

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: P332190-840

Luminaire Tested: **S123DIW-S1000D755U840-4F0-1E-UDD-F**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P332190-840
REPORT IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-1807-864-5,
Test Lab: INNOVATION CENTER
Issue Date: 3/3/2020
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: NEO-RAY
Catalog Number: S123DIW-S1000D755U840-4F0-1E-UDD-F
Description: DEFINE 3 DIRECT-INDIRECT WALL MOUNT LED LUMINAIRE
DOWNLIGHT 1000 LUMENS PER FOOT, FLUSH SATIN WHITE DIFFUSER
UPLIGHT 755 LUMENS PER FOOT, NO LENS
Light Source: -
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 7212.5 lumens
Efficiency: N/A
Efficacy: 134.6 lumens/watt
Spacing Criteria (0/90/45): 1.21 / 1.18 / 1.31
Luminous Opening: Rectangular (W 0.25' x L: 4' x H: 0')
CIE Type: General Diffuse

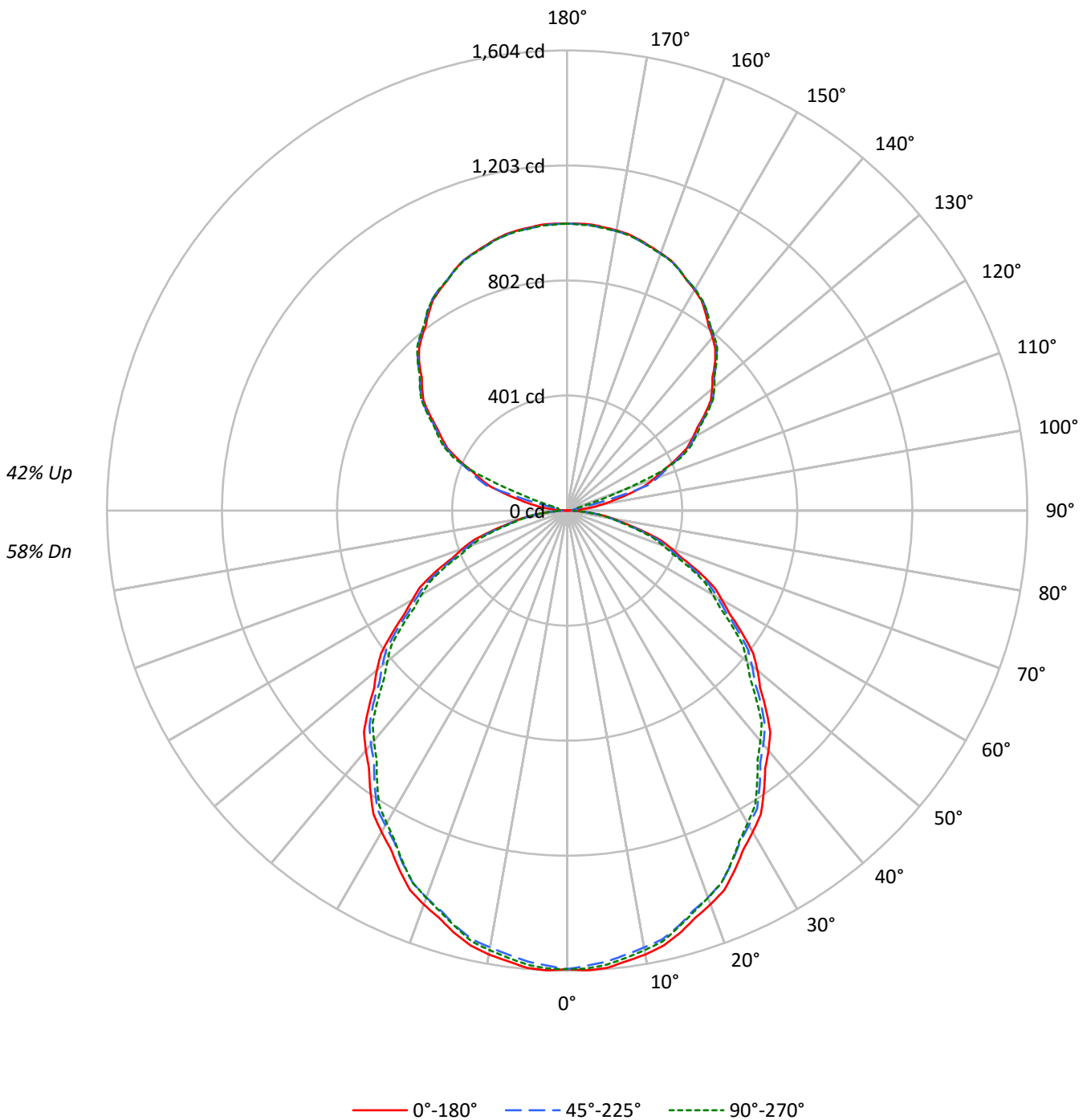
Input Watts (W): 53.6
Input Voltage (V): 120
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



