

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: P331823-930

Luminaire Tested: **S122RDIW-S675D1440U930-4F0-1E-UDD-F**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P331823-930
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-S675D1440U930-4F0-1E-UDD-F
Description: DEFINE 2 DIRECT-INDIRECT WALL MOUNT LED LUMINAIRE
DOWNLIGHT 675 LUMENS PER FOOT, FLUSH SATIN WHITE DIFFUSER, REGRESSED
HOUSING
UPLIGHT 1440 LUMENS PER FOOT, NO LENS
Light Source: -
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 6591.7 lumens
Efficiency: N/A
Efficacy: 96.8 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

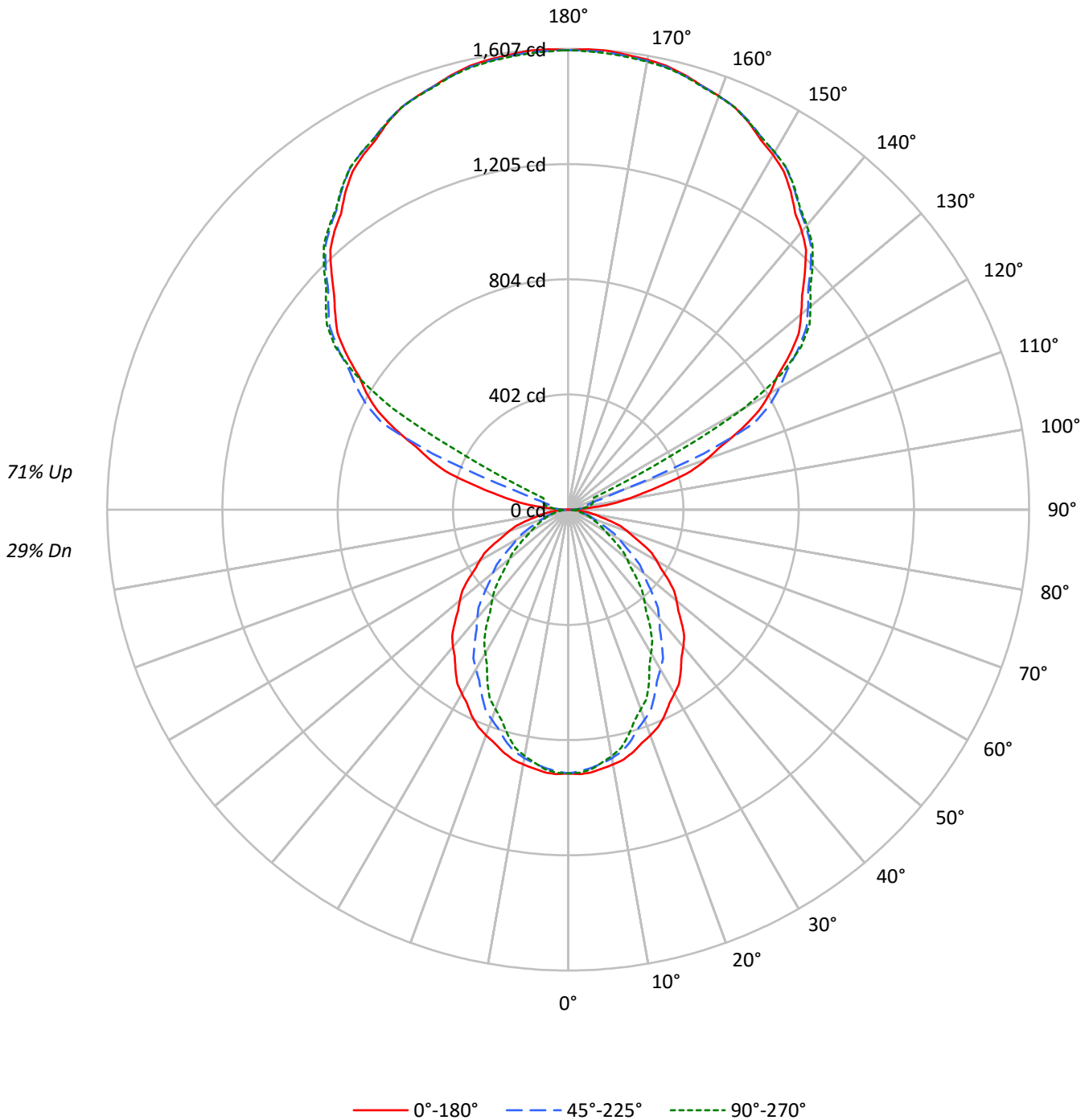
Input Watts (W): 68.1
Input Voltage (V): 120
Input Current (A_{in}): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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	50	30	10	0		
RCR																										
0	102	102	102	102	91	91	91	91	72	72	72	53	53	53	37	37	37	29								
1	93	89	86	82	83	80	77	74	63	61	59	47	46	45	33	32	31	25								
2	85	78	72	68	76	70	65	61	55	52	49	42	40	38	29	28	27	21								
3	78	69	62	57	69	62	56	51	49	45	42	37	34	32	26	24	23	18								
4	71	61	54	48	64	55	49	44	44	39	36	33	30	28	23	22	20	16								
5	65	54	47	41	58	49	43	38	39	34	31	30	27	24	21	19	18	14								
6	60	49	41	36	54	44	37	33	35	30	27	27	24	21	19	17	16	12								
7	56	44	36	31	50	40	33	29	32	27	24	25	21	19	18	16	14	11								
8	52	40	32	27	46	36	30	25	29	24	21	22	19	17	16	14	13	10								
9	48	36	29	24	43	33	27	22	27	22	19	21	17	15	15	13	11	9								
10	45	33	26	22	40	30	24	20	24	20	17	19	16	14	14	12	10	8								

