

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: P331553-930

Luminaire Tested: **S122DIW-S675D1440U930-4F0-1E-UDD-F**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P331553-930
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: S122DIW-S675D1440U930-4F0-1E-UDD-F
Description: DEFINE 2 DIRECT-INDIRECT WALL MOUNT LED LUMINAIRE
DOWNLIGHT 675 LUMENS PER FOOT, FLUSH SATIN WHITE DIFFUSER
UPLIGHT 1440 LUMENS PER FOOT, NO LENS
Light Source: -
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 6902.3 lumens
Efficiency: N/A
Efficacy: 101.4 lumens/watt
Spacing Criteria (0/90/45): 1.2 / 1.16 / 1.3
Luminous Opening: Rectangular (W 0.17' x L: 4' x H: 0')
CIE Type: Semi-Indirect

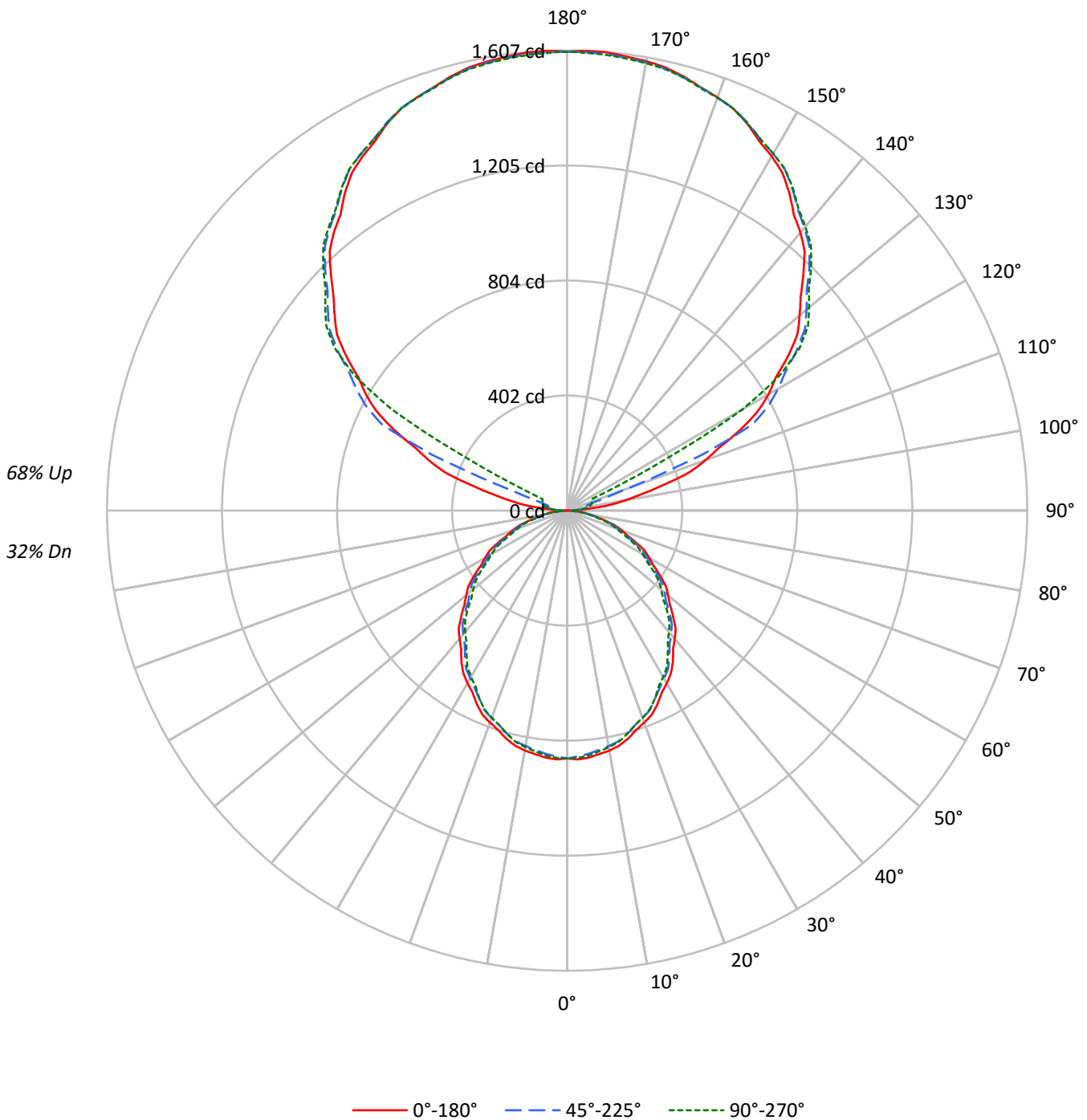
Input Watts (W): 68.1
Input Voltage (V): 120
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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	93	93	93	93	73	73	73	56	56	56	40	40	40	32				
1	94	90	86	82	84	81	78	75	64	62	60	49	48	46	35	34	33	27				
2	85	78	72	67	77	70	65	61	56	53	50	43	41	39	31	29	28	23				
3	78	69	62	56	70	62	56	51	49	45	42	38	35	33	27	25	24	19				
4	71	61	53	47	64	55	48	43	44	39	35	34	31	28	24	22	21	16				
5	65	54	46	40	58	49	42	37	39	34	30	30	27	24	22	20	18	14				
6	60	48	40	35	54	44	37	32	35	30	26	27	24	21	20	18	16	13				
7	55	43	36	30	50	39	33	28	32	27	23	25	21	19	18	16	14	11				
8	51	39	32	27	46	36	29	25	29	24	20	23	19	16	17	14	12	10				
9	48	36	29	24	43	33	26	22	26	22	18	21	17	15	15	13	11	9				
10	44	33	26	21	40	30	24	19	24	20	16	19	16	13	14	12	10	8				

