

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: P331606-840

Luminaire Tested: **S122DIW-S1005D1240U840-4F0-1E-UDD-D1**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P331606-840
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-S1005D1240U840-4F0-1E-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

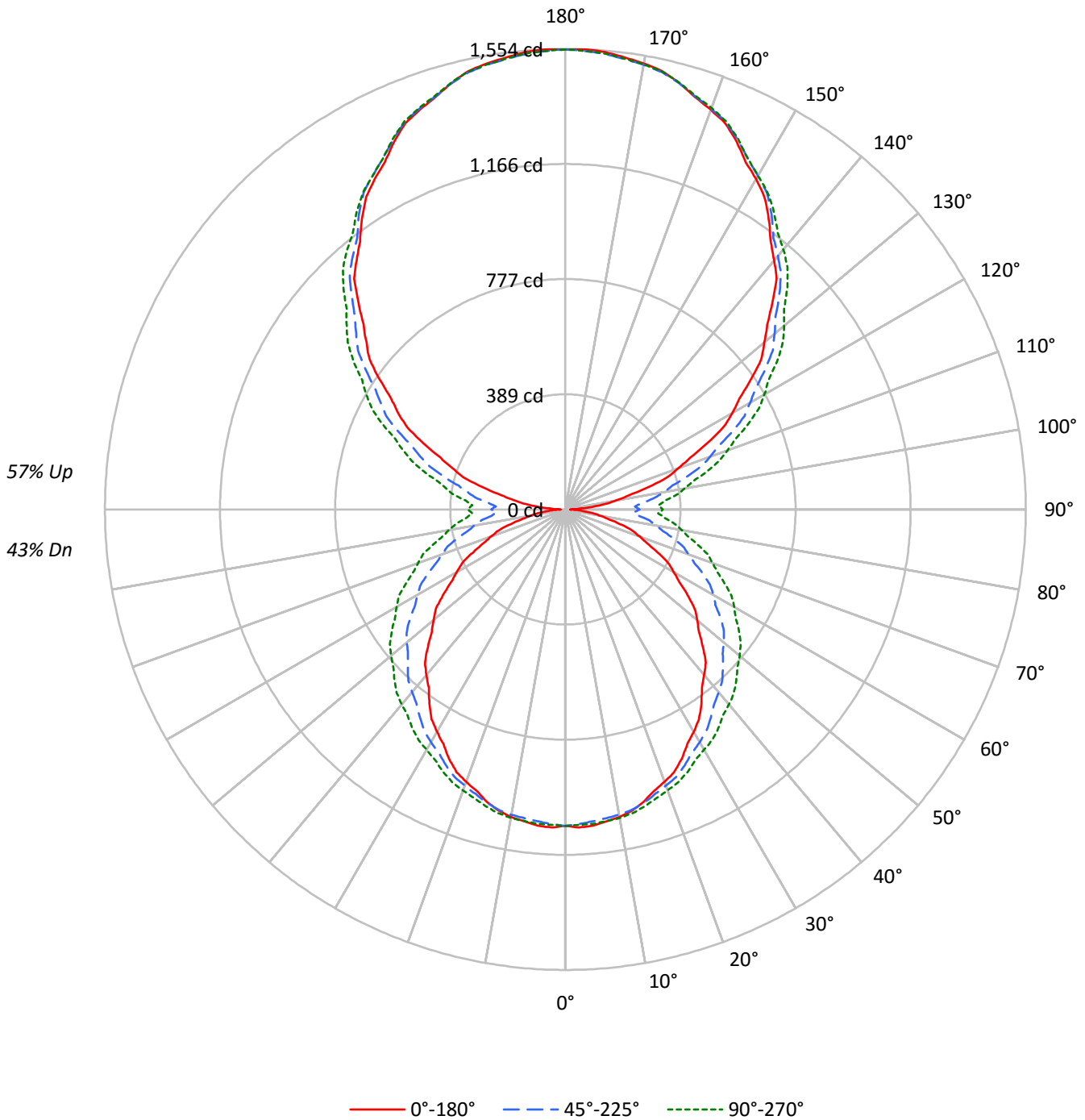
Lumens per Lamp: N/A
Luminaire Lumens: 8419.0 lumens
Efficiency: N/A
Efficacy: 110.5 lumens/watt
Spacing Criteria (0/90/45): 1.21 / 1.32 / 1.42
Luminous Opening: Rectangular w/ Sides (W: 0.17' x L: 4' x H: 0.08')
CIE Type: General Diffuse

