

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: P332709-840

Luminaire Tested: **S124DIP-S1195D1205U840-4F0-1E-UDD-D**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P332709-840
REPORT IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-1807-864-6,
Test Lab: INNOVATION CENTER
Issue Date: 3/3/2020
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: NEO-RAY
Catalog Number: S124DIP-S1195D1205U840-4F0-1E-UDD-D
Description: DEFINE 4 DIRECT-INDIRECT PENDANT LED LUMINAIRE
DOWNLIGHT 1195 LUMENS PER FOOT, DROP SATIN WHITE DIFFUSER
UPLIGHT 1205 LUMENS PER FOOT, NO LENS
Light Source: -
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 9766.3 lumens
Efficiency: N/A
Efficacy: 136.2 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

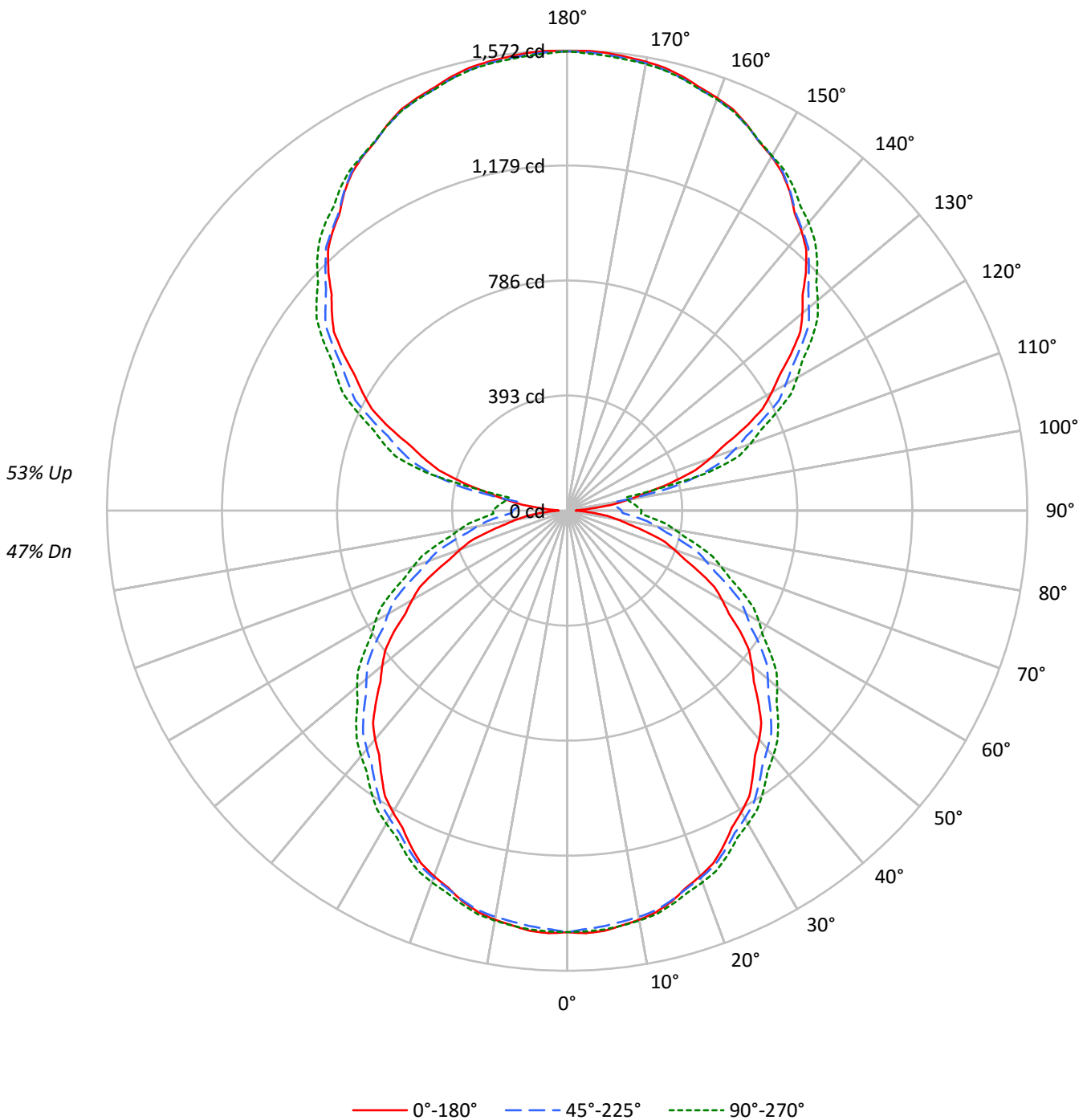
Input Watts (W): 71.7
Input Voltage (V): 120
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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Luminous Intensity Polar Plot





