

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: P331606-940

Luminaire Tested: **S122DIW-S1005D1240U940-4F0-1E-UDD-D1**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P331606-940
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-S1005D1240U940-4F0-1E-UDD-D1
Description: DEFINE 2 DIRECT-INDIRECT WALL MOUNT LED LUMINAIRE
DOWNLIGHT 1005 LUMENS PER FOOT, DROP SATIN WHITE DIFFUSER
UPLIGHT 1240 LUMENS PER FOOT, FLUSH SATIN WHITE DIFFUSER
Light Source: -
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 7434.0 lumens
Efficiency: N/A
Efficacy: 97.6 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

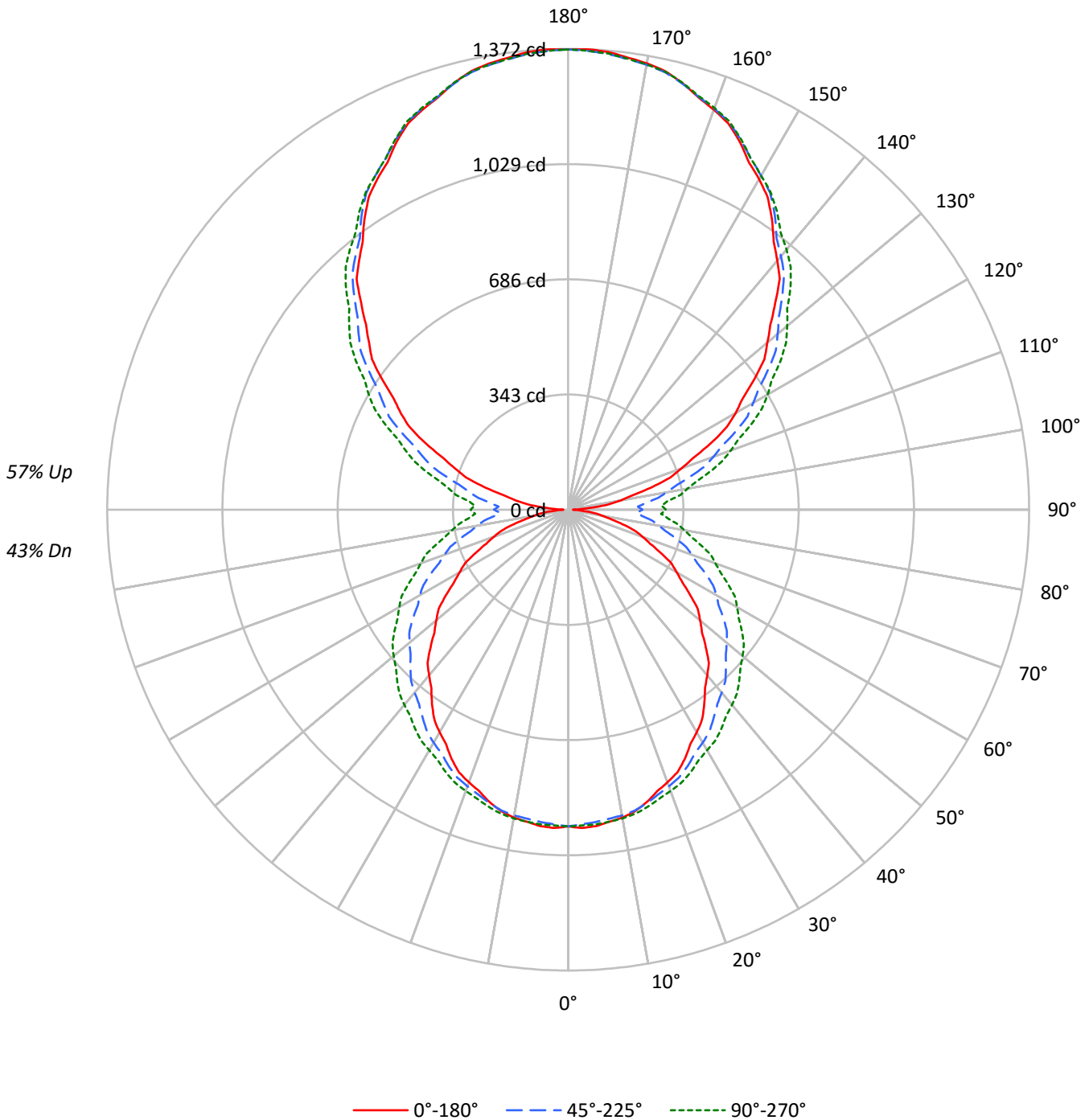
Input Watts (W): 76.2
Input Voltage (V): 120
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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	105	105	105	105	96	96	96	96	79	79	79	64	64	64	50	50	50	43
1	95	90	86	82	86	82	79	75	68	65	62	54	52	51	42	41	39	34
2	86	78	71	66	78	71	65	61	59	54	51	47	44	41	36	34	32	27
3	78	68	60	54	71	62	55	50	51	46	42	41	37	34	32	29	27	22
4	71	60	52	45	65	55	48	42	45	40	35	36	32	29	28	25	23	19
5	65	53	45	39	59	49	41	36	40	35	30	32	28	25	25	22	20	16
6	60	47	39	33	54	44	36	31	36	30	26	29	25	22	23	19	17	14
7	55	43	35	29	50	39	32	27	33	27	23	26	22	19	21	17	15	12
8	51	39	31	25	47	36	29	24	30	24	20	24	20	17	19	16	13	11
9	48	35	28	22	43	32	26	21	27	22	18	22	18	15	17	14	12	10
10	44	32	25	20	40	30	23	19	25	20	16	20	16	13	16	13	11	9

