

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: P331819-830

Luminaire Tested: **S122RDIW-S675D1240U830-4F0-1E-UDD-F**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P331819-830
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: S122RDIW-S675D1240U830-4F0-1E-UDD-F
Description: DEFINE 2 DIRECT-INDIRECT WALL MOUNT LED LUMINAIRE
DOWNLIGHT 675 LUMENS PER FOOT, FLUSH SATIN WHITE DIFFUSER, REGRESSED
HOUSING
UPLIGHT 1240 LUMENS PER FOOT, NO LENS
Light Source: -
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 6860.2 lumens
Efficiency: N/A
Efficacy: 111.7 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

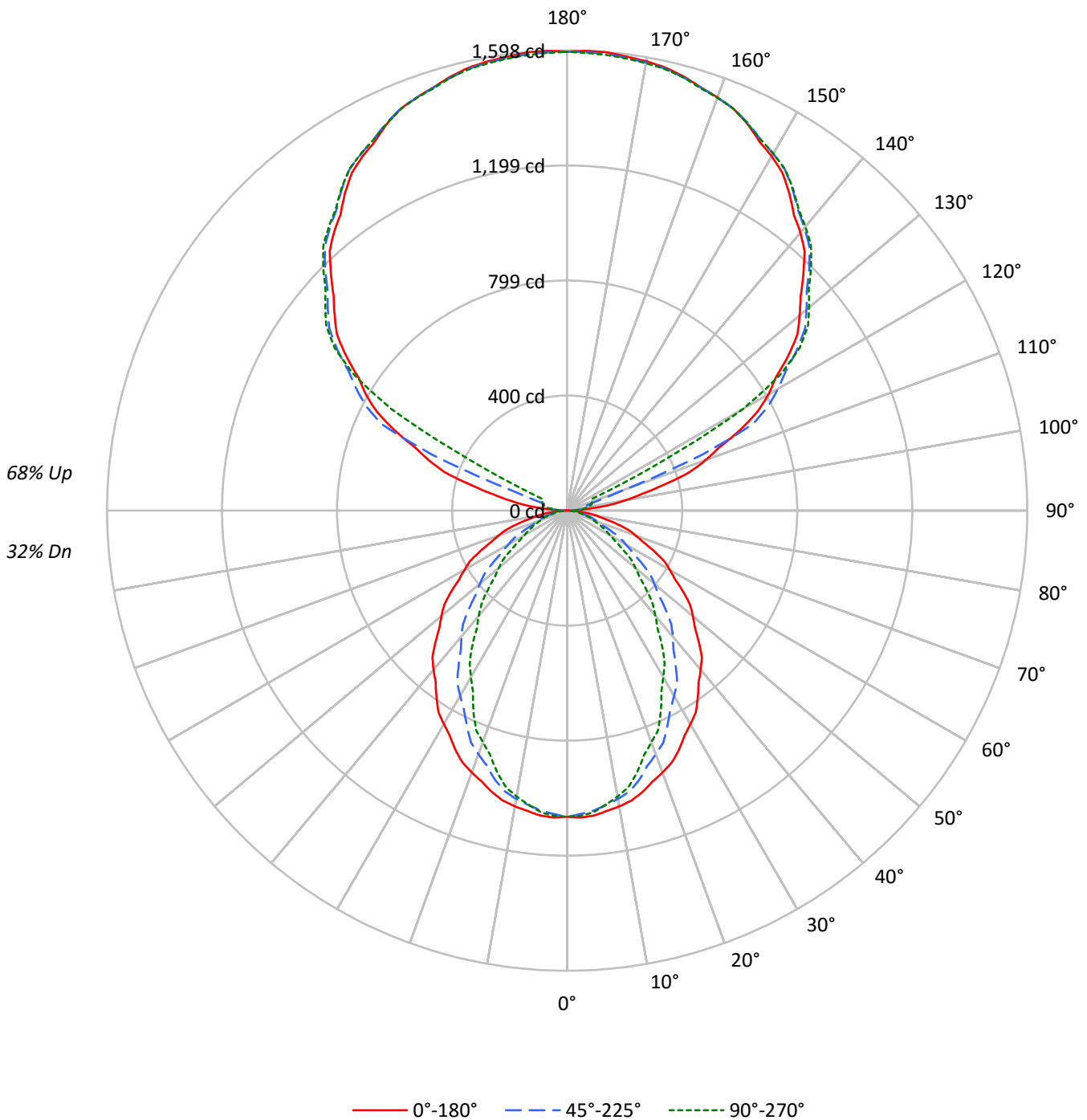
Input Watts (W): 61.4
Input Voltage (V): 120
Input Current (A_{in}): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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
RW	70	50	30	10	70	50	30	10	50	30	10	50	30	10	50	30	10
RCR																	
0	103	103	103	103	93	93	93	93	73	73	73	56	56	56	40	40	40
1	94	90	86	83	84	81	78	75	65	62	61	49	48	47	35	35	34
2	86	79	73	68	77	71	66	62	57	54	51	44	41	40	31	30	29
3	78	70	63	57	70	63	57	52	50	46	43	39	36	34	28	26	25
4	72	62	54	48	64	56	49	44	45	40	37	35	32	29	25	23	22
5	66	55	47	42	59	50	43	38	40	35	32	31	28	25	23	21	19
6	61	49	42	36	55	45	38	33	36	31	28	28	25	22	21	19	17
7	56	44	37	32	50	40	34	29	33	28	24	26	22	20	19	17	15
8	52	40	33	28	47	37	30	26	30	25	22	24	20	18	18	15	14
9	48	37	30	25	44	34	27	23	27	23	19	22	18	16	16	14	12
10	45	34	27	22	41	31	25	21	25	21	17	20	17	14	15	13	11

