

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: P331578-830

Luminaire Tested: **S122DIW-S865D1240U830-4F0-1E-UDD-F1**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P331578-830
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-S865D1240U830-4F0-1E-UDD-F1
Description: DEFINE 2 DIRECT-INDIRECT WALL MOUNT LED LUMINAIRE
DOWNLIGHT 865 LUMENS PER FOOT, FLUSH 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: 7364.5 lumens
Efficiency: N/A
Efficacy: 105.5 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: General Diffuse

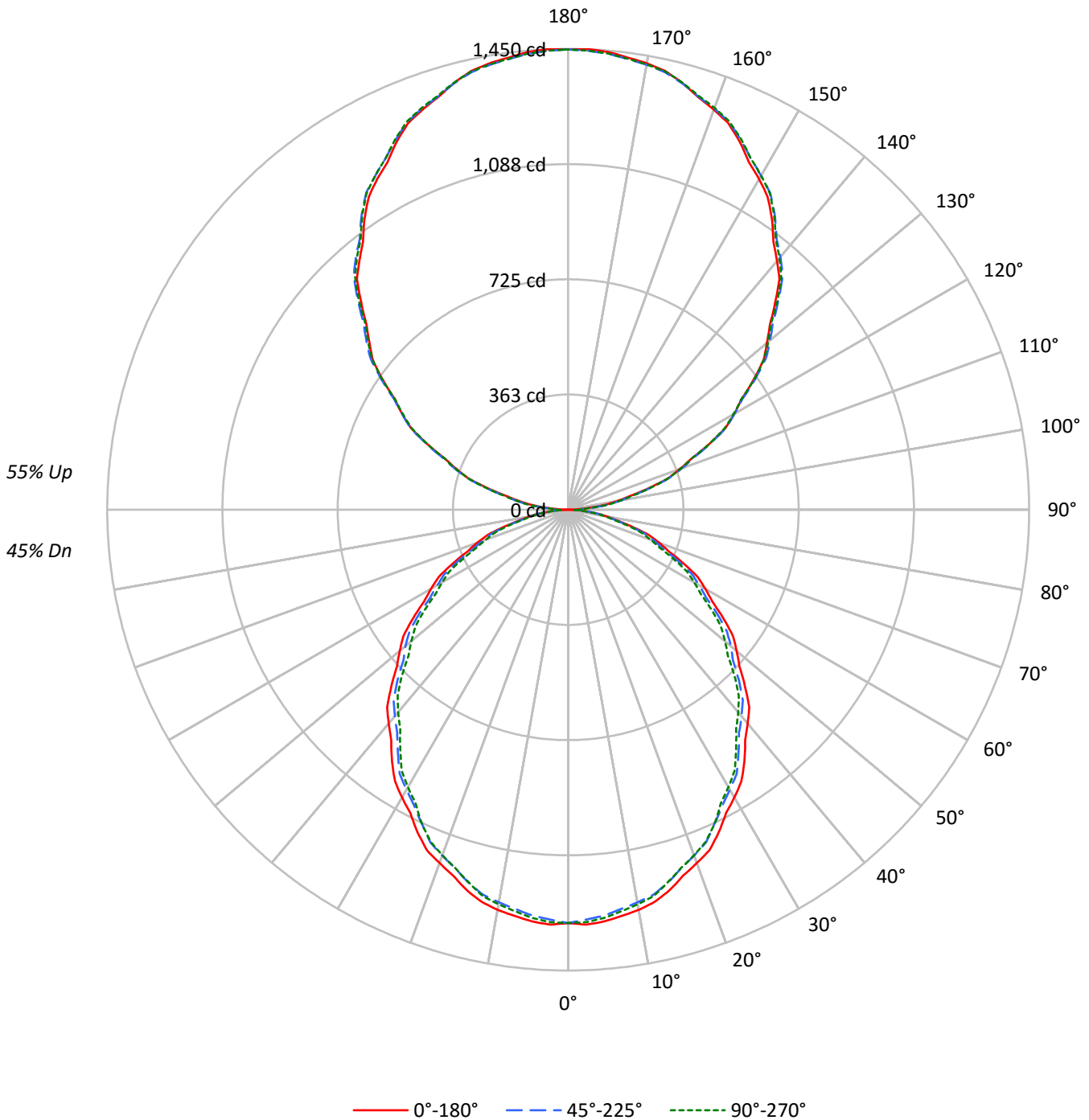
Input Watts (W): 69.8
Input Voltage (V): 120
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



