

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: P331547-940

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

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P331547-940
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-F
Description: DEFINE 2 DIRECT-INDIRECT WALL MOUNT LED LUMINAIRE
DOWNLIGHT 675 LUMENS PER FOOT, FLUSH SATIN WHITE DIFFUSER
UPLIGHT 1240 LUMENS PER FOOT, NO LENS
Light Source: -
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 6830.0 lumens
Efficiency: N/A
Efficacy: 111.2 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

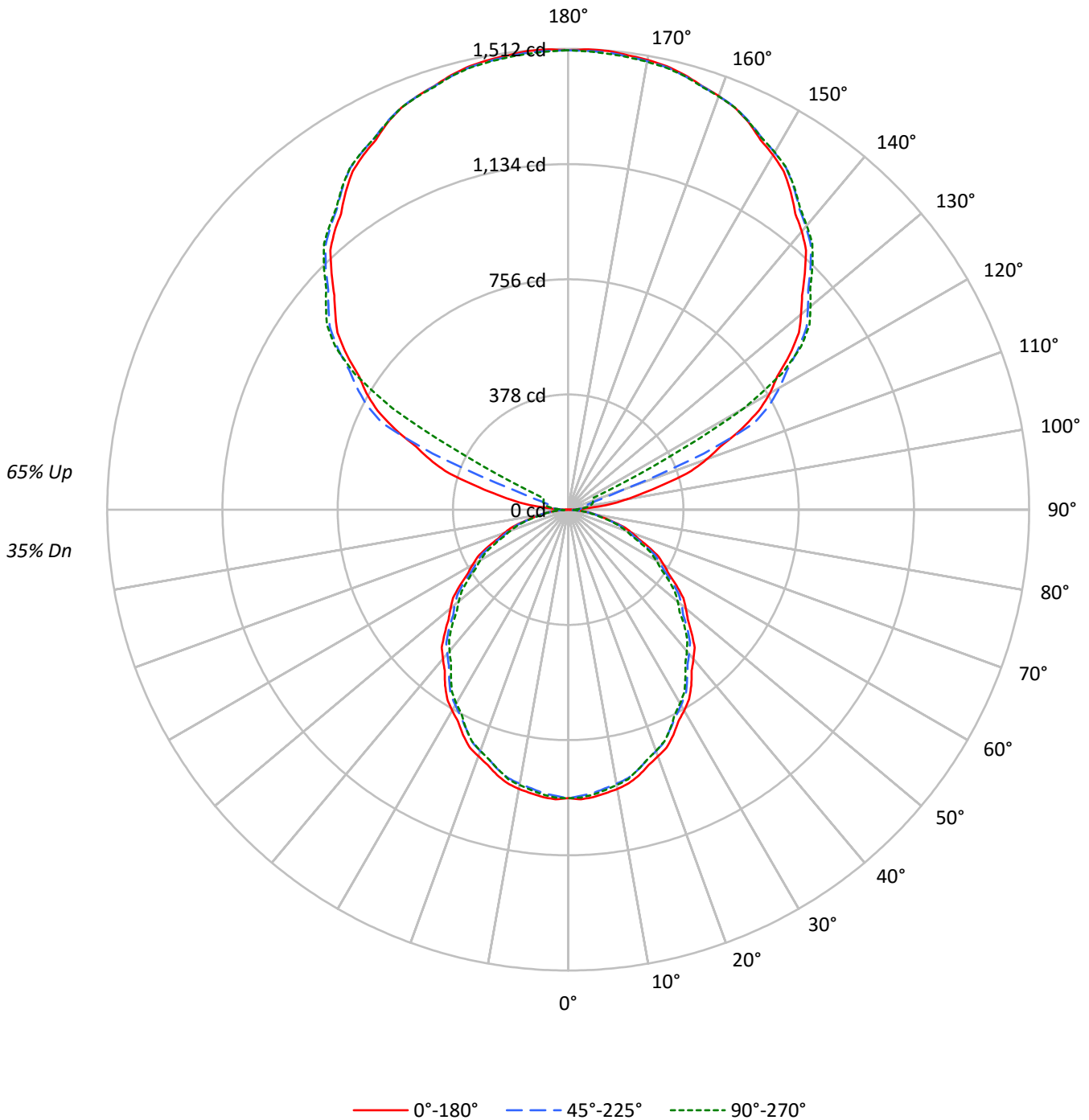
Input Watts (W): 61.4
Input Voltage (V): 120
Input Current (A_{in}): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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	0
RCR																		
0	104	104	104	104	94	94	94	94	75	75	75	58	58	58	43	43	43	35
1	94	90	86	83	85	82	79	76	66	64	62	51	50	48	38	37	36	30
2	86	79	73	68	78	71	66	62	58	54	51	45	42	40	33	32	30	25
3	78	69	62	56	71	63	57	52	51	46	43	40	37	34	29	27	26	21
4	72	61	53	48	65	56	49	44	45	40	36	35	32	29	26	24	22	18
5	66	54	46	41	59	50	43	37	40	35	31	32	28	25	24	21	19	16
6	60	49	41	35	54	44	37	32	36	31	27	29	25	22	21	19	17	14
7	56	44	36	31	50	40	33	28	33	28	24	26	22	19	20	17	15	12
8	52	40	32	27	47	36	30	25	30	25	21	24	20	17	18	15	13	11
9	48	36	29	24	43	33	27	22	27	22	19	22	18	15	17	14	12	10
10	45	33	26	21	41	30	24	20	25	20	17	20	16	14	15	13	11	9

