

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: P331577

Luminaire Tested: **S122DIW-S865D1240U835-4F0-1E-UDD-F**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P331577
REPORT IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-1807-864-2,
Test Lab: INNOVATION CENTER
Issue Date: 3/3/2020
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: NEO-RAY
Catalog Number: S122DIW-S865D1240U835-4F0-1E-UDD-F
Description: DEFINE 2 DIRECT-INDIRECT WALL MOUNT LED LUMINAIRE
DOWNLIGHT 865 LUMENS PER FOOT, FLUSH SATIN WHITE DIFFUSER
UPLIGHT 1240 LUMENS PER FOOT, NO LENS
Light Source: -
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 8469.3 lumens
Efficiency: N/A
Efficacy: 121.3 lumens/watt
Spacing Criteria (0/90/45): 1.2 / 1.16 / 1.3
Luminous Opening: Rectangular (W 0.17' x L: 4' x H: 0')
CIE Type: General Diffuse

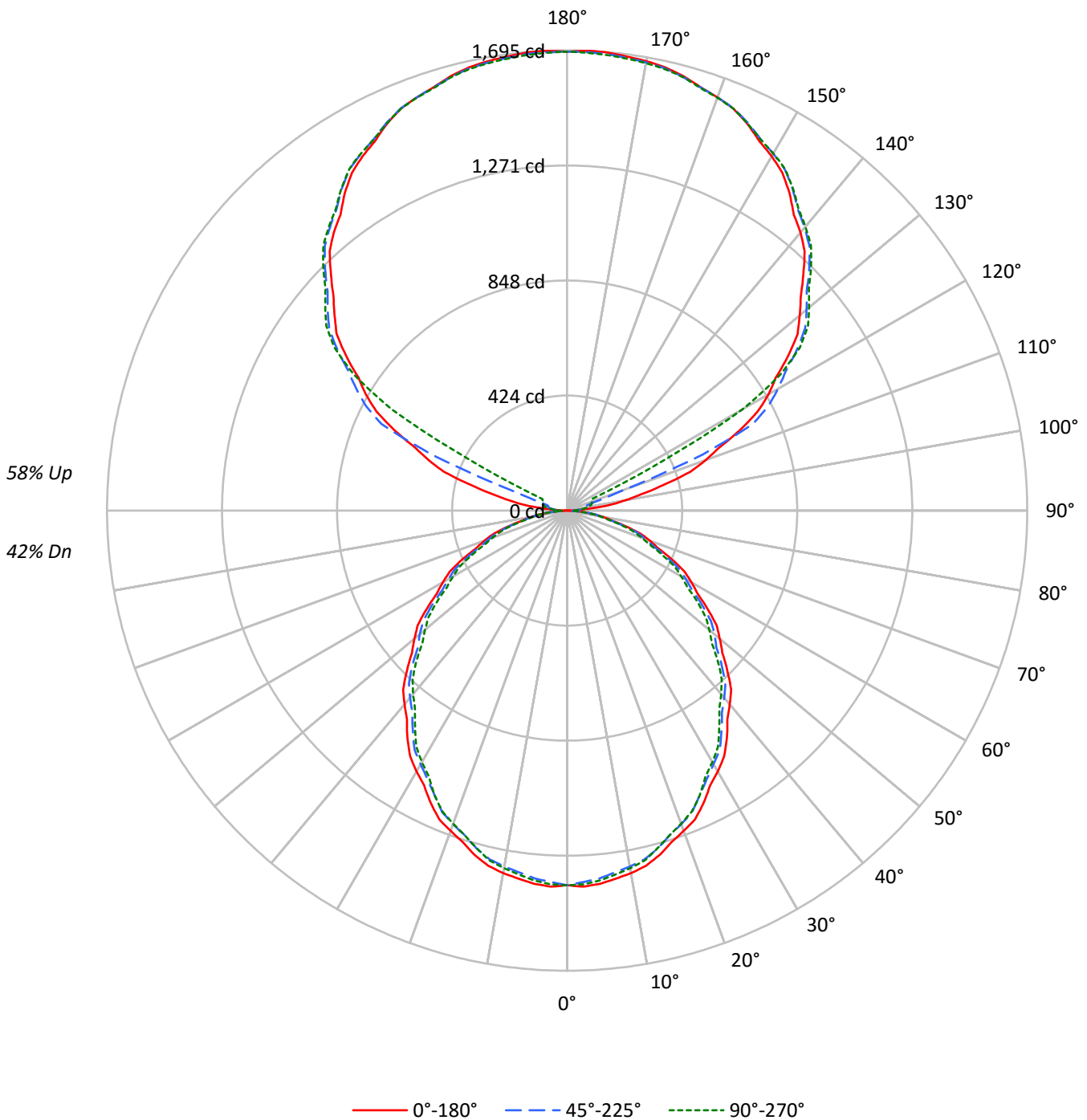
Input Watts (W): 69.8
Input Voltage (V): 120
Input Current (A_{in}): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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	50	30	10	0	
RCR																						
0	105	105	105	105	96	96	96	96	79	79	79	63	63	63	48	48	48	42				
1	96	92	88	84	87	84	80	77	69	67	64	55	54	52	43	42	41	35				
2	87	80	74	69	79	73	68	64	60	57	53	48	46	44	38	36	34	29				
3	80	70	63	57	72	64	58	53	53	49	45	43	40	37	33	31	29	25				
4	73	62	54	48	66	57	50	45	47	42	38	38	35	32	30	27	25	21				
5	67	55	47	41	61	51	44	39	42	37	33	34	30	27	27	24	22	18				
6	61	50	42	36	56	46	39	33	38	33	29	31	27	24	24	21	19	16				
7	57	45	37	31	52	41	34	29	34	29	25	28	24	21	22	19	17	14				
8	53	41	33	28	48	37	31	26	31	26	22	26	22	19	20	17	15	13				
9	49	37	30	25	45	34	28	23	29	24	20	24	20	17	19	16	14	12				
10	46	34	27	22	42	31	25	21	26	21	18	22	18	15	17	15	13	11				

