

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: P332803-927

Luminaire Tested: **S124DIW-S795D1560U927-4F0-1E-UDD-F**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P332803-927
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: S124DIW-S795D1560U927-4F0-1E-UDD-F
Description: DEFINE 4 DIRECT-INDIRECT WALL MOUNT LED LUMINAIRE
DOWNLIGHT 795 LUMENS PER FOOT, FLUSH SATIN WHITE DIFFUSER
UPLIGHT 1560 LUMENS PER FOOT, NO LENS
Light Source: -
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 7643.9 lumens
Efficiency: N/A
Efficacy: 112.2 lumens/watt
Spacing Criteria (0/90/45): 1.2 / 1.17 / 1.3
Luminous Opening: Rectangular (W 0.33' x L: 4' x H: 0')
CIE Type: Semi-Indirect

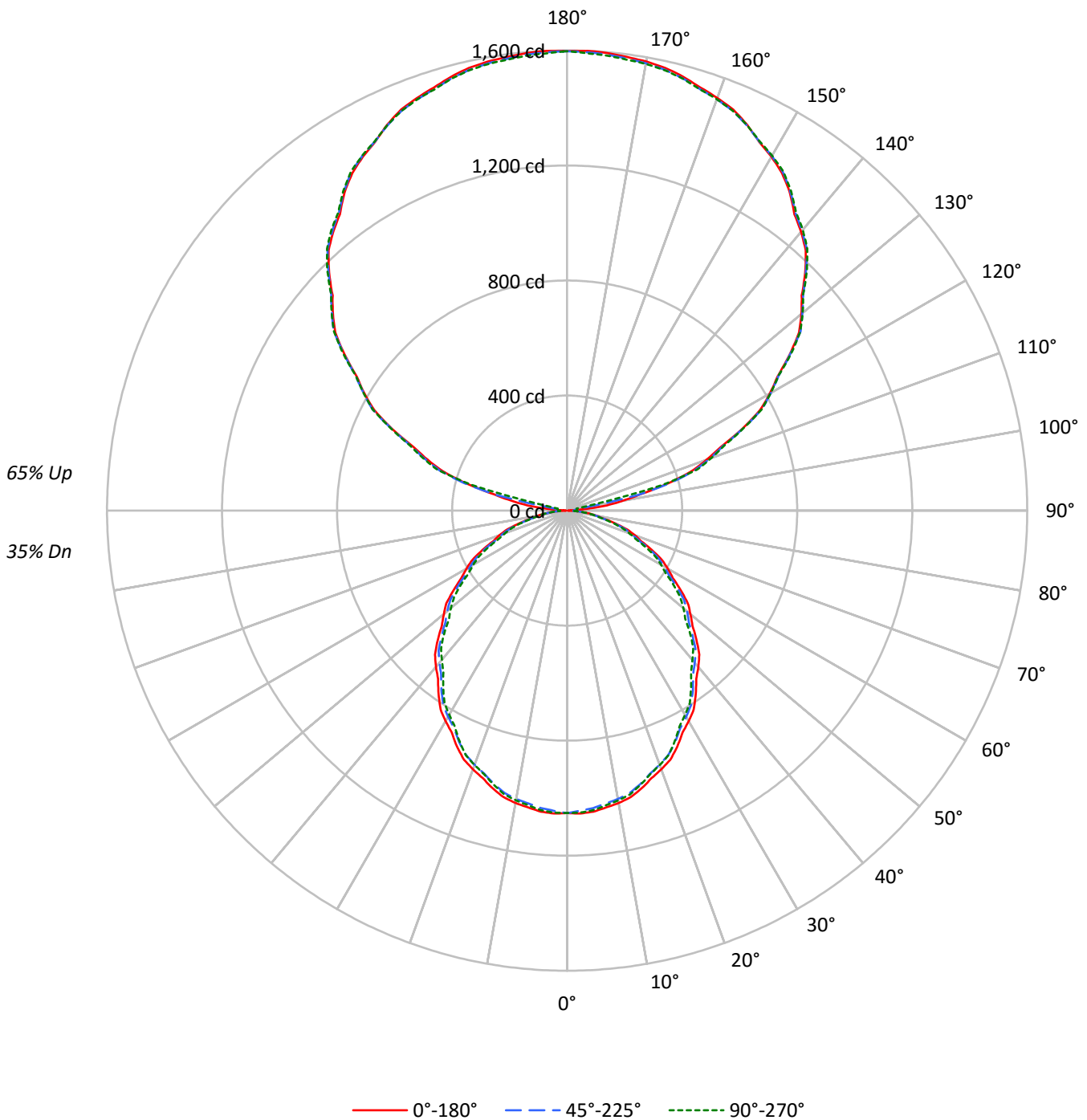
Input Watts (W): 68.1
Input Voltage (V): 120
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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	104	104	104	104	94	94	94	94	75	75	75	58	58	58	43	43	43	35
1	94	90	86	83	85	82	78	76	66	64	62	51	50	48	38	37	36	30
2	86	79	73	68	77	71	66	62	58	54	51	45	42	40	33	32	30	25
3	78	69	62	56	71	63	57	52	51	46	43	40	37	34	29	27	26	21
4	72	61	53	48	65	56	49	44	45	40	36	35	32	29	26	24	22	18
5	66	54	46	41	59	49	43	37	40	35	31	32	28	25	24	21	19	16
6	60	49	41	35	54	44	37	32	36	31	27	29	25	22	21	19	17	14
7	56	44	36	31	50	40	33	28	33	28	24	26	22	19	19	17	15	12
8	52	40	32	27	47	36	30	25	30	25	21	24	20	17	18	15	13	11
9	48	36	29	24	43	33	27	22	27	22	19	22	18	15	16	14	12	10
10	45	33	26	21	41	30	24	20	25	20	17	20	16	14	15	13	11	9

