

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: P332850

Luminaire Tested: **S124DIW-S1195D1050U835-4F0-1E-UDD-D1**

Issue Date: 3/3/2020

**Test Information**

Test Method: LM-79-08  
Report Number: P332850  
REPORT IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-1807-864-10,  
Test Lab: INNOVATION CENTER  
Issue Date: 3/3/2020  
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)  
Product Line: NEO-RAY  
Catalog Number: S124DIW-S1195D1050U835-4F0-1E-UDD-D1  
Description: DEFINE 4 DIRECT-INDIRECT WALL MOUNT LED LUMINAIRE  
DOWNLIGHT 1195 LUMENS PER FOOT, DROP SATIN WHITE DIFFUSER  
UPLIGHT 1050 LUMENS PER FOOT, FLUSH SATIN WHITE DIFFUSER  
Light Source: -  
Ballast/Driver: ELECTRONIC DRIVER

**Summary**

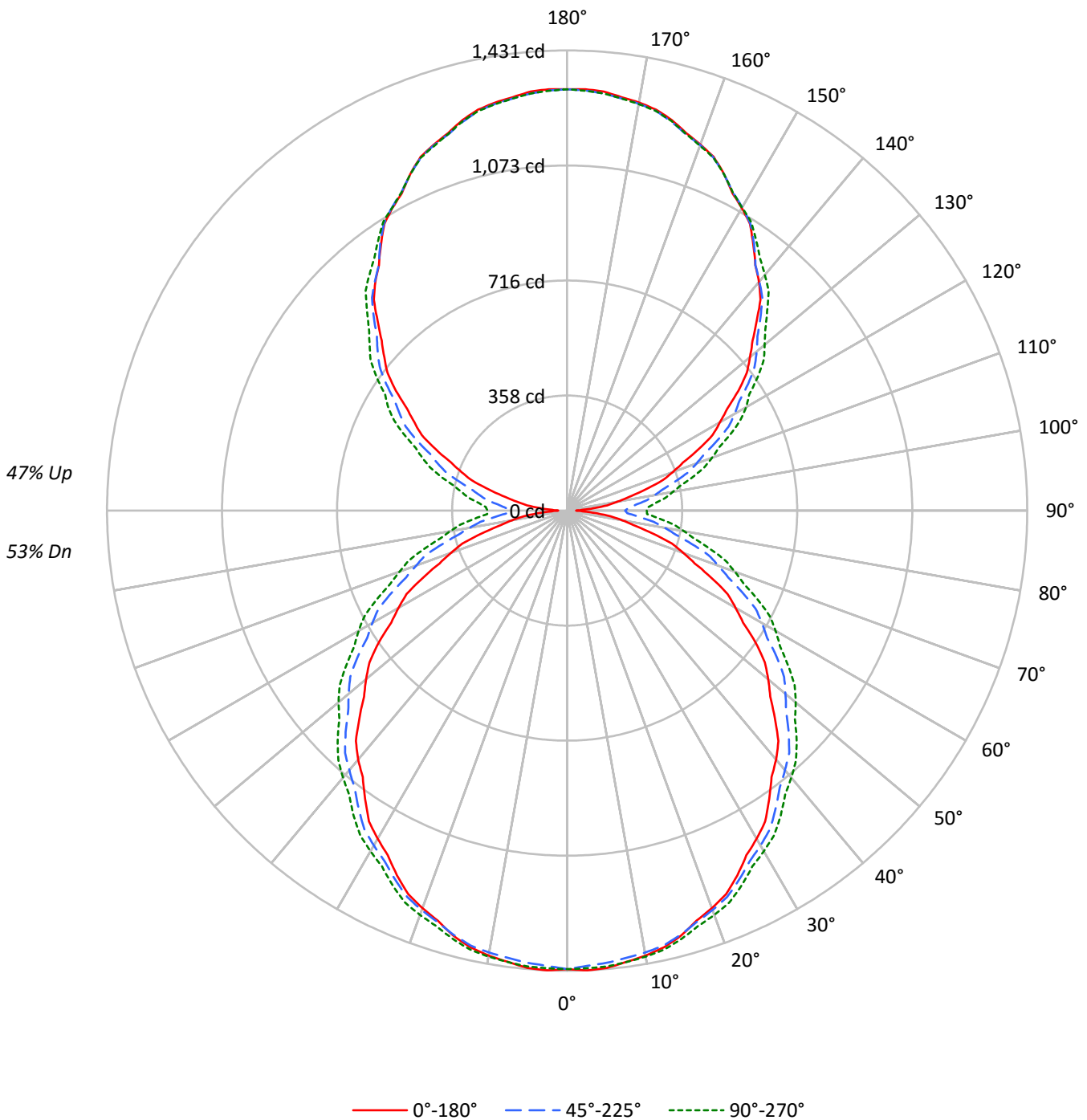
Lumens per Lamp: N/A  
Luminaire Lumens: 8498.9 lumens  
Efficiency: N/A  
Efficacy: 126.1 lumens/watt  
Spacing Criteria (0/90/45): 1.23 / 1.28 / 1.39  
Luminous Opening: Rectangular w/ Sides (W: 0.33' x L: 4' x H: 0.08')  
CIE Type: General Diffuse  
  