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	22281	22281	22281
5°	22366	22044	22174
10°	22233	21820	21930
15°	21959	21538	21514
20°	21569	21113	21089
25°	21180	20591	20591
30°	20681	20113	19939
35°	20217	19537	19249
40°	19633	18963	18598
45°	19057	18393	17938
50°	18432	17799	17166
55°	17779	17106	16473
60°	17053	16281	15684
65°	16275	15461	14751
70°	15286	14469	13780
75°	13905	13325	12994
80°	12338	11967	11353
85°	10078	9596	8596



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	129.8	1.5
10°-20°	365.1	4.3
20°-30°	536.7	6.3
30°-40°	623.4	7.4
40°-50°	622.7	7.4
50°-60°	543.1	6.4
60°-70°	401.6	4.7
70°-80°	227.4	2.7
80°-90°	65.3	0.8
90°-100°	56.4	0.7
100°-110°	206.8	2.4
110°-120°	552.8	6.5
120°-130°	912.5	10.8
130°-140°	970.4	11.5
140°-150°	902.0	10.6
150°-160°	725.2	8.6
160°-170°	467.3	5.5
170°-180°	160.9	1.9
0°-30°	1031.6	12.2
0°-40°	1655.0	19.5
0°-60°	2820.8	33.3
0°-90°	3515.1	41.5
90°-120°	816.0	9.6
90°-150°	3600.9	42.5
90°-180°	4954.0	58.5
0°-180°	8469.3	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1380	1380	1380	1380	1380	
5°	1380	1374	1360	1370	1368	131
15°	1314	1305	1288	1293	1287	370
25°	1189	1178	1156	1158	1156	547
35°	1026	1012	991	983	977	640
45°	835	825	806	791	786	644
55°	632	623	608	592	585	565
65°	426	418	405	393	386	421
75°	223	220	214	206	208	238
85°	54	53	52	48	46	62
90°	1	14	24	30	33	6
95°	80	42	48	53	53	97
105°	372	388	75	88	93	397
115°	703	725	755	215	100	692
125°	994	1011	1034	1042	1046	886
135°	1231	1250	1261	1273	1271	950
145°	1428	1428	1447	1455	1450	893
155°	1572	1562	1576	1582	1573	724
165°	1656	1650	1653	1660	1653	468
175°	1694	1686	1688	1696	1684	161
180°	1690	1690	1690	1690	1690	