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	8490	8490	8490
5°	8515	8413	8474
10°	8461	8344	8385
15°	8359	8226	8247
20°	8223	8079	8086
25°	8068	7911	7888
30°	7879	7713	7643
35°	7681	7508	7407
40°	7477	7273	7140
45°	7263	7042	6907
50°	7027	6836	6625
55°	6773	6570	6356
60°	6516	6273	6082
65°	6229	5989	5746
70°	5908	5611	5391
75°	5415	5153	5022
80°	4816	4621	4505
85°	4215	4057	3974



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	99.0	1.3
10°-20°	279.0	3.7
20°-30°	410.7	5.4
30°-40°	477.4	6.2
40°-50°	477.5	6.2
50°-60°	417.6	5.5
60°-70°	310.2	4.1
70°-80°	176.2	2.3
80°-90°	55.5	0.7
90°-100°	54.6	0.7
100°-110°	348.3	4.6
110°-120°	666.3	8.7
120°-130°	845.9	11.1
130°-140°	905.0	11.8
140°-150°	846.3	11.1
150°-160°	682.5	8.9
160°-170°	440.2	5.8
170°-180°	151.7	2.0
0°-30°	788.7	10.3
0°-40°	1266.2	16.6
0°-60°	2161.3	28.3
0°-90°	2703.2	35.4
90°-120°	1069.3	14.0
90°-150°	3666.4	48.0
90°-180°	4941.0	64.6
0°-180°	7643.9	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1052	1052	1052	1052	1052	
5°	1051	1047	1038	1047	1046	100
15°	1000	996	984	989	987	282
25°	906	900	888	889	886	417
35°	779	773	762	756	752	487
45°	636	630	617	608	605	490
55°	481	478	467	457	452	431
65°	326	322	314	305	301	323
75°	174	169	165	162	161	184
85°	46	45	44	44	43	50
90°	4	17	26	33	36	6
95°	66	27	26	33	35	84
105°	360	367	373	380	340	376
115°	671	675	674	676	676	660
125°	944	948	946	950	951	842
135°	1171	1170	1174	1177	1179	902
145°	1350	1353	1354	1355	1357	843
155°	1480	1481	1478	1482	1479	682
165°	1561	1556	1555	1564	1554	441
175°	1597	1591	1591	1601	1588	152
180°	1597	1597	1597	1597	1597	



