

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: P331545-940

Luminaire Tested: **S122DIW-S675D1240U940-4F0-1E-UDD-D**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P331545-940
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-S675D1240U940-4F0-1E-UDD-D
Description: DEFINE 2 DIRECT-INDIRECT WALL MOUNT LED LUMINAIRE
DOWNLIGHT 675 LUMENS PER FOOT, DROP SATIN WHITE DIFFUSER
UPLIGHT 1240 LUMENS PER FOOT, NO LENS
Light Source: -
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 6817.7 lumens
Efficiency: N/A
Efficacy: 111.0 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

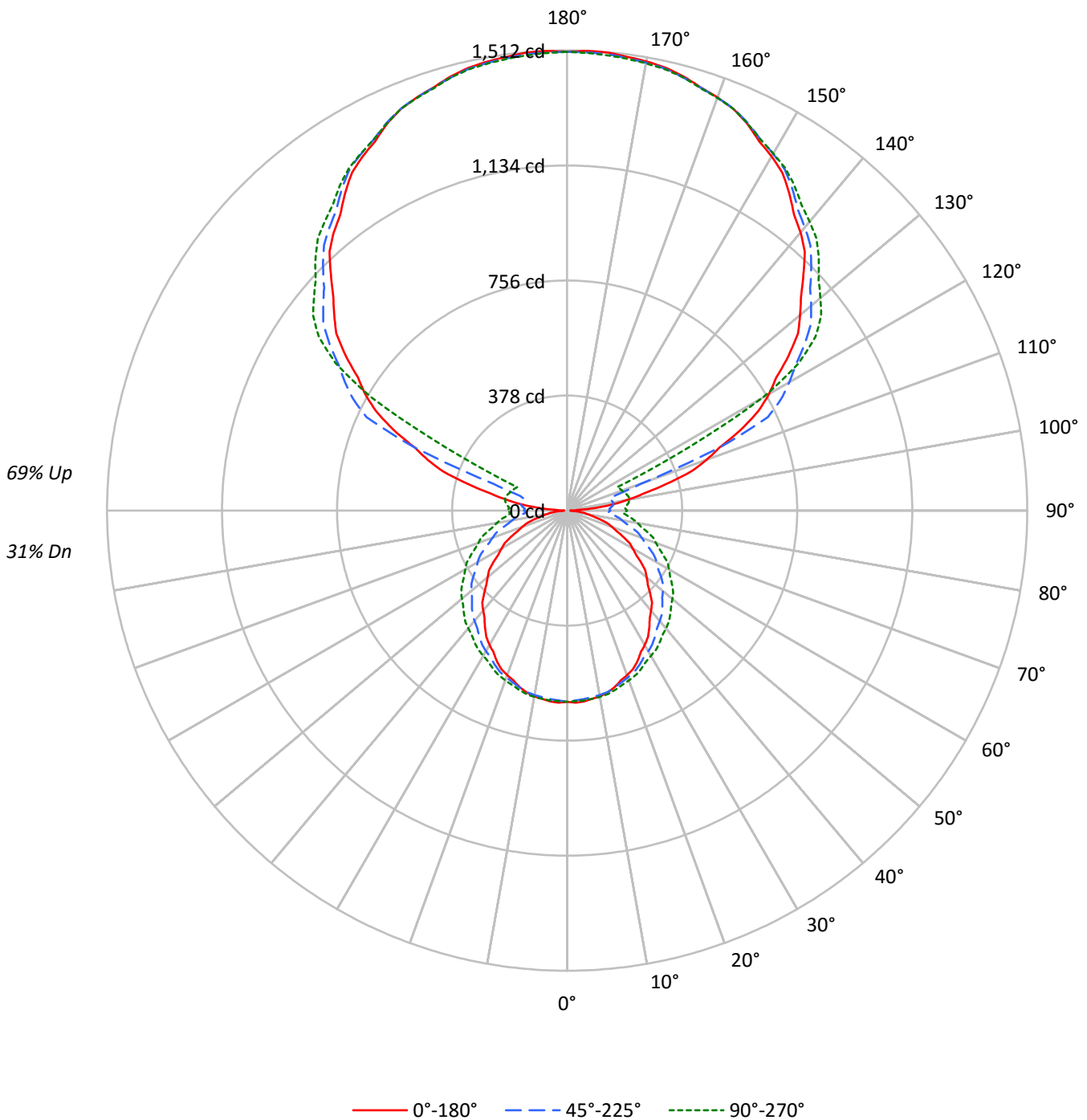
Input Watts (W): 61.4
Input Voltage (V): 120
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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Luminous Intensity Polar Plot





