	1015.3	1015.4	1015.6	1015.7	1014.3
135°	1070.0	1073.5	1076.9	1080.3	1083.8	1085.9	1086.6	1087.2	1087.8	1088.4	1088.2
137.5°	1143.6	1146.4	1149.2	1152.1	1154.9	1156.8	1157.6	1158.4	1159.2	1160.1	1159.8
140°	1187.9	1190.7	1193.6	1196.5	1199.3	1201.5	1203.1	1204.7	1206.3	1207.8	1207.8
142.5°	1233.4	1236.2	1239.1	1241.9	1244.7	1246.7	1247.7	1248.9	1249.9	1251.0	1251.2
145°	1298.7	1301.0	1303.2	1305.3	1307.6	1309.7	1311.5	1313.4	1315.3	1317.2	1317.5
147.5°	1357.0	1359.6	1362.3	1365.0	1367.6	1369.6	1370.8	1372.1	1373.4	1374.6	1375.4
150°	1396.8	1398.6	1400.6	1402.5	1404.4	1405.9	1407.2	1408.4	1409.8	1411.0	1411.9
152.5°	1432.0	1433.9	1435.8	1437.7	1439.6	1441.3	1442.8	1444.4	1445.9	1447.4	1448.6
155°	1484.9	1485.8	1486.8	1487.7	1488.7	1489.6	1490.5	1491.5	1492.4	1493.4	1495.0
157.5°	1530.0	1530.7	1531.3	1532.0	1532.6	1533.2	1533.8	1534.4	1534.9	1535.5	1537.6
160°	1557.4	1558.0	1558.6	1559.2	1559.9	1560.4	1560.7	1560.9	1561.3	1561.6	1563.5
162.5°	1582.3	1582.5	1582.6	1582.7	1582.9	1583.1	1583.4	1583.8	1584.0	1584.3	1586.5
165°	1615.6	1615.3	1615.0	1614.7	1614.4	1614.2	1614.2	1614.2	1614.2	1614.2	1616.4
167.5°	1643.4	1642.5	1641.5	1640.6	1639.6	1639.2	1639.1	1639.1	1639.0	1638.9	1641.2
170°	1658.2	1657.3	1656.3	1655.4	1654.4	1653.8	1653.5	1653.2	1652.8	1652.6	1654.7
172.5°	1668.5	1667.5	1666.6	1665.7	1664.7	1664.1	1663.8	1663.4	1663.1	1662.7	1665.0
175°	1680.9	1680.0	1679.0	1678.1	1677.2	1676.4	1675.7	1675.1	1674.5	1673.9	1676.1
177.5°	1686.1	1685.4	1684.6	1683.9	1683.1	1682.4	1681.9	1681.4	1680.9	1680.4	1681.9
180°	1683.9	1683.9	1683.9	1683.9	1683.9	1683.9	1683.9	1683.9	1683.9	1683.9	1683.9



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CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
0°	1063.2	1063.2	1063.2	1063.2	1063.2	1063.2	1063.2	1063.2
2.5°	1058.2	1059.9	1061.6	1062.2	1062.0	1061.6	1061.3	1060.9
5°	1049.7	1051.7	1053.6	1054.2	1053.6	1052.9	1052.3	1051.7
7.5°	1032.7	1033.3	1033.9	1033.6	1032.5	1031.4	1030.3	1029.2
10°	1015.8	1015.1	1014.5	1013.5	1012.2	1011.0	1009.7	1008.3
12.5°	996.3	995.1	993.9	992.3	990.1	988.1	985.9	983.7
15°	959.9	955.7	951.7	948.6	946.5	944.3	942.2	940.1
17.5°	918.7	913.8	909.0	904.7	901.1	897.4	893.7	890.0
20°	889.9	884.6	879.2	874.2	869.5	864.8	860.1	855.4
22.5°	858.4	851.5	844.6	839.4	835.8	832.4	828.9	825.4
25°	806.1	797.3	788.5	782.6	779.4	776.2	773.0	769.8
27.5°	756.2	746.0	735.8	728.1	723.0	717.9	712.8	707.8
30°	721.0	710.1	699.2	690.9	685.0	679.3	673.5	667.8
32.5°	685.6	673.2	660.7	651.8	646.3	640.9	635.5	630.1
35°	630.3	616.8	603.3	594.2	589.5	584.8	580.1	575.4
37.5°	576.3	561.5	546.7	536.5	531.1	525.8	520.4	515.0
40°	540.2	525.0	509.8	499.5	493.9	488.3	482.8	477.2
42.5°	503.8	488.0	472.4	461.8	456.5	451.1	445.7	440.3
45°	450.7	435.5	420.4	410.2	405.1	399.9	394.8	389.6
47.5°	399.2	384.1	368.9	359.1	354.4	349.8	345.1	340.4
50°	366.0	351.2	336.5	326.8	322.3	317.8	313.4	308.9
52.5°	334.7	320.4	306.1	297.0	292.8	288.7	284.6	280.4
55°	287.1	274.2	261.4	253.0	248.9	244.8	240.7	236.7
57.5°	243.7	232.1	220.3	212.6	209.2	205.9	202.4	199.0
60°	214.0	203.0	192.1	184.9	181.5	178.1	174.7	171.3
62.5°	188.0	177.6	167.2	161.0	158.9	156.9	154.9	152.8
65°	152.9	145.6	138.4	134.4	133.7	133.1	132.4	131.9
67.5°	123.4	120.1	116.8	114.7	114.0	113.4	112.7	112.0
70°	107.4	105.2	103.0	101.6	100.7	99.8	99.0	98.1
72.5°	93.4	91.6	89.8	88.7	88.1	87.7	87.1	86.6
75°	74.0	72.5	71.0	70.1	69.9	69.7	69.5	69.3
77.5°	56.0	55.1	54.3	53.7	53.3	53.1	52.7	52.3
80°	44.5	43.6	42.8	42.3	42.3	42.3	42.3	42.3
82.5°	33.6	33.1	32.6	32.3	32.3	32.3	32.3	32.3
85°	18.3	18.3	18.3	18.3	18.3	18.3	18.3	18.3
87.5°	15.6	15.2	14.9	14.8	14.9	14.9	15.0	15.1
90°	48.4	47.9	47.2	47.0	47.4	47.7	48.0	48.4
92.5°	45.4	45.5	45.7	45.8	45.8	45.9	46.0	46.0
95°	91.0	91.0	91.0	90.6	90.0	89.4	88.7	88.1
97.5°	152.9	152.9	152.9	152.9	152.8	152.7	152.7	152.6
100°	196.0	196.0	196.0	196.0	195.6	195.3	195.0	194.6
102.5°	243.2	243.5	243.7	243.6	243.4	243.1	242.7	242.4
105°	313.9	314.5	315.1	315.5	315.5	315.5	315.5	315.5
107.5°	390.1	390.4	390.6	390.0	388.6	387.1	385.7	384.2
110°	442.0	442.0	442.0	441.4	440.5	439.5	438.6	437.6