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CANDELA DISTRIBUTION (FULL):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
0°	1051.6	1051.6	1051.6	1051.6	1051.6	1051.6	1051.6	1051.6	1051.6	1051.6	1051.6
2.5°	1054.3	1053.8	1053.4	1053.0	1052.5	1051.5	1049.8	1048.1	1046.5	1044.9	1046.3
5°	1050.8	1050.0	1049.2	1048.5	1047.7	1046.3	1044.3	1042.2	1040.1	1038.1	1040.1
7.5°	1041.0	1040.2	1039.5	1038.7	1038.0	1036.5	1034.2	1031.9	1029.6	1027.3	1029.0
10°	1032.2	1031.5	1030.7	1030.0	1029.2	1027.6	1025.2	1022.8	1020.3	1017.9	1019.4
12.5°	1020.7	1020.0	1019.2	1018.5	1017.8	1016.1	1013.5	1010.9	1008.4	1005.8	1007.4
15°	1000.2	999.4	998.7	997.9	997.2	995.5	992.6	989.8	987.0	984.2	985.3
17.5°	975.4	974.5	973.5	972.6	971.7	969.9	967.3	964.6	961.9	959.3	960.0
20°	957.2	956.2	955.4	954.4	953.5	951.6	948.8	945.9	943.2	940.4	941.0
22.5°	937.7	936.4	935.2	934.0	932.7	930.7	927.9	925.1	922.3	919.5	920.5
25°	905.8	904.5	903.2	901.9	900.6	898.6	896.0	893.3	890.7	888.1	888.3
27.5°	869.4	868.1	866.7	865.4	864.0	862.1	859.7	857.3	854.8	852.4	851.9
30°	845.2	843.7	842.2	840.7	839.2	837.2	834.7	832.3	829.9	827.4	826.7
32.5°	819.5	818.2	816.8	815.5	814.1	812.1	809.6	807.0	804.5	801.8	801.0
35°	779.4	778.1	776.8	775.5	774.2	772.2	769.6	767.0	764.4	761.8	760.4
37.5°	737.1	735.9	734.7	733.6	732.3	730.3	727.5	724.7	721.9	719.1	717.6
40°	709.5	708.0	706.5	705.0	703.5	701.3	698.5	695.7	692.9	690.1	688.2
42.5°	679.9	678.9	678.0	677.2	676.2	674.2	671.1	668.0	664.9	661.8	659.7
45°	636.2	634.9	633.6	632.2	631.0	628.8	625.8	622.8	619.8	616.8	614.7
47.5°	590.5	589.6	588.7	587.8	586.9	585.1	582.3	579.6	576.8	574.0	571.6
50°	559.5	558.7	558.0	557.2	556.5	554.8	552.2	549.6	546.9	544.3	541.7
52.5°	529.2	528.3	527.4	526.5	525.5	523.7	520.9	518.2	515.4	512.6	510.3
55°	481.2	480.5	480.0	479.4	478.9	477.3	474.7	472.1	469.4	466.8	464.5
57.5°	435.3	434.7	434.0	433.4	432.8	431.1	428.6	426.0	423.4	420.8	418.7
60°	403.6	402.7	401.7	400.8	399.9	398.2	395.8	393.3	390.9	388.5	386.7
62.5°	372.6	371.9	371.1	370.3	369.5	367.8	365.2	362.6	360.0	357.4	355.9
65°	326.1	325.2	324.2	323.3	322.3	320.9	319.1	317.2	315.3	313.5	311.6
67.5°	279.2	278.4	277.5	276.6	275.8	274.5	272.7	270.8	269.1	267.3	265.5
70°	250.3	249.0	247.6	246.3	245.0	243.6	242.1	240.6	239.1	237.7	236.1
72.5°	219.3	217.9	216.7	215.3	214.0	212.8	211.6	210.3	209.1	207.9	206.8
75°	173.6	172.6	171.7	170.8	169.8	168.9	167.9	167.0	166.1	165.2	164.4
77.5°	129.9	129.5	129.1	128.7	128.3	127.7	126.8	126.0	125.2	124.4	124.1
80°	103.6	103.1	102.5	102.0	101.4	100.9	100.5	100.2	99.8	99.4	99.0
82.5°	78.0	77.8	77.5	77.2	77.0	76.8	76.8	76.7	76.6	76.5	76.3
85°	45.5	45.5	45.5	45.5	45.5	45.3	44.9	44.6	44.2	43.8	43.8
87.5°	18.2	18.7	19.1	19.6	20.0	20.4	20.6	20.9	21.2	21.5	21.8
90°	3.6	6.5	9.4	12.4	15.3	17.8	19.9	22.0	24.2	26.3	27.9
92.5°	15.1	15.2	15.4	15.5	15.7	16.8	18.9	21.1	23.2	25.3	26.9
95°	65.7	56.6	47.7	38.7	29.6	25.2	25.5	25.7	26.0	26.3	27.9
97.5°	139.5	145.1	150.8	156.5	162.1	150.0	120.4	90.8	61.2	31.5	31.7
100°	195.9	200.7	205.5	210.2	215.0	199.1	162.5	125.8	89.2	52.6	48.1
102.5°	259.0	262.5	266.0	269.5	273.0	272.4	267.6	262.8	258.0	253.3	204.5
105°	359.6	361.2	362.7	364.4	366.0	367.4	368.8	370.1	371.4	372.7	375.1
107.5°	453.0	453.8	454.6	455.4	456.2	457.5	459.3	461.1	462.9	464.7	465.9
110°	516.1	516.9	517.7	518.5	519.3	520.5	522.0	523.6	525.2	526.8	527.4