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	1.5
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°	30.3	0.4
90°-100°	53.1	0.8
100°-110°	194.9	2.8
110°-120°	521.0	7.6
120°-130°	860.1	12.5
130°-140°	914.7	13.3
140°-150°	850.1	12.4
150°-160°	683.5	10.0
160°-170°	440.5	6.4
170°-180°	151.6	2.2
0°-30°	756.5	11.0
0°-40°	1174.9	17.1
0°-60°	1861.8	27.1
0°-90°	2190.7	31.9
90°-120°	769.1	11.2
90°-150°	3394.0	49.5
90°-180°	4670.0	68.1
0°-180°	6860.2	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	14	23	29	31	5
95°	75	39	45	50	50	92
105°	350	366	70	83	88	375
115°	663	683	711	203	94	653
125°	937	953	974	982	986	835
135°	1160	1178	1189	1200	1198	896
145°	1346	1346	1364	1371	1366	841
155°	1482	1472	1485	1491	1483	682
165°	1561	1555	1558	1565	1558	441
175°	1597	1589	1591	1598	1588	152
180°	1593	1593	1593	1593	1593	



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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°	12.5	11.8	10.9	10.2	9.3	9.1	9.5	10.0	10.4	10.7	10.8
90°	1.1	4.0	6.8	9.6	12.4	14.9	16.9	18.9	21.0	23.1	24.3
92.5°	23.3	23.0	22.8	22.5	22.2	22.6	23.7	24.7	25.7	26.8	27.4
95°	74.9	66.4	58.1	49.6	41.1	37.8	39.6	41.4	43.2	45.0	46.3
97.5°	148.7	124.9	101.0	77.3	53.4	43.5	47.7	51.8	56.1	60.2	61.2
100°	204.1	169.0	133.8	98.8	63.7	48.3	52.7	57.0	61.4	65.7	67.8
102.5°	264.9	257.5	250.1	242.7	235.3	213.3	176.8	140.4	104.0	67.6	70.2
105°	350.5	358.2	365.9	373.5	381.3	350.2	280.2	210.2	140.3	70.3	73.1
107.5°	448.1	454.2	460.4	466.7	472.9	434.0	350.2	266.3	182.4	98.5	95.6
110°	510.8	516.1	521.5	526.9	532.3	497.9	424.0	349.9	275.8	201.8	176.2



