

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: P332856

Luminaire Tested: **S124DIW-S1195D1340U835-4F0-1E-UDD-D1**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P332856
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-S1195D1340U835-4F0-1E-UDD-D1
Description: DEFINE 4 DIRECT-INDIRECT WALL MOUNT LED LUMINAIRE
DOWNLIGHT 1195 LUMENS PER FOOT, DROP SATIN WHITE DIFFUSER
UPLIGHT 1340 LUMENS PER FOOT, FLUSH SATIN WHITE DIFFUSER
Light Source: -
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 9518.3 lumens
Efficiency: N/A
Efficacy: 124.9 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

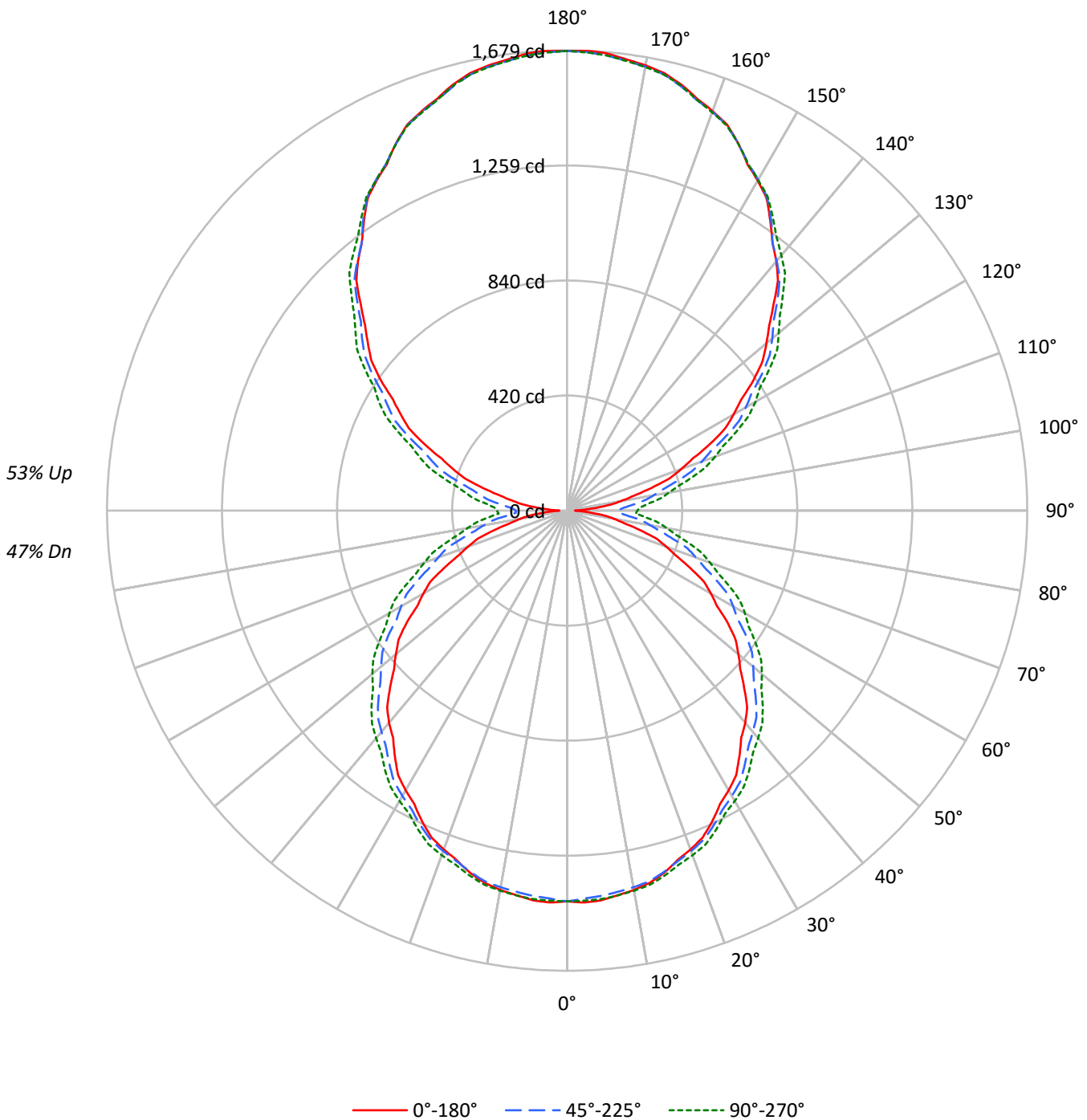
Input Watts (W): 76.2
Input Voltage (V): 120
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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	106	106	106	106	98	98	98	98	82	82	82	67	67	67	54	54	54	47
1	96	91	87	83	88	84	80	77	70	68	65	58	56	54	46	45	43	38
2	87	79	73	67	80	73	67	62	61	57	53	50	47	44	40	38	36	31
3	79	69	62	56	72	64	57	52	53	48	44	44	40	37	35	32	30	26
4	72	61	53	47	66	56	49	44	47	42	37	39	35	31	31	28	26	22
5	66	54	46	40	61	50	43	37	42	36	32	35	30	27	28	25	22	19
6	61	49	40	34	56	45	37	32	38	32	28	31	27	23	25	22	19	16
7	56	44	36	30	51	40	33	28	34	28	24	28	24	21	23	20	17	14
8	52	40	32	26	48	37	30	25	31	25	21	26	22	18	21	18	15	13
9	49	36	28	23	44	33	27	22	28	23	19	24	19	16	19	16	14	11
10	45	33	26	21	42	31	24	20	26	21	17	22	18	15	18	15	12	10

