

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: P331552-830

Luminaire Tested: **S122DIW-S675D1440U830-4F0-1E-UDD-D1**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P331552-830
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: S122DIW-S675D1440U830-4F0-1E-UDD-D1
Description: DEFINE 2 DIRECT-INDIRECT WALL MOUNT LED LUMINAIRE
DOWNLIGHT 675 LUMENS PER FOOT, DROP SATIN WHITE DIFFUSER
UPLIGHT 1440 LUMENS PER FOOT, FLUSH SATIN WHITE DIFFUSER
Light Source: -
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 7247.8 lumens
Efficiency: N/A
Efficacy: 106.4 lumens/watt
Spacing Criteria (0/90/45): 1.21 / 1.32 / 1.42
Luminous Opening: Rectangular w/ Sides (W: 0.17' x L: 4' x H: 0.08')
CIE Type: Semi-Indirect

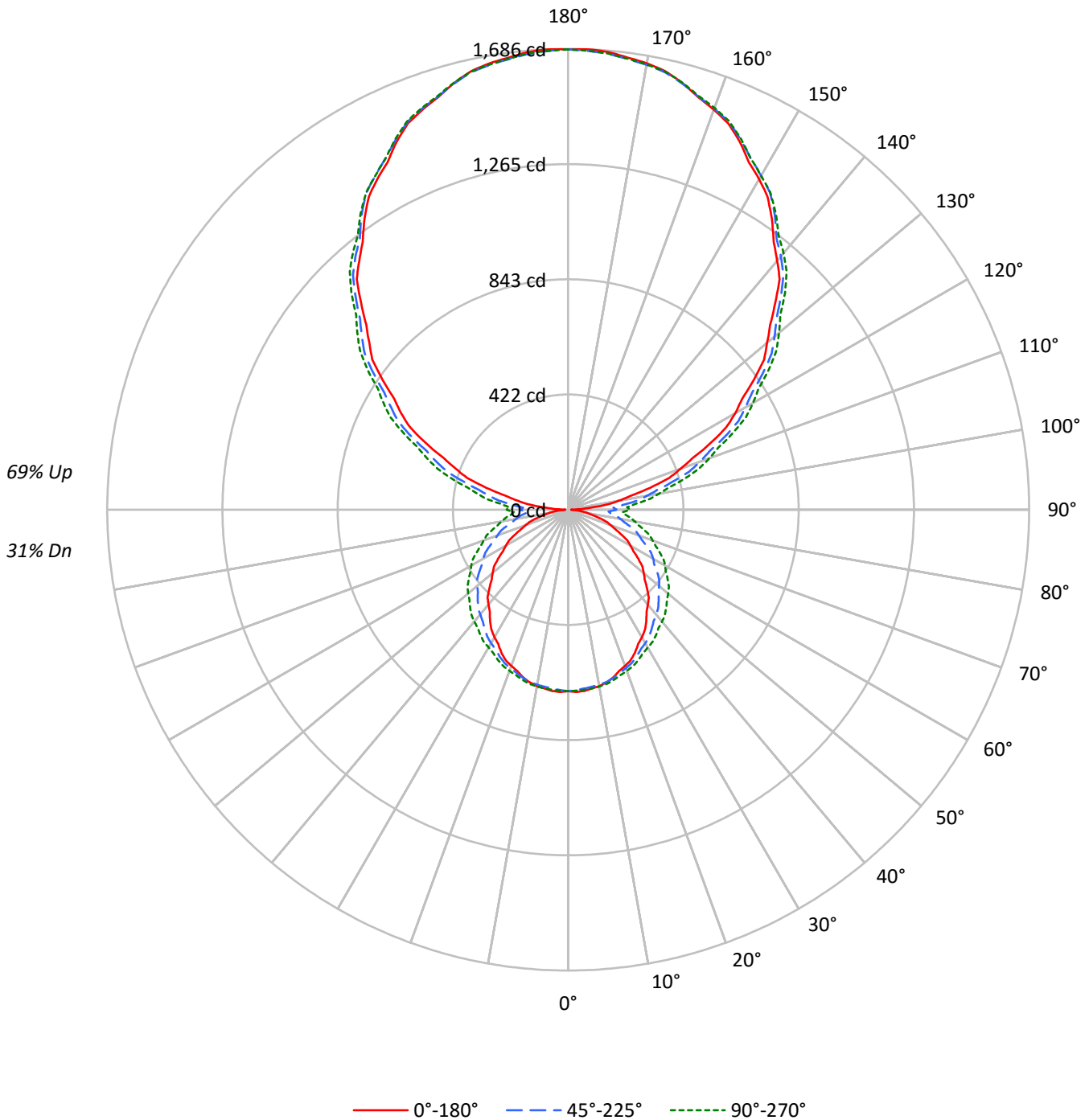
Input Watts (W): 68.1
Input Voltage (V): 120
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