Input Watts (W): 67.4  
Input Voltage (V): 120  
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



TEST NUMBER: P332850

CATALOG NUMBER: S124DIW-S1195D1050U835-4F0-1E-UDD-D1

### Luminous Intensity Polar Plot





TEST NUMBER: P332850

CATALOG NUMBER: S124DIW-S1195D1050U835-4F0-1E-UDD-D1

**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	108	108	108	108	100	100	100	100	85	85	85	71	71	71	59	59	59	53
1	97	93	88	84	90	86	82	79	73	70	68	61	59	57	50	49	48	42
2	88	80	74	68	81	74	68	64	63	59	55	53	50	47	44	41	39	35
3	80	70	62	56	74	65	58	53	55	50	46	46	43	39	38	35	33	29
4	73	62	53	47	67	57	50	44	49	43	39	41	37	33	34	31	28	24
5	67	55	46	40	62	51	43	38	44	38	33	37	32	29	30	27	24	21
6	62	49	41	35	57	46	38	33	39	33	29	33	28	25	28	24	21	18
7	57	44	36	30	52	41	34	29	36	30	25	30	25	22	25	21	19	16
8	53	40	32	27	49	37	30	25	32	26	22	28	23	19	23	19	17	14
9	49	37	29	24	45	34	27	22	30	24	20	25	21	17	21	18	15	13
10	46	34	26	21	42	31	25	20	27	22	18	23	19	16	20	16	14	12

**AVERAGE LUMINANCE (cd/sqm):**

	0°	45°	90°
0°	11512	11512	11512
5°	11547	11251	11283
10°	11477	11067	11058
15°	11374	10854	10794
20°	11219	10619	10537
25°	11044	10355	10254
30°	10854	10093	9964
35°	10640	9824	9710
40°	10469	9569	9445
45°	10215	9334	9218
50°	10000	9062	8977
55°	9778	8806	8695
60°	9431	8480	8438
65°	9051	8130	8122
70°	8591	7730	7753
75°	7950	7291	7421
80°	7239	6868	7093
85°	6329	6495	6901