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CATALOG NUMBER: S122DIW-S675D1240U940-4F0-1E-UDD-D

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	33	30	25	23	21	16
4	70	59	51	45	62	53	46	41	42	37	33	32	28	25	22	20	18	14
5	64	52	44	38	57	47	40	35	37	32	28	28	25	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	15	15	12	11	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°	10141	10141	10141
5°	10191	9762	9724
10°	10126	9474	9367
15°	9987	9168	8990
20°	9810	8841	8627
25°	9637	8525	8298
30°	9392	8201	7967
35°	9142	7888	7735
40°	8880	7621	7501
45°	8632	7383	7302
50°	8365	7166	7106
55°	8089	6934	6906
60°	7745	6695	6695
65°	7391	6412	6445
70°	6992	6110	6173
75°	6483	5811	5925
80°	5680	5509	5672
85°	4908	5245	5473



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	59.5	0.9
10°-20°	170.7	2.5
20°-30°	258.6	3.8
30°-40°	315.0	4.6
40°-50°	338.9	5.0
50°-60°	329.1	4.8
60°-70°	287.4	4.2
70°-80°	221.2	3.2
80°-90°	152.2	2.2
90°-100°	152.6	2.2
100°-110°	259.1	3.8
110°-120°	542.3	8.0
120°-130°	841.2	12.3
130°-140°	876.9	12.9
140°-150°	806.3	11.8
150°-160°	646.7	9.5
160°-170°	416.7	6.1
170°-180°	143.4	2.1
0°-30°	488.8	7.2
0°-40°	803.8	11.8
0°-60°	1471.8	21.6
0°-90°	2132.6	31.3
90°-120°	953.9	14.0
90°-150°	3478.3	51.0
90°-180°	4685.0	68.7
0°-180°	6817.7	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	628	628	628	628	628	
5°	630	627	622	627	626	60
15°	601	602	603	610	610	169
25°	546	553	561	571	574	251
35°	471	486	503	523	530	294
45°	386	411	442	470	480	298
55°	296	329	376	408	420	264
65°	202	247	300	336	350	201
75°	112	163	221	259	272	118
85°	33	89	148	184	198	35
90°	10	75	142	182	197	9
95°	78	88	147	186	197	92
105°	336	378	145	187	203	360
115°	631	662	728	273	181	621
125°	889	905	953	984	996	792
135°	1098	1116	1135	1163	1170	848
145°	1273	1273	1290	1303	1303	796
155°	1402	1393	1405	1411	1403	646
165°	1477	1471	1474	1480	1474	417
175°	1511	1504	1505	1512	1502	144
180°	1507	1507	1507	1507	1507	