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	14849	14849	14849
5°	14906	14663	14744
10°	14791	14423	14300
15°	14621	13996	13593
20°	14387	13385	12713
25°	14145	12691	11863
30°	13811	11979	10769
35°	13484	11203	9810
40°	13156	10404	8701
45°	12771	9501	7695
50°	12376	8593	6712
55°	11972	7614	5762
60°	11502	6584	4782
65°	10968	5532	4359
70°	10334	4556	4008
75°	9551	4155	3737
80°	8433	3710	3403
85°	6632	2927	2927



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	86.1	1.3
10°-20°	236.4	3.6
20°-30°	331.9	5.0
30°-40°	361.9	5.5
40°-50°	332.8	5.0
50°-60°	261.4	4.0
60°-70°	170.4	2.6
70°-80°	87.9	1.3
80°-90°	26.7	0.4
90°-100°	53.5	0.8
100°-110°	196.0	3.0
110°-120°	524.0	7.9
120°-130°	865.0	13.1
130°-140°	919.9	14.0
140°-150°	855.0	13.0
150°-160°	687.4	10.4
160°-170°	443.0	6.7
170°-180°	152.5	2.3
0°-30°	654.4	9.9
0°-40°	1016.3	15.4
0°-60°	1610.5	24.4
0°-90°	1895.5	28.8
90°-120°	773.5	11.7
90°-150°	3413.3	51.8
90°-180°	4696.0	71.2
0°-180°	6591.7	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	920	920	920	920	920	
5°	920	915	905	912	910	87
15°	875	864	837	822	813	246
25°	794	766	712	680	666	365
35°	684	640	568	518	498	428
45°	559	502	416	359	337	432
55°	425	359	270	222	205	380
65°	287	219	145	118	114	285
75°	153	96	67	61	60	162
85°	36	19	16	16	16	42
90°	1	14	23	29	31	5
95°	75	40	45	51	50	92
105°	352	368	71	83	88	377
115°	667	687	715	204	95	656
125°	943	958	980	988	991	840
135°	1166	1185	1196	1206	1205	901
145°	1353	1353	1372	1379	1374	846
155°	1490	1481	1494	1500	1491	686
165°	1570	1564	1566	1574	1566	443
175°	1606	1598	1600	1607	1597	153
180°	1602	1602	1602	1602	1602	