TEST NUMBER: P331578-830

CATALOG NUMBER: S122DIW-S865D1240U830-4F0-1E-UDD-F1

Luminous Intensity Polar Plot





TEST NUMBER: P331578-830

CATALOG NUMBER: S122DIW-S865D1240U830-4F0-1E-UDD-F1

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	106	106	106	106	97	97	97	97	81	81	81	65	65	65	52	52	52	45
1	97	92	88	85	88	85	81	78	71	68	66	58	56	54	46	44	43	38
2	88	81	75	69	80	74	69	64	62	58	55	51	48	45	40	38	37	32
3	80	71	64	58	73	65	59	54	55	50	46	45	41	38	35	33	31	27
4	73	63	55	49	67	58	51	46	48	43	39	40	36	33	32	29	27	23
5	67	56	48	42	61	51	44	39	43	38	34	36	32	29	29	26	23	20
6	62	50	42	36	57	46	39	34	39	33	29	32	28	25	26	23	21	18
7	57	45	37	32	52	42	35	30	35	30	26	29	25	22	24	21	18	16
8	53	41	33	28	49	38	31	26	32	27	23	27	23	20	22	19	16	14
9	49	37	30	25	45	35	28	23	30	24	21	25	21	18	20	17	15	13
10	46	34	27	22	42	32	25	21	27	22	18	23	19	16	19	16	13	11

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	21001	21001	21001
5°	21081	20778	20900
10°	20956	20566	20669
15°	20697	20301	20277
20°	20330	19900	19878
25°	19963	19408	19408
30°	19494	18957	18793
35°	19056	18413	18143
40°	18506	17873	17530
45°	17961	17335	16908
50°	17372	16777	16179
55°	16757	16124	15527
60°	16075	15345	14783
65°	15339	14571	13903
70°	14408	13638	12987
75°	13107	12558	12246
80°	11632	11278	10702
85°	9503	9040	8096



TEST NUMBER: P331578-830

CATALOG NUMBER: S122DIW-S865D1240U830-4F0-1E-UDD-F1

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	122.3	1.7
10°-20°	344.2	4.7
20°-30°	505.9	6.9
30°-40°	587.6	8.0
40°-50°	587.0	8.0
50°-60°	511.9	7.0
60°-70°	378.5	5.1
70°-80°	214.4	2.9
80°-90°	63.4	0.9
90°-100°	91.8	1.2
100°-110°	285.0	3.9
110°-120°	487.2	6.6
120°-130°	640.7	8.7
130°-140°	719.1	9.8
140°-150°	705.1	9.6
150°-160°	591.4	8.0
160°-170°	392.2	5.3
170°-180°	137.1	1.9
0°-30°	972.3	13.2
0°-40°	1559.9	21.2
0°-60°	2658.7	36.1
0°-90°	3315.0	45.0
90°-120°	864.0	11.7
90°-150°	2928.8	39.8
90°-180°	4050.0	55.0
0°-180°	7364.5	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1301	1301	1301	1301	1301	
5°	1301	1295	1282	1291	1290	123
15°	1238	1230	1214	1219	1213	348
25°	1121	1110	1089	1092	1089	515
35°	967	954	934	927	920	603
45°	787	777	759	746	740	607
55°	595	587	573	558	552	532
65°	402	394	381	370	364	397
75°	210	207	201	194	196	224
85°	51	50	49	45	44	59
90°	1	17	43	40	42	6
95°	64	75	78	78	76	73
105°	263	266	269	271	271	277
115°	489	496	494	492	489	483
125°	711	721	719	715	714	635
135°	920	933	936	935	931	711
145°	1117	1126	1133	1134	1129	698
155°	1277	1281	1284	1290	1287	588
165°	1390	1388	1388	1396	1391	392
175°	1446	1442	1440	1447	1441	137
180°	1448	1448	1448	1448	1448	