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CANDELA DISTRIBUTION (FULL):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
0°	1380.0	1380.0	1380.0	1380.0	1380.0	1380.0	1380.0	1380.0	1380.0	1380.0	1380.0
2.5°	1386.4	1385.2	1384.0	1382.9	1381.7	1379.8	1377.2	1374.6	1372.0	1369.4	1371.8
5°	1380.0	1378.8	1377.7	1376.5	1375.3	1373.1	1369.9	1366.6	1363.4	1360.1	1362.5
7.5°	1367.8	1366.0	1364.2	1362.3	1360.5	1357.9	1354.6	1351.3	1348.0	1344.7	1347.1
10°	1356.1	1354.1	1352.0	1349.9	1347.9	1345.1	1341.5	1338.0	1334.5	1330.9	1333.3
12.5°	1340.2	1338.4	1336.6	1334.7	1332.9	1330.2	1326.7	1323.1	1319.6	1316.1	1317.7
15°	1313.7	1311.9	1310.1	1308.4	1306.6	1303.8	1300.0	1296.1	1292.3	1288.5	1289.6
17.5°	1279.7	1277.9	1276.2	1274.4	1272.6	1269.8	1265.9	1262.0	1258.1	1254.2	1255.6
20°	1255.3	1253.5	1251.8	1250.0	1248.2	1245.3	1241.1	1237.0	1232.9	1228.8	1229.6
22.5°	1230.9	1228.4	1225.9	1223.4	1221.0	1217.8	1213.9	1210.0	1206.1	1202.2	1202.4
25°	1188.9	1186.6	1184.2	1181.9	1179.5	1175.8	1170.8	1165.8	1160.8	1155.8	1156.4
27.5°	1141.2	1139.1	1136.9	1134.8	1132.7	1129.6	1125.7	1121.7	1117.8	1113.8	1113.0
30°	1109.3	1107.0	1104.6	1102.3	1099.9	1096.5	1092.1	1087.7	1083.2	1078.8	1077.9
32.5°	1075.4	1073.5	1071.6	1069.7	1067.8	1064.5	1059.9	1055.2	1050.6	1045.9	1044.3
35°	1025.7	1022.8	1019.8	1016.9	1013.9	1010.1	1005.4	1000.7	995.9	991.2	989.5
37.5°	969.7	967.1	964.5	961.9	959.4	955.7	951.0	946.3	941.5	936.8	934.6
40°	931.5	929.2	926.8	924.4	922.1	918.5	913.8	909.1	904.4	899.7	897.0
42.5°	894.4	892.0	889.6	887.3	884.9	881.4	876.7	872.0	867.2	862.5	859.6
45°	834.6	832.6	830.5	828.5	826.4	823.1	818.7	814.3	809.9	805.5	802.2
47.5°	775.2	773.3	771.3	769.4	767.4	764.1	759.5	754.9	750.3	745.7	742.3
50°	733.8	732.3	730.9	729.4	727.9	725.1	721.0	716.8	712.7	708.6	704.5
52.5°	693.5	691.5	689.6	687.6	685.7	682.8	678.9	675.0	671.1	667.2	663.8
55°	631.6	629.9	628.1	626.3	624.5	621.9	618.4	614.8	611.3	607.7	604.2
57.5°	569.5	568.1	566.7	565.3	563.9	561.2	557.3	553.4	549.5	545.6	542.2
60°	528.1	526.9	525.8	524.6	523.4	520.8	516.6	512.5	508.4	504.2	501.0
62.5°	487.8	485.9	484.0	482.1	480.2	477.7	474.5	471.3	468.1	465.0	462.0
65°	426.0	424.2	422.4	420.6	418.9	416.5	413.6	410.6	407.7	404.7	402.1
67.5°	363.1	361.6	360.2	358.8	357.4	355.4	352.7	350.0	347.4	344.7	342.7
70°	323.8	322.6	321.4	320.2	319.1	317.1	314.5	311.8	309.2	306.5	304.5
72.5°	283.4	282.3	281.1	279.9	278.7	277.3	275.6	273.9	272.1	270.4	268.4
75°	222.9	222.3	221.7	221.2	220.6	219.5	218.1	216.6	215.1	213.6	211.9
77.5°	168.8	167.8	166.8	165.8	164.8	164.0	163.4	162.8	162.2	161.6	160.7
80°	132.7	132.4	132.1	131.8	131.5	131.1	130.5	129.9	129.3	128.7	127.8
82.5°	98.7	98.7	98.6	98.5	98.5	98.3	97.9	97.6	97.2	96.9	95.7
85°	54.4	54.1	53.8	53.5	53.2	52.9	52.6	52.3	52.0	51.8	50.9
87.5°	19.4	19.5	19.6	19.7	19.9	19.9	19.9	19.8	19.8	19.8	19.3
90°	1.2	4.2	7.2	10.2	13.2	15.8	17.9	20.1	22.3	24.5	25.8
92.5°	24.7	24.4	24.2	23.9	23.6	24.0	25.1	26.2	27.3	28.4	29.1
95°	79.5	70.5	61.6	52.6	43.6	40.1	42.0	43.9	45.8	47.7	49.1
97.5°	157.8	132.5	107.2	82.0	56.7	46.2	50.6	55.0	59.5	63.9	64.9
100°	216.5	179.3	142.0	104.8	67.6	51.2	55.9	60.5	65.1	69.7	71.9
102.5°	281.1	273.2	265.3	257.5	249.6	226.3	187.6	149.0	110.3	71.7	74.5
105°	371.9	380.0	388.2	396.3	404.5	371.5	297.3	223.0	148.8	74.6	77.6
107.5°	475.4	481.9	488.5	495.1	501.7	460.5	371.5	282.5	193.5	104.5	101.4
110°	541.9	547.6	553.3	559.0	564.7	528.3	449.8	371.2	292.6	214.1	186.9



