

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: P332856-840

Luminaire Tested: **S124DIW-S1195D1340U840-4F0-1E-UDD-D1**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P332856-840
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-S1195D1340U840-4F0-1E-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: 9612.2 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

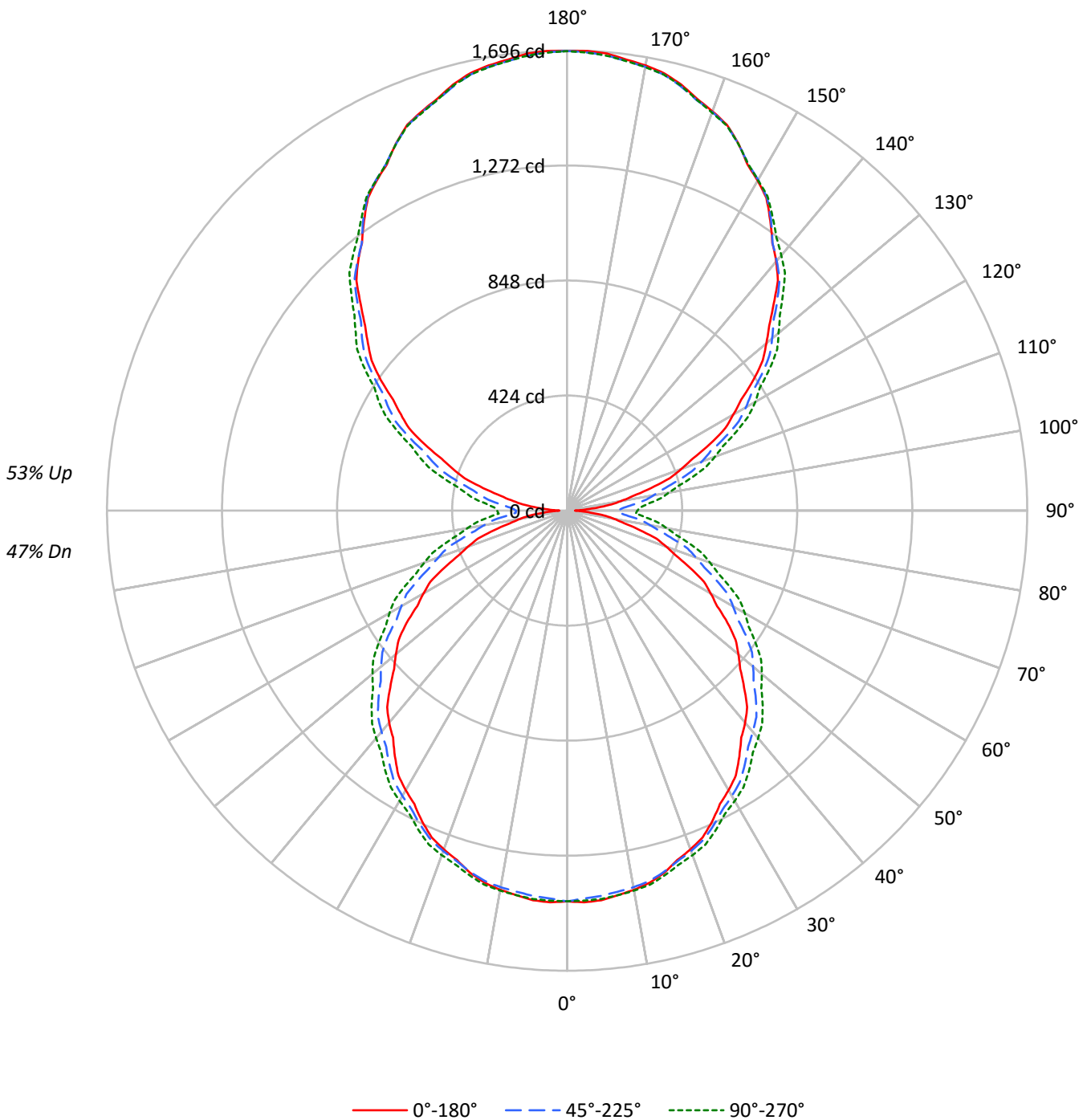
Input Watts (W): 76.2
Input Voltage (V): 120
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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°	11626	11626	11626
5°	11661	11362	11394
10°	11590	11176	11167
15°	11486	10961	10900
20°	11330	10723	10641
25°	11153	10457	10356
30°	10961	10193	10063
35°	10745	9921	9805
40°	10573	9663	9538
45°	10316	9426	9309
50°	10098	9151	9066
55°	9875	8894	8781
60°	9525	8563	8521
65°	9141	8210	8201
70°	8676	7806	7830
75°	8028	7363	7494
80°	7309	6935	7163
85°	6389	6559	6968