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COEFFICIENT OF UTILIZATION - ZONAL CAVITY METHOD:

RF	20									20									20									20									
RC	80									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	106	106	106	106	98	98	98	98	81	81	81	67	67	67	53	53	53	47						47													
1	96	91	87	83	88	84	80	77	70	67	65	57	55	53	45	44	43	37						37													
2	87	79	73	67	80	73	67	62	61	57	53	50	47	44	39	37	35	30						30													
3	79	69	62	55	72	64	57	52	53	48	44	43	40	37	34	32	30	25						25													
4	72	61	53	47	66	56	49	43	47	42	37	39	34	31	31	28	25	21						21													
5	66	54	46	40	60	50	43	37	42	36	32	34	30	27	27	24	22	18						18													
6	61	48	40	34	56	45	37	32	38	32	28	31	27	23	25	22	19	16						16													
7	56	44	36	30	51	40	33	28	34	28	24	28	24	20	23	19	17	14						14													
8	52	40	32	26	48	37	30	25	31	25	21	26	21	18	21	17	15	13						13													
9	48	36	28	23	44	33	27	22	28	23	19	24	19	16	19	16	13	11						11													
10	45	33	26	21	41	31	24	20	26	21	17	22	18	15	18	14	12	10						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	4.0
20°-30°	590.8	6.0
30°-40°	714.8	7.3
40°-50°	755.7	7.7
50°-60°	711.2	7.3
60°-70°	590.1	6.0
70°-80°	414.5	4.2
80°-90°	238.8	2.4
90°-100°	192.8	2.0
100°-110°	445.1	4.6
110°-120°	723.6	7.4
120°-130°	869.8	8.9
130°-140°	905.8	9.3
140°-150°	834.7	8.5
150°-160°	670.4	6.9
160°-170°	432.4	4.4
170°-180°	149.0	1.5
0°-30°	1117.8	11.4
0°-40°	1832.6	18.8
0°-60°	3299.5	33.8
0°-90°	4542.9	46.5
90°-120°	1361.5	13.9
90°-150°	3971.8	40.7
90°-180°	5223.0	53.5
0°-180°	9766.3	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°	29	107	185	237	254	20
95°	86	102	166	215	232	100
105°	368	408	472	519	494	386
115°	669	689	738	774	787	659
125°	933	938	974	1007	1020	833
135°	1153	1153	1168	1195	1208	889
145°	1328	1329	1330	1340	1349	829
155°	1454	1455	1452	1456	1453	670
165°	1534	1528	1528	1536	1527	433
175°	1569	1562	1563	1572	1559	149
180°	1569	1569	1569	1569	1569	



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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	63.6	78.9	94.0	109.2	124.8	141.0	157.1	173.2	189.3	200.1
90°	29.3	46.6	63.7	80.9	98.2	115.5	133.0	150.5	167.9	185.4	197.4
92.5°	39.3	52.3	65.4	78.5	91.5	106.8	124.3	141.8	159.3	176.8	188.4
95°	85.5	88.5	91.4	94.4	97.4	106.3	121.3	136.2	151.2	166.1	177.3
97.5°	156.1	171.8	187.5	203.2	218.9	219.4	204.9	190.4	175.8	161.3	170.8
100°	210.2	224.2	238.2	252.2	266.2	262.3	240.2	218.2	196.2	174.2	179.5
102.5°	272.2	283.8	295.4	307.0	318.6	328.9	337.9	346.9	355.9	364.9	326.4
105°	367.7	376.5	385.2	393.9	402.6	414.2	428.9	443.4	458.0	472.5	483.8
107.5°	459.2	465.9	472.5	479.1	485.7	496.2	510.6	524.9	539.3	553.5	563.5
110°	519.8	525.6	531.4	537.2	543.0	553.0	567.0	581.2	595.3	609.4	618.1



