

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: P331600

Luminaire Tested: **S122DIW-S1005D970U835-4F0-1E-UDD-D1**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P331600
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-S1005D970U835-4F0-1E-UDD-D1
Description: DEFINE 2 DIRECT-INDIRECT WALL MOUNT LED LUMINAIRE
DOWNLIGHT 1005 LUMENS PER FOOT, DROP SATIN WHITE DIFFUSER
UPLIGHT 970 LUMENS PER FOOT, FLUSH SATIN WHITE DIFFUSER
Light Source: -
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 7395.1 lumens
Efficiency: N/A
Efficacy: 109.7 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: General Diffuse

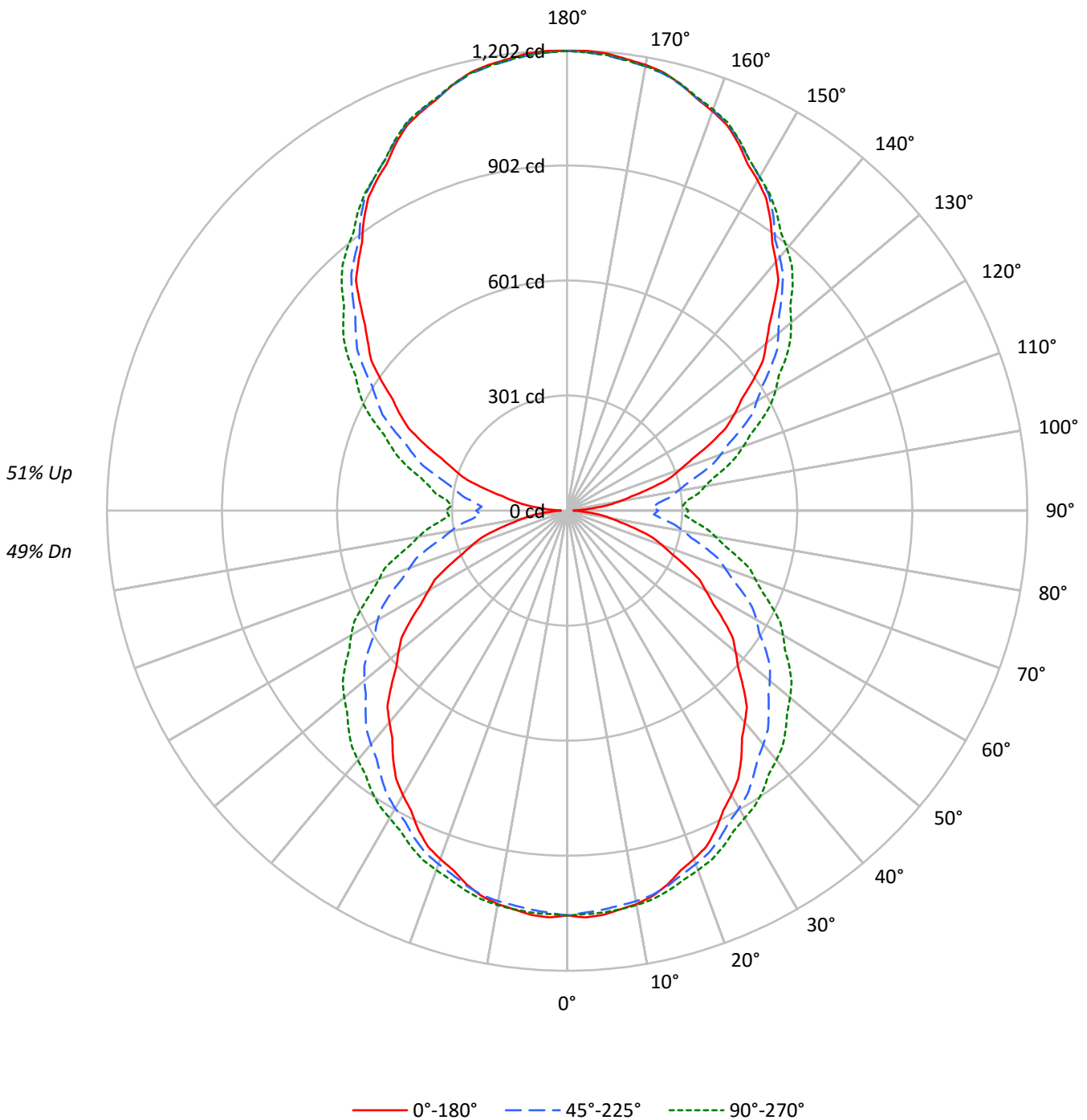
Input Watts (W): 67.4
Input Voltage (V): 120
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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Luminous Intensity Polar Plot