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	136.4	1.4
10°-20°	390.7	4.1
20°-30°	590.8	6.1
30°-40°	714.8	7.4
40°-50°	755.7	7.9
50°-60°	711.2	7.4
60°-70°	590.1	6.1
70°-80°	414.5	4.3
80°-90°	239.4	2.5
90°-100°	250.8	2.6
100°-110°	433.9	4.5
110°-120°	630.7	6.6
120°-130°	779.5	8.1
130°-140°	848.5	8.8
140°-150°	820.6	8.5
150°-160°	687.3	7.2
160°-170°	457.3	4.8
170°-180°	160.1	1.7
0°-30°	1117.8	11.6
0°-40°	1832.6	19.1
0°-60°	3299.5	34.3
0°-90°	4543.4	47.3
90°-120°	1315.4	13.7
90°-150°	3764.0	39.2
90°-180°	5069.0	52.7
0°-180°	9612.2	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1440	1440	1440	1440	1440	
5°	1442	1436	1426	1438	1437	137
15°	1382	1383	1379	1392	1392	389
25°	1264	1274	1279	1296	1298	582
35°	1106	1125	1142	1163	1169	692
45°	922	953	984	1010	1019	713
55°	722	757	805	836	847	643
65°	500	552	606	645	660	495
75°	277	338	405	448	464	295
85°	85	153	226	272	290	91
90°	30	109	188	241	259	22
95°	100	165	240	286	302	104
105°	320	355	418	461	479	340
115°	581	597	644	677	688	573
125°	838	839	876	902	911	747
135°	1076	1084	1095	1117	1124	832
145°	1305	1308	1310	1318	1321	816
155°	1493	1493	1492	1496	1492	687
165°	1625	1621	1619	1626	1621	458
175°	1691	1685	1683	1691	1683	160
180°	1693	1693	1693	1693	1693	