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CANDELA DISTRIBUTION (continued):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
112.5°	569.8	574.6	579.3	584.1	588.9	582.1	563.8	545.5	527.3	508.9	415.5
115°	663.0	667.3	671.7	676.0	680.4	685.8	692.2	698.6	705.0	711.4	592.8
117.5°	746.2	751.1	755.9	760.8	765.7	770.3	774.7	779.1	783.5	788.0	759.2
120°	807.1	811.0	814.7	818.6	822.5	826.7	831.3	835.9	840.6	845.1	848.2
122.5°	858.8	862.8	866.9	870.9	875.0	879.5	884.5	889.5	894.6	899.6	901.4
125°	937.4	940.7	944.1	947.3	950.6	954.8	959.7	964.5	969.4	974.3	976.1
127.5°	1008.6	1012.3	1016.0	1019.7	1023.4	1027.1	1030.7	1034.3	1037.9	1041.6	1044.2
130°	1053.9	1057.9	1062.1	1066.1	1070.3	1073.7	1076.5	1079.3	1082.1	1085.0	1087.8
132.5°	1099.9	1103.4	1106.9	1110.4	1113.9	1117.0	1119.8	1122.7	1125.5	1128.3	1130.7
135°	1159.9	1163.9	1168.1	1172.1	1176.3	1179.5	1181.8	1184.1	1186.4	1188.7	1191.3
137.5°	1220.5	1223.4	1226.2	1229.2	1232.0	1234.7	1237.4	1240.0	1242.6	1245.2	1247.7
140°	1260.2	1262.3	1264.3	1266.3	1268.4	1270.8	1273.7	1276.5	1279.3	1282.1	1284.4
142.5°	1293.5	1295.2	1297.1	1298.9	1300.8	1303.3	1306.6	1309.8	1313.0	1316.3	1318.3
145°	1345.5	1345.3	1345.0	1344.7	1344.5	1346.5	1350.9	1355.3	1359.6	1364.0	1365.7
147.5°	1390.9	1390.0	1389.0	1388.0	1387.0	1388.7	1393.0	1397.3	1401.7	1405.9	1407.3
150°	1420.5	1418.7	1416.9	1415.0	1413.2	1414.5	1418.5	1422.7	1426.7	1430.9	1432.4
152.5°	1445.4	1443.4	1441.3	1439.4	1437.4	1438.3	1442.2	1446.1	1450.0	1453.9	1455.5
155°	1481.6	1479.2	1477.0	1474.6	1472.3	1472.7	1475.8	1478.8	1482.0	1485.1	1486.6
157.5°	1510.0	1508.0	1506.0	1504.1	1502.1	1502.2	1504.4	1506.6	1508.7	1510.9	1512.6
160°	1526.5	1525.0	1523.4	1521.9	1520.4	1520.4	1521.9	1523.4	1525.0	1526.5	1528.0
162.5°	1541.3	1539.7	1538.2	1536.7	1535.1	1535.0	1536.3	1537.7	1539.1	1540.4	1542.1
165°	1561.1	1559.6	1558.0	1556.5	1555.0	1554.6	1555.4	1556.1	1556.9	1557.6	1559.4
167.5°	1575.9	1574.3	1572.8	1571.3	1569.7	1569.3	1570.1	1570.7	1571.5	1572.2	1574.0
170°	1584.2	1582.6	1581.1	1579.6	1578.0	1577.5	1578.0	1578.6	1579.0	1579.6	1581.4
172.5°	1589.7	1588.2	1586.7	1585.1	1583.6	1583.1	1583.6	1584.0	1584.6	1585.1	1586.9
175°	1596.9	1595.1	1593.3	1591.5	1589.7	1589.0	1589.6	1590.1	1590.6	1591.1	1592.9
177.5°	1598.0	1596.6	1595.2	1593.7	1592.2	1591.7	1591.9	1592.0	1592.2	1592.5	1593.9
180°	1593.4	1593.4	1593.4	1593.4	1593.4	1593.4	1593.4	1593.4	1593.4	1593.4	1593.4