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	15224	15224	15224
5°	15300	14656	14600
10°	15203	14222	14063
15°	14994	13763	13496
20°	14728	13272	12952
25°	14466	12799	12457
30°	14098	12312	11962
35°	13725	11842	11611
40°	13332	11442	11262
45°	12960	11082	10962
50°	12561	10760	10668
55°	12143	10411	10368
60°	11628	10049	10051
65°	11095	9625	9675
70°	10498	9170	9268
75°	9730	8725	8894
80°	8523	8267	8514
85°	7361	7873	8218



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	89.3	1.2
10°-20°	256.2	3.4
20°-30°	388.3	5.2
30°-40°	472.9	6.4
40°-50°	508.8	6.8
50°-60°	494.1	6.6
60°-70°	431.4	5.8
70°-80°	332.1	4.5
80°-90°	228.4	3.1
90°-100°	240.4	3.2
100°-110°	381.8	5.1
110°-120°	535.0	7.2
120°-130°	647.5	8.7
130°-140°	697.6	9.4
140°-150°	670.1	9.0
150°-160°	559.5	7.5
160°-170°	371.1	5.0
170°-180°	129.7	1.7
0°-30°	733.8	9.9
0°-40°	1206.7	16.2
0°-60°	2209.5	29.7
0°-90°	3201.4	43.1
90°-120°	1157.1	15.6
90°-150°	3172.3	42.7
90°-180°	4233.0	56.9
0°-180°	7434.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	943	943	943	943	943	
5°	946	941	933	941	940	90
15°	902	904	905	916	916	254
25°	820	830	842	858	862	377
35°	706	730	756	785	795	441
45°	579	617	664	705	720	447
55°	444	495	564	612	631	397
65°	303	371	451	505	525	301
75°	168	245	332	389	409	178
85°	49	134	221	277	298	53
90°	15	109	221	271	291	12
95°	71	147	231	281	297	78
105°	255	300	372	420	437	270
115°	468	492	549	587	600	462
125°	676	688	726	759	771	604
135°	872	885	901	927	936	674
145°	1057	1065	1072	1081	1083	660
155°	1208	1212	1215	1220	1218	556
165°	1315	1314	1314	1321	1316	371
175°	1368	1364	1362	1369	1363	130
180°	1370	1370	1370	1370	1370	