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CANDELA DISTRIBUTION (FULL):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
0°	1440.1	1440.1	1440.1	1440.1	1440.1	1440.1	1440.1	1440.1	1440.1	1440.1	1440.1
2.5°	1445.2	1444.3	1443.5	1442.6	1441.8	1440.2	1437.8	1435.6	1433.3	1431.0	1433.0
5°	1441.6	1440.6	1439.5	1438.5	1437.3	1435.5	1433.0	1430.5	1428.1	1425.5	1428.4
7.5°	1429.4	1428.8	1428.1	1427.4	1426.8	1425.4	1423.4	1421.3	1419.2	1417.1	1420.4
10°	1419.1	1418.7	1418.4	1418.0	1417.6	1416.5	1414.7	1413.0	1411.2	1409.4	1412.6
12.5°	1404.8	1404.8	1404.7	1404.6	1404.6	1403.9	1402.7	1401.5	1400.3	1399.1	1402.0
15°	1382.0	1382.3	1382.7	1383.0	1383.4	1383.0	1382.0	1380.9	1379.8	1378.8	1382.0
17.5°	1350.7	1351.8	1352.8	1353.9	1354.9	1355.4	1355.2	1354.9	1354.7	1354.5	1357.9
20°	1328.8	1329.8	1330.9	1332.0	1333.0	1333.7	1334.1	1334.5	1334.8	1335.2	1338.8
22.5°	1304.2	1305.6	1307.0	1308.3	1309.7	1310.7	1311.3	1312.0	1312.6	1313.2	1316.9
25°	1264.3	1266.4	1268.6	1270.7	1272.8	1274.4	1275.6	1276.6	1277.7	1278.8	1282.7
27.5°	1219.7	1222.9	1226.1	1229.2	1232.3	1234.8	1236.4	1238.1	1239.7	1241.3	1245.0
30°	1190.0	1193.0	1195.8	1198.7	1201.5	1204.3	1206.7	1209.2	1211.7	1214.3	1218.2
32.5°	1157.8	1161.2	1164.7	1168.1	1171.5	1174.7	1177.5	1180.3	1183.1	1185.9	1190.4
35°	1106.2	1110.5	1114.8	1119.1	1123.4	1127.3	1130.9	1134.5	1138.1	1141.7	1146.7
37.5°	1054.3	1059.2	1064.2	1069.1	1074.1	1078.7	1083.2	1087.6	1092.1	1096.5	1101.7
40°	1020.8	1025.4	1030.1	1034.7	1039.4	1044.2	1049.2	1054.3	1059.2	1064.3	1069.6
42.5°	982.1	987.2	992.5	997.7	1003.0	1008.6	1014.4	1020.3	1026.1	1032.1	1038.0
45°	922.4	929.2	936.0	942.8	949.6	956.4	963.2	970.1	976.8	983.7	989.8
47.5°	865.3	872.3	879.4	886.4	893.4	900.9	908.8	916.7	924.5	932.4	938.7
50°	824.0	831.9	839.8	847.7	855.6	863.4	871.3	879.2	887.1	894.9	902.1
52.5°	782.7	790.6	798.5	806.4	814.3	822.7	831.7	840.8	849.8	858.9	866.1
55°	722.5	729.9	737.5	745.0	752.6	761.6	772.4	783.2	794.0	804.7	811.8
57.5°	655.0	664.4	673.7	683.0	692.3	702.3	713.0	723.7	734.4	745.0	753.6
60°	611.2	620.5	629.8	639.1	648.4	659.0	670.9	682.7	694.5	706.3	714.6
62.5°	568.6	578.8	589.0	599.2	609.3	620.3	632.2	644.0	655.8	667.6	675.8
65°	499.9	511.4	522.8	534.3	545.7	557.5	569.8	582.0	594.1	606.3	615.3
67.5°	433.7	446.0	458.2	470.3	482.5	495.1	508.2	521.2	534.2	547.3	556.4
70°	388.6	400.8	413.0	425.2	437.4	450.3	463.8	477.5	491.1	504.7	514.4
72.5°	344.8	357.2	369.7	382.1	394.7	408.1	422.6	437.1	451.5	466.1	475.4
75°	277.4	290.6	303.9	317.1	330.4	344.6	359.6	374.7	389.7	404.8	414.8
77.5°	214.5	228.5	242.6	256.6	270.6	285.6	301.3	317.1	332.9	348.6	358.8
80°	175.8	190.1	204.4	218.7	233.1	248.1	263.9	279.7	295.5	311.2	321.9
82.5°	137.0	152.0	166.9	181.8	196.7	212.1	227.8	243.6	259.3	275.1	286.1
85°	85.4	100.5	115.5	130.6	145.6	161.3	177.3	193.5	209.6	225.8	236.5
87.5°	48.5	63.8	79.1	94.3	109.6	125.2	141.5	157.6	173.8	190.0	200.7
90°	29.7	47.3	64.8	82.3	99.9	117.5	135.2	153.0	170.8	188.4	200.6
92.5°	52.5	69.1	85.6	102.2	118.8	135.6	152.7	169.7	186.7	203.8	214.9
95°	99.6	114.0	128.5	142.9	157.3	172.9	189.7	206.4	223.1	239.8	250.3
97.5°	156.3	168.5	180.9	193.1	205.4	219.9	236.9	253.9	270.7	287.7	298.1
100°	201.1	211.6	222.1	232.6	243.0	256.5	273.2	289.7	306.3	323.0	333.2
102.5°	249.3	257.9	266.6	275.2	283.9	296.2	312.3	328.3	344.5	360.5	370.7
105°	319.6	327.1	334.6	342.0	349.5	360.4	374.9	389.3	403.7	418.1	428.0
107.5°	396.6	402.8	409.1	415.3	421.5	431.0	443.7	456.5	469.2	481.9	491.5
110°	447.7	453.3	458.9	464.5	470.1	479.1	491.3	503.5	515.7	528.1	535.7