TEST NUMBER: P331578-830

CATALOG NUMBER: S122DIW-S865D1240U830-4F0-1E-UDD-F1

CANDELA DISTRIBUTION (FULL):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
0°	1300.7	1300.7	1300.7	1300.7	1300.7	1300.7	1300.7	1300.7	1300.7	1300.7	1300.7
2.5°	1306.7	1305.6	1304.5	1303.4	1302.3	1300.5	1298.1	1295.6	1293.2	1290.7	1293.0
5°	1300.7	1299.6	1298.5	1297.4	1296.3	1294.2	1291.2	1288.1	1285.1	1282.0	1284.2
7.5°	1289.2	1287.5	1285.8	1284.0	1282.3	1279.9	1276.8	1273.7	1270.5	1267.4	1269.7
10°	1278.2	1276.3	1274.3	1272.3	1270.5	1267.8	1264.4	1261.1	1257.8	1254.4	1256.7
12.5°	1263.2	1261.5	1259.8	1258.0	1256.3	1253.8	1250.5	1247.1	1243.8	1240.5	1242.0
15°	1238.2	1236.5	1234.8	1233.2	1231.5	1228.9	1225.3	1221.6	1218.0	1214.5	1215.5
17.5°	1206.2	1204.5	1202.9	1201.2	1199.5	1196.8	1193.2	1189.5	1185.8	1182.1	1183.5
20°	1183.2	1181.5	1179.9	1178.2	1176.5	1173.7	1169.8	1165.9	1162.1	1158.2	1159.0
22.5°	1160.2	1157.8	1155.5	1153.1	1150.8	1147.8	1144.2	1140.5	1136.8	1133.1	1133.3
25°	1120.6	1118.4	1116.2	1114.0	1111.7	1108.2	1103.5	1098.8	1094.1	1089.4	1090.0
27.5°	1075.6	1073.7	1071.6	1069.6	1067.6	1064.7	1061.0	1057.2	1053.6	1049.8	1049.0
30°	1045.6	1043.4	1041.1	1039.0	1036.7	1033.5	1029.4	1025.2	1021.0	1016.8	1016.0
32.5°	1013.6	1011.8	1010.0	1008.2	1006.4	1003.3	999.0	994.6	990.2	985.8	984.3
35°	966.8	964.0	961.2	958.5	955.6	952.1	947.6	943.2	938.7	934.2	932.6
37.5°	914.0	911.5	909.1	906.6	904.3	900.8	896.4	891.9	887.4	883.0	880.9
40°	878.0	875.8	873.5	871.3	869.1	865.7	861.3	856.9	852.4	848.0	845.5
42.5°	843.0	840.7	838.5	836.3	834.1	830.8	826.3	821.9	817.4	812.9	810.2
45°	786.6	784.8	782.8	780.9	778.9	775.8	771.7	767.5	763.4	759.2	756.1
47.5°	730.7	728.9	727.0	725.2	723.3	720.2	715.9	711.5	707.2	702.9	699.6
50°	691.6	690.2	688.9	687.5	686.1	683.4	679.6	675.6	671.8	667.9	664.0
52.5°	653.7	651.8	650.0	648.1	646.3	643.6	639.9	636.2	632.5	628.9	625.7
55°	595.3	593.7	592.0	590.3	588.6	586.2	582.9	579.5	576.2	572.8	569.5
57.5°	536.8	535.5	534.1	532.8	531.5	529.0	525.3	521.6	517.9	514.3	511.0
60°	497.8	496.6	495.6	494.5	493.3	490.9	486.9	483.1	479.2	475.2	472.2
62.5°	459.8	458.0	456.2	454.4	452.6	450.3	447.2	444.2	441.2	438.3	435.5
65°	401.5	399.8	398.1	396.4	394.8	392.6	389.8	387.0	384.3	381.4	379.0
67.5°	342.2	340.8	339.5	338.2	336.9	335.0	332.4	329.9	327.4	324.9	323.0
70°	305.2	304.1	302.9	301.8	300.8	298.9	296.4	293.9	291.4	288.9	287.0
72.5°	267.1	266.1	264.9	263.8	262.7	261.4	259.8	258.2	256.5	254.9	253.0
75°	210.1	209.5	209.0	208.5	207.9	206.9	205.6	204.2	202.7	201.3	199.7
77.5°	159.1	158.2	157.2	156.3	155.3	154.6	154.0	153.4	152.9	152.3	151.5
80°	125.1	124.8	124.5	124.2	123.9	123.6	123.0	122.4	121.9	121.3	120.5
82.5°	93.0	93.0	92.9	92.8	92.8	92.7	92.3	92.0	91.6	91.3	90.2
85°	51.3	51.0	50.7	50.4	50.1	49.9	49.6	49.3	49.0	48.8	48.0
87.5°	18.3	18.5	18.7	18.9	19.0	19.6	20.4	21.0	21.8	22.5	21.8
90°	1.2	4.5	7.7	11.0	14.2	18.9	24.9	30.8	36.8	42.8	42.2
92.5°	21.8	24.1	26.6	28.9	31.3	33.2	34.6	36.0	37.4	38.8	38.9
95°	63.5	66.3	69.0	71.7	74.5	76.1	76.6	77.1	77.7	78.2	78.2
97.5°	116.1	118.5	120.9	123.3	125.6	127.3	128.4	129.4	130.4	131.5	131.5
100°	155.2	157.4	159.6	161.7	163.9	165.4	166.2	167.0	167.9	168.6	168.6
102.5°	196.2	198.0	199.7	201.5	203.2	204.6	205.7	206.7	207.7	208.8	209.0
105°	262.8	263.5	264.4	265.2	266.0	266.7	267.2	267.8	268.3	268.9	269.4
107.5°	329.7	330.9	332.2	333.3	334.5	335.1	335.1	335.1	335.1	335.1	335.4
110°	372.8	374.4	376.0	377.7	379.3	380.1	380.1	380.1	380.1	380.1	380.1