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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	107	107	107	107	98	98	98	98	83	83	83	68	68	68	55	55	55	49
1	96	91	87	83	88	84	80	76	70	67	65	58	56	54	46	45	43	38
2	87	79	72	66	79	72	67	62	61	56	52	50	47	44	40	37	35	31
3	79	69	61	55	72	63	56	51	53	48	43	43	40	36	35	32	29	25
4	72	60	52	46	66	56	48	43	47	41	37	38	34	31	31	28	25	21
5	66	54	45	39	60	49	42	36	42	36	31	34	30	26	28	24	22	18
6	61	48	39	33	55	44	37	31	37	31	27	31	26	23	25	21	19	16
7	56	43	35	29	51	40	33	27	34	28	24	28	23	20	23	19	17	14
8	52	39	31	26	47	36	29	24	31	25	21	26	21	18	21	17	15	12
9	48	36	28	23	44	33	26	21	28	23	19	23	19	16	19	16	13	11
10	45	33	25	20	41	30	24	19	26	20	17	22	17	14	18	14	12	10

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	17073	17073	17073
5°	17157	16435	16373
10°	17049	15949	15770
15°	16814	15435	15136
20°	16517	14884	14525
25°	16223	14353	13970
30°	15810	13808	13414
35°	15392	13280	13021
40°	14952	12831	12629
45°	14535	12429	12294
50°	14086	12066	11964
55°	13616	11675	11627
60°	13040	11269	11271
65°	12441	10795	10850
70°	11770	10285	10393
75°	10911	9784	9973
80°	9555	9272	9549
85°	8259	8830	9217



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	100.2	1.4
10°-20°	287.3	3.9
20°-30°	435.4	5.9
30°-40°	530.3	7.2
40°-50°	570.5	7.7
50°-60°	554.1	7.5
60°-70°	483.8	6.5
70°-80°	372.4	5.0
80°-90°	254.8	3.4
90°-100°	248.2	3.4
100°-110°	362.0	4.9
110°-120°	486.8	6.6
120°-130°	577.3	7.8
130°-140°	615.4	8.3
140°-150°	587.7	7.9
150°-160°	490.1	6.6
160°-170°	325.1	4.4
170°-180°	113.6	1.5
0°-30°	822.9	11.1
0°-40°	1353.3	18.3
0°-60°	2477.9	33.5
0°-90°	3588.9	48.5
90°-120°	1097.0	14.8
90°-150°	2877.4	38.9
90°-180°	3806.0	51.5
0°-180°	7395.1	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1057	1057	1057	1057	1057	
5°	1060	1056	1047	1055	1054	101
15°	1012	1014	1014	1028	1027	285
25°	920	930	944	962	967	423
35°	792	819	848	880	892	495
45°	650	692	745	790	808	501
55°	498	555	633	686	708	445
65°	340	416	506	566	588	338
75°	188	275	372	436	458	199
85°	55	150	248	310	334	59
90°	16	118	238	295	316	13
95°	65	148	241	297	316	70
105°	225	275	355	408	427	239
115°	411	437	501	544	560	406
125°	592	604	648	685	699	530
135°	764	776	793	823	833	591
145°	926	933	939	949	953	578
155°	1058	1061	1064	1069	1066	487
165°	1152	1151	1151	1157	1153	325
175°	1198	1195	1193	1200	1194	114
180°	1200	1200	1200	1200	1200	



