

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: P332218

Luminaire Tested: **S123DIW-S1165D755U835-4F0-1E-UDD-D**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P332218
REPORT IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-1807-864-5,
Test Lab: INNOVATION CENTER
Issue Date: 3/3/2020
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: NEO-RAY
Catalog Number: S123DIW-S1165D755U835-4F0-1E-UDD-D
Description: DEFINE 3 DIRECT-INDIRECT WALL MOUNT LED LUMINAIRE
DOWNLIGHT 1165 LUMENS PER FOOT, DROP SATIN WHITE DIFFUSER
UPLIGHT 755 LUMENS PER FOOT, NO LENS
Light Source: -
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 7872.4 lumens
Efficiency: N/A
Efficacy: 131.6 lumens/watt
Spacing Criteria (0/90/45): 1.2 / 1.26 / 1.37
Luminous Opening: Rectangular w/ Sides (W: 0.25' x L: 4' x H: 0.08')
CIE Type: General Diffuse

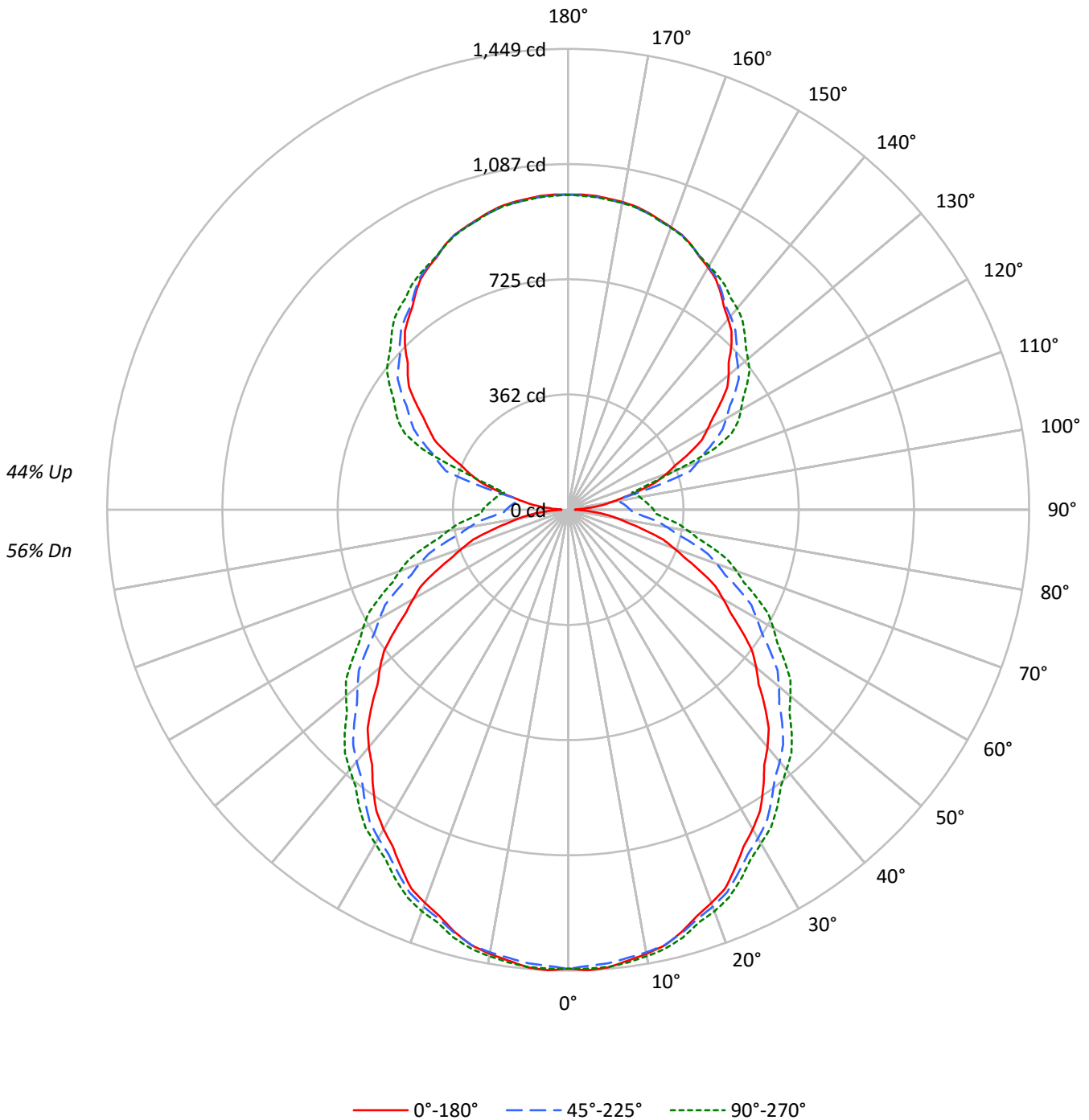
Input Watts (W): 59.8
Input Voltage (V): 120
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