TEST NUMBER: P331578-830

CATALOG NUMBER: S122DIW-S865D1240U830-4F0-1E-UDD-F1

CANDELA DISTRIBUTION (continued):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
112.5°	419.7	421.3	422.9	424.6	426.2	426.9	426.7	426.5	426.2	426.0	425.4
115°	488.9	490.5	492.1	493.7	495.4	495.9	495.4	494.8	494.3	493.7	493.5
117.5°	557.8	560.0	562.1	564.3	566.5	566.8	565.2	563.7	562.2	560.7	560.1
120°	603.7	605.9	608.1	610.3	612.5	612.5	610.3	608.1	605.9	603.7	603.7
122.5°	645.7	648.4	651.0	653.6	656.2	656.8	655.3	653.7	652.1	650.6	650.0
125°	711.2	713.7	716.1	718.6	721.0	721.9	721.0	720.3	719.4	718.6	717.8
127.5°	775.1	778.2	781.3	784.4	787.5	788.5	787.6	786.6	785.6	784.6	783.6
130°	815.2	818.7	822.3	825.8	829.2	830.8	830.3	829.7	829.2	828.6	828.0
132.5°	860.2	863.0	865.9	868.7	871.7	873.2	873.3	873.4	873.5	873.5	872.4
135°	920.3	923.2	926.2	929.3	932.3	934.0	934.5	935.1	935.7	936.1	935.9
137.5°	983.5	986.0	988.4	990.9	993.3	994.9	995.6	996.4	997.0	997.8	997.6
140°	1021.7	1024.2	1026.6	1029.1	1031.5	1033.4	1034.7	1036.1	1037.5	1038.8	1038.8
142.5°	1060.8	1063.3	1065.7	1068.2	1070.6	1072.2	1073.2	1074.1	1075.1	1076.0	1076.2
145°	1117.0	1119.0	1120.9	1122.8	1124.6	1126.4	1128.0	1129.6	1131.3	1132.9	1133.2
147.5°	1167.2	1169.4	1171.7	1174.0	1176.3	1178.0	1179.0	1180.2	1181.2	1182.3	1182.9
150°	1201.4	1203.0	1204.7	1206.3	1207.9	1209.3	1210.3	1211.4	1212.5	1213.6	1214.4
152.5°	1231.7	1233.3	1234.9	1236.5	1238.2	1239.6	1241.0	1242.3	1243.6	1244.9	1245.9
155°	1277.1	1278.0	1278.7	1279.6	1280.4	1281.2	1282.0	1282.8	1283.6	1284.5	1285.8
157.5°	1316.0	1316.5	1317.1	1317.7	1318.1	1318.7	1319.2	1319.7	1320.1	1320.7	1322.5
160°	1339.4	1340.0	1340.6	1341.1	1341.6	1342.1	1342.3	1342.6	1342.8	1343.1	1344.7
162.5°	1360.9	1361.1	1361.2	1361.3	1361.4	1361.6	1361.9	1362.2	1362.4	1362.7	1364.5
165°	1389.6	1389.3	1389.0	1388.7	1388.5	1388.4	1388.4	1388.4	1388.4	1388.4	1390.3
167.5°	1413.5	1412.7	1411.9	1411.1	1410.2	1409.9	1409.8	1409.8	1409.7	1409.6	1411.6
170°	1426.3	1425.4	1424.7	1423.8	1423.0	1422.5	1422.2	1421.9	1421.6	1421.4	1423.2
172.5°	1435.0	1434.3	1433.4	1432.6	1431.8	1431.3	1431.0	1430.7	1430.4	1430.1	1432.1
175°	1445.8	1445.0	1444.2	1443.3	1442.6	1441.9	1441.3	1440.8	1440.2	1439.6	1441.6
177.5°	1450.2	1449.5	1448.9	1448.2	1447.6	1447.1	1446.6	1446.1	1445.8	1445.3	1446.6
180°	1448.2	1448.2	1448.2	1448.2	1448.2	1448.2	1448.2	1448.2	1448.2	1448.2	1448.2