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CANDELA DISTRIBUTION (FULL):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
0°	919.7	919.7	919.7	919.7	919.7	919.7	919.7	919.7	919.7	919.7	919.7
2.5°	923.0	922.3	921.5	920.8	920.1	918.8	917.2	915.6	914.0	912.4	913.9
5°	919.7	918.8	917.9	916.9	916.0	914.4	911.9	909.5	907.1	904.7	906.4
7.5°	910.2	909.1	907.9	906.8	905.6	903.6	900.8	898.1	895.2	892.4	892.8
10°	902.2	900.9	899.6	898.3	897.0	894.5	890.8	887.1	883.5	879.7	879.2
12.5°	892.2	890.6	889.0	887.5	885.8	882.7	878.0	873.3	868.5	863.7	862.7
15°	874.7	872.7	870.7	868.6	866.6	862.4	856.1	849.9	843.6	837.3	833.8
17.5°	853.3	850.2	847.1	843.9	840.8	835.3	827.2	819.1	811.1	803.0	798.8
20°	837.3	833.6	829.9	826.2	822.5	816.0	806.7	797.5	788.3	779.0	774.4
22.5°	819.9	815.9	811.7	807.6	803.4	796.1	785.7	775.3	764.8	754.4	748.4
25°	794.0	788.1	782.2	776.2	770.4	761.2	749.1	736.9	724.6	712.4	704.8
27.5°	762.7	756.3	749.8	743.4	736.9	726.8	713.1	699.4	685.6	671.8	663.0
30°	740.8	733.7	726.7	719.7	712.7	701.7	686.9	672.1	657.3	642.5	633.1
32.5°	719.4	711.2	703.0	694.8	686.6	674.9	659.8	644.7	629.7	614.6	603.8
35°	684.1	674.7	665.3	655.8	646.5	633.6	617.3	601.0	584.7	568.4	556.8
37.5°	648.9	638.5	628.1	617.8	607.4	593.5	576.3	558.9	541.5	524.2	511.4
40°	624.2	613.1	602.0	590.9	579.8	565.3	547.4	529.5	511.5	493.6	480.5
42.5°	598.9	587.3	575.5	563.9	552.2	537.0	518.5	500.0	481.4	462.9	449.3
45°	559.3	546.9	534.5	522.1	509.7	493.8	474.4	455.0	435.5	416.1	403.0
47.5°	520.7	507.5	494.4	481.3	468.1	451.6	431.5	411.5	391.4	371.4	358.3
50°	492.7	479.6	466.4	453.3	440.2	423.5	403.1	382.8	362.4	342.1	329.3
52.5°	465.5	451.7	438.0	424.3	410.5	393.7	373.8	353.9	334.0	314.1	301.8
55°	425.3	410.9	396.5	382.0	367.6	350.4	330.4	310.5	290.5	270.5	259.4
57.5°	384.2	369.4	354.6	339.8	325.0	308.0	288.8	269.6	250.4	231.2	221.0
60°	356.2	341.4	326.6	311.9	297.0	280.1	261.1	242.0	223.0	203.9	194.4
62.5°	328.9	314.1	299.3	284.5	269.7	253.2	235.1	217.0	198.8	180.6	171.6
65°	287.1	272.1	257.1	242.2	227.2	211.4	194.8	178.1	161.4	144.8	138.5
67.5°	246.9	232.0	217.1	202.3	187.4	172.4	157.4	142.5	127.5	112.5	109.7
70°	218.9	204.5	190.0	175.6	161.2	147.6	134.9	122.1	109.3	96.5	94.7
72.5°	192.2	178.4	164.6	150.7	136.9	124.9	114.6	104.4	94.2	83.9	82.3
75°	153.1	140.2	127.3	114.3	101.3	91.7	85.4	79.2	72.9	66.6	65.3
77.5°	114.7	103.3	92.0	80.6	69.3	62.0	59.0	56.0	53.0	50.0	49.2
80°	90.7	81.3	71.8	62.5	53.0	47.4	45.5	43.6	41.8	39.9	39.2
82.5°	68.7	61.4	54.1	46.6	39.3	35.0	33.8	32.4	31.2	30.0	29.5
85°	35.8	31.9	28.0	24.1	20.2	18.0	17.4	17.0	16.4	15.8	15.8
87.5°	10.9	10.3	9.6	9.0	8.4	8.3	8.7	9.1	9.5	9.9	10.1
90°	1.1	4.0	6.8	9.7	12.5	14.9	17.0	19.1	21.1	23.2	24.5
92.5°	23.4	23.2	22.9	22.7	22.4	22.7	23.8	24.9	25.8	26.9	27.6
95°	75.3	66.9	58.4	49.9	41.3	38.0	39.8	41.6	43.5	45.2	46.5
97.5°	149.6	125.6	101.7	77.7	53.7	43.9	48.0	52.2	56.3	60.5	61.6
100°	205.2	169.9	134.6	99.3	64.0	48.6	52.9	57.3	61.7	66.1	68.2
102.5°	266.4	259.0	251.5	244.0	236.6	214.5	177.9	141.2	104.6	67.9	70.6
105°	352.5	360.2	367.9	375.7	383.4	352.1	281.8	211.4	141.0	70.8	73.5
107.5°	450.6	456.8	463.1	469.3	475.6	436.5	352.1	267.7	183.4	99.1	96.1
110°	513.7	519.1	524.5	529.9	535.3	500.8	426.3	351.9	277.4	202.9	177.2