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CANDELA DISTRIBUTION (continued):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
112.5°	500.9	505.4	510.0	514.6	519.2	527.1	538.6	550.1	561.5	572.9	580.8
115°	580.7	583.9	587.1	590.4	593.6	600.7	611.6	622.4	633.3	644.2	651.8
117.5°	657.4	659.5	661.8	663.9	666.0	672.3	682.6	692.8	703.1	713.4	719.8
120°	707.4	709.6	712.0	714.2	716.4	722.3	731.7	741.3	750.8	760.3	766.1
122.5°	760.8	761.5	762.2	763.0	763.6	768.6	778.0	787.5	796.9	806.3	812.4
125°	838.1	837.8	837.4	837.0	836.7	840.8	849.5	858.2	866.9	875.5	881.7
127.5°	909.3	909.8	910.3	910.8	911.3	914.8	921.2	927.7	934.0	940.5	946.3
130°	958.3	958.8	959.3	959.9	960.4	963.5	969.2	974.9	980.7	986.4	992.3
132.5°	1009.7	1009.9	1010.2	1010.5	1010.8	1013.1	1017.4	1021.8	1026.1	1030.5	1036.0
135°	1075.8	1077.6	1079.3	1081.1	1082.9	1085.0	1087.4	1089.9	1092.5	1095.0	1100.1
137.5°	1149.7	1150.1	1150.6	1151.0	1151.5	1152.7	1154.3	1156.0	1157.7	1159.3	1163.9
140°	1198.9	1199.2	1199.4	1199.6	1199.8	1200.1	1200.5	1200.8	1201.2	1201.5	1206.0
142.5°	1242.7	1243.2	1243.7	1244.3	1244.8	1244.8	1244.4	1243.9	1243.4	1243.0	1247.1
145°	1304.7	1305.6	1306.4	1307.2	1308.0	1308.5	1308.8	1309.1	1309.4	1309.7	1311.5
147.5°	1366.5	1367.6	1368.7	1369.7	1370.7	1371.1	1370.9	1370.7	1370.4	1370.2	1370.3
150°	1404.3	1405.1	1405.9	1406.7	1407.5	1407.9	1407.9	1407.9	1407.9	1407.9	1407.9
152.5°	1438.7	1439.3	1439.9	1440.5	1441.1	1441.6	1441.8	1442.0	1442.3	1442.5	1443.2
155°	1493.0	1493.0	1493.0	1493.0	1493.0	1492.9	1492.6	1492.3	1492.0	1491.8	1492.9
157.5°	1539.1	1538.6	1538.1	1537.5	1537.0	1536.7	1536.7	1536.6	1536.6	1536.5	1537.4
160°	1566.4	1566.1	1565.8	1565.5	1565.2	1564.9	1564.6	1564.4	1564.1	1563.8	1564.6
162.5°	1591.5	1590.7	1590.0	1589.2	1588.5	1588.0	1587.7	1587.4	1587.1	1586.8	1588.4
165°	1625.3	1624.5	1623.6	1622.7	1621.8	1621.1	1620.5	1619.9	1619.3	1618.7	1620.5
167.5°	1651.2	1650.0	1648.8	1647.6	1646.4	1645.8	1645.9	1645.9	1646.0	1646.0	1647.8
170°	1665.9	1664.5	1663.0	1661.5	1660.1	1659.5	1659.8	1660.1	1660.4	1660.6	1662.4
172.5°	1676.4	1675.2	1674.0	1672.7	1671.5	1670.9	1671.0	1671.0	1671.1	1671.1	1673.1
175°	1690.8	1689.3	1687.9	1686.5	1685.0	1684.1	1683.8	1683.5	1683.2	1682.9	1685.0
177.5°	1695.5	1694.4	1693.1	1692.0	1690.8	1690.3	1690.3	1690.3	1690.3	1690.3	1691.9
180°	1693.4	1693.4	1693.4	1693.4	1693.4	1693.4	1693.4	1693.4	1693.4	1693.4	1693.4



