

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: P331551-830

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

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P331551-830
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: S122DIW-S675D1440U830-4F0-1E-UDD-D
Description: DEFINE 2 DIRECT-INDIRECT WALL MOUNT LED LUMINAIRE
DOWNLIGHT 675 LUMENS PER FOOT, DROP SATIN WHITE DIFFUSER
UPLIGHT 1440 LUMENS PER FOOT, NO LENS
Light Source: -
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 7966.6 lumens
Efficiency: N/A
Efficacy: 117.0 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

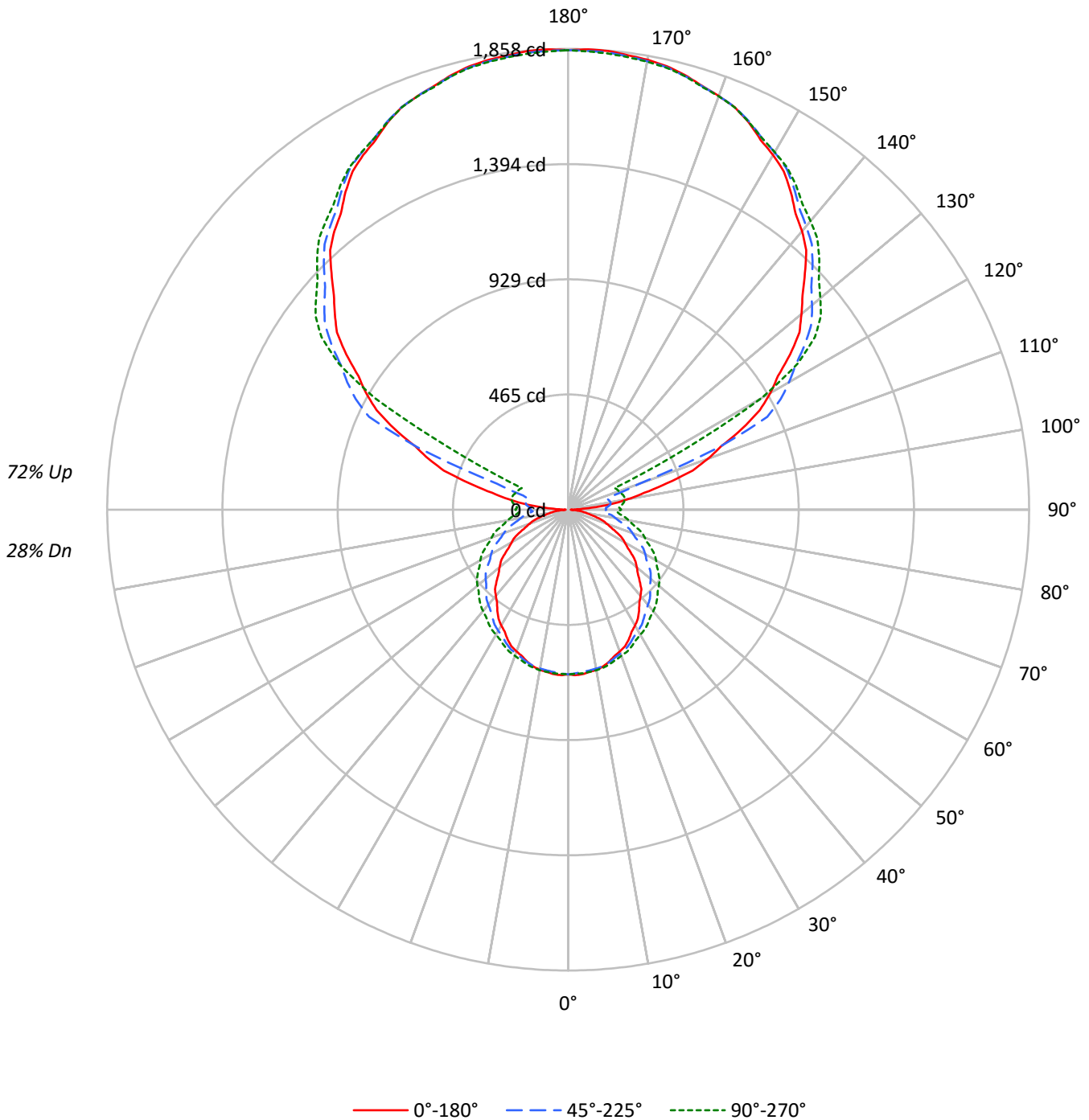
Input Watts (W): 68.1
Input Voltage (V): 120
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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Luminous Intensity Polar Plot