TEST NUMBER: P331824-830

CATALOG NUMBER: S122RDIW-S675D1440U830-4F0-1E-UDD-F1

CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
112.5°	493.8	493.0	492.3	491.5	490.9	490.2	489.5	488.8
115°	573.4	573.1	572.8	572.1	571.2	570.2	569.3	568.4
117.5°	650.4	649.7	648.9	648.0	647.1	646.1	645.2	644.2
120°	701.9	701.9	701.9	701.4	700.5	699.6	698.6	697.7
122.5°	755.0	754.2	753.5	752.7	752.1	751.4	750.6	750.0
125°	833.6	832.6	831.7	831.1	830.8	830.5	830.2	829.8
127.5°	909.9	908.8	907.7	906.6	905.6	904.6	903.6	902.6
130°	962.1	961.5	960.8	959.9	958.7	957.4	956.1	954.9
132.5°	1013.0	1011.5	1010.1	1008.9	1008.0	1006.9	1005.9	1004.8
135°	1087.8	1087.5	1087.2	1086.6	1085.6	1084.7	1083.7	1082.8
137.5°	1159.5	1159.3	1159.0	1158.3	1157.1	1155.7	1154.5	1153.2
140°	1207.8	1207.8	1207.8	1207.2	1205.9	1204.7	1203.3	1202.1
142.5°	1251.5	1251.8	1252.0	1251.5	1250.3	1249.0	1247.7	1246.4
145°	1317.9	1318.1	1318.4	1318.0	1316.7	1315.5	1314.2	1313.0
147.5°	1376.0	1376.7	1377.4	1377.1	1375.9	1374.7	1373.6	1372.3
150°	1412.9	1413.8	1414.8	1414.8	1413.8	1412.9	1411.9	1411.0
152.5°	1449.7	1451.0	1452.2	1452.2	1451.0	1449.7	1448.6	1447.4
155°	1496.6	1498.2	1499.7	1500.1	1499.1	1498.2	1497.2	1496.3
157.5°	1539.7	1541.9	1544.1	1544.4	1542.8	1541.3	1539.8	1538.3
160°	1565.4	1567.3	1569.1	1569.5	1568.2	1567.0	1565.8	1564.4
162.5°	1588.7	1590.8	1592.9	1593.3	1591.8	1590.3	1588.7	1587.1
165°	1618.6	1620.8	1623.1	1623.3	1621.7	1620.2	1618.6	1617.0
167.5°	1643.3	1645.6	1647.8	1648.0	1646.4	1644.7	1643.1	1641.4
170°	1657.0	1659.2	1661.4	1661.5	1659.6	1657.7	1655.9	1654.0
172.5°	1667.2	1669.4	1671.6	1671.8	1669.9	1668.0	1666.1	1664.2
175°	1678.3	1680.5	1682.7	1682.9	1680.9	1679.0	1677.2	1675.3
177.5°	1683.5	1685.0	1686.5	1686.5	1685.0	1683.5	1681.9	1680.4
180°	1683.9	1683.9	1683.9	1683.9	1683.9	1683.9	1683.9	1683.9

(END OF REPORT)