TEST NUMBER: P331552-830

CATALOG NUMBER: S122DIW-S675D1440U830-4F0-1E-UDD-D1

Luminous Intensity Polar Plot





TEST NUMBER: P331552-830

CATALOG NUMBER: S122DIW-S675D1440U830-4F0-1E-UDD-D1

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	0
RCR																		
0	103	103	103	103	92	92	92	92	73	73	73	55	55	55	39	39	39	31
1	93	88	84	80	83	79	76	72	62	60	58	47	45	44	33	32	31	24
2	84	76	70	65	75	69	63	59	54	50	47	41	38	36	28	27	25	20
3	76	67	59	53	68	60	54	48	47	43	39	36	32	30	25	23	21	16
4	70	59	51	45	62	53	46	41	42	37	33	31	28	25	22	20	18	14
5	64	52	44	38	57	47	40	35	37	32	28	28	24	22	20	17	15	12
6	58	46	38	33	52	42	35	30	33	28	24	25	22	19	18	15	13	10
7	54	42	34	28	48	38	31	26	30	25	21	23	19	16	16	14	12	9
8	50	38	30	25	45	34	27	23	27	22	19	21	17	14	15	12	10	8
9	46	34	27	22	41	31	25	20	25	20	16	19	15	13	14	11	9	7
10	43	31	24	19	39	28	22	18	23	18	15	18	14	12	13	10	8	6

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	10719	10719	10719
5°	10771	10318	10278
10°	10704	10013	9900
15°	10557	9691	9503
20°	10370	9345	9120
25°	10186	9011	8772
30°	9928	8668	8421
35°	9665	8338	8176
40°	9388	8055	7929
45°	9124	7803	7719
50°	8843	7574	7511
55°	8548	7331	7300
60°	8188	7076	7078
65°	7811	6777	6812
70°	7390	6457	6525
75°	6853	6143	6262
80°	6004	5822	5995
85°	5192	5544	5785



TEST NUMBER: P331552-830

CATALOG NUMBER: S122DIW-S675D1440U830-4F0-1E-UDD-D1

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	62.9	0.9
10°-20°	180.4	2.5
20°-30°	273.4	3.8
30°-40°	333.0	4.6
40°-50°	358.2	4.9
50°-60°	347.9	4.8
60°-70°	303.7	4.2
70°-80°	233.8	3.2
80°-90°	163.7	2.3
90°-100°	214.8	3.0
100°-110°	410.3	5.7
110°-120°	618.6	8.5
120°-130°	774.0	10.7
130°-140°	848.3	11.7
140°-150°	821.9	11.3
150°-160°	687.6	9.5
160°-170°	456.0	6.3
170°-180°	159.4	2.2
0°-30°	516.7	7.1
0°-40°	849.6	11.7
0°-60°	1555.7	21.5
0°-90°	2257.0	31.1
90°-120°	1243.7	17.2
90°-150°	3687.9	50.9
90°-180°	4991.0	68.9
0°-180°	7247.8	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	664	664	664	664	664	
5°	666	663	657	663	662	63
15°	635	637	637	645	645	179
25°	577	584	593	604	607	265
35°	498	514	532	552	560	311
45°	408	434	468	496	507	315
55°	313	348	397	431	444	279
65°	214	261	318	356	370	212
75°	118	173	234	274	288	125
85°	35	94	156	195	210	37
90°	11	85	177	211	225	10
95°	82	141	202	237	247	91
105°	310	344	395	430	442	328
115°	572	593	632	658	666	566
125°	829	842	868	889	897	741
135°	1071	1086	1099	1117	1121	827
145°	1299	1309	1317	1324	1324	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	