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



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	135.0	1.4
10°-20°	386.9	4.1
20°-30°	585.0	6.1
30°-40°	707.8	7.4
40°-50°	748.3	7.9
50°-60°	704.2	7.4
60°-70°	584.3	6.1
70°-80°	410.4	4.3
80°-90°	237.0	2.5
90°-100°	248.4	2.6
100°-110°	429.6	4.5
110°-120°	624.5	6.6
120°-130°	771.9	8.1
130°-140°	840.2	8.8
140°-150°	812.6	8.5
150°-160°	680.6	7.2
160°-170°	452.8	4.8
170°-180°	158.6	1.7
0°-30°	1106.9	11.6
0°-40°	1814.7	19.1
0°-60°	3267.3	34.3
0°-90°	4499.0	47.3
90°-120°	1302.5	13.7
90°-150°	3727.2	39.2
90°-180°	5019.0	52.7
0°-180°	9518.3	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	108	187	239	256	22
95°	99	164	238	283	299	103
105°	316	352	414	456	474	337
115°	575	591	638	670	682	567
125°	830	831	867	894	902	740
135°	1065	1073	1084	1106	1113	824
145°	1292	1295	1297	1305	1308	808
155°	1478	1478	1477	1482	1477	680
165°	1609	1606	1603	1610	1606	453
175°	1674	1668	1666	1675	1666	159
180°	1677	1677	1677	1677	1677	



TEST NUMBER: P332856

CATALOG NUMBER: S124DIW-S1195D1340U835-4F0-1E-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°	48.0	63.2	78.3	93.4	108.5	124.0	140.1	156.1	172.1	188.1	198.7
90°	29.4	46.8	64.2	81.5	98.9	116.4	133.9	151.5	169.1	186.6	198.6
92.5°	52.0	68.4	84.8	101.2	117.6	134.3	151.2	168.0	184.9	201.8	212.8
95°	98.6	112.9	127.2	141.5	155.8	171.2	187.8	204.4	220.9	237.5	247.9
97.5°	154.8	166.9	179.1	191.2	203.4	217.8	234.6	251.4	268.1	284.9	295.2
100°	199.1	209.5	219.9	230.3	240.6	254.0	270.5	286.9	303.3	319.8	329.9
102.5°	246.9	255.4	264.0	272.5	281.1	293.3	309.2	325.1	341.1	357.0	367.1
105°	316.5	323.9	331.3	338.7	346.1	356.9	371.2	385.5	399.8	414.0	423.8
107.5°	392.7	398.9	405.1	411.2	417.4	426.8	439.4	452.0	464.6	477.2	486.7
110°	443.3	448.9	454.4	460.0	465.5	474.4	486.5	498.6	510.7	522.9	530.5