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	15285	15285	15285
5°	15344	15123	15211
10°	15252	14969	15044
15°	15064	14775	14760
20°	14795	14483	14467
25°	14530	14125	14125
30°	14188	13798	13679
35°	13868	13403	13204
40°	13468	13009	12760
45°	13075	12618	12305
50°	12645	12210	11776
55°	12197	11738	11299
60°	11699	11170	10756
65°	11163	10609	10120
70°	10485	9928	9456
75°	9538	9145	8914
80°	8461	8210	7782
85°	6928	6576	5891



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	89.0	1.3
10°-20°	250.5	3.7
20°-30°	368.2	5.4
30°-40°	427.7	6.3
40°-50°	427.2	6.3
50°-60°	372.6	5.5
60°-70°	275.5	4.0
70°-80°	156.0	2.3
80°-90°	45.7	0.7
90°-100°	50.3	0.7
100°-110°	184.4	2.7
110°-120°	492.9	7.2
120°-130°	813.7	11.9
130°-140°	865.3	12.7
140°-150°	804.3	11.8
150°-160°	646.7	9.5
160°-170°	416.7	6.1
170°-180°	143.4	2.1
0°-30°	707.7	10.4
0°-40°	1135.4	16.6
0°-60°	1935.1	28.3
0°-90°	2412.3	35.3
90°-120°	727.6	10.7
90°-150°	3210.9	47.0
90°-180°	4418.0	64.7
0°-180°	6830.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	947	947	947	947	947	
5°	947	943	933	940	938	90
15°	901	895	884	887	883	254
25°	816	808	793	794	793	375
35°	704	694	680	675	670	439
45°	573	566	553	543	539	442
55°	433	428	417	406	401	387
65°	292	286	278	270	265	289
75°	153	151	147	142	143	163
85°	37	36	36	33	32	43
90°	1	13	22	27	29	5
95°	71	37	42	48	47	87
105°	332	346	66	78	83	354
115°	627	646	673	192	89	617
125°	887	901	922	929	933	790
135°	1097	1114	1125	1135	1133	847
145°	1273	1273	1290	1297	1293	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°	946.7	946.7	946.7	946.7	946.7	946.7	946.7	946.7	946.7	946.7	946.7
2.5°	951.1	950.3	949.5	948.7	947.9	946.6	944.8	943.0	941.2	939.4	941.0
5°	946.7	945.9	945.1	944.3	943.5	942.0	939.8	937.5	935.3	933.1	934.7
7.5°	938.3	937.1	935.9	934.6	933.4	931.6	929.3	927.0	924.8	922.5	924.1
10°	930.3	928.9	927.5	926.0	924.7	922.7	920.3	917.9	915.4	913.0	914.6
12.5°	919.4	918.2	916.9	915.6	914.4	912.6	910.1	907.7	905.3	902.9	904.0
15°	901.2	900.0	898.8	897.6	896.3	894.4	891.8	889.1	886.5	883.9	884.8
17.5°	877.9	876.6	875.5	874.2	873.1	871.1	868.4	865.8	863.1	860.4	861.4
20°	861.1	860.0	858.7	857.5	856.3	854.3	851.4	848.6	845.8	842.9	843.6
22.5°	844.4	842.7	841.0	839.3	837.6	835.4	832.8	830.1	827.4	824.7	824.8
25°	815.6	814.0	812.4	810.7	809.1	806.6	803.2	799.8	796.3	792.9	793.3