TEST NUMBER: P331552-830

CATALOG NUMBER: S122DIW-S675D1440U830-4F0-1E-UDD-D1

CANDELA DISTRIBUTION (FULL):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
0°	663.9	663.9	663.9	663.9	663.9	663.9	663.9	663.9	663.9	663.9	663.9
2.5°	667.8	667.2	666.8	666.2	665.7	664.9	663.6	662.4	661.3	660.1	660.9
5°	665.8	665.2	664.6	663.9	663.3	662.3	661.0	659.8	658.5	657.1	658.5
7.5°	659.9	659.4	659.0	658.6	658.2	657.4	656.5	655.4	654.5	653.6	655.1
10°	655.3	654.8	654.4	653.9	653.6	653.0	652.3	651.8	651.1	650.4	652.1
12.5°	647.5	647.6	647.7	647.8	647.9	647.7	647.2	646.8	646.3	645.8	647.5
15°	635.1	635.5	635.9	636.3	636.8	637.0	637.0	637.0	637.0	637.0	638.9
17.5°	618.9	619.8	620.7	621.6	622.5	623.3	624.0	624.6	625.3	626.0	628.0
20°	608.1	609.2	610.2	611.3	612.4	613.3	614.2	615.1	616.0	616.8	619.2
22.5°	596.5	597.8	599.1	600.3	601.5	602.8	604.0	605.1	606.3	607.6	609.9
25°	577.3	578.8	580.3	581.8	583.3	585.0	586.9	588.9	590.8	592.7	595.3
27.5°	554.2	556.7	559.1	561.6	564.0	566.4	568.6	570.9	573.2	575.4	578.6
30°	538.9	541.6	544.4	547.1	550.0	552.7	555.5	558.3	561.1	563.8	567.2
32.5°	521.9	525.0	528.1	531.2	534.4	537.6	540.9	544.1	547.4	550.7	554.7
35°	497.5	501.1	504.7	508.3	512.0	515.9	519.9	524.0	528.0	532.1	536.8
37.5°	470.9	475.1	479.3	483.4	487.7	492.4	497.7	502.9	508.1	513.4	518.7
40°	453.2	457.9	462.6	467.3	472.0	477.2	483.1	488.8	494.6	500.3	505.9
42.5°	436.3	440.9	445.6	450.3	455.1	460.7	467.4	474.0	480.6	487.3	493.3
45°	407.9	413.8	419.5	425.3	431.0	437.7	445.2	452.7	460.1	467.6	474.3
47.5°	380.0	386.3	392.7	398.9	405.2	412.7	421.5	430.3	439.0	447.8	454.8
50°	360.8	367.5	374.1	380.7	387.3	395.5	405.1	414.7	424.3	433.9	441.2
52.5°	342.3	349.3	356.3	363.3	370.2	378.8	388.9	399.1	409.2	419.3	426.8
55°	312.7	320.4	328.1	335.8	343.5	352.9	364.0	375.1	386.3	397.4	405.1
57.5°	283.4	292.2	300.9	309.5	318.2	328.2	339.5	350.8	362.2	373.5	381.8
60°	262.7	271.8	281.1	290.3	299.4	310.2	322.3	334.5	346.7	358.9	367.0
62.5°	244.2	253.7	263.3	272.8	282.4	293.2	305.4	317.5	329.8	342.0	350.6
65°	213.6	224.0	234.6	245.1	255.5	267.0	279.7	292.3	304.9	317.5	326.3
67.5°	185.5	196.4	207.5	218.4	229.3	241.2	254.1	267.0	279.9	292.8	301.7
70°	165.5	176.6	187.8	198.9	210.0	222.2	235.4	248.6	261.9	275.2	284.4
72.5°	147.0	158.4	169.9	181.4	192.8	205.3	218.8	232.1	245.6	259.0	268.1
75°	118.4	130.4	142.3	154.3	166.3	179.1	192.7	206.4	220.1	233.8	243.0
77.5°	90.7	103.2	115.7	128.2	140.7	154.0	167.9	181.8	195.7	209.5	218.8
80°	72.2	85.2	98.2	111.3	124.3	137.8	151.7	165.6	179.5	193.4	202.4
82.5°	56.7	69.7	82.5	95.4	108.3	121.7	135.8	149.9	163.9	178.0	187.0
85°	34.7	47.9	61.2	74.4	87.7	101.1	114.8	128.5	142.2	155.9	164.9
87.5°	19.1	32.6	46.2	59.7	73.1	87.5	102.5	117.6	132.6	147.7	156.4
90°	11.0	27.2	43.5	59.6	75.8	94.3	114.8	135.4	156.1	176.7	184.6
92.5°	34.1	48.4	62.8	77.1	91.4	106.0	120.8	135.6	150.4	165.2	173.8
95°	81.6	94.8	108.0	121.2	134.4	147.8	161.2	174.7	188.1	201.6	209.7
97.5°	141.8	153.4	165.1	176.9	188.6	201.2	214.7	228.3	241.8	255.2	263.2
100°	187.2	197.7	208.1	218.5	228.9	240.6	253.5	266.5	279.4	292.3	300.2
102.5°	234.1	243.5	252.7	261.9	271.2	282.2	295.0	307.8	320.7	333.6	341.5
105°	310.3	317.4	324.6	331.8	338.9	348.4	360.1	371.8	383.6	395.4	403.5
107.5°	388.0	394.4	400.7	407.1	413.4	421.9	432.5	443.2	453.8	464.5	471.9
110°	437.2	443.4	449.6	455.7	461.9	470.2	480.7	491.2	501.7	512.2	519.0