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CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
0°	1440.1	1440.1	1440.1	1440.1	1440.1	1440.1	1440.1	1440.1
2.5°	1435.0	1437.0	1439.1	1439.9	1439.6	1439.3	1439.1	1438.8
5°	1431.3	1434.1	1436.9	1438.2	1437.8	1437.5	1437.1	1436.8
7.5°	1423.6	1426.8	1430.1	1431.5	1431.1	1430.8	1430.4	1430.1
10°	1415.8	1419.1	1422.3	1423.7	1423.4	1423.0	1422.6	1422.3
12.5°	1404.9	1407.9	1410.8	1412.3	1412.2	1412.1	1412.0	1412.0
15°	1385.2	1388.5	1391.6	1393.1	1392.7	1392.4	1392.0	1391.6
17.5°	1361.2	1364.4	1367.8	1369.3	1369.0	1368.7	1368.4	1368.1
20°	1342.4	1345.9	1349.6	1351.3	1351.3	1351.3	1351.3	1351.3
22.5°	1320.4	1324.0	1327.6	1329.7	1330.3	1330.8	1331.4	1332.0
25°	1286.7	1290.6	1294.5	1296.7	1297.1	1297.4	1297.8	1298.1
27.5°	1248.7	1252.3	1256.0	1258.0	1258.5	1258.9	1259.3	1259.7
30°	1222.1	1226.1	1230.0	1232.3	1233.0	1233.8	1234.5	1235.3
32.5°	1194.9	1199.4	1204.0	1206.6	1207.3	1208.0	1208.7	1209.4
35°	1151.8	1156.7	1161.7	1164.8	1165.9	1167.0	1168.0	1169.1
37.5°	1106.7	1111.8	1116.9	1120.0	1121.2	1122.3	1123.5	1124.6
40°	1075.0	1080.5	1085.8	1089.2	1090.7	1092.1	1093.5	1094.9
42.5°	1043.9	1049.9	1055.8	1059.3	1060.6	1061.7	1062.8	1064.0
45°	995.8	1002.0	1008.0	1012.0	1013.8	1015.5	1017.3	1019.2
47.5°	945.0	951.3	957.7	961.8	964.0	966.1	968.3	970.5
50°	909.3	916.5	923.6	928.3	930.5	932.6	934.7	936.9
52.5°	873.2	880.4	887.5	892.2	894.3	896.5	898.6	900.8
55°	819.0	826.2	833.3	838.0	840.1	842.3	844.4	846.6
57.5°	762.0	770.6	779.1	784.4	786.4	788.4	790.4	792.4
60°	722.8	731.0	739.2	744.8	747.7	750.5	753.5	756.3
62.5°	684.1	692.4	700.5	706.1	709.0	711.9	714.7	717.6
65°	624.2	633.2	642.2	648.0	651.0	653.8	656.7	659.5
67.5°	565.5	574.6	583.7	589.7	592.5	595.2	598.0	600.9
70°	524.1	533.7	543.4	549.6	552.0	554.5	557.0	559.6
72.5°	484.8	494.2	503.6	509.7	512.5	515.2	518.1	520.9
75°	424.9	434.8	444.8	451.5	454.7	458.0	461.2	464.4
77.5°	369.0	379.2	389.3	396.2	399.6	403.0	406.5	409.9
80°	332.8	343.5	354.3	361.0	363.9	366.8	369.6	372.5
82.5°	297.2	308.2	319.2	326.4	329.5	332.6	335.8	338.9
85°	247.2	258.0	268.7	275.9	279.5	283.1	286.7	290.2
87.5°	211.4	222.2	232.9	239.8	243.2	246.4	249.7	253.0
90°	212.8	224.9	237.0	244.8	248.2	251.7	255.2	258.6
92.5°	226.1	237.2	248.4	255.6	258.8	262.0	265.2	268.4
95°	260.9	271.5	282.1	288.9	292.2	295.4	298.6	301.8
97.5°	308.6	319.0	329.4	336.2	339.3	342.3	345.5	348.5
100°	343.5	353.8	364.0	370.3	372.8	375.4	377.9	380.4
102.5°	380.9	391.1	401.3	407.9	410.9	413.9	417.0	420.0
105°	437.8	447.7	457.5	464.2	468.0	471.7	475.4	479.2
107.5°	501.1	510.8	520.4	526.4	529.0	531.5	534.0	536.5
110°	543.4	551.0	558.7	564.4	568.2	571.9	575.6	579.4