TEST NUMBER: P331551-830

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

COEFFICIENT OF UTILIZATION - ZONAL CAVITY METHOD:

RF	20				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	102	102	102	102	91	91	91	91	71	71	71	53	53	53	36	36	36	28
1	92	88	83	80	82	78	75	72	61	59	57	45	44	42	31	30	29	22
2	83	76	70	64	74	68	63	58	53	49	46	39	37	35	26	25	24	18
3	76	66	59	53	67	59	53	48	46	42	38	34	31	29	23	21	20	15
4	69	58	51	45	61	52	46	40	41	36	32	30	27	24	20	18	17	12
5	63	52	44	38	56	46	40	34	36	31	28	27	24	21	18	16	14	11
6	58	46	38	32	52	42	35	30	33	28	24	24	21	18	17	14	13	9
7	54	42	34	28	48	37	31	26	29	24	21	22	18	16	15	13	11	8
8	50	37	30	25	44	34	27	22	27	22	18	20	17	14	14	11	10	7
9	46	34	27	22	41	31	24	20	24	20	16	18	15	12	13	10	9	6
10	43	31	24	19	38	28	22	18	22	18	14	17	13	11	12	9	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



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	62.9	0.8
10°-20°	180.4	2.3
20°-30°	273.4	3.4
30°-40°	333.0	4.2
40°-50°	358.2	4.5
50°-60°	347.9	4.4
60°-70°	303.7	3.8
70°-80°	233.8	2.9
80°-90°	161.5	2.0
90°-100°	169.9	2.1
100°-110°	305.6	3.8
110°-120°	657.9	8.3
120°-130°	1029.1	12.9
130°-140°	1075.7	13.5
140°-150°	990.6	12.4
150°-160°	794.7	10.0
160°-170°	512.1	6.4
170°-180°	176.3	2.2
0°-30°	516.7	6.5
0°-40°	849.6	10.7
0°-60°	1555.7	19.5
0°-90°	2254.8	28.3
90°-120°	1133.4	14.2
90°-150°	4228.7	53.1
90°-180°	5712.0	71.7
0°-180°	7966.6	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	82	154	197	213	11
95°	95	100	163	204	216	113
105°	412	459	164	211	229	441
115°	775	810	885	321	207	762
125°	1092	1111	1166	1200	1214	973
135°	1350	1371	1393	1425	1431	1042
145°	1564	1564	1586	1600	1599	978
155°	1723	1712	1726	1734	1724	793
165°	1815	1808	1811	1819	1811	513
175°	1857	1848	1850	1858	1846	177
180°	1853	1853	1853	1853	1853	



TEST NUMBER: P331551-830

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

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	32.5	45.9	59.3	72.8	86.5	100.7	114.8	129.0	143.2	152.1
90°	10.9	26.7	42.3	58.0	73.7	89.5	105.7	121.7	137.7	153.8	163.9
92.5°	35.9	47.2	58.4	69.7	81.0	93.7	108.1	122.4	136.9	151.2	160.3
95°	94.8	95.0	95.3	95.5	95.7	103.3	118.2	133.1	148.0	163.0	172.6
97.5°	179.6	160.9	142.1	123.4	104.6	103.8	120.9	138.1	155.2	172.4	181.4
100°	244.0	211.1	178.2	145.3	112.4	104.4	121.5	138.6	155.6	172.7	182.9
102.5°	314.1	312.6	311.2	309.8	308.4	292.3	261.6	230.8	200.1	169.4	180.2
105°	412.4	427.4	442.6	457.7	472.9	445.4	375.1	304.9	234.7	164.5	175.3
107.5°	525.6	537.7	549.9	562.0	574.2	536.9	450.0	363.1	276.3	189.4	193.2
110°	597.7	608.2	618.8	629.3	639.8	607.3	531.7	456.1	380.4	304.8	281.9