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CANDELA DISTRIBUTION (FULL):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
0°	942.9	942.9	942.9	942.9	942.9	942.9	942.9	942.9	942.9	942.9	942.9
2.5°	948.4	947.7	946.9	946.2	945.5	944.2	942.5	940.8	939.1	937.5	938.7
5°	945.7	944.8	943.9	942.9	942.0	940.7	938.9	937.0	935.2	933.4	935.2
7.5°	937.2	936.6	935.9	935.4	934.8	933.8	932.4	930.9	929.6	928.2	930.3
10°	930.7	930.1	929.4	928.8	928.2	927.5	926.6	925.6	924.7	923.8	926.2
12.5°	919.7	919.8	920.0	920.1	920.2	919.9	919.3	918.6	917.9	917.2	919.7
15°	902.0	902.6	903.1	903.7	904.4	904.6	904.6	904.6	904.6	904.6	907.4
17.5°	879.0	880.3	881.5	882.8	884.0	885.2	886.2	887.2	888.1	889.1	892.0
20°	863.7	865.2	866.7	868.3	869.8	871.1	872.4	873.5	874.8	876.0	879.3
22.5°	847.3	849.0	850.8	852.6	854.3	856.0	857.7	859.4	861.1	862.8	866.2
25°	819.9	822.1	824.2	826.3	828.5	830.9	833.6	836.3	839.1	841.8	845.4
27.5°	787.1	790.6	794.1	797.5	801.0	804.3	807.5	810.7	814.0	817.3	821.8
30°	765.3	769.2	773.2	777.1	781.0	785.1	789.0	792.9	796.8	800.8	805.7
32.5°	741.2	745.6	750.1	754.6	758.9	763.5	768.2	772.8	777.6	782.2	787.8
35°	706.5	711.7	716.8	722.0	727.2	732.6	738.4	744.1	749.9	755.7	762.4
37.5°	668.8	674.8	680.7	686.6	692.6	699.3	706.8	714.3	721.8	729.2	736.6
40°	643.6	650.3	657.0	663.7	670.4	677.8	686.0	694.2	702.4	710.6	718.5
42.5°	619.6	626.2	632.9	639.6	646.3	654.3	663.8	673.2	682.6	692.1	700.6
45°	579.4	587.6	595.8	604.0	612.2	621.6	632.3	642.9	653.5	664.1	673.6
47.5°	539.8	548.8	557.7	566.6	575.5	586.2	598.7	611.1	623.6	636.0	645.9
50°	512.5	521.9	531.3	540.7	550.1	561.7	575.3	589.0	602.6	616.4	626.7
52.5°	486.2	496.1	506.0	515.9	525.8	538.0	552.3	566.8	581.1	595.6	606.1
55°	444.2	455.0	466.0	477.0	487.9	501.2	517.0	532.8	548.6	564.4	575.3
57.5°	402.6	414.9	427.2	439.6	451.9	466.1	482.2	498.3	514.4	530.5	542.2
60°	373.1	386.1	399.2	412.2	425.3	440.5	457.8	475.1	492.4	509.7	521.3
62.5°	346.9	360.3	373.9	387.4	401.0	416.4	433.7	451.0	468.4	485.7	497.9
65°	303.4	318.3	333.1	348.0	362.9	379.3	397.3	415.1	433.0	450.9	463.4
67.5°	263.5	279.0	294.5	310.1	325.7	342.6	361.0	379.3	397.6	416.0	428.6
70°	235.1	250.8	266.6	282.4	298.2	315.5	334.4	353.2	372.0	390.8	403.9
72.5°	208.8	225.1	241.4	257.6	273.9	291.6	310.7	329.8	348.8	367.9	380.7
75°	168.1	185.1	202.1	219.1	236.1	254.3	273.8	293.2	312.6	332.1	345.1
77.5°	128.8	146.5	164.3	182.1	199.9	218.6	238.4	258.2	277.9	297.7	310.7
80°	102.5	121.0	139.6	158.1	176.6	195.7	215.4	235.2	254.9	274.6	287.4
82.5°	80.6	98.9	117.2	135.5	153.7	172.9	192.9	212.9	232.8	252.8	265.6
85°	49.2	68.0	86.9	105.7	124.5	143.7	163.1	182.5	202.0	221.4	234.2
87.5°	27.0	45.7	64.5	83.2	101.9	121.5	142.0	162.6	183.2	203.8	216.1
90°	14.8	35.5	56.2	77.0	97.6	120.5	145.6	170.7	195.7	220.9	232.5
92.5°	33.2	51.8	70.4	89.2	107.8	127.2	147.2	167.2	187.3	207.3	219.4
95°	71.1	87.9	104.8	121.5	138.4	156.2	175.0	193.7	212.4	231.1	242.7
97.5°	119.4	134.4	149.4	164.3	179.2	195.9	214.4	232.9	251.4	269.8	281.1
100°	156.4	169.7	183.0	196.3	209.6	225.1	242.9	260.6	278.5	296.2	307.5
102.5°	194.1	206.1	218.0	229.9	241.8	256.5	274.0	291.5	309.0	326.5	337.7
105°	255.4	265.0	274.6	284.2	293.7	306.7	323.0	339.3	355.6	371.9	383.1
107.5°	318.5	326.7	334.8	343.0	351.2	362.8	378.0	393.2	408.2	423.4	433.7
110°	358.1	365.7	373.4	380.9	388.6	399.8	414.7	429.6	444.4	459.3	469.0