TEST NUMBER: P332850

CATALOG NUMBER: S124DIW-S1195D1050U835-4F0-1E-UDD-D1

**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	135.0	1.6
10°-20°	386.9	4.6
20°-30°	585.0	6.9
30°-40°	707.8	8.3
40°-50°	748.3	8.8
50°-60°	704.2	8.3
60°-70°	584.3	6.9
70°-80°	410.4	4.8
80°-90°	235.9	2.8
90°-100°	224.2	2.6
100°-110°	357.9	4.2
110°-120°	502.8	5.9
120°-130°	611.4	7.2
130°-140°	660.0	7.8
140°-150°	635.5	7.5
150°-160°	531.7	6.3
160°-170°	353.7	4.2
170°-180°	123.9	1.5
0°-30°	1106.9	13.0
0°-40°	1814.7	21.4
0°-60°	3267.3	38.4
0°-90°	4497.9	52.9
90°-120°	1084.9	12.8
90°-150°	2991.8	35.2
90°-180°	4001.0	47.1
0°-180°	8498.9	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	1426	1426	1426	1426	1426	
5°	1428	1422	1412	1424	1423	135
15°	1368	1370	1365	1379	1378	385
25°	1252	1261	1266	1283	1285	576
35°	1095	1114	1130	1152	1158	686
45°	913	944	974	1000	1009	706
55°	715	750	797	828	838	637
65°	495	546	600	639	653	490
75°	275	334	401	444	460	292
85°	85	152	224	270	287	90
90°	29	104	180	231	248	21
95°	82	144	216	260	276	84
105°	250	285	346	388	405	267
115°	451	468	515	548	559	446
125°	650	650	687	714	723	579
135°	833	839	850	873	880	645
145°	1010	1012	1013	1021	1025	632
155°	1155	1155	1154	1158	1154	531
165°	1257	1254	1252	1258	1254	354
175°	1308	1303	1302	1308	1302	124
180°	1310	1310	1310	1310	1310	