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CANDELA DISTRIBUTION (continued):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
112.5°	577.3	578.7	580.1	581.5	583.0	584.1	584.8	585.6	586.3	587.1	586.9
115°	671.4	672.2	673.0	673.8	674.5	674.9	674.5	674.3	674.1	673.8	674.3
117.5°	756.2	757.2	758.4	759.4	760.5	761.3	761.8	762.5	763.0	763.6	763.5
120°	813.6	814.6	815.7	816.7	817.8	818.2	817.9	817.7	817.4	817.1	817.7
122.5°	867.0	867.7	868.3	868.9	869.7	870.1	870.5	870.8	871.2	871.6	872.0
125°	943.8	944.8	945.9	947.0	948.0	948.2	947.8	947.2	946.7	946.2	947.0
127.5°	1016.4	1016.7	1016.9	1017.2	1017.5	1018.2	1019.5	1020.6	1021.8	1023.1	1022.9
130°	1063.3	1063.5	1063.7	1064.1	1064.3	1064.9	1065.6	1066.4	1067.2	1068.0	1068.3
132.5°	1106.2	1106.7	1107.2	1107.7	1108.2	1108.9	1109.9	1110.9	1111.9	1112.9	1113.2
135°	1170.8	1170.4	1170.2	1170.0	1169.7	1170.1	1171.2	1172.2	1173.3	1174.3	1174.9
137.5°	1227.9	1228.0	1228.0	1228.2	1228.3	1228.9	1230.1	1231.3	1232.4	1233.6	1234.1
140°	1265.1	1265.7	1266.2	1266.7	1267.3	1267.8	1268.3	1268.8	1269.4	1269.9	1270.7
142.5°	1298.5	1299.5	1300.5	1301.5	1302.4	1303.1	1303.4	1303.7	1304.0	1304.3	1304.9
145°	1350.0	1350.8	1351.5	1352.3	1353.1	1353.5	1353.5	1353.5	1353.5	1353.5	1353.8
147.5°	1390.8	1392.3	1393.8	1395.3	1396.8	1397.3	1397.1	1396.9	1396.5	1396.3	1396.5
150°	1420.5	1421.5	1422.5	1423.6	1424.7	1425.1	1424.8	1424.6	1424.3	1424.0	1424.0
152.5°	1445.3	1446.1	1447.0	1447.8	1448.7	1448.9	1448.3	1447.9	1447.4	1446.9	1447.4
155°	1480.2	1480.4	1480.7	1481.0	1481.2	1481.0	1480.2	1479.4	1478.6	1477.7	1478.8
157.5°	1509.6	1509.4	1509.3	1509.1	1508.9	1508.4	1507.4	1506.6	1505.7	1504.8	1506.2
160°	1526.8	1526.0	1525.2	1524.4	1523.6	1523.0	1522.7	1522.5	1522.3	1521.9	1523.6
162.5°	1542.1	1541.0	1540.0	1539.1	1538.0	1537.4	1537.1	1536.8	1536.6	1536.3	1537.9
165°	1561.4	1560.0	1558.8	1557.4	1556.1	1555.4	1555.4	1555.4	1555.4	1555.4	1557.5
167.5°	1576.7	1575.3	1573.9	1572.6	1571.1	1570.4	1570.3	1570.1	1569.9	1569.8	1572.1
170°	1585.3	1583.7	1582.1	1580.5	1578.9	1578.3	1578.5	1578.8	1579.1	1579.3	1581.4
172.5°	1591.0	1589.4	1587.9	1586.3	1584.7	1584.0	1584.3	1584.5	1584.8	1585.1	1587.1
175°	1597.2	1595.6	1594.0	1592.4	1590.9	1590.2	1590.5	1590.7	1591.0	1591.3	1593.6
177.5°	1600.1	1598.6	1597.1	1595.6	1594.2	1593.6	1594.0	1594.5	1594.9	1595.3	1597.0
180°	1597.2	1597.2	1597.2	1597.2	1597.2	1597.2	1597.2	1597.2	1597.2	1597.2	1597.2