TEST NUMBER: P331578-830

CATALOG NUMBER: S122DIW-S865D1240U830-4F0-1E-UDD-F1

CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
0°	1300.7	1300.7	1300.7	1300.7	1300.7	1300.7	1300.7	1300.7
2.5°	1295.1	1297.4	1299.6	1300.5	1300.0	1299.6	1299.2	1298.7
5°	1286.4	1288.6	1290.9	1291.7	1291.2	1290.6	1290.1	1289.5
7.5°	1271.9	1274.1	1276.4	1277.1	1276.6	1275.9	1275.4	1274.7
10°	1258.9	1261.1	1263.4	1264.0	1263.2	1262.3	1261.5	1260.7
12.5°	1243.6	1245.1	1246.7	1247.2	1246.5	1245.9	1245.3	1244.7
15°	1216.6	1217.8	1218.9	1218.7	1217.4	1216.0	1214.6	1213.1
17.5°	1184.7	1186.0	1187.3	1187.2	1185.9	1184.6	1183.3	1181.9
20°	1159.8	1160.6	1161.5	1161.3	1160.3	1159.1	1158.0	1156.9
22.5°	1133.5	1133.6	1133.8	1133.6	1132.8	1132.2	1131.5	1130.9
25°	1090.5	1091.0	1091.6	1091.6	1091.0	1090.5	1090.0	1089.4
27.5°	1048.2	1047.4	1046.5	1045.5	1044.1	1042.7	1041.4	1040.1
30°	1015.1	1014.4	1013.5	1012.5	1011.4	1010.3	1009.2	1008.0
32.5°	982.8	981.3	979.8	978.5	977.4	976.3	975.2	974.0
35°	930.9	929.3	927.7	926.0	924.7	923.3	921.9	920.5
37.5°	878.9	876.8	874.8	873.1	871.8	870.4	869.1	867.7
40°	843.0	840.5	838.0	836.1	835.1	834.0	832.8	831.7
42.5°	807.5	804.7	802.1	799.9	798.3	796.8	795.2	793.7
45°	753.1	750.0	747.0	744.9	743.8	742.6	741.5	740.5
47.5°	696.4	693.2	690.0	687.6	686.0	684.4	682.8	681.2
50°	660.1	656.2	652.3	649.7	648.3	646.9	645.5	644.1
52.5°	622.4	619.2	616.0	613.4	611.6	609.7	607.9	606.1
55°	566.2	562.8	559.5	557.1	555.7	554.3	553.0	551.6
57.5°	507.7	504.4	501.1	499.0	497.9	496.9	495.9	494.7
60°	469.2	466.1	463.1	461.1	460.2	459.4	458.5	457.8
62.5°	432.5	429.7	426.9	425.0	423.9	422.8	421.8	420.8
65°	376.5	374.0	371.5	369.5	368.2	366.7	365.3	363.9
67.5°	321.0	319.1	317.2	315.7	314.5	313.4	312.3	311.1
70°	285.0	283.0	281.2	279.6	278.5	277.4	276.3	275.1
72.5°	251.0	249.0	247.1	245.7	244.8	243.9	243.0	242.1
75°	198.0	196.3	194.7	194.2	194.7	195.3	195.8	196.3
77.5°	150.7	149.9	149.0	148.2	147.4	146.7	145.9	145.1
80°	119.6	118.9	118.0	117.3	116.7	116.2	115.6	115.1
82.5°	89.2	88.1	87.1	86.5	86.3	86.2	86.1	86.1
85°	47.1	46.3	45.4	44.9	44.6	44.3	44.0	43.7
87.5°	21.0	20.3	19.4	18.9	18.9	18.7	18.5	18.3
90°	41.7	41.2	40.6	40.4	40.7	41.0	41.3	41.6
92.5°	39.1	39.2	39.3	39.4	39.4	39.5	39.6	39.6
95°	78.2	78.2	78.2	77.9	77.4	76.8	76.3	75.8
97.5°	131.5	131.5	131.5	131.5	131.4	131.4	131.3	131.3
100°	168.6	168.6	168.6	168.5	168.2	168.0	167.7	167.4
102.5°	209.2	209.4	209.6	209.6	209.3	209.1	208.8	208.5
105°	269.9	270.5	271.1	271.4	271.4	271.4	271.4	271.4
107.5°	335.5	335.7	336.0	335.5	334.2	333.0	331.7	330.5
110°	380.1	380.1	380.1	379.7	378.9	378.1	377.2	376.5