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°	17241	17241	17241
5°	17327	16597	16534
10°	17217	16106	15925
15°	16980	15587	15284
20°	16681	15031	14669
25°	16384	14494	14107
30°	15966	13945	13546
35°	15544	13412	13150
40°	15099	12958	12754
45°	14678	12551	12415
50°	14226	12185	12082
55°	13750	11789	11742
60°	13168	11380	11382
65°	12566	10901	10957
70°	11886	10385	10497
75°	11021	9881	10071
80°	9646	9362	9643
85°	8334	8915	9308



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	101.2	1.2
10°-20°	290.2	3.4
20°-30°	439.7	5.2
30°-40°	535.6	6.4
40°-50°	576.2	6.8
50°-60°	559.5	6.6
60°-70°	488.6	5.8
70°-80°	376.1	4.5
80°-90°	258.6	3.1
90°-100°	272.2	3.2
100°-110°	432.4	5.1
110°-120°	605.9	7.2
120°-130°	733.3	8.7
130°-140°	790.1	9.4
140°-150°	758.9	9.0
150°-160°	633.6	7.5
160°-170°	420.3	5.0
170°-180°	146.9	1.7
0°-30°	831.1	9.9
0°-40°	1366.6	16.2
0°-60°	2502.3	29.7
0°-90°	3625.6	43.1
90°-120°	1310.4	15.6
90°-150°	3592.6	42.7
90°-180°	4793.0	56.9
0°-180°	8419.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1068	1068	1068	1068	1068	
5°	1071	1066	1057	1066	1065	102
15°	1022	1024	1024	1038	1037	288
25°	929	940	953	971	976	427
35°	800	827	856	889	901	500
45°	656	699	752	798	816	506
55°	503	560	639	693	715	450
65°	344	420	511	572	594	341
75°	190	278	376	440	463	201
85°	56	152	251	313	337	60
90°	17	124	250	307	329	14
95°	80	167	262	318	337	88
105°	289	340	421	476	495	306
115°	530	557	622	665	680	524
125°	765	779	822	859	873	684
135°	988	1002	1020	1050	1060	763
145°	1197	1206	1214	1224	1227	748
155°	1368	1372	1376	1382	1379	630
165°	1489	1488	1488	1496	1490	420
175°	1549	1545	1542	1551	1544	147
180°	1552	1552	1552	1552	1552	



