

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: P331539

Luminaire Tested: **S122DIW-S675D970U835-4F0-1E-UDD-D**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P331539
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-S675D970U835-4F0-1E-UDD-D
Description: DEFINE 2 DIRECT-INDIRECT WALL MOUNT LED LUMINAIRE
DOWNLIGHT 675 LUMENS PER FOOT, DROP SATIN WHITE DIFFUSER
UPLIGHT 970 LUMENS PER FOOT, NO LENS
Light Source: -
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 6560.4 lumens
Efficiency: N/A
Efficacy: 124.7 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

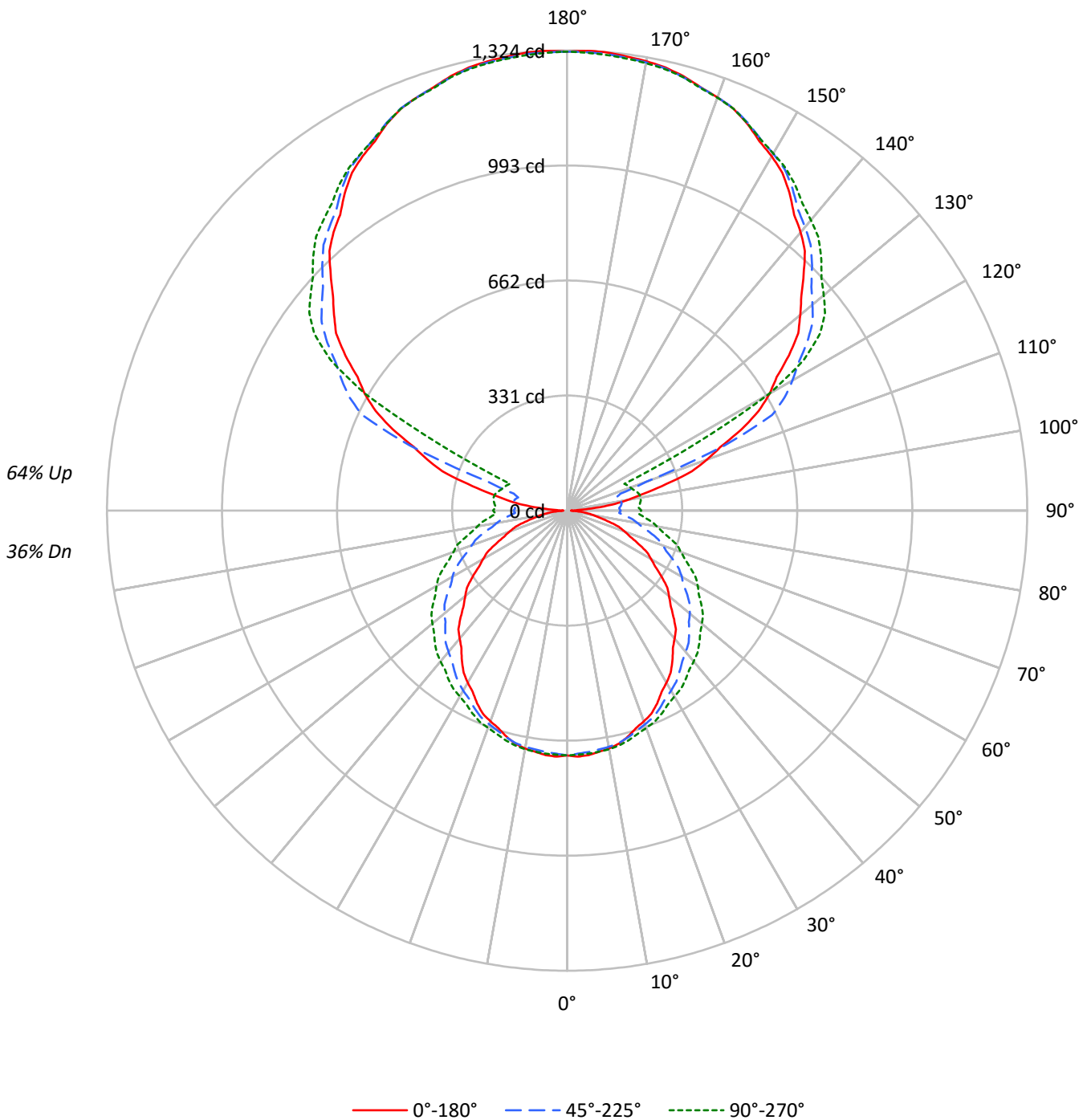
Input Watts (W): 52.6
Input Voltage (V): 120
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