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CANDELA DISTRIBUTION (continued):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
112.5°	666.4	675.4	684.6	693.7	702.9	701.8	690.5	679.2	667.9	656.6	554.7
115°	774.7	782.0	789.5	796.9	804.3	816.5	833.6	850.7	867.8	884.9	753.3
117.5°	870.4	877.7	884.9	892.1	899.3	909.8	923.9	937.9	952.0	965.9	939.0
120°	941.2	946.6	951.9	957.2	962.5	972.1	986.1	1000.0	1013.9	1027.8	1037.4
122.5°	1001.3	1006.4	1011.4	1016.4	1021.5	1031.0	1044.8	1058.8	1072.6	1086.5	1094.5
125°	1091.7	1095.6	1099.5	1103.3	1107.3	1115.4	1127.9	1140.5	1152.9	1165.5	1173.3
127.5°	1174.6	1178.6	1182.8	1186.8	1190.9	1197.8	1207.6	1217.3	1227.1	1236.8	1245.2
130°	1227.2	1231.7	1236.2	1240.9	1245.4	1251.5	1259.3	1267.1	1274.8	1282.6	1291.0
132.5°	1280.8	1284.6	1288.5	1292.3	1296.1	1301.5	1308.2	1314.9	1321.6	1328.4	1336.1
135°	1349.5	1354.2	1359.1	1363.9	1368.6	1373.4	1378.2	1383.0	1387.8	1392.7	1400.1
137.5°	1420.0	1423.3	1426.6	1429.9	1433.2	1436.8	1440.9	1444.8	1448.8	1452.7	1459.6
140°	1466.1	1468.3	1470.5	1472.6	1474.8	1477.7	1481.5	1485.2	1488.8	1492.6	1498.6
142.5°	1504.8	1506.7	1508.6	1510.5	1512.5	1515.3	1519.2	1523.1	1526.9	1530.7	1535.9
145°	1564.4	1564.1	1563.8	1563.5	1563.2	1565.6	1570.7	1575.7	1580.7	1585.8	1589.2
147.5°	1617.2	1616.1	1615.0	1613.8	1612.7	1614.6	1619.6	1624.7	1629.7	1634.7	1636.3
150°	1651.5	1649.4	1647.4	1645.3	1643.1	1644.5	1649.3	1654.1	1658.8	1663.6	1665.4
152.5°	1680.5	1678.2	1675.8	1673.5	1671.2	1672.3	1676.8	1681.3	1685.8	1690.4	1692.1
155°	1722.6	1719.9	1717.2	1714.5	1711.8	1712.3	1715.9	1719.5	1723.1	1726.5	1728.3
157.5°	1755.6	1753.3	1751.1	1748.8	1746.5	1746.6	1749.1	1751.6	1754.1	1756.6	1758.7
160°	1774.8	1773.0	1771.3	1769.5	1767.7	1767.7	1769.5	1771.3	1773.0	1774.8	1776.6
162.5°	1792.0	1790.3	1788.5	1786.7	1784.9	1784.7	1786.3	1787.8	1789.4	1790.9	1793.0
165°	1815.1	1813.3	1811.5	1809.7	1807.9	1807.5	1808.4	1809.2	1810.2	1811.0	1813.2
167.5°	1832.2	1830.4	1828.6	1826.8	1825.0	1824.6	1825.4	1826.3	1827.1	1828.0	1830.0
170°	1841.9	1840.1	1838.3	1836.5	1834.8	1834.1	1834.8	1835.3	1835.9	1836.5	1838.6
172.5°	1848.3	1846.5	1844.7	1843.0	1841.2	1840.6	1841.2	1841.7	1842.4	1843.0	1845.0
175°	1856.6	1854.5	1852.5	1850.4	1848.3	1847.6	1848.1	1848.7	1849.4	1849.9	1852.0
177.5°	1857.9	1856.3	1854.6	1852.9	1851.2	1850.6	1850.8	1851.1	1851.2	1851.5	1853.2
180°	1852.6	1852.6	1852.6	1852.6	1852.6	1852.6	1852.6	1852.6	1852.6	1852.6	1852.6