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CANDELA DISTRIBUTION (FULL):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
0°	628.1	628.1	628.1	628.1	628.1	628.1	628.1	628.1	628.1	628.1	628.1
2.5°	631.8	631.2	630.8	630.3	629.8	629.0	627.9	626.7	625.6	624.5	625.3
5°	629.9	629.3	628.7	628.1	627.5	626.6	625.4	624.2	622.9	621.7	622.9
7.5°	624.3	623.8	623.5	623.0	622.7	622.0	621.1	620.1	619.2	618.3	619.7
10°	619.9	619.5	619.1	618.7	618.3	617.8	617.2	616.6	616.0	615.4	617.0
12.5°	612.6	612.7	612.8	612.9	613.0	612.8	612.3	611.9	611.4	611.0	612.6
15°	600.8	601.2	601.6	602.0	602.4	602.6	602.6	602.6	602.6	602.6	604.4
17.5°	585.5	586.4	587.2	588.1	588.9	589.7	590.3	590.9	591.6	592.3	594.1
20°	575.3	576.3	577.3	578.4	579.3	580.2	581.0	581.9	582.7	583.5	585.8
22.5°	564.4	565.5	566.8	567.9	569.1	570.2	571.4	572.5	573.6	574.8	577.0
25°	546.2	547.6	549.0	550.5	551.9	553.5	555.3	557.1	558.9	560.7	563.2
27.5°	524.3	526.6	529.0	531.3	533.6	535.8	538.0	540.1	542.2	544.4	547.4
30°	509.8	512.4	515.1	517.6	520.3	522.9	525.6	528.2	530.8	533.4	536.6
32.5°	493.7	496.7	499.6	502.6	505.6	508.6	511.8	514.8	517.9	521.0	524.8
35°	470.6	474.0	477.5	480.9	484.4	488.0	491.9	495.7	499.5	503.4	507.8
37.5°	445.5	449.5	453.4	457.4	461.4	465.8	470.8	475.8	480.7	485.7	490.7
40°	428.7	433.2	437.7	442.1	446.6	451.5	457.0	462.4	467.9	473.3	478.6
42.5°	412.8	417.1	421.6	426.1	430.5	435.9	442.2	448.4	454.7	461.0	466.7
45°	385.9	391.5	396.9	402.3	407.8	414.1	421.2	428.3	435.3	442.4	448.7
47.5°	359.5	365.5	371.5	377.4	383.3	390.5	398.8	407.1	415.4	423.7	430.3
50°	341.3	347.7	353.9	360.2	366.4	374.2	383.3	392.4	401.4	410.5	417.4
52.5°	323.9	330.5	337.1	343.7	350.3	358.4	367.9	377.6	387.1	396.7	403.8
55°	295.9	303.1	310.4	317.7	324.9	333.9	344.4	354.9	365.4	375.9	383.3
57.5°	268.1	276.4	284.6	292.8	301.0	310.5	321.2	331.9	342.7	353.4	361.2
60°	248.5	257.2	265.9	274.6	283.3	293.5	305.0	316.5	328.0	339.6	347.2
62.5°	231.0	240.0	249.1	258.1	267.2	277.4	288.9	300.4	312.0	323.5	331.7
65°	202.1	212.0	221.9	231.8	241.7	252.6	264.6	276.5	288.5	300.4	308.7
67.5°	175.5	185.8	196.3	206.6	217.0	228.2	240.4	252.6	264.8	277.1	285.4
70°	156.6	167.1	177.6	188.2	198.7	210.2	222.7	235.2	247.8	260.4	269.0
72.5°	139.1	149.9	160.8	171.7	182.4	194.2	207.0	219.6	232.4	245.0	253.6
75°	112.0	123.3	134.6	146.0	157.3	169.4	182.4	195.3	208.2	221.2	229.9
77.5°	85.8	97.6	109.5	121.3	133.1	145.7	158.8	172.0	185.1	198.2	207.0
80°	68.3	80.6	92.9	105.3	117.6	130.4	143.6	156.7	169.8	183.0	191.5
82.5°	53.7	65.9	78.0	90.2	102.5	115.1	128.5	141.8	155.1	168.4	176.9
85°	32.8	45.3	57.9	70.4	82.9	95.7	108.6	121.5	134.6	147.5	156.0
87.5°	18.1	30.7	43.2	55.8	68.4	81.4	94.7	108.1	121.4	134.7	143.2
90°	10.2	24.6	39.0	53.4	67.8	82.4	97.3	112.2	127.1	142.0	151.3
92.5°	30.4	41.1	51.8	62.4	73.1	85.2	98.6	112.1	125.5	138.9	147.5
95°	78.2	79.7	81.2	82.8	84.2	91.8	105.8	119.6	133.4	147.2	156.1
97.5°	147.0	133.0	119.0	104.9	90.8	91.5	107.1	122.6	138.2	153.8	162.3
100°	199.5	173.7	148.0	122.3	96.6	91.4	106.8	122.3	137.8	153.2	162.6
102.5°	256.3	256.1	255.9	255.7	255.6	243.7	220.3	196.8	173.3	149.9	159.7
105°	336.2	349.3	362.4	375.6	388.7	367.5	311.8	256.1	200.5	144.8	154.5
107.5°	428.3	438.8	449.3	459.9	470.5	441.1	371.8	302.6	233.3	164.0	168.1
110°	486.9	496.0	505.2	514.2	523.4	497.9	437.7	377.6	317.4	257.3	239.6