TEST NUMBER: P331600

CATALOG NUMBER: S122DIW-S1005D970U835-4F0-1E-UDD-D1

CANDELA DISTRIBUTION (FULL):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
0°	1057.4	1057.4	1057.4	1057.4	1057.4	1057.4	1057.4	1057.4	1057.4	1057.4	1057.4
2.5°	1063.6	1062.8	1061.9	1061.1	1060.3	1058.9	1057.0	1055.1	1053.2	1051.3	1052.7
5°	1060.5	1059.5	1058.5	1057.4	1056.4	1054.9	1052.9	1050.8	1048.8	1046.7	1048.8
7.5°	1051.0	1050.3	1049.6	1049.0	1048.3	1047.2	1045.6	1044.0	1042.5	1040.9	1043.3
10°	1043.7	1043.0	1042.3	1041.6	1040.9	1040.1	1039.1	1038.0	1037.0	1036.0	1038.7
12.5°	1031.4	1031.5	1031.7	1031.8	1031.9	1031.6	1030.9	1030.1	1029.4	1028.6	1031.4
15°	1011.5	1012.2	1012.8	1013.5	1014.2	1014.5	1014.5	1014.5	1014.5	1014.5	1017.6
17.5°	985.7	987.2	988.6	990.0	991.4	992.7	993.8	994.9	996.0	997.1	1000.3
20°	968.6	970.3	972.0	973.7	975.4	976.9	978.3	979.6	981.0	982.4	986.1
22.5°	950.2	952.1	954.1	956.1	958.1	960.0	961.9	963.8	965.7	967.6	971.4
25°	919.5	921.9	924.3	926.7	929.1	931.8	934.8	937.9	941.0	944.0	948.1
27.5°	882.7	886.6	890.5	894.4	898.3	902.0	905.6	909.2	912.8	916.5	921.6
30°	858.2	862.6	867.1	871.5	875.9	880.4	884.8	889.2	893.6	898.1	903.5
32.5°	831.2	836.2	841.2	846.2	851.1	856.2	861.5	866.7	872.0	877.2	883.5
35°	792.3	798.1	803.9	809.7	815.5	821.6	828.1	834.5	841.0	847.5	855.0
37.5°	750.0	756.7	763.4	770.0	776.7	784.2	792.6	801.0	809.4	817.8	826.1
40°	721.8	729.3	736.8	744.3	751.8	760.1	769.3	778.5	787.7	796.9	805.8
42.5°	694.9	702.3	709.8	717.3	724.8	733.8	744.4	755.0	765.5	776.1	785.7
45°	649.8	659.0	668.2	677.4	686.6	697.1	709.1	721.0	732.9	744.8	755.4
47.5°	605.4	615.4	625.4	635.4	645.4	657.4	671.4	685.3	699.3	713.2	724.3
50°	574.7	585.3	595.8	606.4	616.9	629.9	645.2	660.5	675.8	691.2	702.8
52.5°	545.3	556.4	567.5	578.6	589.7	603.3	619.4	635.6	651.7	667.9	679.7
55°	498.1	510.3	522.6	534.9	547.1	562.1	579.8	597.5	615.2	632.9	645.2
57.5°	451.5	465.3	479.1	493.0	506.8	522.7	540.8	558.8	576.9	594.9	608.1
60°	418.4	433.0	447.7	462.3	477.0	494.0	513.4	532.8	552.2	571.6	584.6
62.5°	389.0	404.1	419.3	434.5	449.7	467.0	486.4	505.8	525.3	544.7	558.4
65°	340.2	356.9	373.6	390.3	407.0	425.4	445.5	465.5	485.6	505.7	519.7
67.5°	295.5	312.9	330.3	347.8	365.2	384.2	404.8	425.4	445.9	466.5	480.6
70°	263.6	281.3	299.0	316.7	334.4	353.8	375.0	396.1	417.2	438.3	452.9
72.5°	234.2	252.4	270.7	288.9	307.2	327.0	348.4	369.8	391.2	412.6	426.9
75°	188.5	207.6	226.6	245.7	264.8	285.2	307.0	328.8	350.6	372.4	387.0
77.5°	144.4	164.3	184.3	204.2	224.2	245.2	267.4	289.5	311.6	333.8	348.4
80°	114.9	135.7	156.5	177.3	198.0	219.5	241.6	263.8	285.9	308.0	322.3
82.5°	90.4	110.9	131.4	151.9	172.4	193.9	216.3	238.7	261.1	283.5	297.8
85°	55.2	76.3	97.4	118.5	139.6	161.1	182.9	204.7	226.5	248.3	262.6
87.5°	30.2	51.1	71.9	92.8	113.6	135.4	158.2	181.0	203.8	226.5	240.4
90°	16.3	38.8	61.2	83.7	106.2	130.8	157.5	184.2	211.0	237.7	250.9
92.5°	32.1	52.5	72.9	93.2	113.6	134.9	157.0	179.2	201.3	223.5	236.9
95°	64.9	83.2	101.4	119.7	138.0	157.5	178.4	199.3	220.2	241.1	254.0
97.5°	106.9	123.2	139.4	155.6	171.8	190.2	210.6	231.1	251.6	272.0	284.6
100°	139.4	153.8	168.2	182.6	197.0	214.0	233.8	253.5	273.3	293.0	305.6
102.5°	172.2	185.1	198.1	211.0	224.0	240.1	259.5	278.9	298.3	317.7	330.2
105°	225.4	236.0	246.5	257.1	267.6	282.0	300.1	318.3	336.5	354.6	367.0
107.5°	280.6	289.5	298.4	307.3	316.2	329.1	346.1	363.0	380.0	397.0	408.6
110°	315.1	323.2	331.4	339.5	347.7	360.1	376.8	393.5	410.2	426.9	437.8