27.5°	782.8	781.4	780.0	778.5	777.0	775.0	772.2	769.5	766.8	764.1	763.5
30°	761.0	759.4	757.8	756.2	754.6	752.2	749.2	746.2	743.2	740.1	739.5
32.5°	737.7	736.4	735.1	733.8	732.5	730.3	727.1	723.9	720.7	717.5	716.4
35°	703.6	701.7	699.6	697.6	695.5	692.9	689.7	686.4	683.2	680.0	678.8
37.5°	665.2	663.4	661.6	659.9	658.2	655.6	652.4	649.2	646.0	642.7	641.1
40°	639.0	637.4	635.8	634.2	632.6	630.2	626.9	623.7	620.5	617.2	615.4
42.5°	613.6	611.9	610.3	608.7	607.1	604.7	601.4	598.2	594.9	591.7	589.7
45°	572.6	571.1	569.7	568.4	566.9	564.7	561.7	558.7	555.6	552.6	550.4
47.5°	531.8	530.5	529.1	527.8	526.5	524.2	521.0	517.9	514.8	511.6	509.3
50°	503.4	502.4	501.4	500.3	499.4	497.4	494.6	491.8	488.9	486.1	483.3
52.5°	475.7	474.4	473.1	471.7	470.4	468.4	465.7	463.1	460.4	457.7	455.4
55°	433.3	432.1	430.9	429.6	428.5	426.6	424.2	421.8	419.4	417.0	414.5
57.5°	390.7	389.8	388.8	387.8	386.8	385.0	382.4	379.7	377.0	374.3	371.9
60°	362.3	361.5	360.7	359.9	359.1	357.2	354.5	351.6	348.7	345.9	343.7
62.5°	334.7	333.3	332.1	330.7	329.5	327.7	325.6	323.3	321.2	319.0	316.9
65°	292.2	291.0	289.8	288.6	287.3	285.7	283.7	281.7	279.6	277.7	275.8
67.5°	249.1	248.1	247.1	246.1	245.1	243.8	241.9	240.1	238.4	236.5	235.1
70°	222.1	221.3	220.5	219.7	218.9	217.6	215.7	213.9	212.1	210.3	208.8
72.5°	194.5	193.6	192.8	192.0	191.2	190.2	189.0	187.9	186.7	185.5	184.1
75°	152.9	152.5	152.1	151.7	151.3	150.6	149.6	148.6	147.6	146.6	145.3
77.5°	115.8	115.1	114.4	113.7	113.1	112.5	112.1	111.6	111.3	110.8	110.3
80°	91.0	90.9	90.6	90.4	90.2	89.9	89.5	89.1	88.7	88.3	87.7
82.5°	67.8	67.7	67.7	67.6	67.6	67.4	67.1	67.0	66.7	66.4	65.7
85°	37.4	37.1	36.9	36.7	36.5	36.3	36.1	35.9	35.7	35.5	34.9
87.5°	13.3	13.6	13.7	14.0	14.2	14.3	14.4	14.4	14.5	14.5	14.4
90°	1.1	3.7	6.4	9.1	11.8	14.1	16.0	17.9	19.9	21.8	23.0
92.5°	22.0	21.8	21.6	21.3	21.0	21.4	22.4	23.4	24.3	25.3	25.9
95°	70.9	62.9	54.9	46.9	38.9	35.8	37.5	39.1	40.8	42.5	43.8
97.5°	140.7	118.2	95.6	73.1	50.6	41.2	45.1	49.0	53.1	57.0	57.9
100°	193.1	159.9	126.6	93.5	60.3	45.7	49.8	53.9	58.1	62.2	64.1
102.5°	250.7	243.6	236.6	229.6	222.6	201.8	167.3	132.9	98.4	63.9	66.4
105°	331.6	338.9	346.2	353.4	360.7	331.3	265.1	198.9	132.7	66.5	69.2
107.5°	423.9	429.7	435.6	441.5	447.4	410.6	331.3	251.9	172.5	93.2	90.4
110°	483.2	488.3	493.4	498.5	503.5	471.1	401.1	331.0	260.9	190.9	166.7