TEST NUMBER: P331539

CATALOG NUMBER: S122DIW-S675D970U835-4F0-1E-UDD-D

Luminous Intensity Polar Plot





TEST NUMBER: P331539

CATALOG NUMBER: S122DIW-S675D970U835-4F0-1E-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	50	30	10	0	
RCR																						
0	104	104	104	104	94	94	94	94	76	76	76	59	59	59	44	44	44	36				
1	94	89	85	81	84	80	77	74	65	62	60	50	48	47	37	36	35	28				
2	85	77	71	65	76	70	64	59	56	52	49	43	41	38	32	30	28	23				
3	77	67	60	54	69	61	54	49	49	44	40	38	35	32	28	26	24	19				
4	70	59	51	45	63	54	47	41	43	38	34	34	30	27	25	22	20	16				
5	64	53	44	38	58	48	40	35	39	33	29	30	26	23	22	19	17	14				
6	59	47	39	33	53	43	35	30	35	29	25	27	23	20	20	17	15	12				
7	55	42	34	29	49	38	31	26	31	26	22	24	20	18	18	15	13	10				
8	50	38	30	25	45	35	28	23	28	23	19	22	18	15	17	14	12	9				
9	47	35	27	22	42	32	25	20	26	21	17	20	17	14	15	13	11	8				
10	44	32	24	20	39	29	23	18	24	19	15	19	15	12	14	11	10	7				

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	11373	11373	11373
5°	11428	10947	10905
10°	11356	10624	10504
15°	11200	10282	10083
20°	11002	9915	9676
25°	10807	9560	9307
30°	10532	9197	8935
35°	10254	8846	8673
40°	9960	8547	8413
45°	9681	8279	8190
50°	9382	8037	7969
55°	9070	7777	7745
60°	8686	7508	7509
65°	8287	7191	7227
70°	7841	6852	6923
75°	7270	6518	6643
80°	6370	6177	6361
85°	5506	5882	6138



TEST NUMBER: P331539

CATALOG NUMBER: S122DIW-S675D970U835-4F0-1E-UDD-D

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	66.7	1.0
10°-20°	191.4	2.9
20°-30°	290.0	4.4
30°-40°	353.3	5.4
40°-50°	380.0	5.8
50°-60°	369.1	5.6
60°-70°	322.3	4.9
70°-80°	248.1	3.8
80°-90°	169.8	2.6
90°-100°	158.8	2.4
100°-110°	245.3	3.7
110°-120°	487.1	7.4
120°-130°	743.7	11.3
130°-140°	771.0	11.8
140°-150°	706.8	10.8
150°-160°	566.5	8.6
160°-170°	365.0	5.6
170°-180°	125.6	1.9
0°-30°	548.2	8.4
0°-40°	901.4	13.7
0°-60°	1650.6	25.2
0°-90°	2390.7	36.4
90°-120°	891.2	13.6
90°-150°	3112.6	47.4
90°-180°	4170.0	63.6
0°-180°	6560.4	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	704	704	704	704	704	
5°	706	703	697	703	702	67
15°	674	676	676	684	684	190
25°	612	620	629	641	644	281
35°	528	545	564	586	594	330
45°	433	461	496	527	538	334
55°	332	369	422	457	472	297
65°	227	277	337	377	392	225
75°	126	183	248	290	305	133
85°	37	100	165	207	222	40
90°	11	81	154	198	214	10
95°	70	90	155	196	210	82
105°	296	339	146	191	207	316
115°	554	583	651	259	182	545
125°	779	793	842	875	888	695
135°	962	978	996	1026	1034	743
145°	1115	1115	1130	1142	1144	697
155°	1228	1220	1231	1236	1229	566
165°	1294	1289	1291	1297	1291	365
175°	1323	1317	1319	1324	1316	126
180°	1320	1320	1320	1320	1320	