TEST NUMBER: P331600

CATALOG NUMBER: S122DIW-S1005D970U835-4F0-1E-UDD-D1

CANDELA DISTRIBUTION (continued):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
112.5°	353.9	361.0	368.1	375.2	382.2	393.6	409.3	425.0	440.7	456.4	466.7
115°	411.3	416.4	421.5	426.6	431.7	441.6	456.5	471.4	486.3	501.1	511.1
117.5°	466.9	471.1	475.4	479.6	483.9	492.5	505.4	518.3	531.2	544.1	553.6
120°	504.9	508.1	511.3	514.4	517.6	525.1	536.9	548.7	560.6	572.4	581.9
122.5°	539.8	542.5	545.2	547.9	550.6	557.7	569.3	580.8	592.4	603.9	612.6
125°	592.5	594.6	596.6	598.6	600.6	606.8	617.0	627.2	637.4	647.7	656.2
127.5°	645.4	647.6	649.9	652.1	654.3	659.4	667.4	675.4	683.3	691.3	699.0
130°	678.6	681.2	683.8	686.4	689.0	693.6	700.3	707.0	713.7	720.4	728.2
132.5°	715.9	718.0	720.0	722.0	724.1	727.9	733.5	739.1	744.7	750.3	757.3
135°	764.2	766.7	769.2	771.6	774.1	777.3	781.1	785.0	788.8	792.7	799.6
137.5°	816.7	818.6	820.6	822.6	824.5	826.5	828.6	830.7	832.8	834.9	841.0
140°	848.3	850.0	851.6	853.3	855.0	856.8	858.6	860.4	862.2	864.0	869.4
142.5°	880.7	882.4	884.1	885.7	887.4	888.7	889.6	890.5	891.4	892.3	896.9
145°	925.7	927.3	928.9	930.5	932.1	933.5	934.9	936.2	937.6	938.9	941.2
147.5°	967.3	969.2	971.1	972.9	974.8	976.2	977.1	978.0	978.9	979.8	980.6
150°	995.6	997.0	998.3	999.7	1001.0	1002.2	1003.1	1004.0	1004.9	1005.8	1006.4
152.5°	1020.8	1022.1	1023.5	1024.8	1026.2	1027.4	1028.5	1029.5	1030.6	1031.7	1032.5
155°	1058.4	1059.1	1059.8	1060.5	1061.1	1061.8	1062.5	1063.2	1063.8	1064.5	1065.6
157.5°	1090.6	1091.1	1091.5	1092.0	1092.4	1092.9	1093.3	1093.7	1094.1	1094.5	1096.0
160°	1110.1	1110.5	1111.0	1111.4	1111.9	1112.2	1112.5	1112.7	1112.9	1113.1	1114.5
162.5°	1127.9	1128.0	1128.1	1128.2	1128.3	1128.4	1128.7	1128.9	1129.1	1129.3	1130.9
165°	1151.6	1151.4	1151.2	1150.9	1150.7	1150.6	1150.6	1150.6	1150.6	1150.6	1152.2
167.5°	1171.5	1170.8	1170.1	1169.4	1168.8	1168.4	1168.4	1168.3	1168.3	1168.2	1169.8
170°	1182.0	1181.3	1180.7	1180.0	1179.3	1178.9	1178.6	1178.4	1178.2	1178.0	1179.5
172.5°	1189.3	1188.6	1187.9	1187.3	1186.6	1186.1	1185.9	1185.7	1185.5	1185.2	1186.8
175°	1198.2	1197.5	1196.9	1196.2	1195.5	1194.9	1194.5	1194.0	1193.6	1193.1	1194.7
177.5°	1201.9	1201.3	1200.8	1200.2	1199.7	1199.2	1198.9	1198.5	1198.2	1197.8	1198.9
180°	1200.2	1200.2	1200.2	1200.2	1200.2	1200.2	1200.2	1200.2	1200.2	1200.2	1200.2