TEST NUMBER: P332218

CATALOG NUMBER: S123DIW-S1165D755U835-4F0-1E-UDD-D

Luminous Intensity Polar Plot





TEST NUMBER: P332218

CATALOG NUMBER: S123DIW-S1165D755U835-4F0-1E-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	50	30	10	0		
RCR																										
0	109	109	109	109	101	101	101	101	87	87	87	74	74	74	62	62	62	56								
1	98	93	89	85	91	87	83	79	74	72	69	63	61	59	53	51	50	45								
2	89	81	74	68	82	75	69	64	65	60	56	55	52	49	46	43	41	37								
3	81	71	63	56	75	66	59	53	57	51	47	48	44	41	40	37	35	31								
4	74	62	54	47	68	58	51	45	50	44	40	43	38	34	36	32	30	26								
5	68	55	47	40	62	52	44	38	45	39	34	38	33	30	32	28	26	22								
6	62	50	41	35	58	46	39	33	40	34	29	34	30	26	29	25	22	19								
7	57	45	36	31	53	42	34	29	36	30	26	31	26	23	27	23	20	17								
8	53	41	33	27	49	38	31	26	33	27	23	29	24	20	24	21	18	15								
9	50	37	29	24	46	35	28	23	30	25	20	26	22	18	22	19	16	14								
10	46	34	26	22	43	32	25	20	28	22	18	24	20	16	21	17	14	12								

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	15532	15532	15532
5°	15581	15141	15150
10°	15441	14792	14718
15°	15242	14397	14247
20°	14958	13944	13729
25°	14607	13423	13185
30°	14248	12956	12632
35°	13844	12460	12191
40°	13459	12010	11719
45°	13033	11577	11342
50°	12611	11149	10926
55°	12146	10713	10553
60°	11692	10267	10169
65°	11230	9793	9712
70°	10529	9260	9244
75°	9643	8650	8768
80°	8626	8052	8224
85°	7681	7639	7911



TEST NUMBER: P332218

CATALOG NUMBER: S123DIW-S1165D755U835-4F0-1E-UDD-D

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	136.8	1.7
10°-20°	390.0	5.0
20°-30°	583.2	7.4
30°-40°	696.5	8.8
40°-50°	728.7	9.3
50°-60°	683.9	8.7
60°-70°	571.2	7.3
70°-80°	408.7	5.2
80°-90°	246.5	3.1
90°-100°	188.9	2.4
100°-110°	284.0	3.6
110°-120°	487.3	6.2
120°-130°	567.8	7.2
130°-140°	580.1	7.4
140°-150°	528.6	6.7
150°-160°	423.1	5.4
160°-170°	273.1	3.5
170°-180°	94.1	1.2
0°-30°	1110.0	14.1
0°-40°	1806.5	22.9
0°-60°	3219.1	40.9
0°-90°	4445.4	56.5
90°-120°	960.2	12.2
90°-150°	2636.8	33.5
90°-180°	3427.0	43.5
0°-180°	7872.4	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1443	1443	1443	1443	1443	
5°	1445	1441	1432	1444	1443	137
15°	1375	1380	1379	1393	1393	387
25°	1242	1257	1262	1282	1283	572
35°	1069	1094	1114	1137	1144	668
45°	874	912	951	980	993	674
55°	666	719	775	816	830	597
65°	461	522	591	636	654	455
75°	250	324	402	452	473	267
85°	77	156	239	290	308	81
90°	21	106	195	250	269	16
95°	62	96	178	230	248	69
105°	232	275	279	198	208	245
115°	419	445	506	549	566	414
125°	585	593	639	672	686	522
135°	725	729	748	777	784	558
145°	835	838	840	853	860	522
155°	918	916	917	920	916	423
165°	968	966	965	970	965	273
175°	990	987	988	992	987	94
180°	990	990	990	990	990	