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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°	10.9	11.0	11.1	11.2	11.3	11.4	11.5	11.6
90°	25.6	26.9	28.2	29.1	29.6	30.1	30.6	31.1
92.5°	28.1	28.7	29.4	29.9	30.2	30.5	30.8	31.1
95°	47.5	48.8	50.0	50.6	50.3	50.0	49.9	49.6
97.5°	62.2	63.2	64.3	64.9	65.2	65.6	65.9	66.2
100°	69.8	71.8	73.9	75.2	75.7	76.3	76.7	77.3
102.5°	72.9	75.6	78.2	79.9	80.6	81.3	82.1	82.8
105°	76.0	78.8	81.6	83.5	84.5	85.6	86.6	87.7
107.5°	92.7	89.8	87.0	86.1	87.1	88.1	89.2	90.2
110°	150.5	124.9	99.2	87.0	88.0	89.1	90.1	91.0



TEST NUMBER: P331819-830

CATALOG NUMBER: S122RDIW-S675D1240U830-4F0-1E-UDD-F

CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
112.5°	322.0	228.6	135.1	88.7	89.5	90.4	91.1	92.0
115°	474.1	355.5	236.9	168.3	149.9	131.5	113.0	94.5
117.5°	730.6	701.8	673.2	628.5	567.9	507.3	446.7	386.0
120°	851.3	854.3	857.4	841.7	807.1	772.5	737.9	703.3
122.5°	903.2	905.1	906.9	904.5	897.8	891.1	884.4	877.6
125°	977.9	979.7	981.5	982.7	983.4	984.3	985.1	985.8
127.5°	1046.8	1049.4	1052.1	1053.5	1053.6	1053.8	1053.9	1054.0
130°	1090.6	1093.4	1096.2	1097.5	1097.2	1097.0	1096.7	1096.5
132.5°	1133.1	1135.5	1137.9	1139.0	1138.8	1138.5	1138.2	1138.0
135°	1193.8	1196.4	1199.0	1200.0	1199.5	1199.0	1198.4	1198.0
137.5°	1250.2	1252.7	1255.3	1256.0	1255.2	1254.3	1253.5	1252.5
140°	1286.8	1289.0	1291.4	1291.8	1290.5	1289.3	1288.0	1286.8
142.5°	1320.4	1322.6	1324.6	1325.0	1323.8	1322.5	1321.2	1319.9
145°	1367.5	1369.3	1371.1	1371.4	1370.1	1368.9	1367.5	1366.3
147.5°	1408.6	1409.9	1411.3	1411.4	1410.3	1409.2	1408.2	1407.1
150°	1433.9	1435.5	1437.0	1437.1	1435.9	1434.5	1433.2	1432.0
152.5°	1457.0	1458.5	1460.1	1460.0	1458.3	1456.6	1454.9	1453.2
155°	1488.1	1489.7	1491.2	1490.9	1488.8	1486.9	1484.8	1482.7
157.5°	1514.4	1516.1	1517.9	1517.7	1515.7	1513.7	1511.7	1509.7
160°	1529.7	1531.2	1532.7	1532.6	1530.8	1529.0	1527.2	1525.4
162.5°	1543.9	1545.6	1547.4	1547.1	1544.9	1542.7	1540.5	1538.3
165°	1561.2	1563.0	1564.8	1564.8	1563.0	1561.2	1559.4	1557.6
167.5°	1575.7	1577.5	1579.3	1579.1	1576.8	1574.5	1572.2	1569.9
170°	1583.2	1585.0	1586.8	1586.5	1584.2	1581.9	1579.6	1577.3
172.5°	1588.7	1590.4	1592.2	1592.0	1589.7	1587.4	1585.1	1582.8
175°	1594.7	1596.5	1598.3	1597.9	1595.3	1592.8	1590.2	1587.6
177.5°	1595.3	1596.8	1598.3	1598.0	1596.2	1594.3	1592.5	1590.6
180°	1593.4	1593.4	1593.4	1593.4	1593.4	1593.4	1593.4	1593.4

(END OF REPORT)