TEST NUMBER: P331552-830

CATALOG NUMBER: S122DIW-S675D1440U830-4F0-1E-UDD-D1

CANDELA DISTRIBUTION (continued):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
112.5°	491.8	497.3	502.8	508.2	513.8	521.3	531.0	540.7	550.4	560.2	566.3
115°	572.2	576.5	580.7	584.9	589.2	595.9	604.8	613.8	622.8	631.8	637.9
117.5°	651.4	655.4	659.5	663.6	667.7	673.3	680.4	687.5	694.7	701.7	707.4
120°	704.8	708.2	711.6	715.0	718.3	723.0	729.1	735.1	741.1	747.2	753.2
122.5°	753.8	757.1	760.4	763.8	767.2	772.0	778.3	784.6	790.9	797.1	802.2
125°	828.9	831.8	834.6	837.4	840.3	844.6	850.6	856.4	862.3	868.3	873.1
127.5°	903.1	906.4	909.8	913.2	916.6	920.5	924.9	929.3	933.7	938.0	942.2
130°	949.7	953.6	957.4	961.4	965.3	969.1	973.0	976.9	980.7	984.6	989.1
132.5°	1002.0	1005.1	1008.2	1011.3	1014.6	1017.9	1021.4	1025.0	1028.7	1032.3	1035.9
135°	1070.9	1074.4	1077.9	1081.4	1084.9	1088.0	1090.7	1093.4	1096.3	1099.0	1103.2
137.5°	1144.5	1147.4	1150.1	1152.9	1155.7	1158.0	1159.8	1161.5	1163.3	1165.1	1168.8
140°	1188.8	1191.5	1194.1	1196.7	1199.4	1201.7	1203.7	1205.7	1207.7	1209.8	1213.1
142.5°	1234.4	1237.0	1239.6	1242.2	1244.8	1246.7	1247.9	1249.1	1250.2	1251.4	1254.3
145°	1298.7	1301.0	1303.2	1305.3	1307.6	1309.7	1311.5	1313.4	1315.3	1317.2	1318.8
147.5°	1357.0	1359.6	1362.3	1365.0	1367.6	1369.6	1370.8	1372.1	1373.4	1374.6	1375.5
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