TEST NUMBER: P332850

CATALOG NUMBER: S124DIW-S1195D1050U835-4F0-1E-UDD-D1

**CANDELA DISTRIBUTION (FULL):**

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
0°	1426.0	1426.0	1426.0	1426.0	1426.0	1426.0	1426.0	1426.0	1426.0	1426.0	1426.0
2.5°	1431.1	1430.2	1429.4	1428.5	1427.7	1426.1	1423.8	1421.6	1419.3	1417.0	1419.0
5°	1427.5	1426.5	1425.4	1424.4	1423.3	1421.5	1419.0	1416.5	1414.1	1411.6	1414.4
7.5°	1415.4	1414.8	1414.1	1413.5	1412.9	1411.5	1409.5	1407.4	1405.3	1403.3	1406.5
10°	1405.2	1404.8	1404.5	1404.1	1403.8	1402.7	1400.9	1399.2	1397.4	1395.6	1398.8
12.5°	1391.1	1391.1	1391.0	1390.9	1390.9	1390.2	1389.0	1387.8	1386.6	1385.4	1388.3
15°	1368.5	1368.8	1369.2	1369.5	1369.9	1369.5	1368.5	1367.4	1366.3	1365.3	1368.5
17.5°	1337.5	1338.6	1339.6	1340.7	1341.7	1342.2	1342.0	1341.7	1341.5	1341.3	1344.6
20°	1315.8	1316.8	1317.9	1319.0	1320.0	1320.7	1321.1	1321.5	1321.8	1322.2	1325.7
22.5°	1291.5	1292.8	1294.2	1295.5	1296.9	1297.9	1298.5	1299.2	1299.8	1300.4	1304.0
25°	1251.9	1254.0	1256.2	1258.3	1260.4	1262.0	1263.1	1264.1	1265.2	1266.3	1270.2
27.5°	1207.8	1211.0	1214.1	1217.2	1220.3	1222.7	1224.3	1226.0	1227.6	1229.2	1232.8
30°	1178.4	1181.3	1184.1	1187.0	1189.8	1192.5	1194.9	1197.4	1199.9	1202.4	1206.3
32.5°	1146.5	1149.9	1153.3	1156.7	1160.1	1163.2	1166.0	1168.8	1171.5	1174.3	1178.8
35°	1095.4	1099.7	1103.9	1108.2	1112.4	1116.3	1119.9	1123.4	1127.0	1130.5	1135.5
37.5°	1044.0	1048.9	1053.8	1058.7	1063.6	1068.2	1072.6	1077.0	1081.4	1085.8	1090.9
40°	1010.8	1015.4	1020.0	1024.6	1029.2	1034.0	1039.0	1044.0	1048.9	1053.9	1059.2
42.5°	972.5	977.6	982.8	988.0	993.2	998.7	1004.5	1010.3	1016.1	1022.0	1027.9
45°	913.4	920.1	926.9	933.6	940.3	947.1	953.8	960.6	967.3	974.1	980.1
47.5°	856.8	863.8	870.8	877.7	884.7	892.1	899.9	907.7	915.5	923.3	929.5
50°	816.0	823.8	831.6	839.4	847.2	855.0	862.8	870.6	878.4	886.2	893.3
52.5°	775.1	782.9	790.7	798.5	806.3	814.7	823.6	832.6	841.5	850.5	857.6
55°	715.4	722.8	730.3	737.7	745.2	754.2	764.9	775.5	786.2	796.8	803.9
57.5°	648.6	657.9	667.1	676.3	685.5	695.4	706.0	716.6	727.2	737.7	746.2
60°	605.2	614.4	623.6	632.9	642.1	652.6	664.3	676.0	687.7	699.4	707.6
62.5°	563.0	573.1	583.2	593.3	603.3	614.2	626.0	637.7	649.4	661.1	669.2
65°	495.0	506.4	517.7	529.1	540.4	552.1	564.2	576.3	588.3	600.4	609.3
67.5°	429.5	441.6	453.7	465.7	477.8	490.3	503.2	516.1	529.0	542.0	551.0
70°	384.8	396.9	409.0	421.0	433.1	445.9	459.3	472.8	486.3	499.8	509.4
72.5°	341.4	353.7	366.1	378.4	390.8	404.1	418.5	432.8	447.1	461.5	470.8
75°	274.7	287.8	300.9	314.0	327.2	341.2	356.1	371.0	385.9	400.8	410.7
77.5°	212.4	226.3	240.2	254.1	268.0	282.8	298.4	314.0	329.6	345.2	355.3
80°	174.1	188.2	202.4	216.6	230.8	245.7	261.3	277.0	292.6	308.2	318.8
82.5°	135.7	150.5	165.3	180.0	194.8	210.0	225.6	241.2	256.8	272.4	283.3
85°	84.6	99.5	114.4	129.3	144.2	159.7	175.6	191.6	207.6	223.6	234.2
87.5°	47.9	62.8	77.8	92.8	107.8	123.2	139.1	155.0	170.9	186.8	197.4
90°	28.6	45.3	61.9	78.6	95.3	112.1	129.2	146.3	163.3	180.4	192.0
92.5°	46.0	61.6	77.2	92.8	108.4	124.5	141.0	157.5	174.0	190.5	201.4
95°	81.5	95.3	109.0	122.7	136.5	151.4	167.5	183.7	199.8	215.9	226.2
97.5°	125.0	136.7	148.4	160.1	171.8	185.8	202.0	218.3	234.5	250.8	260.9
100°	159.4	169.5	179.6	189.8	199.9	212.9	228.8	244.6	260.5	276.4	286.4
102.5°	196.7	205.1	213.6	222.0	230.5	242.4	257.8	273.2	288.6	304.0	313.9
105°	250.4	257.7	265.1	272.4	279.7	290.4	304.4	318.4	332.5	346.5	356.0
107.5°	309.9	315.9	322.0	328.1	334.2	343.5	356.1	368.7	381.2	393.8	403.1
110°	349.1	354.5	359.9	365.4	370.8	379.6	391.8	404.0	416.2	428.4	436.1