TEST NUMBER: P332218

CATALOG NUMBER: S123DIW-S1165D755U835-4F0-1E-UDD-D

CANDELA DISTRIBUTION (FULL):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
0°	1443.0	1443.0	1443.0	1443.0	1443.0	1443.0	1443.0	1443.0	1443.0	1443.0	1443.0
2.5°	1449.3	1448.5	1447.6	1446.8	1445.9	1444.4	1442.2	1439.9	1437.7	1435.5	1437.7
5°	1444.6	1443.9	1443.2	1442.5	1441.8	1440.4	1438.3	1436.2	1434.1	1432.0	1434.8
7.5°	1430.4	1430.6	1430.7	1430.9	1431.0	1430.1	1428.0	1426.0	1424.0	1421.9	1425.4
10°	1417.9	1418.6	1419.3	1420.0	1420.7	1420.1	1418.4	1416.6	1414.9	1413.1	1416.6
12.5°	1402.8	1403.7	1404.7	1405.7	1406.7	1406.6	1405.4	1404.2	1403.0	1401.8	1405.0
15°	1375.4	1376.5	1377.5	1378.6	1379.6	1380.0	1379.6	1379.3	1378.9	1378.6	1382.1
17.5°	1340.8	1342.9	1345.0	1347.1	1349.2	1350.2	1350.1	1349.9	1349.8	1349.6	1352.8
20°	1315.7	1317.8	1319.9	1322.0	1324.1	1325.5	1326.2	1326.9	1327.6	1328.3	1331.4
22.5°	1289.3	1291.4	1293.5	1295.6	1297.7	1299.2	1300.2	1301.2	1302.1	1303.1	1307.1
25°	1241.8	1245.3	1248.8	1252.3	1255.8	1258.0	1259.1	1260.1	1261.2	1262.2	1266.8
27.5°	1194.0	1198.0	1202.0	1206.0	1209.9	1213.1	1215.3	1217.5	1219.8	1222.0	1225.9
30°	1160.1	1164.6	1169.1	1173.7	1178.2	1181.9	1184.7	1187.5	1190.3	1193.1	1197.3
32.5°	1122.3	1127.4	1132.5	1137.6	1142.7	1147.1	1150.7	1154.4	1158.0	1161.6	1166.1
35°	1068.9	1074.5	1080.1	1085.7	1091.3	1096.3	1100.9	1105.4	1109.9	1114.5	1119.7
37.5°	1012.3	1018.6	1024.9	1031.2	1037.5	1043.4	1049.0	1054.6	1060.2	1065.8	1071.7
40°	974.6	980.9	987.2	993.4	999.7	1006.4	1013.4	1020.3	1027.3	1034.3	1040.3
42.5°	933.1	940.8	948.5	956.1	963.8	971.3	978.6	985.8	993.1	1000.4	1006.9
45°	874.0	882.4	890.7	899.1	907.5	916.1	924.8	933.5	942.3	951.0	957.6
47.5°	812.0	821.5	831.0	840.6	850.1	859.8	869.8	879.8	889.8	899.8	907.2
50°	771.8	781.6	791.4	801.1	810.9	821.2	832.1	842.9	853.7	864.5	872.6
52.5°	729.1	739.4	749.7	760.1	770.4	781.6	793.5	805.4	817.4	829.3	837.7
55°	666.5	678.0	689.5	701.1	712.6	724.6	737.2	749.8	762.4	775.0	784.4
57.5°	605.5	617.5	629.5	641.5	653.6	666.5	680.2	694.0	707.7	721.5	731.0
60°	562.7	575.3	587.9	600.5	613.0	626.5	640.8	655.1	669.5	683.8	693.6
62.5°	522.5	535.4	548.2	561.1	573.9	587.9	603.1	618.2	633.4	648.6	658.3
65°	460.6	474.2	487.8	501.4	515.1	529.6	544.9	560.3	575.7	591.0	601.5
67.5°	397.7	412.2	426.6	441.1	455.5	470.6	486.2	501.9	517.5	533.2	544.6
70°	353.7	368.7	383.7	398.7	413.8	429.7	446.4	463.2	480.0	496.7	507.9
72.5°	313.4	328.5	343.5	358.5	373.5	389.7	407.0	424.3	441.7	459.0	470.5
75°	249.9	266.4	282.8	299.2	315.6	332.5	350.0	367.5	384.9	402.4	413.9
77.5°	194.6	211.2	227.7	244.3	260.8	277.9	295.5	313.1	330.7	348.3	360.5
80°	155.6	172.7	189.9	207.0	224.1	241.7	259.9	278.1	296.2	314.4	326.3
82.5°	121.7	139.1	156.5	173.9	191.2	209.2	227.6	246.1	264.5	282.9	294.8
85°	77.0	94.5	112.0	129.4	146.9	164.9	183.4	201.9	220.4	238.9	250.8
87.5°	42.0	59.7	77.4	95.1	112.9	130.8	149.1	167.3	185.6	203.8	215.8
90°	21.2	39.9	58.7	77.4	96.2	115.5	135.5	155.4	175.3	195.3	207.8
92.5°	32.9	47.8	62.8	77.8	92.8	109.9	129.0	148.1	167.3	186.4	199.0
95°	62.2	69.1	76.0	82.9	89.9	102.8	121.7	140.6	159.5	178.4	190.4
97.5°	105.6	114.9	124.2	133.5	142.8	149.7	154.3	158.8	163.4	168.0	179.7
100°	138.5	153.0	167.4	181.9	196.3	198.8	189.4	179.9	170.5	161.0	172.5
102.5°	176.1	188.5	200.9	213.3	225.8	225.9	213.9	201.8	189.7	177.6	183.4
105°	231.9	242.0	252.2	262.4	272.6	277.8	278.1	278.4	278.7	279.0	259.9
107.5°	289.1	297.7	306.3	314.8	323.4	336.0	352.5	369.1	385.7	402.3	390.4
110°	327.3	334.9	342.5	350.1	357.7	369.4	385.2	400.9	416.7	432.5	436.2