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CANDELA DISTRIBUTION (FULL):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
0°	1067.8	1067.8	1067.8	1067.8	1067.8	1067.8	1067.8	1067.8	1067.8	1067.8	1067.8
2.5°	1074.1	1073.3	1072.4	1071.6	1070.8	1069.3	1067.4	1065.5	1063.6	1061.7	1063.1
5°	1071.0	1070.0	1068.9	1067.8	1066.8	1065.3	1063.3	1061.2	1059.1	1057.0	1059.1
7.5°	1061.4	1060.7	1060.0	1059.3	1058.6	1057.5	1055.9	1054.3	1052.8	1051.2	1053.6
10°	1054.0	1053.3	1052.6	1051.9	1051.2	1050.4	1049.4	1048.2	1047.2	1046.2	1048.9
12.5°	1041.6	1041.7	1041.9	1042.0	1042.1	1041.8	1041.1	1040.3	1039.6	1038.7	1041.6
15°	1021.5	1022.2	1022.8	1023.5	1024.2	1024.5	1024.5	1024.5	1024.5	1024.5	1027.6
17.5°	995.4	996.9	998.4	999.8	1001.2	1002.5	1003.6	1004.7	1005.8	1006.9	1010.2
20°	978.2	979.9	981.6	983.3	985.0	986.5	988.0	989.3	990.7	992.1	995.8
22.5°	959.6	961.5	963.5	965.5	967.6	969.5	971.4	973.3	975.2	977.1	981.0
25°	928.6	931.0	933.4	935.8	938.3	941.0	944.0	947.2	950.3	953.3	957.5
27.5°	891.4	895.3	899.3	903.2	907.2	910.9	914.5	918.2	921.8	925.5	930.7
30°	866.7	871.1	875.7	880.1	884.5	889.1	893.5	898.0	902.4	907.0	912.4
32.5°	839.4	844.4	849.5	854.5	859.5	864.6	870.0	875.3	880.6	885.9	892.2
35°	800.1	806.0	811.8	817.7	823.5	829.7	836.3	842.7	849.3	855.9	863.4
37.5°	757.4	764.2	770.9	777.6	784.4	791.9	800.4	808.9	817.4	825.9	834.2
40°	728.9	736.5	744.1	751.6	759.2	767.6	776.9	786.2	795.5	804.8	813.7
42.5°	701.8	709.2	716.8	724.4	732.0	741.0	751.7	762.4	773.1	783.8	793.5
45°	656.2	665.5	674.8	684.1	693.4	704.0	716.1	728.1	740.1	752.1	762.9
47.5°	611.4	621.5	631.6	641.7	651.8	663.9	678.0	692.1	706.2	720.2	731.4
50°	580.4	591.1	601.7	612.4	623.0	636.1	651.6	667.0	682.5	698.0	709.7
52.5°	550.7	561.9	573.1	584.3	595.5	609.3	625.5	641.9	658.1	674.5	686.4
55°	503.0	515.3	527.8	540.2	552.5	567.6	585.5	603.4	621.3	639.1	651.6
57.5°	456.0	469.9	483.8	497.9	511.8	527.9	546.1	564.3	582.6	600.8	614.1
60°	422.5	437.3	452.1	466.9	481.7	498.9	518.5	538.1	557.6	577.2	590.4
62.5°	392.8	408.1	423.4	438.8	454.1	471.6	491.2	510.8	530.5	550.1	563.9
65°	343.6	360.4	377.3	394.2	411.0	429.6	449.9	470.1	490.4	510.7	524.8
67.5°	298.4	316.0	333.6	351.2	368.8	388.0	408.8	429.6	450.3	471.1	485.3
70°	266.2	284.1	301.9	319.8	337.7	357.3	378.7	400.0	421.3	442.6	457.4
72.5°	236.5	254.9	273.4	291.8	310.2	330.2	351.8	373.4	395.1	416.7	431.1
75°	190.4	209.6	228.8	248.1	267.4	288.0	310.0	332.0	354.1	376.1	390.8
77.5°	145.8	165.9	186.1	206.2	226.4	247.6	270.0	292.4	314.7	337.1	351.8
80°	116.0	137.0	158.0	179.0	200.0	221.7	244.0	266.4	288.7	311.0	325.5
82.5°	91.3	112.0	132.7	153.4	174.1	195.8	218.4	241.1	263.7	286.3	300.7
85°	55.7	77.1	98.4	119.7	141.0	162.7	184.7	206.7	228.7	250.7	265.2
87.5°	30.6	51.8	73.0	94.2	115.4	137.6	160.9	184.2	207.5	230.8	244.7
90°	16.8	40.2	63.6	87.2	110.6	136.4	164.9	193.3	221.7	250.1	263.3
92.5°	37.6	58.7	79.8	101.0	122.1	144.0	166.7	189.3	212.1	234.8	248.4
95°	80.5	99.6	118.7	137.6	156.7	176.9	198.1	219.3	240.5	261.8	274.9
97.5°	135.2	152.2	169.2	186.0	203.0	221.9	242.8	263.8	284.7	305.6	318.3
100°	177.1	192.2	207.2	222.3	237.3	254.9	275.1	295.2	315.4	335.5	348.2
102.5°	219.8	233.4	246.9	260.3	273.9	290.5	310.3	330.1	349.9	369.7	382.4
105°	289.2	300.1	310.9	321.8	332.6	347.3	365.8	384.3	402.7	421.2	433.8
107.5°	360.7	370.0	379.2	388.5	397.8	410.9	428.1	445.2	462.3	479.5	491.2
110°	405.6	414.1	422.8	431.4	440.1	452.8	469.7	486.6	503.3	520.2	531.2