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CANDELA DISTRIBUTION (continued):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
112.5°	542.7	550.6	558.6	566.4	574.4	574.4	566.5	558.6	550.7	542.9	460.8
115°	630.9	637.2	643.5	649.9	656.2	667.0	682.2	697.3	712.5	727.6	621.4
117.5°	708.7	714.8	720.9	726.9	732.9	742.3	754.8	767.4	780.0	792.6	771.4
120°	766.2	770.7	775.2	779.6	784.1	792.6	804.9	817.4	829.9	842.3	850.9
122.5°	815.1	819.3	823.5	827.6	831.8	840.0	852.4	864.8	877.1	889.5	896.7
125°	888.7	891.8	894.9	898.1	901.3	908.4	919.4	930.5	941.6	952.7	959.8
127.5°	956.0	959.3	962.6	965.9	969.2	975.2	983.8	992.5	1001.1	1009.9	1017.4
130°	998.8	1002.5	1006.1	1009.9	1013.5	1018.8	1025.7	1032.6	1039.6	1046.4	1054.0
132.5°	1042.4	1045.5	1048.7	1051.7	1054.8	1059.4	1065.2	1071.2	1077.2	1083.1	1090.1
135°	1098.2	1102.2	1106.0	1109.9	1113.7	1117.8	1122.0	1126.2	1130.4	1134.6	1141.3
137.5°	1155.7	1158.3	1161.0	1163.7	1166.4	1169.3	1172.7	1176.1	1179.5	1182.8	1188.9
140°	1193.1	1194.9	1196.6	1198.4	1200.1	1202.5	1205.6	1208.6	1211.7	1214.8	1220.2
142.5°	1224.6	1226.1	1227.6	1229.2	1230.7	1233.1	1236.2	1239.3	1242.5	1245.6	1250.2
145°	1272.9	1272.7	1272.5	1272.2	1272.0	1273.9	1278.1	1282.2	1286.3	1290.4	1293.3
147.5°	1315.9	1315.0	1314.1	1313.1	1312.2	1313.8	1317.9	1322.0	1326.1	1330.1	1331.5
150°	1343.9	1342.2	1340.5	1338.7	1337.0	1338.2	1342.0	1345.9	1349.8	1353.7	1355.1
152.5°	1367.4	1365.6	1363.6	1361.7	1359.9	1360.8	1364.4	1368.2	1371.8	1375.5	1377.0
155°	1401.7	1399.5	1397.3	1395.1	1392.9	1393.3	1396.2	1399.1	1402.0	1405.0	1406.4
157.5°	1428.5	1426.6	1424.8	1423.0	1421.1	1421.2	1423.3	1425.3	1427.4	1429.4	1431.0
160°	1444.2	1442.8	1441.3	1439.8	1438.4	1438.4	1439.8	1441.3	1442.8	1444.2	1445.6
162.5°	1458.2	1456.7	1455.3	1453.8	1452.3	1452.2	1453.5	1454.7	1456.1	1457.3	1458.9
165°	1476.9	1475.5	1474.0	1472.6	1471.1	1470.8	1471.5	1472.2	1472.9	1473.6	1475.3
167.5°	1490.9	1489.4	1488.0	1486.6	1485.1	1484.7	1485.4	1486.0	1486.7	1487.4	1489.1
170°	1498.8	1497.3	1495.8	1494.4	1492.9	1492.5	1492.9	1493.4	1493.9	1494.4	1496.1
172.5°	1504.0	1502.5	1501.1	1499.6	1498.2	1497.7	1498.2	1498.6	1499.1	1499.6	1501.3
175°	1510.7	1509.0	1507.3	1505.7	1504.0	1503.3	1503.9	1504.3	1504.9	1505.3	1507.0
177.5°	1511.8	1510.5	1509.1	1507.8	1506.4	1505.8	1506.0	1506.2	1506.4	1506.6	1508.0
180°	1507.4	1507.4	1507.4	1507.4	1507.4	1507.4	1507.4	1507.4	1507.4	1507.4	1507.4