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CANDELA DISTRIBUTION (continued):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
112.5°	604.5	609.6	614.6	619.7	624.8	617.6	598.2	578.8	559.4	539.9	440.8
115°	703.4	708.0	712.6	717.2	721.9	727.6	734.4	741.2	748.0	754.8	628.9
117.5°	791.7	796.9	802.0	807.2	812.4	817.3	821.9	826.6	831.3	836.0	805.5
120°	856.3	860.4	864.4	868.5	872.6	877.1	882.0	886.9	891.8	896.6	899.9
122.5°	911.1	915.4	919.7	924.0	928.3	933.1	938.4	943.7	949.1	954.4	956.3
125°	994.5	998.0	1001.6	1005.1	1008.6	1013.0	1018.2	1023.3	1028.5	1033.7	1035.6
127.5°	1070.1	1074.0	1077.9	1081.9	1085.8	1089.7	1093.5	1097.4	1101.2	1105.1	1107.9
130°	1118.1	1122.4	1126.8	1131.1	1135.5	1139.1	1142.1	1145.1	1148.1	1151.1	1154.1
132.5°	1167.0	1170.7	1174.4	1178.1	1181.8	1185.1	1188.1	1191.1	1194.1	1197.1	1199.6
135°	1230.6	1234.9	1239.3	1243.6	1248.0	1251.4	1253.8	1256.3	1258.7	1261.2	1263.9
137.5°	1294.9	1298.0	1301.0	1304.1	1307.1	1310.0	1312.8	1315.6	1318.3	1321.1	1323.8
140°	1337.0	1339.2	1341.4	1343.5	1345.7	1348.3	1351.3	1354.3	1357.3	1360.3	1362.7
142.5°	1372.3	1374.2	1376.2	1378.1	1380.1	1382.8	1386.2	1389.6	1393.0	1396.5	1398.7
145°	1427.5	1427.3	1427.0	1426.7	1426.5	1428.6	1433.3	1437.9	1442.5	1447.1	1449.0
147.5°	1475.7	1474.7	1473.7	1472.6	1471.6	1473.4	1477.9	1482.5	1487.1	1491.6	1493.1
150°	1507.1	1505.2	1503.3	1501.3	1499.4	1500.7	1505.0	1509.4	1513.7	1518.1	1519.7
152.5°	1533.5	1531.4	1529.2	1527.1	1525.0	1526.0	1530.1	1534.3	1538.4	1542.5	1544.2
155°	1571.9	1569.4	1567.0	1564.5	1562.1	1562.5	1565.8	1569.0	1572.3	1575.6	1577.2
157.5°	1602.0	1599.9	1597.8	1595.8	1593.7	1593.8	1596.1	1598.4	1600.7	1603.0	1604.8
160°	1619.6	1618.0	1616.3	1614.7	1613.1	1613.1	1614.7	1616.3	1618.0	1619.6	1621.2
162.5°	1635.3	1633.6	1632.0	1630.4	1628.7	1628.6	1630.0	1631.4	1632.9	1634.3	1636.1
165°	1656.3	1654.7	1653.0	1651.4	1649.8	1649.4	1650.2	1651.0	1651.8	1652.6	1654.5
167.5°	1672.0	1670.3	1668.7	1667.1	1665.4	1665.0	1665.8	1666.5	1667.3	1668.0	1669.9
170°	1680.8	1679.1	1677.5	1675.9	1674.2	1673.7	1674.2	1674.8	1675.3	1675.9	1677.8
172.5°	1686.6	1685.0	1683.4	1681.7	1680.1	1679.6	1680.1	1680.6	1681.2	1681.7	1683.6
175°	1694.2	1692.3	1690.4	1688.5	1686.6	1685.9	1686.5	1687.0	1687.6	1688.1	1690.0
177.5°	1695.4	1693.9	1692.4	1690.9	1689.3	1688.7	1688.9	1689.1	1689.3	1689.6	1691.1
180°	1690.5	1690.5	1690.5	1690.5	1690.5	1690.5	1690.5	1690.5	1690.5	1690.5	1690.5