TEST NUMBER: P332850

CATALOG NUMBER: S124DIW-S1195D1050U835-4F0-1E-UDD-D1

**CANDELA DISTRIBUTION (continued):**

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
112.5°	390.0	394.5	398.9	403.4	407.9	415.9	427.3	438.8	450.2	461.7	469.5
115°	451.3	454.5	457.7	460.8	464.0	471.1	482.0	492.9	503.8	514.7	522.3
117.5°	510.5	512.6	514.7	516.8	518.9	525.1	535.3	545.6	555.9	566.1	572.7
120°	548.9	550.9	552.9	554.8	556.8	562.6	572.2	581.8	591.4	601.1	607.0
122.5°	590.3	590.9	591.4	592.0	592.6	597.6	607.0	616.4	625.8	635.2	641.5
125°	649.7	649.3	649.0	648.6	648.2	652.4	661.0	669.7	678.3	687.0	693.3
127.5°	704.7	705.0	705.3	705.6	705.9	709.3	715.8	722.2	728.7	735.1	741.1
130°	742.3	742.6	742.9	743.2	743.6	746.6	752.2	757.9	763.6	769.3	775.2
132.5°	782.0	782.1	782.3	782.4	782.6	784.8	789.2	793.5	797.9	802.3	807.9
135°	832.9	834.2	835.6	836.9	838.3	840.2	842.7	845.2	847.6	850.1	855.4
137.5°	890.0	890.3	890.6	890.8	891.1	892.0	893.6	895.2	896.7	898.3	902.9
140°	928.1	928.2	928.3	928.4	928.5	928.7	929.1	929.4	929.8	930.1	934.5
142.5°	961.7	962.1	962.4	962.8	963.2	963.2	962.8	962.4	962.0	961.6	965.6
145°	1009.6	1010.1	1010.7	1011.2	1011.8	1012.1	1012.4	1012.6	1012.8	1013.0	1014.9
147.5°	1057.4	1058.1	1058.8	1059.6	1060.3	1060.6	1060.4	1060.2	1060.0	1059.8	1059.9
150°	1086.6	1087.1	1087.7	1088.2	1088.7	1089.0	1089.0	1089.0	1089.0	1089.0	1089.0
152.5°	1112.8	1113.3	1113.8	1114.3	1114.7	1115.0	1115.2	1115.4	1115.6	1115.8	1116.3
155°	1154.9	1154.9	1154.9	1154.9	1154.9	1154.8	1154.5	1154.3	1154.1	1153.9	1154.8
157.5°	1190.5	1190.1	1189.7	1189.3	1188.9	1188.7	1188.6	1188.6	1188.5	1188.5	1189.2
160°	1211.6	1211.4	1211.1	1210.9	1210.7	1210.5	1210.2	1210.0	1209.8	1209.6	1210.2
162.5°	1231.0	1230.5	1229.9	1229.3	1228.7	1228.3	1228.1	1227.9	1227.6	1227.4	1228.6
165°	1257.2	1256.5	1255.8	1255.2	1254.5	1253.9	1253.5	1253.0	1252.6	1252.1	1253.5
167.5°	1277.2	1276.3	1275.4	1274.4	1273.5	1273.0	1273.1	1273.1	1273.1	1273.2	1274.5
170°	1288.6	1287.5	1286.3	1285.2	1284.1	1283.6	1283.9	1284.1	1284.3	1284.5	1285.9
172.5°	1296.7	1295.7	1294.8	1293.9	1292.9	1292.5	1292.5	1292.6	1292.6	1292.6	1294.2
175°	1307.8	1306.7	1305.6	1304.5	1303.3	1302.7	1302.4	1302.2	1302.0	1301.8	1303.3
177.5°	1311.5	1310.6	1309.7	1308.8	1307.9	1307.4	1307.4	1307.4	1307.4	1307.4	1308.7
180°	1309.9	1309.9	1309.9	1309.9	1309.9	1309.9	1309.9	1309.9	1309.9	1309.9	1309.9