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CANDELA DISTRIBUTION (continued):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
112.5°	578.7	584.4	590.3	596.1	602.0	611.3	624.0	636.7	649.3	662.1	669.9
115°	669.1	673.2	677.1	681.2	685.2	692.8	704.0	715.2	726.4	737.6	746.0
117.5°	752.1	755.1	758.1	761.0	764.1	771.1	782.4	793.7	804.9	816.2	823.5
120°	807.2	809.3	811.4	813.5	815.7	821.7	831.9	842.0	852.1	862.3	870.0
122.5°	859.7	860.6	861.4	862.2	863.1	868.6	878.8	889.0	899.2	909.4	916.9
125°	933.4	934.1	934.8	935.5	936.1	940.8	949.2	957.7	966.0	974.5	982.1
127.5°	1004.5	1004.4	1004.3	1004.2	1004.1	1008.0	1016.1	1024.2	1032.3	1040.4	1046.7
130°	1049.1	1049.0	1048.9	1048.8	1048.7	1052.0	1058.5	1065.0	1071.6	1078.0	1084.8
132.5°	1091.5	1091.6	1091.7	1091.8	1091.9	1094.7	1100.2	1105.9	1111.5	1117.0	1123.5
135°	1153.2	1152.9	1152.7	1152.4	1152.2	1153.8	1157.3	1160.8	1164.5	1168.0	1174.3
137.5°	1209.2	1209.0	1208.7	1208.5	1208.2	1209.3	1211.6	1214.1	1216.4	1218.8	1224.6
140°	1245.9	1246.1	1246.2	1246.4	1246.5	1247.1	1247.9	1248.8	1249.7	1250.5	1256.0
142.5°	1277.5	1278.3	1279.2	1280.0	1280.9	1281.4	1281.5	1281.6	1281.7	1281.8	1286.5
145°	1327.6	1328.0	1328.4	1328.9	1329.3	1329.5	1329.5	1329.5	1329.5	1329.5	1331.9
147.5°	1367.7	1368.8	1369.9	1371.0	1372.1	1372.5	1372.3	1372.0	1371.7	1371.5	1372.0
150°	1396.8	1397.5	1398.2	1398.9	1399.6	1399.8	1399.5	1399.3	1399.0	1398.7	1398.7
152.5°	1420.0	1420.7	1421.5	1422.2	1423.0	1423.1	1422.7	1422.2	1421.7	1421.3	1421.7
155°	1453.9	1454.1	1454.4	1454.6	1454.9	1454.6	1453.9	1453.1	1452.3	1451.5	1452.6
157.5°	1482.7	1482.6	1482.4	1482.3	1482.1	1481.6	1480.7	1479.9	1478.9	1478.0	1479.4
160°	1499.6	1498.8	1498.0	1497.3	1496.5	1496.0	1495.7	1495.4	1495.2	1494.9	1496.5
162.5°	1514.6	1513.7	1512.7	1511.7	1510.7	1510.1	1509.7	1509.5	1509.2	1509.0	1510.6
165°	1533.7	1532.4	1531.1	1529.7	1528.4	1527.8	1527.8	1527.8	1527.8	1527.8	1529.8
167.5°	1548.6	1547.3	1546.0	1544.6	1543.3	1542.5	1542.4	1542.2	1542.1	1541.9	1544.2
170°	1557.1	1555.6	1554.0	1552.5	1550.8	1550.2	1550.4	1550.7	1551.0	1551.3	1553.4
172.5°	1562.8	1561.2	1559.6	1558.0	1556.5	1555.8	1556.1	1556.4	1556.6	1556.9	1558.9
175°	1568.8	1567.3	1565.7	1564.2	1562.6	1562.0	1562.2	1562.5	1562.8	1563.0	1565.3
177.5°	1571.7	1570.2	1568.7	1567.3	1565.8	1565.3	1565.7	1566.1	1566.6	1567.0	1568.6
180°	1568.8	1568.8	1568.8	1568.8	1568.8	1568.8	1568.8	1568.8	1568.8	1568.8	1568.8