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CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
0°	1380.0	1380.0	1380.0	1380.0	1380.0	1380.0	1380.0	1380.0
2.5°	1374.1	1376.5	1378.8	1379.8	1379.3	1378.8	1378.4	1377.9
5°	1364.8	1367.2	1369.6	1370.4	1369.9	1369.3	1368.7	1368.1
7.5°	1349.4	1351.8	1354.2	1355.0	1354.4	1353.7	1353.1	1352.4
10°	1335.6	1338.0	1340.4	1341.1	1340.2	1339.3	1338.4	1337.6
12.5°	1319.4	1321.0	1322.7	1323.2	1322.5	1321.9	1321.2	1320.6
15°	1290.8	1292.0	1293.2	1293.0	1291.6	1290.1	1288.6	1287.1
17.5°	1256.9	1258.3	1259.7	1259.6	1258.2	1256.8	1255.4	1254.0
20°	1230.5	1231.4	1232.3	1232.1	1231.0	1229.8	1228.6	1227.4
22.5°	1202.6	1202.7	1202.9	1202.7	1201.9	1201.2	1200.5	1199.8
25°	1157.0	1157.5	1158.1	1158.1	1157.5	1157.0	1156.4	1155.8
27.5°	1112.1	1111.2	1110.3	1109.2	1107.7	1106.3	1104.9	1103.5
30°	1077.0	1076.2	1075.3	1074.2	1073.1	1071.9	1070.7	1069.5
32.5°	1042.7	1041.1	1039.5	1038.1	1037.0	1035.8	1034.6	1033.4
35°	987.7	985.9	984.2	982.5	981.1	979.6	978.1	976.6
37.5°	932.5	930.3	928.1	926.3	924.9	923.5	922.1	920.6
40°	894.4	891.7	889.1	887.1	886.0	884.8	883.6	882.4
42.5°	856.7	853.8	851.0	848.7	847.0	845.4	843.7	842.1
45°	799.0	795.7	792.5	790.3	789.1	787.9	786.7	785.6
47.5°	738.9	735.5	732.1	729.5	727.8	726.1	724.4	722.7
50°	700.3	696.2	692.1	689.3	687.8	686.3	684.9	683.4
52.5°	660.3	656.9	653.5	650.8	648.9	646.9	645.0	643.0
55°	600.7	597.1	593.6	591.1	589.6	588.1	586.7	585.2
57.5°	538.7	535.2	531.7	529.4	528.3	527.2	526.1	524.9
60°	497.8	494.5	491.3	489.2	488.3	487.4	486.5	485.7
62.5°	458.9	455.9	452.9	450.9	449.7	448.6	447.5	446.4
65°	399.4	396.8	394.1	392.0	390.6	389.1	387.6	386.1
67.5°	340.6	338.5	336.5	334.9	333.7	332.5	331.3	330.1
70°	302.4	300.3	298.3	296.6	295.5	294.3	293.1	291.9
72.5°	266.3	264.2	262.2	260.7	259.7	258.8	257.8	256.9
75°	210.1	208.3	206.6	206.0	206.6	207.2	207.7	208.3
77.5°	159.9	159.0	158.1	157.2	156.4	155.6	154.8	153.9
80°	126.9	126.1	125.2	124.4	123.8	123.3	122.7	122.1
82.5°	94.6	93.5	92.4	91.8	91.6	91.5	91.4	91.3
85°	50.0	49.1	48.2	47.6	47.3	47.0	46.7	46.4
87.5°	18.9	18.4	18.0	17.7	17.6	17.5	17.3	17.2
90°	27.2	28.5	29.9	30.9	31.4	31.9	32.5	33.0
92.5°	29.8	30.5	31.2	31.7	32.0	32.4	32.7	33.0
95°	50.4	51.8	53.1	53.7	53.4	53.1	52.9	52.6
97.5°	66.0	67.1	68.2	68.9	69.2	69.6	69.9	70.2
100°	74.1	76.2	78.4	79.8	80.3	80.9	81.4	82.0
102.5°	77.3	80.2	83.0	84.8	85.5	86.3	87.1	87.8
105°	80.6	83.6	86.6	88.6	89.7	90.8	91.9	93.0
107.5°	98.4	95.3	92.3	91.3	92.4	93.5	94.6	95.7
110°	159.7	132.5	105.3	92.3	93.4	94.5	95.6	96.6