TEST NUMBER: P332856

CATALOG NUMBER: S124DIW-S1195D1340U835-4F0-1E-UDD-D1

CANDELA DISTRIBUTION (continued):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
112.5°	496.0	500.5	505.0	509.6	514.1	522.0	533.3	544.7	556.0	567.3	575.1
115°	575.0	578.2	581.4	584.6	587.8	594.8	605.6	616.3	627.1	637.9	645.4
117.5°	651.0	653.1	655.3	657.4	659.5	665.7	675.9	686.0	696.2	706.4	712.8
120°	700.5	702.7	705.0	707.2	709.4	715.2	724.6	734.1	743.5	752.9	758.6
122.5°	753.4	754.1	754.8	755.5	756.1	761.1	770.4	779.8	789.1	798.4	804.5
125°	829.9	829.6	829.2	828.8	828.5	832.6	841.2	849.8	858.4	866.9	873.1
127.5°	900.4	900.9	901.4	901.9	902.4	905.9	912.2	918.6	924.9	931.3	937.1
130°	948.9	949.4	949.9	950.5	951.0	954.1	959.7	965.4	971.1	976.8	982.6
132.5°	999.8	1000.0	1000.3	1000.6	1000.9	1003.2	1007.5	1011.8	1016.1	1020.4	1025.9
135°	1065.3	1067.1	1068.8	1070.5	1072.3	1074.4	1076.8	1079.3	1081.8	1084.3	1089.4
137.5°	1138.5	1138.9	1139.4	1139.8	1140.3	1141.4	1143.0	1144.7	1146.4	1148.0	1152.5
140°	1187.2	1187.5	1187.7	1187.9	1188.1	1188.4	1188.8	1189.1	1189.5	1189.8	1194.2
142.5°	1230.6	1231.1	1231.6	1232.1	1232.6	1232.6	1232.2	1231.7	1231.3	1230.9	1234.9
145°	1292.0	1292.8	1293.6	1294.4	1295.2	1295.7	1296.0	1296.3	1296.6	1296.9	1298.7
147.5°	1353.2	1354.2	1355.3	1356.3	1357.3	1357.7	1357.5	1357.3	1357.0	1356.8	1356.9
150°	1390.6	1391.4	1392.2	1393.0	1393.8	1394.1	1394.1	1394.1	1394.1	1394.1	1394.1
152.5°	1424.6	1425.2	1425.8	1426.4	1427.0	1427.5	1427.7	1427.9	1428.2	1428.4	1429.1
155°	1478.4	1478.4	1478.4	1478.4	1478.4	1478.3	1478.0	1477.7	1477.4	1477.2	1478.3
157.5°	1524.1	1523.6	1523.1	1522.5	1522.0	1521.7	1521.7	1521.6	1521.6	1521.5	1522.4
160°	1551.1	1550.8	1550.5	1550.2	1549.9	1549.6	1549.3	1549.1	1548.8	1548.5	1549.3
162.5°	1576.0	1575.2	1574.5	1573.7	1573.0	1572.5	1572.2	1571.9	1571.6	1571.3	1572.9
165°	1609.4	1608.6	1607.7	1606.8	1606.0	1605.3	1604.7	1604.1	1603.5	1602.9	1604.7
167.5°	1635.1	1633.9	1632.7	1631.5	1630.3	1629.7	1629.8	1629.8	1629.9	1629.9	1631.7
170°	1649.6	1648.2	1646.8	1645.3	1643.9	1643.3	1643.6	1643.9	1644.2	1644.4	1646.2
172.5°	1660.0	1658.8	1657.6	1656.4	1655.2	1654.6	1654.7	1654.7	1654.8	1654.8	1656.8
175°	1674.3	1672.8	1671.4	1670.0	1668.5	1667.6	1667.4	1667.1	1666.8	1666.5	1668.5
177.5°	1678.9	1677.8	1676.6	1675.5	1674.3	1673.8	1673.8	1673.8	1673.8	1673.8	1675.4
180°	1676.9	1676.9	1676.9	1676.9	1676.9	1676.9	1676.9	1676.9	1676.9	1676.9	1676.9