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	13976	13976	13976
5°	14029	13827	13908
10°	13946	13686	13754
15°	13772	13508	13494
20°	13527	13242	13228
25°	13286	12916	12916
30°	12972	12616	12506
35°	12682	12254	12073
40°	12313	11894	11666
45°	11953	11536	11250
50°	11560	11163	10766
55°	11153	10731	10331
60°	10698	10214	9836
65°	10208	9700	9253
70°	9588	9073	8644
75°	8721	8359	8153
80°	7736	7504	7122
85°	6336	6002	5391



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	81.4	1.2
10°-20°	229.0	3.3
20°-30°	336.6	4.9
30°-40°	391.0	5.7
40°-50°	390.6	5.7
50°-60°	340.6	4.9
60°-70°	251.9	3.6
70°-80°	142.7	2.1
80°-90°	42.3	0.6
90°-100°	53.5	0.8
100°-110°	196.0	2.8
110°-120°	524.0	7.6
120°-130°	865.0	12.5
130°-140°	919.9	13.3
140°-150°	855.0	12.4
150°-160°	687.4	10.0
160°-170°	443.0	6.4
170°-180°	152.5	2.2
0°-30°	647.0	9.4
0°-40°	1038.1	15.0
0°-60°	1769.3	25.6
0°-90°	2206.2	32.0
90°-120°	773.5	11.2
90°-150°	3413.3	49.5
90°-180°	4696.0	68.0
0°-180°	6902.3	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	866	866	866	866	866	
5°	866	862	853	859	858	82
15°	824	819	808	811	807	232
25°	746	739	725	726	725	343
35°	643	635	622	617	612	402
45°	524	517	505	496	493	404
55°	396	391	381	372	367	354
65°	267	262	254	247	242	264
75°	140	138	134	129	131	149
85°	34	33	32	30	29	39
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°	865.6	865.6	865.6	865.6	865.6	865.6	865.6	865.6	865.6	865.6	865.6
2.5°	869.6	868.9	868.1	867.4	866.7	865.4	863.8	862.2	860.5	858.9	860.4
5°	865.6	864.9	864.1	863.4	862.7	861.3	859.2	857.2	855.2	853.1	854.6
7.5°	857.9	856.8	855.7	854.5	853.4	851.7	849.7	847.6	845.5	843.4	844.9
10°	850.6	849.3	848.0	846.7	845.5	843.7	841.5	839.3	837.0	834.8	836.3
12.5°	840.7	839.5	838.3	837.1	836.0	834.4	832.1	829.9	827.7	825.5	826.6
15°	823.9	822.9	821.7	820.7	819.5	817.7	815.4	812.9	810.6	808.1	808.9
17.5°	802.7	801.5	800.5	799.3	798.3	796.5	794.0	791.6	789.1	786.7	787.6
20°	787.3	786.3	785.1	784.0	782.9	781.1	778.4	775.9	773.3	770.7	771.3
22.5°	772.0	770.5	768.9	767.4	765.8	763.9	761.4	759.0	756.5	754.1	754.2
25°	745.8	744.3	742.8	741.3	739.8	737.5	734.3	731.2	728.1	725.0	725.3
27.5°	715.8	714.4	713.1	711.8	710.5	708.6	706.0	703.6	701.1	698.6	698.1
30°	695.8	694.3	692.8	691.4	689.9	687.8	685.0	682.2	679.5	676.7	676.1
32.5°	674.5	673.3	672.1	670.9	669.8	667.7	664.8	661.9	658.9	656.0	655.0
35°	643.4	641.6	639.7	637.8	635.9	633.6	630.6	627.6	624.7	621.7	620.6
37.5°	608.2	606.6	605.0	603.3	601.8	599.4	596.5	593.5	590.6	587.6	586.2
40°	584.2	582.8	581.3	579.8	578.4	576.2	573.2	570.2	567.3	564.3	562.6
42.5°	561.0	559.5	558.0	556.5	555.1	552.9	549.8	546.9	544.0	541.0	539.2
45°	523.5	522.2	520.9	519.7	518.4	516.3	513.6	510.8	508.0	505.2	503.2
47.5°	486.2	485.0	483.8	482.6	481.4	479.3	476.4	473.5	470.7	467.7	465.6
50°	460.2	459.3	458.4	457.5	456.6	454.8	452.2	449.6	447.0	444.4	441.9
52.5°	435.0	433.7	432.5	431.3	430.1	428.3	425.8	423.4	420.9	418.5	416.4
55°	396.2	395.1	394.0	392.8	391.8	390.0	387.8	385.6	383.4	381.2	379.0