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CANDELA DISTRIBUTION (continued):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
112.5°	573.1	577.8	582.6	587.4	592.2	585.4	567.0	548.6	530.2	511.8	417.8
115°	666.8	671.2	675.5	679.9	684.3	689.7	696.1	702.5	709.0	715.4	596.1
117.5°	750.5	755.4	760.3	765.2	770.1	774.7	779.1	783.6	788.0	792.5	763.6
120°	811.7	815.5	819.4	823.3	827.1	831.4	836.0	840.7	845.3	849.9	853.0
122.5°	863.6	867.7	871.8	875.9	880.0	884.5	889.5	894.5	899.6	904.7	906.5
125°	942.7	946.1	949.4	952.8	956.1	960.3	965.2	970.0	974.9	979.8	981.6
127.5°	1014.4	1018.1	1021.8	1025.5	1029.2	1032.9	1036.6	1040.2	1043.9	1047.6	1050.2
130°	1059.8	1064.0	1068.0	1072.2	1076.4	1079.8	1082.6	1085.5	1088.3	1091.1	1094.0
132.5°	1106.2	1109.7	1113.2	1116.7	1120.2	1123.4	1126.3	1129.0	1131.9	1134.7	1137.2
135°	1166.5	1170.6	1174.8	1178.8	1183.0	1186.2	1188.5	1190.8	1193.2	1195.5	1198.1
137.5°	1227.5	1230.4	1233.3	1236.2	1239.0	1241.8	1244.4	1247.1	1249.7	1252.3	1254.8
140°	1267.4	1269.4	1271.5	1273.6	1275.6	1278.1	1280.9	1283.8	1286.6	1289.4	1291.8
142.5°	1300.8	1302.6	1304.5	1306.4	1308.2	1310.8	1314.0	1317.3	1320.5	1323.7	1325.8
145°	1353.2	1352.9	1352.7	1352.4	1352.2	1354.2	1358.6	1363.0	1367.3	1371.7	1373.5
147.5°	1398.9	1397.9	1396.9	1396.0	1395.0	1396.6	1400.9	1405.3	1409.7	1414.0	1415.3
150°	1428.6	1426.8	1425.0	1423.2	1421.3	1422.5	1426.6	1430.8	1434.8	1439.0	1440.6
152.5°	1453.6	1451.6	1449.6	1447.6	1445.6	1446.5	1450.4	1454.3	1458.2	1462.2	1463.7
155°	1490.0	1487.7	1485.4	1483.0	1480.7	1481.2	1484.3	1487.4	1490.4	1493.5	1495.0
157.5°	1518.6	1516.6	1514.7	1512.7	1510.7	1510.8	1513.0	1515.2	1517.3	1519.5	1521.3
160°	1535.2	1533.7	1532.2	1530.6	1529.1	1529.1	1530.6	1532.2	1533.7	1535.2	1536.8
162.5°	1550.0	1548.6	1547.0	1545.5	1543.9	1543.8	1545.2	1546.5	1547.8	1549.2	1550.9
165°	1570.0	1568.5	1566.9	1565.4	1563.8	1563.5	1564.2	1565.0	1565.8	1566.5	1568.4
167.5°	1584.9	1583.3	1581.8	1580.2	1578.7	1578.3	1579.0	1579.7	1580.5	1581.2	1583.0
170°	1593.3	1591.7	1590.2	1588.6	1587.1	1586.5	1587.1	1587.6	1588.0	1588.6	1590.4
172.5°	1598.8	1597.3	1595.7	1594.2	1592.6	1592.1	1592.6	1593.1	1593.7	1594.2	1595.9
175°	1606.0	1604.2	1602.4	1600.6	1598.8	1598.1	1598.6	1599.1	1599.7	1600.2	1602.0
177.5°	1607.1	1605.7	1604.3	1602.8	1601.3	1600.8	1600.9	1601.2	1601.3	1601.6	1603.0
180°	1602.5	1602.5	1602.5	1602.5	1602.5	1602.5	1602.5	1602.5	1602.5	1602.5	1602.5