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CANDELA DISTRIBUTION (continued):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
112.5°	455.9	463.3	470.9	478.4	485.9	497.6	513.4	529.2	545.0	560.8	571.1
115°	530.0	535.5	541.0	546.5	552.1	562.3	577.1	592.1	606.9	621.9	631.9
117.5°	602.3	607.0	611.9	616.7	621.5	630.3	642.9	655.6	668.2	681.0	690.4
120°	651.5	655.2	658.9	662.6	666.3	673.9	685.3	696.7	708.2	719.6	729.2
122.5°	696.5	699.9	703.3	706.6	709.9	717.2	728.5	739.8	751.1	762.4	771.1
125°	765.2	767.8	770.4	773.1	775.7	782.0	792.1	802.3	812.4	822.5	831.0
127.5°	833.5	836.5	839.5	842.4	845.5	850.8	858.7	866.5	874.3	882.1	889.6
130°	876.5	879.9	883.3	886.8	890.2	895.2	901.9	908.6	915.2	921.8	929.5
132.5°	924.6	927.5	930.2	932.9	935.6	939.9	945.5	951.2	956.9	962.6	969.3
135°	987.5	990.8	993.9	997.1	1000.4	1004.0	1007.9	1012.0	1016.0	1020.1	1027.0
137.5°	1055.4	1057.9	1060.5	1063.0	1065.6	1068.0	1070.3	1072.6	1074.8	1077.0	1083.2
140°	1096.2	1098.5	1100.8	1103.1	1105.3	1107.5	1109.6	1111.9	1114.0	1116.1	1121.7
142.5°	1138.1	1140.4	1142.7	1145.0	1147.2	1148.9	1150.0	1151.1	1152.4	1153.5	1158.1
145°	1196.8	1198.9	1200.9	1203.0	1205.0	1206.9	1208.6	1210.3	1212.1	1213.9	1216.2
147.5°	1250.5	1252.9	1255.4	1257.9	1260.3	1262.1	1263.2	1264.5	1265.6	1266.8	1267.7
150°	1287.2	1288.9	1290.7	1292.4	1294.1	1295.7	1296.8	1298.0	1299.1	1300.3	1301.1
152.5°	1319.7	1321.4	1323.1	1324.8	1326.7	1328.2	1329.6	1331.0	1332.4	1333.8	1334.9
155°	1368.4	1369.3	1370.1	1371.0	1371.9	1372.7	1373.6	1374.4	1375.3	1376.2	1377.7
157.5°	1410.0	1410.6	1411.2	1411.8	1412.3	1412.9	1413.4	1413.9	1414.4	1415.0	1416.9
160°	1435.1	1435.7	1436.3	1436.9	1437.4	1437.9	1438.1	1438.5	1438.8	1439.1	1440.8
162.5°	1458.1	1458.3	1458.4	1458.5	1458.6	1458.9	1459.2	1459.5	1459.8	1460.1	1462.0
165°	1488.8	1488.5	1488.2	1487.9	1487.6	1487.5	1487.5	1487.5	1487.5	1487.5	1489.6
167.5°	1514.5	1513.6	1512.8	1511.9	1511.0	1510.6	1510.5	1510.5	1510.4	1510.3	1512.4
170°	1528.1	1527.2	1526.4	1525.5	1524.6	1524.1	1523.8	1523.5	1523.2	1522.9	1524.9
172.5°	1537.5	1536.7	1535.8	1534.9	1534.1	1533.5	1533.2	1532.9	1532.6	1532.3	1534.4
175°	1549.0	1548.2	1547.3	1546.4	1545.6	1544.9	1544.3	1543.7	1543.1	1542.5	1544.6
177.5°	1553.8	1553.1	1552.4	1551.7	1551.0	1550.4	1549.9	1549.4	1549.0	1548.5	1549.9
180°	1551.7	1551.7	1551.7	1551.7	1551.7	1551.7	1551.7	1551.7	1551.7	1551.7	1551.7