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CANDELA DISTRIBUTION (continued):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
112.5°	402.5	409.1	415.8	422.4	429.1	439.3	453.3	467.3	481.3	495.2	504.3
115°	468.0	472.9	477.7	482.6	487.5	496.5	509.6	522.8	535.9	549.1	557.9
117.5°	531.8	536.0	540.3	544.6	548.8	556.5	567.7	578.9	590.0	601.3	609.7
120°	575.2	578.5	581.8	585.1	588.4	595.0	605.1	615.2	625.4	635.4	643.9
122.5°	615.0	618.0	621.0	623.9	626.9	633.3	643.3	653.3	663.3	673.2	680.9
125°	675.6	678.0	680.3	682.6	684.9	690.5	699.5	708.5	717.4	726.3	733.8
127.5°	736.0	738.6	741.3	743.9	746.5	751.3	758.2	765.1	772.0	778.9	785.5
130°	773.9	776.9	780.0	783.0	786.0	790.5	796.4	802.3	808.2	814.0	820.7
132.5°	816.5	818.9	821.4	823.8	826.2	829.9	834.9	839.9	845.0	850.0	855.9
135°	872.0	874.9	877.6	880.5	883.3	886.5	890.0	893.6	897.2	900.7	906.9
137.5°	931.9	934.2	936.4	938.6	940.9	943.1	945.0	947.1	949.0	951.0	956.4
140°	968.0	970.0	972.0	974.0	976.0	977.9	979.8	981.8	983.6	985.5	990.4
142.5°	1005.0	1007.0	1009.0	1011.0	1013.0	1014.5	1015.5	1016.5	1017.5	1018.5	1022.6
145°	1056.8	1058.6	1060.4	1062.2	1064.0	1065.7	1067.2	1068.7	1070.3	1071.8	1073.9
147.5°	1104.2	1106.3	1108.5	1110.7	1112.9	1114.5	1115.4	1116.5	1117.5	1118.6	1119.4
150°	1136.6	1138.1	1139.7	1141.2	1142.7	1144.1	1145.0	1146.1	1147.1	1148.2	1148.9
152.5°	1165.3	1166.8	1168.3	1169.8	1171.4	1172.8	1174.0	1175.3	1176.5	1177.8	1178.8
155°	1208.3	1209.1	1209.8	1210.6	1211.4	1212.1	1212.9	1213.6	1214.4	1215.2	1216.5
157.5°	1245.0	1245.5	1246.1	1246.6	1247.1	1247.6	1248.0	1248.5	1248.9	1249.5	1251.2
160°	1267.2	1267.7	1268.3	1268.8	1269.3	1269.7	1269.9	1270.2	1270.4	1270.7	1272.2
162.5°	1287.5	1287.7	1287.8	1287.9	1288.0	1288.2	1288.4	1288.7	1289.0	1289.2	1290.9
165°	1314.6	1314.4	1314.1	1313.8	1313.6	1313.5	1313.5	1313.5	1313.5	1313.5	1315.3
167.5°	1337.3	1336.5	1335.8	1335.0	1334.2	1333.8	1333.7	1333.7	1333.6	1333.6	1335.4
170°	1349.3	1348.5	1347.8	1347.0	1346.2	1345.8	1345.5	1345.2	1345.0	1344.7	1346.5
172.5°	1357.6	1356.9	1356.1	1355.3	1354.6	1354.1	1353.8	1353.5	1353.3	1353.0	1354.9
175°	1367.8	1367.1	1366.3	1365.5	1364.8	1364.1	1363.6	1363.1	1362.5	1362.0	1363.9
177.5°	1372.0	1371.4	1370.7	1370.1	1369.5	1369.0	1368.6	1368.2	1367.8	1367.3	1368.6
180°	1370.1	1370.1	1370.1	1370.1	1370.1	1370.1	1370.1	1370.1	1370.1	1370.1	1370.1