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CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
0°	919.7	919.7	919.7	919.7	919.7	919.7	919.7	919.7
2.5°	915.3	916.8	918.3	918.8	918.6	918.3	918.0	917.7
5°	908.0	909.7	911.3	911.9	911.3	910.8	910.3	909.7
7.5°	893.3	893.8	894.3	894.1	893.1	892.2	891.2	890.2
10°	878.6	878.1	877.5	876.7	875.5	874.5	873.3	872.2
12.5°	861.8	860.8	859.7	858.3	856.5	854.7	852.8	850.9
15°	830.3	826.7	823.2	820.5	818.7	816.8	815.0	813.2
17.5°	794.7	790.4	786.3	782.6	779.4	776.2	773.1	769.9
20°	769.8	765.2	760.5	756.2	752.1	748.0	744.0	739.9
22.5°	742.5	736.5	730.6	726.1	723.0	720.0	717.0	714.0
25°	697.2	689.7	682.1	676.9	674.2	671.4	668.6	665.9
27.5°	654.1	645.3	636.5	629.8	625.4	621.0	616.6	612.2
30°	623.7	614.2	604.8	597.6	592.6	587.6	582.6	577.6
32.5°	593.0	582.3	571.5	563.8	559.1	554.4	549.7	545.0
35°	545.2	533.5	521.9	514.0	509.9	505.8	501.8	497.7
37.5°	498.5	485.7	472.9	464.1	459.4	454.8	450.1	445.5
40°	467.2	454.1	441.0	432.0	427.2	422.4	417.6	412.8
42.5°	435.8	422.2	408.6	399.5	394.8	390.2	385.6	380.8
45°	389.9	376.7	363.6	354.8	350.4	345.9	341.5	337.0
47.5°	345.3	332.2	319.1	310.6	306.6	302.6	298.5	294.5
50°	316.6	303.8	291.1	282.7	278.8	274.9	271.1	267.2
52.5°	289.5	277.1	264.8	256.9	253.3	249.7	246.1	242.6
55°	248.3	237.2	226.1	218.8	215.3	211.7	208.2	204.7
57.5°	210.8	200.7	190.5	183.9	181.0	178.1	175.0	172.1
60°	185.1	175.6	166.2	160.0	157.0	154.1	151.1	148.1
62.5°	162.7	153.6	144.6	139.3	137.5	135.7	134.0	132.2
65°	132.2	126.0	119.7	116.3	115.7	115.1	114.5	114.1
67.5°	106.7	103.9	101.0	99.2	98.7	98.1	97.5	96.9
70°	92.9	91.0	89.1	87.9	87.1	86.3	85.6	84.9
72.5°	80.8	79.2	77.7	76.7	76.2	75.8	75.3	74.9
75°	64.0	62.7	61.4	60.7	60.5	60.3	60.1	59.9
77.5°	48.4	47.7	47.0	46.5	46.1	45.9	45.6	45.2
80°	38.5	37.7	37.0	36.6	36.6	36.6	36.6	36.6
82.5°	29.1	28.6	28.2	28.0	28.0	28.0	28.0	28.0
85°	15.8	15.8	15.8	15.8	15.8	15.8	15.8	15.8
87.5°	10.2	10.3	10.4	10.5	10.6	10.7	10.8	10.9
90°	25.8	27.1	28.4	29.3	29.8	30.2	30.8	31.3
92.5°	28.2	28.9	29.6	30.1	30.4	30.7	31.0	31.3
95°	47.8	49.1	50.4	50.9	50.6	50.4	50.1	49.9
97.5°	62.6	63.6	64.7	65.3	65.6	66.0	66.3	66.5
100°	70.2	72.3	74.4	75.7	76.1	76.6	77.2	77.7
102.5°	73.3	76.0	78.7	80.4	81.1	81.8	82.5	83.2
105°	76.4	79.2	82.1	84.0	85.0	86.1	87.1	88.1
107.5°	93.3	90.3	87.5	86.6	87.6	88.6	89.7	90.7
110°	151.4	125.6	99.9	87.5	88.5	89.5	90.6	91.6