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CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
0°	628.1	628.1	628.1	628.1	628.1	628.1	628.1	628.1
2.5°	626.1	626.9	627.7	627.9	627.6	627.3	627.0	626.7
5°	624.2	625.4	626.6	627.1	626.9	626.7	626.5	626.2
7.5°	621.2	622.7	624.1	624.7	624.6	624.3	624.1	623.9
10°	618.6	620.2	621.9	622.5	622.3	622.1	622.0	621.7
12.5°	614.2	615.8	617.5	618.1	618.0	617.8	617.6	617.3
15°	606.3	608.1	609.9	610.7	610.6	610.3	610.1	609.9
17.5°	596.0	598.0	599.9	600.8	600.8	600.8	600.8	600.8
20°	588.0	590.2	592.4	593.5	593.5	593.5	593.5	593.5
22.5°	579.3	581.5	583.6	585.0	585.2	585.6	585.9	586.2
25°	565.6	568.0	570.4	571.9	572.6	573.2	573.8	574.4
27.5°	550.5	553.6	556.7	558.4	558.8	559.3	559.7	560.2
30°	539.9	543.1	546.4	548.3	548.9	549.6	550.1	550.7
32.5°	528.5	532.3	535.9	538.3	539.5	540.6	541.6	542.7
35°	512.3	516.7	521.2	524.1	525.6	527.0	528.3	529.8
37.5°	495.6	500.5	505.5	508.7	510.2	511.7	513.2	514.7
40°	483.8	489.1	494.4	497.9	499.7	501.6	503.4	505.2
42.5°	472.4	478.2	483.9	487.8	489.5	491.4	493.2	495.0
45°	455.0	461.2	467.5	471.6	473.7	475.7	477.7	479.7
47.5°	436.8	443.4	449.9	454.2	456.5	458.7	460.9	463.2
50°	424.3	431.1	438.1	442.6	444.9	447.1	449.2	451.5
52.5°	410.8	417.9	424.9	429.6	431.9	434.4	436.8	439.2
55°	390.5	397.8	405.1	410.0	412.7	415.3	417.9	420.5
57.5°	369.1	376.9	384.8	390.0	392.7	395.4	398.1	400.7
60°	354.9	362.6	370.3	375.6	378.4	381.2	384.1	386.9
62.5°	339.8	348.0	356.2	361.7	364.3	366.9	369.6	372.3
65°	317.0	325.3	333.6	339.0	341.7	344.3	347.0	349.6
67.5°	293.8	302.2	310.6	316.2	318.9	321.6	324.4	327.2
70°	277.8	286.4	295.2	300.7	303.1	305.6	308.0	310.4
72.5°	262.2	270.6	279.2	284.9	287.8	290.8	293.6	296.6
75°	238.6	247.3	256.0	261.6	264.3	266.9	269.6	272.2
77.5°	215.6	224.3	232.9	238.6	241.5	244.3	247.1	249.9
80°	199.9	208.5	217.0	222.7	225.4	228.3	231.1	234.0
82.5°	185.4	193.9	202.4	207.9	210.6	213.3	216.0	218.6
85°	164.4	173.0	181.5	187.1	189.9	192.8	195.6	198.4
87.5°	151.7	160.2	168.7	174.3	177.0	179.7	182.4	185.0
90°	160.6	169.9	179.2	185.3	188.2	191.1	194.0	197.0
92.5°	156.0	164.6	173.2	178.8	181.6	184.2	186.9	189.7
95°	165.1	173.9	182.8	188.3	190.6	192.7	194.9	197.1
97.5°	170.7	179.1	187.6	193.1	195.8	198.5	201.2	203.9
100°	172.0	181.5	190.9	197.0	199.7	202.4	205.1	207.8
102.5°	169.5	179.4	189.2	195.6	198.5	201.4	204.3	207.2
105°	164.3	174.1	183.8	190.3	193.5	196.7	199.8	203.0
107.5°	172.1	176.2	180.3	184.0	187.2	190.3	193.5	196.7
110°	221.8	204.0	186.3	179.0	182.2	185.4	188.6	191.8