TEST NUMBER: P332850

CATALOG NUMBER: S124DIW-S1195D1050U835-4F0-1E-UDD-D1

**CANDELA DISTRIBUTION (continued):**

	55°	60°	65°	70°	75°	80°	85°	90°
0°	1426.0	1426.0	1426.0	1426.0	1426.0	1426.0	1426.0	1426.0
2.5°	1421.0	1423.0	1425.0	1425.8	1425.5	1425.2	1425.0	1424.7
5°	1417.3	1420.1	1422.9	1424.2	1423.8	1423.5	1423.1	1422.8
7.5°	1409.7	1412.9	1416.1	1417.5	1417.1	1416.8	1416.4	1416.1
10°	1402.0	1405.2	1408.4	1409.8	1409.5	1409.1	1408.7	1408.4
12.5°	1391.2	1394.1	1397.0	1398.5	1398.4	1398.3	1398.2	1398.2
15°	1371.7	1374.9	1378.0	1379.5	1379.1	1378.8	1378.4	1378.0
17.5°	1347.9	1351.1	1354.4	1355.9	1355.6	1355.3	1355.0	1354.7
20°	1329.3	1332.8	1336.4	1338.1	1338.1	1338.1	1338.1	1338.1
22.5°	1307.5	1311.1	1314.6	1316.7	1317.3	1317.8	1318.4	1319.0
25°	1274.1	1278.0	1281.9	1284.0	1284.4	1284.7	1285.1	1285.4
27.5°	1236.5	1240.1	1243.7	1245.7	1246.2	1246.6	1247.0	1247.4
30°	1210.2	1214.1	1218.0	1220.3	1221.0	1221.7	1222.4	1223.2
32.5°	1183.2	1187.7	1192.2	1194.8	1195.5	1196.2	1196.9	1197.6
35°	1140.5	1145.4	1150.4	1153.4	1154.5	1155.6	1156.6	1157.7
37.5°	1095.9	1100.9	1106.0	1109.1	1110.2	1111.3	1112.5	1113.6
40°	1064.5	1069.9	1075.2	1078.6	1080.0	1081.4	1082.8	1084.2
42.5°	1033.7	1039.6	1045.5	1049.0	1050.2	1051.3	1052.4	1053.6
45°	986.1	992.2	998.2	1002.1	1003.9	1005.6	1007.4	1009.2
47.5°	935.8	942.0	948.3	952.4	954.6	956.7	958.8	961.0
50°	900.4	907.5	914.6	919.2	921.4	923.5	925.6	927.7
52.5°	864.7	871.8	878.8	883.5	885.6	887.7	889.8	892.0
55°	811.0	818.1	825.2	829.8	831.9	834.1	836.2	838.3
57.5°	754.6	763.1	771.5	776.7	778.7	780.7	782.7	784.7
60°	715.7	723.9	732.0	737.5	740.4	743.2	746.1	748.9
62.5°	677.4	685.6	693.7	699.2	702.1	704.9	707.7	710.6
65°	618.1	627.0	635.9	641.7	644.6	647.4	650.3	653.1
67.5°	560.0	569.0	578.0	583.9	586.7	589.4	592.2	595.0
70°	519.0	528.5	538.1	544.2	546.6	549.1	551.6	554.1
72.5°	480.1	489.4	498.7	504.7	507.5	510.2	513.0	515.8
75°	420.7	430.6	440.5	447.1	450.3	453.5	456.7	459.9
77.5°	365.4	375.5	385.5	392.3	395.7	399.1	402.5	405.9
80°	329.5	340.1	350.8	357.5	360.3	363.2	366.0	368.9
82.5°	294.3	305.2	316.1	323.2	326.3	329.4	332.5	335.6
85°	244.8	255.5	266.1	273.2	276.8	280.3	283.9	287.4
87.5°	207.9	218.5	229.1	235.9	239.2	242.4	245.6	248.8
90°	203.7	215.3	226.9	234.4	237.7	241.0	244.3	247.6
92.5°	212.2	223.0	233.8	240.8	243.9	247.0	250.1	253.2
95°	236.4	246.7	256.9	263.7	266.9	270.1	273.2	276.4
97.5°	271.0	281.1	291.2	297.8	300.9	303.9	307.0	310.0
100°	296.4	306.4	316.5	322.7	325.2	327.7	330.2	332.7
102.5°	323.9	333.8	343.7	350.2	353.1	356.0	359.0	361.9
105°	365.6	375.1	384.7	391.2	394.7	398.2	401.8	405.3
107.5°	412.5	421.8	431.2	437.1	439.6	442.2	444.7	447.2
110°	443.8	451.5	459.2	464.8	468.3	471.8	475.4	478.9