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CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
0°	1067.8	1067.8	1067.8	1067.8	1067.8	1067.8	1067.8	1067.8
2.5°	1064.4	1065.8	1067.2	1067.6	1067.0	1066.5	1065.9	1065.4
5°	1061.2	1063.3	1065.3	1066.1	1065.8	1065.5	1065.1	1064.8
7.5°	1056.1	1058.6	1061.1	1062.2	1061.8	1061.5	1061.1	1060.8
10°	1051.7	1054.5	1057.2	1058.4	1058.0	1057.7	1057.4	1057.0
12.5°	1044.3	1047.0	1049.8	1051.0	1050.7	1050.3	1050.0	1049.7
15°	1030.8	1033.8	1036.9	1038.3	1037.9	1037.6	1037.2	1036.9
17.5°	1013.4	1016.6	1019.9	1021.5	1021.5	1021.5	1021.5	1021.5
20°	999.6	1003.4	1007.1	1009.1	1009.1	1009.1	1009.1	1009.1
22.5°	984.7	988.6	992.3	994.5	995.0	995.6	996.1	996.7
25°	961.6	965.7	969.9	972.4	973.5	974.5	975.5	976.5
27.5°	935.9	941.2	946.4	949.4	950.2	950.9	951.7	952.4
30°	918.0	923.4	929.0	932.2	933.2	934.2	935.3	936.3
32.5°	898.6	904.8	911.2	915.2	917.2	919.0	920.9	922.7
35°	871.0	878.6	886.2	891.1	893.5	896.0	898.4	900.7
37.5°	842.6	851.0	859.4	864.8	867.4	870.0	872.5	875.0
40°	822.6	831.6	840.5	846.6	849.7	852.7	855.9	859.0
42.5°	803.2	813.0	822.8	829.2	832.3	835.5	838.5	841.6
45°	773.5	784.2	794.8	801.8	805.3	808.7	812.1	815.6
47.5°	742.6	753.7	764.9	772.3	776.1	779.9	783.7	787.5
50°	721.3	733.1	744.8	752.6	756.3	760.0	763.9	767.6
52.5°	698.4	710.3	722.4	730.3	734.4	738.5	742.6	746.6
55°	664.0	676.3	688.7	697.1	701.6	706.1	710.5	715.0
57.5°	627.5	640.9	654.2	663.1	667.6	672.2	676.7	681.3
60°	603.4	616.5	629.5	638.5	643.3	648.1	653.0	657.7
62.5°	577.8	591.7	605.6	614.8	619.4	623.9	628.4	633.0
65°	539.0	553.0	567.1	576.4	580.9	585.3	589.9	594.3
67.5°	499.6	513.8	528.1	537.6	542.2	546.8	551.6	556.2
70°	472.2	487.0	501.8	511.2	515.3	519.5	523.6	527.8
72.5°	445.7	460.2	474.6	484.4	489.4	494.3	499.3	504.2
75°	405.7	420.4	435.3	444.8	449.3	453.8	458.3	462.7
77.5°	366.5	381.2	396.0	405.8	410.5	415.4	420.2	425.0
80°	339.9	354.5	368.9	378.5	383.3	388.1	392.9	397.8
82.5°	315.2	329.6	344.1	353.6	358.1	362.6	367.2	371.7
85°	279.6	294.1	308.5	318.1	323.0	327.8	332.5	337.4
87.5°	258.6	272.6	286.5	295.7	300.1	304.6	309.0	313.5
90°	276.5	289.6	302.9	311.6	316.0	320.4	324.9	329.3
92.5°	262.0	275.6	289.2	298.1	302.3	306.4	310.6	314.8
95°	287.9	301.0	314.1	322.3	325.9	329.4	333.0	336.6
97.5°	331.0	343.8	356.5	364.9	368.8	372.8	376.8	380.8
100°	360.9	373.7	386.4	394.5	398.0	401.4	405.0	408.5
102.5°	395.2	407.8	420.5	428.6	432.0	435.6	439.1	442.5
105°	446.5	459.0	471.6	479.9	483.6	487.5	491.2	494.9
107.5°	503.0	514.8	526.6	533.7	536.1	538.7	541.1	543.5
110°	542.2	553.2	564.2	571.2	574.1	577.0	580.0	582.8