TEST NUMBER: P331545-940

CATALOG NUMBER: S122DIW-S675D1240U940-4F0-1E-UDD-D

CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
112.5°	378.9	296.9	215.0	175.6	178.5	181.6	184.6	187.5
115°	515.3	409.1	303.0	242.3	227.0	211.9	196.6	181.4
117.5°	750.3	729.2	707.9	669.8	614.5	559.2	503.9	448.6
120°	859.5	868.1	876.6	865.7	835.2	804.7	774.2	743.7
122.5°	903.9	911.2	918.5	919.8	915.4	911.0	906.5	902.1
125°	967.0	974.1	981.3	986.1	988.7	991.2	993.8	996.3
127.5°	1024.8	1032.2	1039.7	1044.5	1046.4	1048.3	1050.3	1052.2
130°	1061.5	1069.1	1076.6	1081.0	1082.4	1083.8	1085.1	1086.5
132.5°	1097.1	1104.0	1111.0	1115.2	1116.5	1117.9	1119.3	1120.7
135°	1148.0	1154.7	1161.3	1165.2	1166.4	1167.5	1168.6	1169.7
137.5°	1195.0	1201.0	1207.2	1210.5	1211.0	1211.6	1212.2	1212.7
140°	1225.7	1231.0	1236.4	1239.2	1239.2	1239.2	1239.2	1239.2
142.5°	1254.7	1259.4	1263.9	1266.1	1266.0	1265.8	1265.7	1265.5
145°	1296.2	1299.1	1302.1	1303.4	1303.2	1303.0	1302.8	1302.6
147.5°	1332.9	1334.4	1335.8	1336.2	1335.7	1335.2	1334.6	1334.1
150°	1356.6	1358.1	1359.5	1359.6	1358.4	1357.2	1355.9	1354.8
152.5°	1378.4	1379.8	1381.3	1381.3	1379.7	1378.0	1376.4	1374.8
155°	1407.8	1409.3	1410.8	1410.5	1408.5	1406.7	1404.7	1402.8
157.5°	1432.7	1434.3	1436.0	1435.8	1434.0	1432.1	1430.2	1428.3
160°	1447.2	1448.6	1450.0	1449.9	1448.2	1446.5	1444.8	1443.1
162.5°	1460.6	1462.2	1463.9	1463.7	1461.6	1459.5	1457.4	1455.4
165°	1477.0	1478.7	1480.4	1480.4	1478.7	1477.0	1475.3	1473.6
167.5°	1490.8	1492.5	1494.2	1494.0	1491.7	1489.6	1487.4	1485.2
170°	1497.8	1499.5	1501.2	1500.9	1498.8	1496.6	1494.4	1492.2
172.5°	1503.0	1504.7	1506.4	1506.2	1504.0	1501.8	1499.6	1497.4
175°	1508.7	1510.4	1512.1	1511.7	1509.3	1506.9	1504.4	1502.0
177.5°	1509.3	1510.6	1512.1	1511.8	1510.1	1508.3	1506.6	1504.9
180°	1507.4	1507.4	1507.4	1507.4	1507.4	1507.4	1507.4	1507.4

(END OF REPORT)