TEST NUMBER: P331578-830

CATALOG NUMBER: S122DIW-S865D1240U830-4F0-1E-UDD-F1

CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
112.5°	424.7	424.0	423.4	422.8	422.2	421.6	421.0	420.4
115°	493.2	492.9	492.7	492.1	491.3	490.5	489.7	488.9
117.5°	559.4	558.7	558.1	557.4	556.6	555.7	555.0	554.1
120°	603.7	603.7	603.7	603.3	602.5	601.7	600.9	600.1
122.5°	649.4	648.8	648.1	647.4	646.9	646.2	645.6	645.1
125°	717.0	716.1	715.4	714.8	714.5	714.3	714.0	713.7
127.5°	782.7	781.7	780.7	779.8	778.9	778.1	777.2	776.3
130°	827.6	827.0	826.4	825.7	824.5	823.5	822.4	821.2
132.5°	871.2	870.0	868.8	867.8	867.0	866.0	865.2	864.3
135°	935.7	935.4	935.1	934.5	933.7	932.9	932.1	931.2
137.5°	997.3	997.1	996.9	996.3	995.1	994.1	993.0	991.9
140°	1038.8	1038.8	1038.8	1038.3	1037.2	1036.1	1035.0	1034.0
142.5°	1076.4	1076.7	1076.9	1076.4	1075.3	1074.2	1073.2	1072.0
145°	1133.5	1133.8	1134.0	1133.6	1132.6	1131.4	1130.4	1129.3
147.5°	1183.5	1184.1	1184.7	1184.5	1183.5	1182.4	1181.4	1180.3
150°	1215.2	1216.1	1216.8	1216.8	1216.1	1215.2	1214.4	1213.6
152.5°	1247.0	1247.9	1249.0	1249.0	1247.9	1247.0	1245.9	1244.9
155°	1287.2	1288.5	1289.9	1290.2	1289.4	1288.5	1287.7	1286.9
157.5°	1324.4	1326.2	1328.0	1328.3	1327.0	1325.7	1324.4	1323.0
160°	1346.4	1348.0	1349.6	1349.9	1348.9	1347.7	1346.7	1345.6
162.5°	1366.4	1368.2	1370.1	1370.4	1369.0	1367.7	1366.4	1365.2
165°	1392.1	1394.0	1396.0	1396.2	1394.9	1393.5	1392.1	1390.8
167.5°	1413.4	1415.3	1417.2	1417.5	1416.1	1414.7	1413.2	1411.8
170°	1425.1	1427.0	1429.0	1429.1	1427.5	1425.9	1424.2	1422.6
172.5°	1434.0	1435.9	1437.8	1437.8	1436.2	1434.6	1433.0	1431.3
175°	1443.5	1445.4	1447.3	1447.5	1445.8	1444.2	1442.6	1440.9
177.5°	1447.9	1449.3	1450.5	1450.5	1449.3	1447.9	1446.6	1445.3
180°	1448.2	1448.2	1448.2	1448.2	1448.2	1448.2	1448.2	1448.2

(END OF REPORT)