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CANDELA DISTRIBUTION (continued):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
112.5°	539.0	543.6	548.0	552.6	557.1	550.7	533.4	516.1	498.8	481.4	393.1
115°	627.2	631.3	635.4	639.5	643.7	648.8	654.9	660.9	667.0	673.1	560.8
117.5°	706.0	710.6	715.2	719.8	724.4	728.8	732.9	737.1	741.3	745.5	718.3
120°	763.6	767.2	770.8	774.5	778.1	782.1	786.5	790.9	795.2	799.5	802.5
122.5°	812.4	816.3	820.1	823.9	827.8	832.1	836.8	841.5	846.3	851.0	852.7
125°	886.8	889.9	893.1	896.3	899.4	903.3	907.9	912.5	917.1	921.8	923.5
127.5°	954.2	957.7	961.2	964.7	968.2	971.7	975.1	978.6	982.0	985.4	987.9
130°	997.0	1000.9	1004.8	1008.6	1012.5	1015.7	1018.4	1021.1	1023.8	1026.4	1029.1
132.5°	1040.6	1043.9	1047.2	1050.5	1053.8	1056.8	1059.4	1062.1	1064.8	1067.5	1069.7
135°	1097.3	1101.2	1105.1	1108.9	1112.9	1115.9	1118.0	1120.3	1122.4	1124.6	1127.0
137.5°	1154.7	1157.4	1160.1	1162.9	1165.6	1168.1	1170.6	1173.1	1175.5	1178.0	1180.4
140°	1192.2	1194.2	1196.1	1198.0	1200.0	1202.3	1205.0	1207.6	1210.3	1213.0	1215.1
142.5°	1223.7	1225.4	1227.2	1228.9	1230.7	1233.1	1236.1	1239.1	1242.2	1245.3	1247.2
145°	1272.9	1272.7	1272.5	1272.2	1272.0	1273.9	1278.1	1282.2	1286.3	1290.4	1292.1
147.5°	1315.9	1315.0	1314.1	1313.1	1312.2	1313.8	1317.9	1322.0	1326.1	1330.1	1331.4
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°	946.7	946.7	946.7	946.7	946.7	946.7	946.7	946.7
2.5°	942.6	944.3	945.9	946.6	946.2	945.9	945.6	945.3
5°	936.3	937.9	939.5	940.1	939.8	939.3	939.0	938.5
7.5°	925.8	927.4	929.0	929.5	929.1	928.7	928.3	927.8
10°	916.2	917.9	919.5	920.0	919.4	918.8	918.2	917.6
12.5°	905.1	906.2	907.4	907.7	907.2	906.9	906.4	906.0
15°	885.6	886.4	887.2	887.1	886.0	885.0	884.0	883.0
17.5°	862.3	863.2	864.2	864.2	863.2	862.2	861.2	860.2
20°	844.2	844.8	845.3	845.3	844.5	843.6	842.8	842.0
22.5°	825.0	825.1	825.2	825.0	824.6	824.0	823.6	823.1
25°	793.7	794.1	794.5	794.5	794.1	793.7	793.3	792.9
27.5°	762.9	762.3	761.7	760.9	759.9	758.9	758.0	757.0
30°	738.9	738.2	737.6	736.9	736.1	735.3	734.5	733.7
32.5°	715.3	714.3	713.1	712.2	711.4	710.6	709.7	708.9
35°	677.6	676.4	675.1	674.0	673.1	672.0	671.0	669.9
37.5°	639.7	638.2	636.7	635.4	634.5	633.5	632.6	631.6
40°	613.6	611.7	609.9	608.6	607.8	607.0	606.2	605.4
42.5°	587.7	585.8	583.8	582.2	581.0	580.0	578.8	577.7
45°	548.1	545.9	543.7	542.2	541.4	540.6	539.8	538.9
47.5°	506.9	504.5	502.2	500.4	499.3	498.1	497.0	495.8
50°	480.5	477.6	474.7	472.9	471.8	470.8	469.8	468.8
52.5°	453.0	450.7	448.4	446.5	445.1	443.8	442.5	441.1
55°	412.1	409.7	407.2	405.5	404.5	403.5	402.4	401.4
57.5°	369.5	367.1	364.8	363.2	362.4	361.7	360.9	360.1
60°	341.4	339.2	337.0	335.6	335.0	334.4	333.8	333.1
62.5°	314.9	312.8	310.8	309.3	308.5	307.7	307.0	306.2
65°	274.0	272.2	270.4	268.9	268.0	266.9	265.9	264.9
67.5°	233.6	232.3	230.9	229.7	228.9	228.1	227.3	226.5
70°	207.4	206.1	204.6	203.5	202.7	201.9	201.1	200.3
72.5°	182.7	181.3	179.9	178.8	178.2	177.5	176.9	176.2
75°	144.1	142.9	141.7	141.3	141.7	142.1	142.5	142.9
77.5°	109.7	109.1	108.4	107.9	107.3	106.7	106.2	105.6
80°	87.1	86.5	85.9	85.3	85.0	84.5	84.2	83.7
82.5°	64.9	64.1	63.4	63.0	62.9	62.8	62.7	62.6
85°	34.3	33.7	33.1	32.6	32.5	32.3	32.1	31.8
87.5°	14.1	13.8	13.6	13.5	13.4	13.3	13.2	13.2
90°	24.3	25.4	26.7	27.6	28.0	28.4	29.0	29.4
92.5°	26.6	27.2	27.8	28.3	28.5	28.9	29.2	29.4
95°	44.9	46.2	47.3	47.9	47.6	47.3	47.2	46.9
97.5°	58.9	59.8	60.8	61.4	61.7	62.1	62.3	62.6
100°	66.1	67.9	69.9	71.2	71.6	72.1	72.6	73.1
102.5°	68.9	71.5	74.0	75.6	76.2	77.0	77.7	78.3
105°	71.9	74.5	77.2	79.0	80.0	81.0	81.9	82.9
107.5°	87.7	85.0	82.3	81.4	82.4	83.4	84.4	85.3
110°	142.4	118.2	93.9	82.3	83.3	84.3	85.2	86.1