TEST NUMBER: P332856-840

CATALOG NUMBER: S124DIW-S1195D1340U840-4F0-1E-UDD-D1

CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
112.5°	588.7	596.4	604.3	609.8	612.8	615.8	618.8	621.9
115°	659.3	667.0	674.6	679.4	681.7	683.9	686.1	688.3
117.5°	726.3	732.8	739.2	743.6	745.9	748.1	750.4	752.8
120°	771.7	777.5	783.2	787.8	791.2	794.7	798.1	801.5
122.5°	818.6	824.9	831.0	834.9	836.4	837.9	839.4	841.0
125°	888.0	894.1	900.4	904.3	905.8	907.5	909.0	910.6
127.5°	952.2	958.1	963.9	967.9	969.9	971.8	973.8	975.7
130°	998.2	1004.0	1009.9	1013.3	1014.3	1015.3	1016.2	1017.2
132.5°	1041.7	1047.2	1052.8	1056.4	1058.1	1059.9	1061.5	1063.2
135°	1105.3	1110.4	1115.6	1118.8	1120.1	1121.4	1122.7	1123.9
137.5°	1168.3	1172.8	1177.3	1180.4	1182.5	1184.4	1186.4	1188.3
140°	1210.3	1214.7	1219.0	1221.9	1223.5	1225.0	1226.5	1228.0
142.5°	1251.0	1255.1	1259.1	1261.8	1263.3	1264.8	1266.2	1267.7
145°	1313.4	1315.2	1317.1	1318.3	1318.9	1319.5	1320.0	1320.6
147.5°	1370.3	1370.4	1370.4	1370.9	1371.7	1372.6	1373.4	1374.3
150°	1407.9	1407.9	1407.9	1407.8	1407.4	1407.1	1406.8	1406.6
152.5°	1443.9	1444.6	1445.3	1445.2	1444.5	1443.7	1443.0	1442.2
155°	1494.1	1495.2	1496.4	1496.4	1495.2	1494.1	1492.9	1491.8
157.5°	1538.2	1539.1	1540.0	1539.9	1538.9	1537.9	1537.0	1536.0
160°	1565.5	1566.4	1567.2	1566.9	1565.5	1564.1	1562.6	1561.2
162.5°	1589.9	1591.5	1593.1	1593.2	1591.6	1590.2	1588.8	1587.3
165°	1622.2	1624.0	1625.8	1626.1	1624.9	1623.7	1622.6	1621.3
167.5°	1649.5	1651.2	1652.9	1652.9	1651.1	1649.3	1647.6	1645.8
170°	1664.2	1665.9	1667.7	1667.5	1665.5	1663.4	1661.4	1659.4
172.5°	1675.1	1677.1	1679.1	1679.0	1677.0	1675.0	1672.9	1670.9
175°	1687.0	1689.0	1691.1	1691.1	1689.0	1687.0	1685.0	1682.9
177.5°	1693.5	1695.2	1696.8	1696.7	1694.9	1692.9	1691.1	1689.2
180°	1693.4	1693.4	1693.4	1693.4	1693.4	1693.4	1693.4	1693.4

(END OF REPORT)