TEST NUMBER: P331552-830

CATALOG NUMBER: S122DIW-S675D1440U830-4F0-1E-UDD-D1

CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
0°	663.9	663.9	663.9	663.9	663.9	663.9	663.9	663.9
2.5°	661.8	662.6	663.5	663.7	663.4	663.1	662.7	662.4
5°	659.8	661.0	662.3	662.9	662.6	662.4	662.2	661.9
7.5°	656.6	658.2	659.7	660.3	660.2	659.9	659.7	659.5
10°	653.8	655.5	657.3	658.0	657.8	657.6	657.4	657.1
12.5°	649.2	650.9	652.7	653.4	653.2	653.0	652.8	652.5
15°	640.8	642.7	644.7	645.5	645.4	645.1	644.9	644.7
17.5°	630.0	632.1	634.0	635.1	635.1	635.1	635.1	635.1
20°	621.5	623.9	626.1	627.4	627.4	627.4	627.4	627.4
22.5°	612.3	614.6	616.9	618.3	618.6	619.0	619.3	619.6
25°	597.9	600.4	602.9	604.5	605.2	605.9	606.5	607.2
27.5°	581.9	585.1	588.4	590.2	590.7	591.2	591.6	592.1
30°	570.7	574.1	577.5	579.6	580.2	580.9	581.5	582.1
32.5°	558.6	562.6	566.5	569.0	570.2	571.4	572.5	573.6
35°	541.5	546.2	550.9	554.0	555.5	557.0	558.5	560.0
37.5°	523.9	529.0	534.3	537.7	539.3	540.8	542.4	544.0
40°	511.4	517.0	522.5	526.3	528.2	530.2	532.1	534.0
42.5°	499.4	505.5	511.5	515.6	517.5	519.4	521.3	523.2
45°	480.9	487.5	494.2	498.5	500.7	502.8	504.9	507.1
47.5°	461.7	468.6	475.5	480.1	482.5	484.8	487.2	489.6
50°	448.5	455.7	463.1	467.9	470.2	472.6	474.9	477.2
52.5°	434.2	441.7	449.1	454.1	456.6	459.1	461.7	464.2
55°	412.7	420.5	428.2	433.4	436.2	438.9	441.8	444.5
57.5°	390.1	398.4	406.7	412.3	415.1	417.9	420.8	423.6
60°	375.1	383.2	391.4	397.0	399.9	402.9	406.0	409.0
62.5°	359.2	367.9	376.5	382.3	385.0	387.9	390.7	393.5
65°	335.1	343.8	352.6	358.4	361.2	363.9	366.7	369.5
67.5°	310.6	319.4	328.3	334.2	337.1	340.0	342.9	345.8
70°	293.6	302.7	312.0	317.8	320.4	323.0	325.6	328.1
72.5°	277.1	286.1	295.1	301.1	304.3	307.4	310.4	313.5
75°	252.2	261.4	270.6	276.5	279.4	282.1	284.9	287.7
77.5°	227.9	237.0	246.2	252.2	255.2	258.3	261.2	264.2
80°	211.3	220.4	229.3	235.4	238.3	241.3	244.3	247.3
82.5°	196.0	204.9	214.0	219.8	222.6	225.5	228.3	231.1
85°	173.8	182.9	191.8	197.7	200.8	203.8	206.8	209.7
87.5°	164.9	173.5	182.1	187.8	190.6	193.4	196.2	199.1
90°	192.6	200.5	208.4	213.9	216.7	219.6	222.4	225.4
92.5°	182.3	190.8	199.3	204.9	207.5	210.1	212.7	215.4
95°	217.8	225.9	234.1	239.1	241.1	243.0	245.0	246.9
97.5°	271.1	279.0	286.9	292.1	294.5	297.0	299.4	301.9
100°	308.1	316.0	324.0	328.9	330.9	333.0	335.1	337.1
102.5°	349.5	357.5	365.5	370.5	372.6	374.6	376.6	378.6
105°	411.6	419.7	427.8	433.0	435.4	437.7	440.1	442.4
107.5°	479.4	486.8	494.3	498.4	499.3	500.2	501.1	502.0
110°	525.8	532.7	539.5	543.7	545.1	546.5	547.9	549.2



TEST NUMBER: P331552-830

CATALOG NUMBER: S122DIW-S675D1440U830-4F0-1E-UDD-D1

CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
112.5°	572.4	578.4	584.6	588.4	590.0	591.7	593.3	595.0
115°	643.9	650.1	656.2	660.0	661.4	662.7	664.1	665.5
117.5°	712.9	718.5	724.1	727.5	728.7	729.9	731.1	732.4
120°	759.1	765.2	771.1	774.8	776.2	777.6	779.0	780.4
122.5°	807.2	812.3	817.4	820.6	821.8	823.1	824.4	825.8
125°	877.9	882.7	887.5	890.7	892.4	894.0	895.6	897.2
127.5°	946.4	950.6	954.7	957.2	958.1	958.9	959.8	960.7
130°	993.5	998.1	1002.6	1005.0	1005.5	1006.0	1006.4	1006.8
132.5°	1039.3	1042.9	1046.5	1048.7	1049.3	1050.1	1050.7	1051.5
135°	1107.4	1111.5	1115.7	1118.2	1119.0	1119.7	1120.5	1121.2
137.5°	1172.4	1176.1	1179.8	1181.8	1181.9	1182.1	1182.3	1182.5
140°	1216.5	1220.0	1223.4	1225.1	1225.1	1225.2	1225.2	1225.2
142.5°	1257.4	1260.4	1263.4	1264.8	1264.6	1264.4	1264.3	1264.1
145°	1320.4	1322.0	1323.6	1324.3	1324.1	1323.9	1323.7	1323.5
147.5°	1376.4	1377.2	1378.1	1378.2	1377.5	1376.8	1376.1	1375.5
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)