TEST NUMBER: P331547-940

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

CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
112.5°	304.6	216.2	127.8	83.9	84.7	85.5	86.2	87.0
115°	448.5	336.4	224.1	159.3	141.8	124.4	106.9	89.4
117.5°	691.2	664.0	636.9	594.6	537.3	479.9	422.6	365.2
120°	805.4	808.2	811.2	796.3	763.6	730.8	698.1	665.4
122.5°	854.5	856.3	858.0	855.7	849.4	843.0	836.7	830.3
125°	925.1	926.8	928.5	929.7	930.4	931.2	931.9	932.6
127.5°	990.3	992.8	995.3	996.7	996.8	996.9	997.0	997.2
130°	1031.8	1034.5	1037.1	1038.3	1038.0	1037.9	1037.6	1037.3
132.5°	1072.0	1074.2	1076.6	1077.5	1077.4	1077.1	1076.8	1076.7
135°	1129.4	1131.8	1134.3	1135.2	1134.8	1134.3	1133.8	1133.4
137.5°	1182.8	1185.2	1187.6	1188.3	1187.5	1186.7	1185.9	1185.0
140°	1217.4	1219.5	1221.7	1222.2	1220.9	1219.8	1218.5	1217.4
142.5°	1249.2	1251.2	1253.2	1253.6	1252.4	1251.2	1249.9	1248.8
145°	1293.8	1295.5	1297.2	1297.4	1296.2	1295.0	1293.8	1292.6
147.5°	1332.7	1333.9	1335.2	1335.2	1334.3	1333.2	1332.2	1331.2
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)