TEST NUMBER: P331539

CATALOG NUMBER: S122DIW-S675D970U835-4F0-1E-UDD-D

CANDELA DISTRIBUTION (FULL):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
0°	704.4	704.4	704.4	704.4	704.4	704.4	704.4	704.4	704.4	704.4	704.4
2.5°	708.5	707.9	707.4	706.8	706.3	705.4	704.1	702.8	701.6	700.3	701.2
5°	706.4	705.7	705.1	704.4	703.7	702.7	701.3	700.0	698.6	697.2	698.6
7.5°	700.1	699.6	699.2	698.7	698.3	697.5	696.5	695.4	694.4	693.4	695.0
10°	695.2	694.7	694.3	693.8	693.4	692.8	692.1	691.5	690.8	690.1	691.9
12.5°	687.0	687.1	687.2	687.3	687.4	687.2	686.7	686.2	685.7	685.2	687.0
15°	673.8	674.2	674.7	675.1	675.6	675.8	675.8	675.8	675.8	675.8	677.8
17.5°	656.6	657.6	658.5	659.5	660.4	661.3	662.0	662.7	663.4	664.2	666.3
20°	645.2	646.3	647.4	648.6	649.7	650.7	651.6	652.6	653.5	654.4	656.9
22.5°	632.9	634.2	635.6	636.9	638.2	639.5	640.8	642.0	643.3	644.6	647.1
25°	612.5	614.1	615.7	617.3	618.9	620.7	622.7	624.8	626.8	628.8	631.6
27.5°	588.0	590.6	593.2	595.8	598.4	600.9	603.3	605.7	608.1	610.5	613.9
30°	571.7	574.6	577.6	580.5	583.5	586.4	589.4	592.3	595.3	598.2	601.8
32.5°	553.7	557.0	560.3	563.6	567.0	570.4	573.9	577.3	580.8	584.3	588.5
35°	527.8	531.6	535.5	539.3	543.2	547.3	551.6	555.9	560.2	564.5	569.5
37.5°	499.6	504.1	508.5	512.9	517.4	522.4	528.0	533.6	539.1	544.7	550.3
40°	480.8	485.8	490.8	495.8	500.8	506.3	512.5	518.6	524.7	530.8	536.7
42.5°	462.9	467.8	472.8	477.8	482.8	488.8	495.9	502.9	509.9	517.0	523.4
45°	432.8	439.0	445.1	451.2	457.3	464.4	472.3	480.3	488.2	496.1	503.2
47.5°	403.2	409.9	416.6	423.2	429.9	437.9	447.2	456.5	465.8	475.1	482.5
50°	382.8	389.9	396.9	403.9	410.9	419.6	429.8	440.0	450.2	460.4	468.1
52.5°	363.2	370.6	378.0	385.4	392.8	401.9	412.6	423.4	434.1	444.9	452.8
55°	331.8	339.9	348.1	356.3	364.4	374.4	386.2	398.0	409.8	421.6	429.8
57.5°	300.7	310.0	319.2	328.4	337.6	348.2	360.2	372.2	384.3	396.3	405.1
60°	278.7	288.4	298.2	308.0	317.7	329.1	342.0	354.9	367.8	380.8	389.4
62.5°	259.1	269.2	279.3	289.4	299.6	311.1	324.0	336.9	349.9	362.8	372.0
65°	226.6	237.7	248.9	260.0	271.1	283.3	296.7	310.1	323.5	336.9	346.2
67.5°	196.8	208.4	220.1	231.7	243.3	255.9	269.6	283.3	297.0	310.7	320.1
70°	175.6	187.4	199.2	211.0	222.8	235.7	249.8	263.8	277.9	292.0	301.7
72.5°	156.0	168.1	180.3	192.5	204.6	217.8	232.1	246.3	260.6	274.8	284.4
75°	125.6	138.3	151.0	163.7	176.4	190.0	204.5	219.0	233.5	248.1	257.8
77.5°	96.2	109.5	122.8	136.0	149.3	163.4	178.1	192.9	207.6	222.3	232.1
80°	76.6	90.4	104.2	118.1	131.9	146.2	161.0	175.7	190.4	205.2	214.7
82.5°	60.2	73.9	87.5	101.2	114.9	129.1	144.1	159.0	173.9	188.9	198.4
85°	36.8	50.8	64.9	78.9	93.0	107.3	121.8	136.3	150.9	165.4	174.9
87.5°	20.2	34.2	48.2	62.2	76.2	90.6	105.4	120.3	135.1	150.0	159.5
90°	11.2	26.7	42.2	57.6	73.1	89.0	105.2	121.4	137.6	153.9	164.0
92.5°	28.7	40.7	52.8	64.8	76.8	90.3	105.1	119.9	134.7	149.6	159.0
95°	70.3	73.9	77.6	81.2	84.9	94.3	109.4	124.5	139.6	154.7	164.3
97.5°	130.4	120.1	109.9	99.6	89.3	92.5	109.0	125.5	142.0	158.5	167.7
100°	176.3	155.6	134.9	114.2	93.5	91.3	107.6	123.9	140.2	156.6	166.6
102.5°	225.9	227.4	228.9	230.4	231.9	223.8	205.9	188.1	170.2	152.4	162.8
105°	295.6	308.5	321.5	334.4	347.4	330.8	284.6	238.4	192.3	146.1	156.4
107.5°	376.2	386.6	397.0	407.4	417.8	393.9	335.7	277.5	219.2	161.0	166.3
110°	427.4	436.4	445.4	454.4	463.4	442.7	392.5	342.2	292.0	241.7	227.8