TEST NUMBER: P331823-930

CATALOG NUMBER: S122RDIW-S675D1440U930-4F0-1E-UDD-F

CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
112.5°	323.8	229.8	135.8	89.2	90.1	90.9	91.7	92.5
115°	476.9	357.5	238.2	169.3	150.7	132.2	113.7	95.1
117.5°	734.7	705.9	677.0	632.1	571.1	510.1	449.1	388.2
120°	856.1	859.2	862.3	846.4	811.7	776.9	742.1	707.4
122.5°	908.4	910.3	912.1	909.6	902.9	896.2	889.4	882.6
125°	983.4	985.2	987.0	988.3	989.1	989.9	990.7	991.4
127.5°	1052.8	1055.4	1058.0	1059.5	1059.6	1059.7	1059.9	1060.1
130°	1096.8	1099.7	1102.4	1103.8	1103.5	1103.3	1103.0	1102.7
132.5°	1139.5	1142.0	1144.4	1145.5	1145.3	1145.0	1144.8	1144.4
135°	1200.6	1203.2	1205.8	1206.8	1206.3	1205.8	1205.3	1204.8
137.5°	1257.4	1259.9	1262.4	1263.2	1262.3	1261.5	1260.6	1259.7
140°	1294.0	1296.4	1298.7	1299.2	1298.0	1296.7	1295.3	1294.0
142.5°	1328.0	1330.1	1332.2	1332.6	1331.3	1330.0	1328.8	1327.5
145°	1375.3	1377.1	1379.0	1379.2	1377.9	1376.6	1375.3	1374.1
147.5°	1416.7	1418.0	1419.4	1419.4	1418.4	1417.3	1416.2	1415.1
150°	1442.1	1443.7	1445.2	1445.3	1444.1	1442.8	1441.4	1440.1
152.5°	1465.3	1466.8	1468.4	1468.3	1466.6	1464.9	1463.2	1461.5
155°	1496.6	1498.1	1499.7	1499.4	1497.4	1495.3	1493.2	1491.2
157.5°	1523.0	1524.7	1526.5	1526.3	1524.4	1522.3	1520.3	1518.3
160°	1538.3	1539.9	1541.4	1541.3	1539.5	1537.7	1535.9	1534.1
162.5°	1552.7	1554.4	1556.2	1555.9	1553.7	1551.5	1549.3	1547.1
165°	1570.2	1572.0	1573.8	1573.8	1572.0	1570.2	1568.4	1566.5
167.5°	1584.8	1586.6	1588.4	1588.1	1585.8	1583.5	1581.2	1578.8
170°	1592.2	1594.0	1595.8	1595.5	1593.3	1590.9	1588.6	1586.2
172.5°	1597.7	1599.5	1601.3	1601.1	1598.8	1596.4	1594.2	1591.8
175°	1603.8	1605.6	1607.4	1607.0	1604.4	1601.8	1599.3	1596.7
177.5°	1604.4	1605.9	1607.4	1607.1	1605.2	1603.4	1601.6	1599.7
180°	1602.5	1602.5	1602.5	1602.5	1602.5	1602.5	1602.5	1602.5

(END OF REPORT)