57.5°	357.2	356.4	355.5	354.6	353.7	352.0	349.6	347.2	344.7	342.3	340.1
60°	331.3	330.5	329.8	329.1	328.3	326.6	324.1	321.5	318.9	316.3	314.2
62.5°	306.0	304.8	303.6	302.4	301.3	299.6	297.7	295.6	293.7	291.6	289.8
65°	267.2	266.0	265.0	263.8	262.7	261.2	259.4	257.6	255.7	253.9	252.2
67.5°	227.7	226.8	225.9	225.0	224.1	222.9	221.2	219.6	217.9	216.2	214.9
70°	203.1	202.4	201.6	200.9	200.2	198.9	197.2	195.6	194.0	192.2	190.9
72.5°	177.8	177.0	176.3	175.5	174.8	173.9	172.8	171.8	170.7	169.6	168.4
75°	139.8	139.4	139.1	138.7	138.4	137.7	136.8	135.8	134.9	134.0	132.9
77.5°	105.9	105.3	104.6	104.0	103.4	102.9	102.5	102.1	101.7	101.3	100.9
80°	83.2	83.1	82.8	82.7	82.5	82.2	81.9	81.4	81.1	80.7	80.1
82.5°	62.0	61.9	61.9	61.8	61.8	61.6	61.4	61.2	61.0	60.7	60.1
85°	34.2	33.9	33.8	33.6	33.3	33.2	33.0	32.9	32.6	32.4	31.9
87.5°	12.2	12.5	12.7	13.0	13.3	13.5	13.6	13.7	13.9	13.9	13.8
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°	865.6	865.6	865.6	865.6	865.6	865.6	865.6	865.6
2.5°	861.9	863.4	864.9	865.4	865.1	864.9	864.5	864.3
5°	856.1	857.5	859.0	859.6	859.2	858.8	858.5	858.1
7.5°	846.4	847.9	849.4	849.9	849.5	849.1	848.7	848.3
10°	837.7	839.3	840.7	841.1	840.7	840.1	839.5	838.9
12.5°	827.5	828.6	829.6	829.9	829.5	829.2	828.8	828.3
15°	809.7	810.4	811.1	811.1	810.1	809.2	808.3	807.3
17.5°	788.4	789.2	790.1	790.1	789.2	788.3	787.4	786.5
20°	771.8	772.4	772.9	772.8	772.1	771.4	770.6	769.9
22.5°	754.3	754.4	754.5	754.3	753.9	753.4	753.0	752.6
25°	725.7	726.0	726.4	726.4	726.0	725.7	725.3	725.0
27.5°	697.5	697.0	696.4	695.7	694.8	693.9	693.0	692.1
30°	675.6	675.0	674.4	673.8	673.0	672.3	671.6	670.8
32.5°	654.0	653.1	652.0	651.2	650.4	649.7	648.9	648.2
35°	619.5	618.4	617.3	616.3	615.4	614.4	613.5	612.5
37.5°	584.9	583.5	582.1	581.0	580.1	579.2	578.4	577.5
40°	561.0	559.3	557.7	556.4	555.7	555.0	554.2	553.5
42.5°	537.4	535.6	533.8	532.3	531.2	530.3	529.2	528.2
45°	501.2	499.1	497.1	495.7	495.0	494.2	493.5	492.7
47.5°	463.5	461.3	459.2	457.5	456.5	455.4	454.4	453.3
50°	439.3	436.7	434.1	432.4	431.4	430.5	429.6	428.6
52.5°	414.2	412.1	409.9	408.2	407.0	405.8	404.6	403.3
55°	376.7	374.5	372.3	370.7	369.8	368.9	367.9	367.0
57.5°	337.9	335.7	333.5	332.1	331.3	330.7	330.0	329.2
60°	312.2	310.1	308.1	306.9	306.3	305.7	305.2	304.6
62.5°	287.9	286.0	284.1	282.8	282.1	281.4	280.7	280.0
65°	250.5	248.8	247.2	245.9	245.0	244.0	243.1	242.2
67.5°	213.6	212.4	211.1	210.0	209.3	208.6	207.8	207.1
70°	189.6	188.4	187.1	186.1	185.3	184.6	183.8	183.1
72.5°	167.1	165.8	164.4	163.5	162.9	162.3	161.8	161.1
75°	131.8	130.7	129.6	129.2	129.6	130.0	130.3	130.7
77.5°	100.3	99.7	99.1	98.7	98.1	97.6	97.1	96.5
80°	79.7	79.1	78.5	78.0	77.7	77.3	77.0	76.6
82.5°	59.4	58.6	58.0	57.6	57.5	57.4	57.3	57.2
85°	31.4	30.8	30.2	29.8	29.7	29.5	29.4	29.1
87.5°	13.6	13.4	13.2	13.1	13.0	13.0	13.0	12.9
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: P331553-930

CATALOG NUMBER: S122DIW-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)