TEST NUMBER: P331539

CATALOG NUMBER: S122DIW-S675D970U835-4F0-1E-UDD-D

CANDELA DISTRIBUTION (continued):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
112.5°	476.3	484.1	491.8	499.6	507.4	508.9	504.3	499.8	495.2	490.6	420.4
115°	553.5	559.6	565.7	571.8	577.9	588.7	604.3	619.8	635.3	650.8	559.3
117.5°	621.5	627.2	632.8	638.5	644.2	653.5	666.6	679.7	692.8	705.9	688.8
120°	671.9	676.0	680.1	684.2	688.3	696.8	709.7	722.6	735.5	748.4	757.3
122.5°	714.7	718.5	722.2	725.9	729.6	737.8	750.5	763.2	775.9	788.6	796.3
125°	778.9	781.6	784.4	787.2	789.9	797.0	808.3	819.5	830.8	842.1	849.7
127.5°	837.9	840.8	843.6	846.4	849.3	855.1	864.0	872.9	881.7	890.6	898.4
130°	875.4	878.6	881.7	884.9	888.1	893.2	900.3	907.4	914.5	921.6	929.4
132.5°	913.6	916.3	918.9	921.6	924.3	928.6	934.6	940.6	946.6	952.6	959.9
135°	962.3	965.7	969.1	972.5	975.9	979.7	983.8	988.0	992.2	996.4	1003.3
137.5°	1012.5	1014.9	1017.2	1019.5	1021.9	1024.6	1027.8	1031.0	1034.1	1037.3	1043.5
140°	1045.4	1046.9	1048.4	1049.8	1051.3	1053.4	1056.2	1059.0	1061.8	1064.6	1070.1
142.5°	1072.9	1074.2	1075.5	1076.8	1078.1	1080.2	1082.9	1085.7	1088.5	1091.2	1095.9
145°	1115.1	1114.9	1114.7	1114.5	1114.3	1116.0	1119.6	1123.2	1126.8	1130.4	1133.2
147.5°	1152.8	1151.9	1151.1	1150.3	1149.5	1150.9	1154.5	1158.0	1161.6	1165.2	1166.5
150°	1177.2	1175.7	1174.2	1172.8	1171.3	1172.2	1175.6	1179.0	1182.4	1185.8	1187.1
152.5°	1197.9	1196.2	1194.5	1192.9	1191.2	1192.0	1195.2	1198.5	1201.7	1204.9	1206.2
155°	1227.9	1225.9	1224.0	1222.1	1220.2	1220.5	1223.1	1225.6	1228.2	1230.7	1232.0
157.5°	1251.4	1249.8	1248.1	1246.5	1244.9	1245.0	1246.8	1248.6	1250.3	1252.1	1253.6
160°	1265.1	1263.9	1262.6	1261.3	1260.0	1260.0	1261.3	1262.6	1263.9	1265.1	1266.4
162.5°	1277.4	1276.1	1274.8	1273.5	1272.3	1272.2	1273.3	1274.4	1275.5	1276.6	1278.0
165°	1293.8	1292.5	1291.2	1290.0	1288.7	1288.4	1289.0	1289.6	1290.3	1290.9	1292.4
167.5°	1306.0	1304.7	1303.5	1302.2	1300.9	1300.6	1301.2	1301.8	1302.4	1303.0	1304.4
170°	1312.9	1311.6	1310.4	1309.1	1307.8	1307.4	1307.8	1308.2	1308.7	1309.1	1310.6
172.5°	1317.5	1316.2	1314.9	1313.7	1312.4	1312.0	1312.4	1312.8	1313.2	1313.7	1315.2
175°	1323.4	1321.9	1320.4	1319.0	1317.5	1316.9	1317.4	1317.8	1318.2	1318.6	1320.1
177.5°	1324.4	1323.2	1322.0	1320.8	1319.6	1319.1	1319.3	1319.4	1319.6	1319.8	1321.0
180°	1320.5	1320.5	1320.5	1320.5	1320.5	1320.5	1320.5	1320.5	1320.5	1320.5	1320.5