TEST NUMBER: P331606-840

CATALOG NUMBER: S122DIW-S1005D1240U840-4F0-1E-UDD-D1

CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
112.5°	581.4	591.7	602.0	608.7	611.9	615.0	618.1	621.3
115°	642.0	652.0	662.0	668.4	671.4	674.3	677.2	680.0
117.5°	699.9	709.4	718.8	724.9	727.6	730.2	732.9	735.5
120°	738.8	748.5	758.1	764.4	767.3	770.2	773.2	776.1
122.5°	779.7	788.4	797.1	802.7	805.3	807.9	810.5	813.0
125°	839.4	847.8	856.3	861.8	864.6	867.5	870.2	873.0
127.5°	897.1	904.5	912.1	916.9	919.0	921.0	923.1	925.2
130°	937.2	944.8	952.5	957.2	958.8	960.4	961.9	963.5
132.5°	976.0	982.7	989.4	993.7	995.5	997.3	999.2	1001.0
135°	1033.9	1040.9	1047.7	1052.2	1054.1	1055.9	1057.8	1059.7
137.5°	1089.2	1095.4	1101.5	1105.1	1106.3	1107.4	1108.6	1109.7
140°	1127.1	1132.7	1138.1	1141.3	1142.3	1143.2	1144.1	1144.9
142.5°	1162.8	1167.3	1171.9	1174.6	1175.3	1175.9	1176.5	1177.1
145°	1218.6	1220.9	1223.2	1224.8	1225.3	1225.9	1226.4	1227.0
147.5°	1268.6	1269.5	1270.4	1270.7	1270.4	1270.2	1269.9	1269.6
150°	1302.0	1302.9	1303.7	1303.7	1302.9	1302.0	1301.1	1300.3
152.5°	1336.1	1337.1	1338.2	1338.2	1337.1	1336.1	1334.9	1333.8
155°	1379.2	1380.6	1382.0	1382.3	1381.5	1380.6	1379.7	1378.9
157.5°	1419.0	1420.9	1422.9	1423.2	1421.8	1420.4	1419.0	1417.5
160°	1442.6	1444.3	1446.0	1446.3	1445.2	1444.0	1442.9	1441.7
162.5°	1464.0	1465.9	1467.9	1468.2	1466.8	1465.4	1464.0	1462.7
165°	1491.6	1493.6	1495.7	1495.9	1494.5	1493.1	1491.6	1490.2
167.5°	1514.4	1516.4	1518.4	1518.7	1517.2	1515.7	1514.2	1512.7
170°	1526.9	1528.9	1531.1	1531.2	1529.4	1527.7	1525.9	1524.2
172.5°	1536.4	1538.4	1540.4	1540.5	1538.8	1537.1	1535.4	1533.6
175°	1546.6	1548.6	1550.6	1550.8	1549.0	1547.3	1545.6	1543.8
177.5°	1551.4	1552.8	1554.1	1554.1	1552.8	1551.4	1549.9	1548.5
180°	1551.7	1551.7	1551.7	1551.7	1551.7	1551.7	1551.7	1551.7

(END OF REPORT)