TEST NUMBER: P332218

CATALOG NUMBER: S123DIW-S1165D755U835-4F0-1E-UDD-D

CANDELA DISTRIBUTION (continued):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
112.5°	365.0	371.3	377.7	384.0	390.4	401.2	416.4	431.6	446.8	462.0	470.9
115°	419.2	424.4	429.6	434.7	439.9	449.5	463.6	477.6	491.6	505.7	515.7
117.5°	472.9	476.7	480.5	484.3	488.1	496.3	508.8	521.4	533.9	546.5	556.1
120°	505.2	508.4	511.6	514.9	518.1	525.7	537.7	549.7	561.7	573.8	583.1
122.5°	539.3	541.5	543.6	545.7	547.8	554.7	566.3	577.9	589.4	601.0	609.7
125°	584.6	585.9	587.2	588.5	589.8	595.9	606.6	617.4	628.2	639.0	646.7
127.5°	629.9	630.9	631.8	632.8	633.7	638.8	648.0	657.1	666.3	675.5	682.9
130°	658.2	659.1	660.1	661.0	662.0	666.3	673.9	681.6	689.2	696.9	704.1
132.5°	684.0	685.2	686.5	687.7	688.9	692.6	698.7	704.8	710.9	717.1	724.1
135°	725.0	725.7	726.3	726.9	727.5	730.1	734.6	739.1	743.6	748.1	754.9
137.5°	760.0	761.0	762.0	762.9	763.9	765.6	768.2	770.7	773.2	775.7	782.0
140°	782.3	783.3	784.3	785.3	786.2	787.5	789.0	790.6	792.1	793.7	799.6
142.5°	804.1	804.8	805.5	806.2	806.9	807.6	808.3	809.0	809.7	810.4	815.6
145°	834.6	835.4	836.2	837.0	837.7	838.3	838.6	839.0	839.3	839.6	842.7
147.5°	861.7	862.4	863.2	863.9	864.7	865.2	865.6	865.9	866.2	866.5	867.7
150°	879.4	879.8	880.3	880.8	881.3	881.7	882.1	882.4	882.7	883.0	883.4
152.5°	895.2	895.5	895.7	895.9	896.2	896.4	896.6	896.8	897.0	897.2	897.7
155°	917.6	917.3	917.0	916.6	916.3	916.2	916.4	916.6	916.7	916.9	917.7
157.5°	935.0	935.0	934.9	934.9	934.9	934.8	934.6	934.4	934.3	934.1	935.1
160°	945.6	945.4	945.3	945.1	944.9	944.8	944.6	944.4	944.3	944.1	945.1
162.5°	955.6	955.2	954.7	954.3	953.9	953.6	953.4	953.3	953.1	952.9	954.1
165°	967.7	967.2	966.7	966.2	965.7	965.4	965.2	965.0	964.9	964.7	966.0
167.5°	977.1	976.4	975.8	975.1	974.5	974.1	974.1	974.1	974.1	974.1	975.4
170°	982.4	981.7	981.1	980.4	979.8	979.4	979.4	979.4	979.4	979.4	980.7
172.5°	985.9	985.1	984.3	983.6	982.8	982.4	982.6	982.7	982.8	983.0	984.3
175°	990.5	989.6	988.8	988.0	987.2	986.9	987.0	987.2	987.4	987.5	988.7
177.5°	991.6	991.0	990.3	989.7	989.0	988.8	988.9	989.0	989.2	989.3	990.3
180°	990.5	990.5	990.5	990.5	990.5	990.5	990.5	990.5	990.5	990.5	990.5