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CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
0°	942.9	942.9	942.9	942.9	942.9	942.9	942.9	942.9
2.5°	939.9	941.1	942.4	942.7	942.2	941.7	941.2	940.8
5°	937.0	938.9	940.7	941.4	941.1	940.8	940.5	940.2
7.5°	932.6	934.8	936.9	937.9	937.5	937.3	936.9	936.7
10°	928.6	931.1	933.5	934.6	934.2	934.0	933.7	933.4
12.5°	922.1	924.5	926.9	928.0	927.7	927.4	927.1	926.8
15°	910.2	912.8	915.6	916.9	916.5	916.2	915.9	915.6
17.5°	894.8	897.7	900.5	902.0	902.0	902.0	902.0	902.0
20°	882.6	886.0	889.3	891.0	891.0	891.0	891.0	891.0
22.5°	869.5	872.9	876.2	878.2	878.6	879.1	879.6	880.1
25°	849.1	852.7	856.4	858.6	859.6	860.5	861.4	862.3
27.5°	826.4	831.1	835.7	838.3	839.0	839.6	840.3	841.0
30°	810.6	815.4	820.3	823.1	824.0	824.9	825.9	826.8
32.5°	793.4	799.0	804.6	808.2	809.9	811.5	813.2	814.8
35°	769.1	775.8	782.5	786.8	789.0	791.1	793.3	795.3
37.5°	744.0	751.4	758.8	763.7	765.9	768.2	770.4	772.7
40°	726.4	734.3	742.2	747.5	750.3	753.0	755.7	758.5
42.5°	709.3	717.9	726.6	732.2	734.9	737.7	740.4	743.2
45°	683.0	692.4	701.8	708.0	711.1	714.1	717.1	720.1
47.5°	655.7	665.5	675.4	682.0	685.3	688.7	692.0	695.4
50°	636.9	647.3	657.6	664.5	667.8	671.1	674.5	677.8
52.5°	616.7	627.2	637.8	644.9	648.5	652.1	655.7	659.2
55°	586.3	597.2	608.1	615.5	619.5	623.5	627.4	631.3
57.5°	554.1	565.9	577.7	585.5	589.5	593.5	597.5	601.5
60°	532.8	544.4	555.9	563.8	568.0	572.3	576.6	580.8
62.5°	510.2	522.5	534.8	542.9	546.9	550.9	554.9	558.9
65°	475.9	488.3	500.8	509.0	512.9	516.8	520.8	524.8
67.5°	441.1	453.7	466.3	474.7	478.8	482.9	487.1	491.2
70°	417.0	430.0	443.1	451.4	455.0	458.7	462.4	466.0
72.5°	393.5	406.4	419.1	427.8	432.1	436.5	440.9	445.2
75°	358.2	371.2	384.3	392.8	396.7	400.7	404.7	408.6
77.5°	323.6	336.6	349.6	358.3	362.5	366.8	371.0	375.2
80°	300.1	313.0	325.7	334.2	338.5	342.7	347.0	351.2
82.5°	278.3	291.1	303.8	312.2	316.2	320.2	324.2	328.2
85°	246.9	259.7	272.4	280.9	285.2	289.4	293.6	297.9
87.5°	228.4	240.7	253.0	261.1	265.0	268.9	272.9	276.8
90°	244.2	255.7	267.4	275.2	279.0	282.9	286.9	290.8
92.5°	231.3	243.3	255.4	263.2	266.9	270.5	274.3	277.9
95°	254.2	265.8	277.3	284.6	287.8	290.9	294.0	297.2
97.5°	292.3	303.5	314.8	322.2	325.7	329.2	332.7	336.3
100°	318.7	329.9	341.2	348.3	351.4	354.5	357.6	360.7
102.5°	348.9	360.1	371.3	378.4	381.5	384.6	387.7	390.7
105°	394.2	405.3	416.4	423.7	427.0	430.4	433.7	437.0
107.5°	444.2	454.6	465.0	471.3	473.4	475.6	477.8	479.9
110°	478.8	488.5	498.2	504.4	506.9	509.5	512.1	514.6