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CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
0°	1051.6	1051.6	1051.6	1051.6	1051.6	1051.6	1051.6	1051.6
2.5°	1047.8	1049.3	1050.8	1051.5	1051.4	1051.2	1051.1	1050.9
5°	1042.2	1044.3	1046.3	1047.2	1046.8	1046.5	1046.1	1045.7
7.5°	1030.6	1032.3	1033.9	1034.6	1034.4	1034.2	1034.0	1033.7
10°	1020.9	1022.4	1023.9	1024.5	1024.1	1023.7	1023.3	1022.9
12.5°	1009.1	1010.7	1012.3	1012.9	1012.4	1011.9	1011.3	1010.8
15°	986.4	987.5	988.6	989.0	988.4	987.9	987.3	986.7
17.5°	960.7	961.4	962.1	962.3	961.9	961.5	961.2	960.8
20°	941.5	942.1	942.6	942.7	942.3	942.0	941.6	941.2
22.5°	921.5	922.5	923.5	923.7	923.0	922.3	921.6	921.0
25°	888.5	888.7	888.9	888.6	887.9	887.1	886.4	885.6
27.5°	851.5	851.0	850.6	849.9	849.0	848.0	847.1	846.1
30°	825.9	825.2	824.4	823.6	822.7	821.7	820.8	819.9
32.5°	800.0	799.2	798.3	797.3	796.4	795.4	794.5	793.6
35°	759.1	757.8	756.5	755.3	754.4	753.5	752.6	751.6
37.5°	716.2	714.8	713.4	712.1	710.8	709.6	708.4	707.1
40°	686.3	684.5	682.6	681.2	680.2	679.4	678.4	677.5
42.5°	657.4	655.3	653.1	651.7	651.1	650.5	649.8	649.2
45°	612.7	610.6	608.6	607.3	606.7	606.1	605.5	605.0
47.5°	569.3	567.0	564.7	562.8	561.4	560.0	558.6	557.1
50°	539.1	536.5	533.9	532.0	530.8	529.7	528.6	527.5
52.5°	508.0	505.6	503.4	501.5	500.1	498.7	497.3	495.8
55°	462.3	460.1	457.8	456.1	455.0	453.9	452.7	451.6
57.5°	416.5	414.4	412.3	410.7	409.6	408.4	407.4	406.3
60°	385.1	383.4	381.7	380.4	379.5	378.5	377.6	376.7
62.5°	354.3	352.8	351.3	350.1	349.1	348.2	347.3	346.3
65°	309.7	307.8	305.9	304.6	303.6	302.7	301.7	300.8
67.5°	263.7	261.9	260.1	259.0	258.8	258.6	258.3	258.0
70°	234.6	233.1	231.6	230.6	230.0	229.5	228.9	228.4
72.5°	205.6	204.4	203.2	202.3	201.7	201.1	200.6	200.0
75°	163.7	162.9	162.2	161.7	161.5	161.3	161.1	161.0
77.5°	123.9	123.7	123.5	123.1	122.6	122.2	121.7	121.2
80°	98.7	98.3	97.9	97.7	97.4	97.3	97.1	96.9
82.5°	76.0	75.8	75.6	75.4	75.3	75.0	74.9	74.6
85°	43.8	43.8	43.8	43.7	43.6	43.3	43.2	42.9
87.5°	22.1	22.4	22.7	22.9	23.1	23.1	23.2	23.4
90°	29.5	31.1	32.6	33.7	34.2	34.8	35.3	35.8
92.5°	28.5	30.1	31.7	32.6	32.6	32.8	32.9	33.0
95°	29.5	31.1	32.6	33.6	33.8	34.1	34.4	34.6
97.5°	31.8	32.0	32.2	32.4	32.6	33.0	33.2	33.4
100°	43.6	39.1	34.5	32.4	32.6	33.0	33.2	33.4
102.5°	155.9	107.2	58.5	34.2	34.2	34.3	34.4	34.4
105°	377.5	379.9	382.3	378.7	369.2	359.6	350.1	340.5
107.5°	467.1	468.3	469.4	470.5	471.5	472.5	473.5	474.5
110°	527.9	528.5	528.9	529.7	530.4	531.2	532.0	532.8