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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°	161.2	170.2	179.3	185.2	188.0	190.9	193.8	196.6
90°	173.9	184.0	194.0	200.6	203.8	206.9	210.1	213.2
92.5°	169.5	178.6	187.8	193.9	196.8	199.7	202.6	205.6
95°	182.2	191.8	201.4	207.4	209.6	211.9	214.1	216.4
97.5°	190.6	199.6	208.8	214.7	217.6	220.6	223.4	226.3
100°	193.2	203.5	213.8	220.5	223.4	226.3	229.2	232.2
102.5°	191.1	201.9	212.7	219.7	222.9	226.1	229.3	232.5
105°	186.1	196.8	207.5	214.7	218.3	221.8	225.4	228.8
107.5°	197.0	200.9	204.7	208.4	212.0	215.6	219.0	222.6
110°	258.9	236.0	213.0	203.3	206.9	210.5	214.0	217.5



TEST NUMBER: P331551-830

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

CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
112.5°	452.9	351.1	249.2	200.0	203.3	206.6	209.9	213.2
115°	621.8	490.3	358.8	283.5	264.4	245.3	226.2	207.1
117.5°	911.9	884.9	857.8	810.1	741.9	673.5	605.2	537.0
120°	1047.0	1056.5	1066.1	1051.9	1014.1	976.2	938.3	900.5
122.5°	1102.4	1110.3	1118.3	1119.4	1113.6	1107.8	1102.0	1096.3
125°	1181.2	1189.0	1196.9	1202.2	1205.0	1207.9	1210.7	1213.5
127.5°	1253.5	1261.9	1270.2	1275.4	1277.4	1279.5	1281.6	1283.6
130°	1299.4	1307.8	1316.3	1321.2	1322.6	1324.0	1325.4	1326.8
132.5°	1343.9	1351.7	1359.4	1364.0	1365.5	1366.9	1368.3	1369.7
135°	1407.6	1415.0	1422.6	1426.8	1428.0	1429.1	1430.2	1431.3
137.5°	1466.5	1473.3	1480.2	1483.8	1484.2	1484.7	1485.2	1485.6
140°	1504.8	1510.9	1517.0	1519.9	1519.8	1519.6	1519.3	1519.1
142.5°	1541.1	1546.2	1551.4	1553.9	1553.5	1553.1	1552.7	1552.4
145°	1592.6	1595.9	1599.3	1600.8	1600.3	1600.0	1599.5	1599.1
147.5°	1638.0	1639.8	1641.5	1642.0	1641.2	1640.5	1639.7	1639.1
150°	1667.2	1669.0	1670.8	1670.8	1669.4	1667.9	1666.4	1664.9
152.5°	1693.9	1695.7	1697.5	1697.4	1695.4	1693.6	1691.6	1689.6
155°	1730.1	1731.9	1733.7	1733.4	1731.1	1728.7	1726.3	1723.9
157.5°	1760.7	1762.6	1764.7	1764.5	1762.3	1759.9	1757.6	1755.3
160°	1778.4	1780.2	1782.0	1781.9	1779.8	1777.6	1775.6	1773.5
162.5°	1795.0	1797.1	1799.0	1798.7	1796.2	1793.7	1791.1	1788.6
165°	1815.2	1817.3	1819.4	1819.4	1817.3	1815.2	1813.2	1811.0
167.5°	1832.1	1834.2	1836.3	1836.0	1833.3	1830.6	1828.0	1825.2
170°	1840.7	1842.8	1844.8	1844.6	1841.9	1839.2	1836.5	1833.8
172.5°	1847.1	1849.2	1851.2	1851.0	1848.3	1845.6	1843.0	1840.2
175°	1854.1	1856.1	1858.2	1857.8	1854.8	1851.8	1848.9	1845.9
177.5°	1854.8	1856.5	1858.2	1857.9	1855.8	1853.7	1851.5	1849.4
180°	1852.6	1852.6	1852.6	1852.6	1852.6	1852.6	1852.6	1852.6

(END OF REPORT)