TEST NUMBER: P331606-940

CATALOG NUMBER: S122DIW-S1005D1240U940-4F0-1E-UDD-D1

CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
112.5°	513.4	522.5	531.5	537.5	540.3	543.1	545.8	548.6
115°	566.9	575.7	584.5	590.2	592.8	595.4	598.0	600.5
117.5°	618.0	626.4	634.7	640.1	642.5	644.8	647.1	649.4
120°	652.4	660.9	669.4	674.9	677.5	680.1	682.7	685.3
122.5°	688.5	696.2	703.8	708.8	711.1	713.4	715.7	717.9
125°	741.2	748.6	756.1	761.0	763.5	766.0	768.4	770.9
127.5°	792.1	798.7	805.4	809.6	811.5	813.2	815.1	817.0
130°	827.5	834.3	841.1	845.2	846.6	848.0	849.4	850.8
132.5°	861.8	867.7	873.6	877.4	879.0	880.7	882.3	883.9
135°	912.9	919.1	925.1	929.1	930.8	932.4	934.1	935.7
137.5°	961.8	967.2	972.6	975.8	976.9	977.9	978.9	979.9
140°	995.2	1000.1	1005.0	1007.8	1008.6	1009.4	1010.2	1010.9
142.5°	1026.7	1030.7	1034.8	1037.1	1037.8	1038.3	1038.8	1039.4
145°	1076.0	1078.1	1080.1	1081.5	1081.9	1082.4	1082.9	1083.4
147.5°	1120.2	1121.0	1121.8	1122.0	1121.8	1121.6	1121.3	1121.1
150°	1149.7	1150.5	1151.2	1151.2	1150.5	1149.7	1148.9	1148.2
152.5°	1179.7	1180.6	1181.6	1181.6	1180.6	1179.7	1178.8	1177.8
155°	1217.8	1219.1	1220.3	1220.6	1219.9	1219.1	1218.3	1217.5
157.5°	1252.9	1254.6	1256.4	1256.7	1255.4	1254.2	1252.9	1251.7
160°	1273.8	1275.3	1276.8	1277.1	1276.1	1275.1	1274.1	1273.0
162.5°	1292.7	1294.4	1296.2	1296.5	1295.2	1294.0	1292.7	1291.6
165°	1317.1	1318.8	1320.7	1320.9	1319.6	1318.4	1317.1	1315.8
167.5°	1337.2	1339.0	1340.8	1341.0	1339.7	1338.4	1337.0	1335.7
170°	1348.3	1350.1	1351.9	1352.0	1350.5	1349.0	1347.4	1345.9
172.5°	1356.6	1358.4	1360.2	1360.3	1358.8	1357.3	1355.8	1354.2
175°	1365.7	1367.4	1369.2	1369.4	1367.8	1366.3	1364.8	1363.2
177.5°	1369.8	1371.1	1372.3	1372.3	1371.1	1369.8	1368.6	1367.3
180°	1370.1	1370.1	1370.1	1370.1	1370.1	1370.1	1370.1	1370.1

(END OF REPORT)