TEST NUMBER: P332856

CATALOG NUMBER: S124DIW-S1195D1340U835-4F0-1E-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°	209.3	220.0	230.6	237.5	240.8	244.0	247.3	250.5
90°	210.7	222.7	234.7	242.4	245.8	249.2	252.7	256.1
92.5°	223.9	234.9	246.0	253.1	256.3	259.4	262.6	265.8
95°	258.4	268.8	279.3	286.1	289.3	292.5	295.7	298.9
97.5°	305.6	315.9	326.2	332.9	336.0	339.0	342.1	345.1
100°	340.1	350.3	360.4	366.7	369.2	371.7	374.2	376.7
102.5°	377.2	387.3	397.4	403.9	406.9	409.9	412.9	415.9
105°	433.5	443.3	453.0	459.7	463.4	467.1	470.8	474.5
107.5°	496.2	505.8	515.3	521.3	523.8	526.3	528.8	531.3
110°	538.1	545.6	553.2	558.9	562.6	566.3	570.0	573.7



TEST NUMBER: P332856

CATALOG NUMBER: S124DIW-S1195D1340U835-4F0-1E-UDD-D1

CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
112.5°	582.9	590.6	598.4	603.8	606.8	609.8	612.8	615.8
115°	652.9	660.5	668.0	672.8	675.0	677.2	679.4	681.6
117.5°	719.2	725.6	732.0	736.3	738.6	740.8	743.1	745.4
120°	764.2	769.9	775.5	780.1	783.5	786.9	790.3	793.7
122.5°	810.6	816.8	822.9	826.7	828.2	829.7	831.2	832.8
125°	879.3	885.4	891.6	895.5	897.0	898.6	900.1	901.7
127.5°	942.9	948.7	954.5	958.4	960.4	962.3	964.3	966.2
130°	988.4	994.2	1000.0	1003.4	1004.4	1005.4	1006.3	1007.3
132.5°	1031.5	1037.0	1042.5	1046.1	1047.8	1049.5	1051.1	1052.8
135°	1094.5	1099.6	1104.7	1107.9	1109.2	1110.4	1111.7	1112.9
137.5°	1156.9	1161.3	1165.8	1168.9	1170.9	1172.8	1174.8	1176.7
140°	1198.5	1202.8	1207.1	1210.0	1211.5	1213.0	1214.5	1216.0
142.5°	1238.8	1242.8	1246.8	1249.5	1251.0	1252.4	1253.8	1255.3
145°	1300.6	1302.4	1304.2	1305.4	1306.0	1306.6	1307.1	1307.7
147.5°	1356.9	1357.0	1357.0	1357.5	1358.3	1359.2	1360.0	1360.9
150°	1394.1	1394.1	1394.1	1394.0	1393.7	1393.4	1393.1	1392.9
152.5°	1429.8	1430.5	1431.2	1431.1	1430.4	1429.6	1428.9	1428.1
155°	1479.5	1480.6	1481.8	1481.8	1480.6	1479.5	1478.3	1477.2
157.5°	1523.2	1524.1	1525.0	1524.9	1523.9	1522.9	1522.0	1521.0
160°	1550.2	1551.1	1551.9	1551.6	1550.2	1548.8	1547.3	1545.9
162.5°	1574.4	1576.0	1577.5	1577.6	1576.1	1574.7	1573.3	1571.8
165°	1606.4	1608.1	1609.9	1610.2	1609.0	1607.8	1606.7	1605.5
167.5°	1633.4	1635.1	1636.8	1636.8	1635.0	1633.2	1631.5	1629.7
170°	1647.9	1649.6	1651.4	1651.2	1649.2	1647.2	1645.2	1643.2
172.5°	1658.7	1660.7	1662.7	1662.6	1660.6	1658.6	1656.6	1654.6
175°	1670.5	1672.5	1674.6	1674.6	1672.5	1670.5	1668.5	1666.5
177.5°	1677.0	1678.6	1680.2	1680.1	1678.3	1676.4	1674.6	1672.7
180°	1676.9	1676.9	1676.9	1676.9	1676.9	1676.9	1676.9	1676.9

(END OF REPORT)