TEST NUMBER: P332218

CATALOG NUMBER: S123DIW-S1165D755U835-4F0-1E-UDD-D

CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
0°	1443.0	1443.0	1443.0	1443.0	1443.0	1443.0	1443.0	1443.0
2.5°	1439.9	1442.2	1444.4	1445.4	1445.1	1444.8	1444.5	1444.3
5°	1437.6	1440.4	1443.2	1444.4	1444.1	1443.7	1443.4	1443.0
7.5°	1428.9	1432.4	1435.9	1437.5	1437.0	1436.6	1436.2	1435.8
10°	1420.1	1423.6	1427.1	1428.5	1427.8	1427.1	1426.4	1425.7
12.5°	1408.3	1411.5	1414.7	1415.9	1415.2	1414.5	1413.8	1413.1
15°	1385.5	1389.0	1392.5	1394.1	1393.8	1393.4	1393.1	1392.7
17.5°	1355.9	1359.1	1362.2	1363.5	1363.1	1362.6	1362.1	1361.6
20°	1334.5	1337.7	1340.8	1342.6	1342.9	1343.3	1343.6	1344.0
22.5°	1311.1	1315.1	1319.0	1320.9	1320.7	1320.5	1320.3	1320.1
25°	1271.3	1275.9	1280.4	1282.7	1282.7	1282.7	1282.7	1282.7
27.5°	1229.8	1233.7	1237.6	1239.7	1240.0	1240.3	1240.6	1240.9
30°	1201.5	1205.7	1209.8	1211.9	1211.9	1211.9	1211.9	1211.9
32.5°	1170.6	1175.1	1179.5	1182.2	1183.0	1183.9	1184.7	1185.5
35°	1125.0	1130.2	1135.4	1138.8	1140.2	1141.6	1143.0	1144.3
37.5°	1077.6	1083.6	1089.5	1093.0	1094.2	1095.3	1096.4	1097.5
40°	1046.2	1052.1	1058.1	1061.7	1063.1	1064.5	1065.9	1067.3
42.5°	1013.4	1019.9	1026.4	1030.6	1032.5	1034.5	1036.4	1038.4
45°	964.3	970.9	977.6	982.3	985.1	987.9	990.7	993.4
47.5°	914.7	922.2	929.7	934.5	936.6	938.8	941.0	943.1
50°	880.6	888.7	896.7	901.9	904.4	906.8	909.3	911.7
52.5°	846.0	854.3	862.6	868.3	871.3	874.3	877.3	880.3
55°	793.8	803.2	812.7	818.8	821.6	824.4	827.2	830.0
57.5°	740.5	750.0	759.5	765.9	769.2	772.5	775.8	779.0
60°	703.3	713.1	722.9	729.7	733.6	737.4	741.2	745.1
62.5°	668.1	677.9	687.7	694.4	697.9	701.5	705.1	708.6
65°	612.0	622.5	633.0	639.9	643.4	646.9	650.4	653.9
67.5°	556.1	567.6	579.0	586.2	589.2	592.1	595.0	598.0
70°	519.1	530.3	541.4	548.8	552.3	555.8	559.2	562.7
72.5°	481.9	493.4	504.8	512.3	515.8	519.3	522.8	526.3
75°	425.5	437.0	448.5	456.4	460.6	464.8	469.0	473.1
77.5°	372.6	384.8	397.0	404.6	407.9	411.1	414.3	417.5
80°	338.1	350.0	361.9	369.6	373.1	376.6	380.1	383.5
82.5°	306.7	318.6	330.4	338.1	341.6	345.1	348.6	352.1
85°	262.7	274.6	286.4	294.1	297.6	301.1	304.6	308.1
87.5°	227.8	239.8	251.8	259.6	263.2	266.7	270.3	273.8
90°	220.3	232.9	245.4	253.6	257.4	261.2	265.0	268.9
92.5°	211.7	224.3	237.0	245.0	248.4	251.8	255.2	258.6
95°	202.4	214.4	226.3	234.1	237.6	241.0	244.5	248.0
97.5°	191.4	203.1	214.9	222.6	226.2	229.9	233.5	237.2
100°	183.9	195.4	206.8	214.3	218.0	221.7	225.3	229.0
102.5°	189.2	195.0	200.8	205.6	209.4	213.2	217.0	220.8
105°	240.7	221.6	202.4	194.5	198.0	201.5	205.0	208.4
107.5°	378.5	366.7	354.8	339.5	320.8	302.0	283.3	264.5
110°	439.8	443.5	447.2	438.8	418.2	397.6	377.0	356.4