TEST NUMBER: P331539

CATALOG NUMBER: S122DIW-S675D970U835-4F0-1E-UDD-D

CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
0°	704.4	704.4	704.4	704.4	704.4	704.4	704.4	704.4
2.5°	702.1	703.0	703.9	704.2	703.8	703.5	703.1	702.8
5°	700.0	701.3	702.7	703.3	703.0	702.8	702.6	702.3
7.5°	696.6	698.3	699.9	700.6	700.4	700.1	699.9	699.7
10°	693.7	695.5	697.4	698.1	697.9	697.7	697.5	697.2
12.5°	688.8	690.6	692.5	693.2	693.0	692.8	692.6	692.3
15°	679.9	681.9	684.0	684.9	684.7	684.4	684.2	684.0
17.5°	668.4	670.6	672.7	673.8	673.8	673.8	673.8	673.8
20°	659.4	661.9	664.3	665.6	665.6	665.6	665.6	665.6
22.5°	649.6	652.1	654.5	656.0	656.3	656.7	657.1	657.4
25°	634.3	637.0	639.7	641.4	642.1	642.8	643.5	644.2
27.5°	617.4	620.8	624.3	626.2	626.7	627.2	627.7	628.2
30°	605.5	609.1	612.7	614.9	615.6	616.3	616.9	617.6
32.5°	592.7	596.9	601.0	603.7	605.0	606.2	607.4	608.6
35°	574.5	579.5	584.5	587.8	589.4	591.0	592.5	594.1
37.5°	555.8	561.3	566.9	570.5	572.2	573.8	575.5	577.2
40°	542.6	548.5	554.4	558.4	560.4	562.5	564.5	566.6
42.5°	529.8	536.3	542.7	547.0	549.0	551.1	553.1	555.1
45°	510.2	517.2	524.3	528.9	531.2	533.5	535.7	538.0
47.5°	489.8	497.2	504.5	509.4	511.9	514.4	516.9	519.4
50°	475.8	483.5	491.3	496.4	498.9	501.4	503.8	506.3
52.5°	460.7	468.6	476.5	481.8	484.4	487.1	489.8	492.5
55°	437.9	446.1	454.3	459.8	462.8	465.7	468.7	471.6
57.5°	413.9	422.7	431.5	437.4	440.4	443.4	446.4	449.4
60°	398.0	406.6	415.3	421.2	424.3	427.5	430.7	433.9
62.5°	381.1	390.3	399.5	405.6	408.5	411.5	414.5	417.5
65°	355.5	364.8	374.1	380.2	383.2	386.1	389.1	392.0
67.5°	329.5	338.9	348.3	354.6	357.6	360.7	363.8	366.9
70°	311.5	321.2	331.0	337.2	339.9	342.7	345.4	348.1
72.5°	294.0	303.5	313.1	319.5	322.8	326.1	329.3	332.6
75°	267.6	277.3	287.1	293.4	296.4	299.3	302.3	305.2
77.5°	241.8	251.5	261.2	267.6	270.8	274.0	277.1	280.3
80°	224.2	233.8	243.3	249.7	252.8	256.0	259.2	262.4
82.5°	207.9	217.4	227.0	233.2	236.2	239.2	242.2	245.2
85°	184.4	194.0	203.5	209.8	213.0	216.2	219.4	222.5
87.5°	168.9	178.4	187.9	194.1	197.1	200.1	203.1	206.1
90°	174.1	184.3	194.4	201.0	204.2	207.3	210.5	213.6
92.5°	168.5	177.9	187.3	193.6	196.5	199.5	202.5	205.5
95°	174.0	183.7	193.4	199.5	202.0	204.5	207.0	209.5
97.5°	177.0	186.2	195.5	201.6	204.5	207.4	210.4	213.3
100°	176.7	186.8	196.9	203.4	206.3	209.3	212.2	215.1
102.5°	173.2	183.6	194.0	200.8	203.9	207.0	210.1	213.2
105°	166.6	176.9	187.2	194.0	197.3	200.7	204.0	207.4
107.5°	171.5	176.8	182.0	186.3	189.6	193.0	196.3	199.7
110°	213.8	199.8	185.8	180.5	183.9	187.2	190.6	193.9