TEST NUMBER: P331577

CATALOG NUMBER: S122DIW-S865D1240U835-4F0-1E-UDD-F

CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
112.5°	341.6	242.5	143.3	94.1	95.0	95.9	96.7	97.6
115°	503.0	377.2	251.3	178.6	159.0	139.5	119.9	100.3
117.5°	775.1	744.6	714.2	666.8	602.5	538.2	473.9	409.5
120°	903.2	906.4	909.7	893.0	856.3	819.6	782.9	746.2
122.5°	958.3	960.3	962.2	959.6	952.5	945.4	938.3	931.1
125°	1037.5	1039.4	1041.3	1042.6	1043.4	1044.3	1045.1	1045.9
127.5°	1110.6	1113.4	1116.2	1117.7	1117.8	1118.0	1118.1	1118.3
130°	1157.1	1160.1	1163.0	1164.4	1164.1	1163.9	1163.6	1163.3
132.5°	1202.2	1204.7	1207.3	1208.4	1208.2	1207.9	1207.6	1207.4
135°	1266.6	1269.3	1272.1	1273.1	1272.6	1272.1	1271.5	1271.0
137.5°	1326.4	1329.1	1331.8	1332.6	1331.7	1330.8	1329.9	1328.9
140°	1365.2	1367.6	1370.1	1370.6	1369.2	1367.9	1366.5	1365.2
142.5°	1400.9	1403.2	1405.4	1405.8	1404.5	1403.1	1401.7	1400.4
145°	1450.9	1452.8	1454.7	1455.0	1453.6	1452.3	1450.9	1449.6
147.5°	1494.5	1495.9	1497.3	1497.4	1496.3	1495.1	1494.0	1492.9
150°	1521.3	1523.0	1524.6	1524.7	1523.4	1522.0	1520.6	1519.3
152.5°	1545.8	1547.4	1549.1	1549.0	1547.2	1545.4	1543.6	1541.8
155°	1578.8	1580.5	1582.1	1581.8	1579.6	1577.5	1575.3	1573.1
157.5°	1606.7	1608.5	1610.4	1610.2	1608.1	1606.0	1603.9	1601.7
160°	1622.9	1624.5	1626.1	1626.0	1624.1	1622.2	1620.3	1618.4
162.5°	1638.0	1639.8	1641.7	1641.4	1639.1	1636.7	1634.4	1632.1
165°	1656.4	1658.3	1660.2	1660.2	1658.3	1656.4	1654.5	1652.6
167.5°	1671.8	1673.7	1675.6	1675.4	1672.9	1670.5	1668.0	1665.6
170°	1679.7	1681.6	1683.5	1683.2	1680.8	1678.3	1675.9	1673.4
172.5°	1685.5	1687.4	1689.3	1689.1	1686.6	1684.2	1681.7	1679.3
175°	1691.9	1693.8	1695.7	1695.3	1692.6	1689.9	1687.1	1684.4
177.5°	1692.6	1694.1	1695.7	1695.4	1693.5	1691.5	1689.6	1687.6
180°	1690.5	1690.5	1690.5	1690.5	1690.5	1690.5	1690.5	1690.5

(END OF REPORT)