TEST NUMBER: P332850

CATALOG NUMBER: S124DIW-S1195D1050U835-4F0-1E-UDD-D1

**CANDELA DISTRIBUTION (continued):**

	55°	60°	65°	70°	75°	80°	85°	90°
112.5°	477.3	485.0	492.8	498.2	501.2	504.2	507.1	510.1
115°	529.9	537.5	545.0	550.0	552.2	554.5	556.7	559.0
117.5°	579.3	586.0	592.6	597.1	599.5	601.9	604.2	606.6
120°	613.0	619.0	624.9	629.6	632.9	636.2	639.4	642.7
122.5°	647.9	654.2	660.5	664.6	666.3	668.0	669.8	671.5
125°	699.6	705.9	712.1	716.1	717.8	719.5	721.2	722.8
127.5°	747.0	753.0	758.9	762.9	764.9	767.0	769.0	771.1
130°	781.2	787.1	793.0	796.6	797.8	799.1	800.3	801.5
132.5°	813.6	819.2	824.9	828.6	830.3	832.1	833.9	835.7
135°	860.6	865.8	871.0	874.4	875.8	877.3	878.7	880.2
137.5°	907.5	912.1	916.7	919.9	921.8	923.8	925.7	927.6
140°	938.9	943.3	947.7	950.6	952.2	953.7	955.3	956.8
142.5°	969.6	973.6	977.6	980.3	981.8	983.2	984.7	986.1
145°	1016.9	1018.8	1020.7	1022.0	1022.7	1023.5	1024.2	1025.0
147.5°	1060.1	1060.2	1060.3	1060.8	1061.7	1062.6	1063.5	1064.4
150°	1089.0	1089.0	1089.0	1088.9	1088.7	1088.5	1088.2	1088.0
152.5°	1116.8	1117.4	1117.9	1117.9	1117.3	1116.7	1116.1	1115.6
155°	1155.7	1156.6	1157.5	1157.5	1156.6	1155.7	1154.8	1153.9
157.5°	1189.9	1190.5	1191.2	1191.2	1190.4	1189.6	1188.9	1188.1
160°	1210.9	1211.6	1212.3	1212.0	1210.9	1209.8	1208.7	1207.5
162.5°	1229.8	1231.0	1232.3	1232.3	1231.2	1230.1	1228.9	1227.8
165°	1254.8	1256.2	1257.5	1257.7	1256.8	1255.9	1255.0	1254.1
167.5°	1275.9	1277.2	1278.6	1278.6	1277.2	1275.8	1274.4	1273.0
170°	1287.2	1288.6	1289.9	1289.8	1288.3	1286.7	1285.1	1283.5
172.5°	1295.7	1297.2	1298.8	1298.7	1297.2	1295.6	1294.0	1292.4
175°	1304.9	1306.5	1308.1	1308.1	1306.5	1304.9	1303.3	1301.8
177.5°	1310.0	1311.2	1312.5	1312.4	1310.9	1309.5	1308.1	1306.6
180°	1309.9	1309.9	1309.9	1309.9	1309.9	1309.9	1309.9	1309.9

(END OF REPORT)