TEST NUMBER: P331539

CATALOG NUMBER: S122DIW-S675D970U835-4F0-1E-UDD-D

CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
112.5°	350.2	280.0	209.8	176.3	179.4	182.6	185.8	189.0
115°	467.8	376.3	284.8	232.6	219.8	207.0	194.3	181.5
117.5°	671.8	654.7	637.6	605.1	557.2	509.3	461.3	413.4
120°	766.2	775.1	784.0	775.3	749.2	723.0	696.8	670.7
122.5°	804.0	811.7	819.4	821.5	818.1	814.7	811.2	807.8
125°	857.4	865.0	872.6	877.7	880.4	883.1	885.8	888.4
127.5°	906.2	914.0	921.8	926.7	928.8	931.0	933.1	935.2
130°	937.2	945.0	952.7	957.4	959.0	960.6	962.2	963.8
132.5°	967.2	974.4	981.7	986.1	987.7	989.3	990.9	992.5
135°	1010.2	1017.0	1023.9	1028.1	1029.5	1030.9	1032.2	1033.6
137.5°	1049.8	1056.0	1062.3	1065.8	1066.7	1067.5	1068.3	1069.1
140°	1075.7	1081.2	1086.8	1089.7	1090.0	1090.3	1090.6	1090.9
142.5°	1100.5	1105.2	1109.8	1112.2	1112.3	1112.4	1112.6	1112.7
145°	1136.1	1138.9	1141.8	1143.2	1143.3	1143.4	1143.5	1143.5
147.5°	1167.7	1169.0	1170.3	1170.8	1170.4	1170.1	1169.7	1169.4
150°	1188.4	1189.6	1190.9	1191.0	1190.0	1188.9	1187.8	1186.8
152.5°	1207.5	1208.7	1210.0	1210.0	1208.6	1207.2	1205.8	1204.4
155°	1233.3	1234.5	1235.8	1235.6	1233.9	1232.2	1230.5	1228.8
157.5°	1255.0	1256.5	1257.9	1257.8	1256.1	1254.5	1252.8	1251.2
160°	1267.7	1268.9	1270.2	1270.1	1268.6	1267.1	1265.7	1264.2
162.5°	1279.5	1280.9	1282.4	1282.2	1280.3	1278.5	1276.7	1274.9
165°	1293.9	1295.4	1296.9	1296.9	1295.4	1293.9	1292.4	1290.9
167.5°	1305.9	1307.4	1308.9	1308.7	1306.8	1304.9	1303.0	1301.1
170°	1312.1	1313.5	1315.0	1314.8	1312.9	1311.0	1309.1	1307.2
172.5°	1316.6	1318.1	1319.6	1319.4	1317.5	1315.6	1313.7	1311.8
175°	1321.6	1323.1	1324.6	1324.3	1322.1	1320.0	1317.9	1315.8
177.5°	1322.2	1323.3	1324.5	1324.4	1322.8	1321.3	1319.8	1318.3
180°	1320.5	1320.5	1320.5	1320.5	1320.5	1320.5	1320.5	1320.5

(END OF REPORT)