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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°	210.8	221.5	232.2	239.1	242.4	245.6	248.9	252.2
90°	209.3	221.4	233.3	241.0	244.4	247.7	251.2	254.5
92.5°	200.2	211.8	223.5	230.8	233.8	236.7	239.7	242.7
95°	188.5	199.9	211.1	218.4	221.9	225.4	228.9	232.4
97.5°	180.4	190.0	199.4	205.9	209.2	212.6	215.9	219.2
100°	184.7	190.0	195.1	199.1	202.0	204.7	207.4	210.3
102.5°	288.0	249.5	211.2	193.3	196.2	199.0	201.9	204.7
105°	495.1	506.4	517.8	520.2	513.6	507.2	500.6	494.0
107.5°	573.5	583.4	593.4	600.2	603.7	607.3	610.9	614.4
110°	626.9	635.7	644.5	650.7	654.3	657.9	661.6	665.3



TEST NUMBER: P332709-840

CATALOG NUMBER: S124DIP-S1195D1205U840-4F0-1E-UDD-D

CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
112.5°	677.8	685.6	693.5	699.3	703.2	707.0	710.9	714.8
115°	754.4	762.9	771.2	776.7	779.2	781.7	784.2	786.7
117.5°	830.8	838.2	845.6	850.6	853.3	856.2	858.9	861.6
120°	877.7	885.3	893.0	898.1	900.4	902.7	905.0	907.5
122.5°	924.3	931.8	939.3	944.0	946.0	948.2	950.2	952.3
125°	989.7	997.2	1004.8	1009.9	1012.3	1014.7	1017.1	1019.5
127.5°	1053.0	1059.2	1065.6	1069.9	1072.1	1074.3	1076.5	1078.7
130°	1091.5	1098.2	1104.9	1109.3	1111.5	1113.7	1115.8	1117.9
132.5°	1129.8	1136.3	1142.8	1146.9	1148.8	1150.7	1152.8	1154.7
135°	1180.5	1186.8	1193.0	1197.5	1200.1	1202.9	1205.5	1208.1
137.5°	1230.4	1236.2	1242.0	1245.7	1247.4	1249.0	1250.6	1252.2
140°	1261.4	1266.9	1272.3	1276.1	1278.1	1280.2	1282.2	1284.2
142.5°	1291.1	1295.8	1300.4	1303.5	1305.0	1306.7	1308.2	1309.8
145°	1334.3	1336.8	1339.1	1341.3	1343.2	1345.2	1347.2	1349.1
147.5°	1372.5	1373.0	1373.5	1374.4	1375.8	1377.3	1378.7	1380.1
150°	1398.7	1398.7	1398.7	1398.9	1399.1	1399.4	1399.7	1399.9
152.5°	1422.1	1422.5	1422.9	1423.0	1422.9	1422.7	1422.6	1422.4
155°	1453.6	1454.6	1455.7	1455.8	1455.0	1454.2	1453.5	1452.7
157.5°	1480.8	1482.1	1483.5	1483.5	1482.1	1480.8	1479.4	1478.0
160°	1498.0	1499.6	1501.2	1501.2	1499.6	1498.0	1496.5	1494.9
162.5°	1512.2	1513.7	1515.3	1515.2	1513.4	1511.7	1509.8	1508.0
165°	1532.0	1534.1	1536.1	1536.0	1533.7	1531.3	1528.9	1526.6
167.5°	1546.5	1548.7	1551.1	1550.8	1548.3	1545.7	1543.1	1540.4
170°	1555.4	1557.5	1559.6	1559.3	1556.7	1554.1	1551.6	1548.9
172.5°	1561.0	1563.2	1565.2	1564.9	1562.1	1559.2	1556.4	1553.6
175°	1567.7	1570.0	1572.4	1572.0	1568.8	1565.7	1562.6	1559.4
177.5°	1570.3	1572.0	1573.7	1573.3	1570.7	1568.2	1565.7	1563.3
180°	1568.8	1568.8	1568.8	1568.8	1568.8	1568.8	1568.8	1568.8

(END OF REPORT)