TEST NUMBER: P332218

CATALOG NUMBER: S123DIW-S1165D755U835-4F0-1E-UDD-D

CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
112.5°	479.8	488.7	497.6	501.1	499.3	497.4	495.5	493.7
115°	525.7	535.8	545.8	552.5	556.0	559.4	562.8	566.3
117.5°	565.7	575.4	585.0	591.2	594.1	596.9	599.8	602.6
120°	592.4	601.8	611.1	617.0	619.5	621.9	624.4	626.8
122.5°	618.4	627.0	635.7	641.3	643.9	646.5	649.1	651.6
125°	654.3	662.0	669.6	674.9	677.6	680.4	683.2	685.9
127.5°	690.4	697.8	705.2	710.0	712.0	714.1	716.1	718.2
130°	711.4	718.7	726.0	730.6	732.3	734.1	735.9	737.6
132.5°	731.1	738.1	745.1	749.6	751.5	753.4	755.3	757.2
135°	761.7	768.4	775.2	779.2	780.5	781.7	783.0	784.3
137.5°	788.3	794.6	800.9	804.8	806.2	807.6	809.1	810.5
140°	805.4	811.3	817.2	820.9	822.3	823.7	825.1	826.6
142.5°	820.8	826.0	831.2	834.5	835.8	837.0	838.3	839.6
145°	845.9	849.0	852.1	854.4	855.8	857.2	858.6	860.0
147.5°	868.9	870.0	871.2	872.0	872.6	873.1	873.6	874.1
150°	883.7	884.0	884.3	884.6	884.8	885.0	885.2	885.4
152.5°	898.3	898.9	899.5	899.5	898.9	898.3	897.7	897.1
155°	918.5	919.3	920.2	920.1	919.1	918.1	917.1	916.1
157.5°	936.1	937.0	938.0	937.9	936.6	935.3	934.1	932.8
160°	946.1	947.1	948.0	948.0	946.8	945.7	944.5	943.4
162.5°	955.2	956.3	957.4	957.4	956.4	955.4	954.4	953.4
165°	967.3	968.6	969.9	970.0	968.9	967.7	966.6	965.4
167.5°	976.7	978.1	979.4	979.4	978.1	976.7	975.4	974.1
170°	982.0	983.4	984.7	984.7	983.4	982.0	980.7	979.4
172.5°	985.6	986.9	988.2	988.1	986.7	985.3	983.8	982.4
175°	989.8	991.0	992.1	992.0	990.7	989.4	988.1	986.8
177.5°	991.4	992.4	993.5	993.3	992.0	990.7	989.4	988.1
180°	990.5	990.5	990.5	990.5	990.5	990.5	990.5	990.5

(END OF REPORT)