TEST NUMBER: P331600

CATALOG NUMBER: S122DIW-S1005D970U835-4F0-1E-UDD-D1

CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
0°	1057.4	1057.4	1057.4	1057.4	1057.4	1057.4	1057.4	1057.4
2.5°	1054.0	1055.4	1056.8	1057.2	1056.6	1056.1	1055.5	1055.0
5°	1050.8	1052.9	1054.9	1055.7	1055.4	1055.1	1054.7	1054.4
7.5°	1045.8	1048.3	1050.7	1051.8	1051.4	1051.1	1050.7	1050.4
10°	1041.4	1044.2	1046.9	1048.1	1047.7	1047.4	1047.1	1046.7
12.5°	1034.1	1036.8	1039.5	1040.7	1040.4	1040.0	1039.7	1039.4
15°	1020.7	1023.7	1026.8	1028.2	1027.8	1027.5	1027.1	1026.8
17.5°	1003.5	1006.7	1009.9	1011.5	1011.5	1011.5	1011.5	1011.5
20°	989.8	993.6	997.3	999.2	999.2	999.2	999.2	999.2
22.5°	975.1	978.9	982.6	984.8	985.3	985.9	986.4	987.0
25°	952.2	956.3	960.4	962.9	964.0	965.0	966.0	967.0
27.5°	926.8	932.0	937.2	940.1	940.9	941.6	942.4	943.1
30°	909.0	914.4	919.9	923.1	924.1	925.1	926.2	927.2
32.5°	889.8	896.0	902.3	906.3	908.2	910.0	911.9	913.7
35°	862.5	870.0	877.5	882.4	884.8	887.2	889.6	891.9
37.5°	834.4	842.7	851.0	856.4	858.9	861.5	864.0	866.5
40°	814.6	823.5	832.3	838.3	841.4	844.4	847.5	850.6
42.5°	795.4	805.1	814.8	821.1	824.2	827.3	830.3	833.4
45°	765.9	776.5	787.0	794.0	797.4	800.8	804.2	807.6
47.5°	735.3	746.3	757.4	764.8	768.5	772.3	776.0	779.8
50°	714.3	725.9	737.5	745.2	748.9	752.6	756.4	760.1
52.5°	691.6	703.4	715.3	723.2	727.2	731.3	735.3	739.3
55°	657.5	669.7	682.0	690.3	694.7	699.2	703.6	708.0
57.5°	621.4	634.6	647.8	656.6	661.1	665.6	670.1	674.6
60°	597.5	610.5	623.4	632.3	637.0	641.8	646.6	651.3
62.5°	572.2	585.9	599.7	608.8	613.3	617.8	622.3	626.8
65°	533.7	547.6	561.6	570.8	575.2	579.6	584.1	588.5
67.5°	494.7	508.8	522.9	532.3	536.9	541.5	546.2	550.8
70°	467.6	482.2	496.9	506.2	510.3	514.4	518.5	522.6
72.5°	441.3	455.7	470.0	479.7	484.6	489.5	494.4	499.3
75°	401.7	416.3	431.0	440.5	444.9	449.4	453.8	458.2
77.5°	362.9	377.5	392.1	401.8	406.5	411.3	416.1	420.8
80°	336.6	351.0	365.3	374.8	379.6	384.3	389.1	393.9
82.5°	312.1	326.4	340.7	350.1	354.6	359.1	363.6	368.1
85°	276.9	291.2	305.5	315.0	319.8	324.6	329.3	334.1
87.5°	254.2	268.0	281.8	290.9	295.3	299.7	304.1	308.5
90°	264.1	277.3	290.4	299.2	303.5	307.8	312.1	316.4
92.5°	250.3	263.8	277.2	286.0	290.1	294.3	298.4	302.5
95°	266.9	279.9	292.8	301.1	304.8	308.4	312.0	315.7
97.5°	297.2	309.8	322.4	330.7	334.7	338.7	342.7	346.6
100°	318.2	330.8	343.4	351.5	355.0	358.5	362.1	365.6
102.5°	342.7	355.2	367.7	375.7	379.2	382.8	386.3	389.8
105°	379.4	391.7	404.1	412.2	415.9	419.7	423.4	427.1
107.5°	420.2	431.8	443.4	450.6	453.3	456.0	458.7	461.5
110°	448.7	459.6	470.5	477.4	480.5	483.6	486.7	489.7