TEST NUMBER: P332803-927

CATALOG NUMBER: S124DIW-S795D1560U927-4F0-1E-UDD-F

CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
112.5°	586.8	586.7	586.6	587.1	588.1	589.1	590.1	591.1
115°	674.9	675.3	675.9	676.2	676.2	676.2	676.2	676.2
117.5°	763.4	763.3	763.2	763.1	763.0	762.9	762.8	762.6
120°	818.2	818.7	819.3	819.3	818.7	818.2	817.7	817.1
122.5°	872.3	872.6	872.9	872.7	872.3	871.7	871.2	870.7
125°	947.8	948.6	949.4	949.9	950.1	950.4	950.7	950.9
127.5°	1022.8	1022.6	1022.5	1022.2	1022.1	1021.8	1021.6	1021.4
130°	1068.6	1068.8	1069.1	1069.2	1069.2	1069.2	1069.2	1069.2
132.5°	1113.5	1113.7	1114.0	1114.0	1113.8	1113.6	1113.4	1113.2
135°	1175.4	1175.9	1176.5	1177.0	1177.5	1178.1	1178.6	1179.1
137.5°	1234.8	1235.3	1236.0	1236.1	1236.0	1235.8	1235.6	1235.5
140°	1271.5	1272.3	1273.1	1273.6	1273.9	1274.1	1274.4	1274.7
142.5°	1305.5	1306.1	1306.6	1306.9	1307.0	1307.1	1307.1	1307.2
145°	1354.1	1354.3	1354.6	1355.0	1355.5	1356.1	1356.6	1357.1
147.5°	1396.7	1396.9	1397.2	1397.4	1397.6	1397.9	1398.2	1398.4
150°	1424.0	1424.0	1424.0	1424.2	1424.4	1424.7	1425.0	1425.2
152.5°	1447.8	1448.2	1448.7	1448.7	1448.6	1448.4	1448.3	1448.1
155°	1479.9	1481.0	1482.0	1482.2	1481.4	1480.6	1479.8	1479.0
157.5°	1507.5	1508.9	1510.3	1510.3	1508.9	1507.5	1506.2	1504.8
160°	1525.2	1526.8	1528.4	1528.4	1526.8	1525.2	1523.6	1521.9
162.5°	1539.5	1541.1	1542.7	1542.5	1540.8	1539.0	1537.2	1535.3
165°	1559.6	1561.8	1563.9	1563.8	1561.4	1559.0	1556.6	1554.3
167.5°	1574.5	1576.8	1579.1	1579.0	1576.3	1573.7	1571.0	1568.4
170°	1583.6	1585.7	1587.9	1587.5	1584.9	1582.2	1579.6	1576.9
172.5°	1589.3	1591.4	1593.6	1593.2	1590.3	1587.5	1584.6	1581.7
175°	1596.0	1598.5	1600.8	1600.4	1597.2	1594.0	1590.9	1587.7
177.5°	1598.7	1600.4	1602.1	1601.7	1599.2	1596.6	1594.0	1591.5
180°	1597.2	1597.2	1597.2	1597.2	1597.2	1597.2	1597.2	1597.2

(END OF REPORT)