TEST NUMBER: P331600

CATALOG NUMBER: S122DIW-S1005D970U835-4F0-1E-UDD-D1

CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
112.5°	477.1	487.4	497.8	504.6	507.9	511.1	514.4	517.6
115°	521.1	531.1	541.1	547.6	550.7	553.8	556.9	559.9
117.5°	563.2	572.7	582.2	588.4	591.2	594.0	596.8	599.6
120°	591.5	601.0	610.5	616.8	619.9	623.0	626.0	629.1
122.5°	621.4	630.1	638.8	644.5	647.2	649.9	652.6	655.3
125°	664.7	673.2	681.7	687.4	690.3	693.1	695.9	698.8
127.5°	706.6	714.2	721.9	726.8	729.1	731.4	733.7	735.9
130°	735.9	743.6	751.3	756.1	757.9	759.7	761.6	763.4
132.5°	764.2	771.1	778.0	782.4	784.5	786.5	788.5	790.5
135°	806.6	813.5	820.4	824.9	826.9	829.0	831.0	833.1
137.5°	847.0	853.1	859.2	863.0	864.4	865.8	867.2	868.6
140°	874.9	880.3	885.8	889.1	890.2	891.4	892.5	893.7
142.5°	901.4	905.9	910.5	913.2	914.1	914.9	915.8	916.7
145°	943.5	945.7	948.0	949.5	950.3	951.1	951.9	952.7
147.5°	981.4	982.1	982.9	983.3	983.2	983.2	983.2	983.1
150°	1007.1	1007.8	1008.5	1008.5	1007.8	1007.1	1006.4	1005.8
152.5°	1033.4	1034.3	1035.1	1035.1	1034.3	1033.4	1032.5	1031.7
155°	1066.8	1067.9	1069.0	1069.2	1068.6	1067.9	1067.2	1066.5
157.5°	1097.6	1099.1	1100.6	1100.8	1099.8	1098.7	1097.6	1096.5
160°	1115.8	1117.2	1118.5	1118.8	1117.9	1117.0	1116.1	1115.2
162.5°	1132.4	1133.9	1135.5	1135.7	1134.6	1133.5	1132.4	1131.4
165°	1153.8	1155.3	1156.9	1157.1	1156.0	1154.9	1153.8	1152.6
167.5°	1171.4	1173.0	1174.5	1174.7	1173.6	1172.4	1171.2	1170.1
170°	1181.1	1182.7	1184.3	1184.4	1183.0	1181.7	1180.3	1179.0
172.5°	1188.4	1190.0	1191.5	1191.7	1190.3	1189.0	1187.6	1186.3
175°	1196.3	1197.9	1199.4	1199.6	1198.2	1196.9	1195.5	1194.2
177.5°	1200.0	1201.0	1202.1	1202.1	1201.0	1200.0	1198.9	1197.8
180°	1200.2	1200.2	1200.2	1200.2	1200.2	1200.2	1200.2	1200.2

(END OF REPORT)