TEST NUMBER: P332190-840

CATALOG NUMBER: S123DIW-S1000D755U840-4F0-1E-UDD-F

Luminous Intensity Polar Plot





TEST NUMBER: P332190-840

CATALOG NUMBER: S123DIW-S1000D755U840-4F0-1E-UDD-F

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	109	109	109	109	102	102	102	102	88	88	88	75	75	75	63	63	63	58
1	99	95	91	87	92	89	85	82	77	74	72	66	64	62	56	54	53	48
2	91	83	77	71	84	77	72	67	67	63	59	58	55	52	49	47	45	41
3	83	73	65	59	77	68	62	56	59	54	50	51	47	44	43	41	38	34
4	76	65	56	50	70	60	53	48	53	47	43	45	41	38	39	36	33	29
5	69	58	49	43	64	54	47	41	47	41	37	41	36	33	35	31	29	26
6	64	52	43	37	59	48	41	36	43	37	32	37	32	29	32	28	25	22
7	59	47	39	33	55	44	37	31	39	33	28	34	29	25	29	25	22	20
8	55	42	35	29	51	40	33	28	35	29	25	31	26	23	27	23	20	18
9	51	39	31	26	48	37	30	25	32	27	23	28	24	20	25	21	18	16
10	48	36	28	23	45	34	27	22	30	24	20	26	22	18	23	19	16	15

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	17206	17206	17206
5°	17286	17049	17168
10°	17171	16901	17006
15°	16971	16710	16741
20°	16736	16436	16452
25°	16422	16112	16079
30°	16075	15751	15631
35°	15713	15369	15172
40°	15336	14948	14716
45°	14918	14562	14206
50°	14502	14086	13695
55°	13955	13594	13181
60°	13403	13020	12605
65°	12918	12394	12006
70°	12198	11679	11160
75°	11146	10746	10289
80°	10054	9627	9540
85°	8830	8497	8139



TEST NUMBER: P332190-840

CATALOG NUMBER: S123DIW-S1000D755U840-4F0-1E-UDD-F

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	150.6	2.1
10°-20°	425.2	5.9
20°-30°	628.0	8.7
30°-40°	733.6	10.2
40°-50°	737.6	10.2
50°-60°	647.9	9.0
60°-70°	482.7	6.7
70°-80°	275.0	3.8
80°-90°	81.7	1.1
90°-100°	36.4	0.5
100°-110°	173.3	2.4
110°-120°	416.3	5.8
120°-130°	530.1	7.4
130°-140°	566.4	7.9
140°-150°	529.7	7.3
150°-160°	427.3	5.9
160°-170°	275.7	3.8
170°-180°	95.0	1.3
0°-30°	1203.8	16.7
0°-40°	1937.4	26.9
0°-60°	3322.8	46.1
0°-90°	4162.3	57.7
90°-120°	626.0	8.7
90°-150°	2252.2	31.2
90°-180°	3050.0	42.3
0°-180°	7212.5	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1598	1598	1598	1598	1598	
5°	1600	1593	1578	1591	1589	152
15°	1523	1517	1500	1509	1502	429
25°	1383	1374	1357	1358	1354	637
35°	1196	1187	1170	1162	1155	748
45°	980	974	957	941	933	756
55°	744	741	724	710	702	666
65°	507	500	487	476	471	500
75°	268	263	258	252	247	287
85°	72	69	69	66	66	78
90°	1	8	18	21	22	6
95°	45	17	23	28	28	56
105°	222	225	163	39	33	235
115°	415	420	427	434	437	410
125°	586	591	594	596	597	523
135°	729	733	736	738	736	561
145°	841	846	848	849	849	526
155°	927	925	926	929	925	427
165°	977	975	974	980	975	276
175°	1000	997	997	1002	996	95
180°	1000	1000	1000	1000	1000	



TEST NUMBER: P332190-840

CATALOG NUMBER: S123DIW-S1000D755U840-4F0-1E-UDD-F

CANDELA DISTRIBUTION (FULL):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
0°	1598.5	1598.5	1598.5	1598.5	1598.5	1598.5	1598.5	1598.5	1598.5	1598.5	1598.5
2.5°	1604.0	1603.1	1602.0	1601.0	1600.1	1598.2	1595.6	1592.9	1590.2	1587.5	1589.9
5°	1599.8	1598.3	1596.8	1595.3	1593.8	1591.3	1588.0	1584.6	1581.2	1577.9	1580.9
7.5°	1584.2	1582.7	1581.1	1579.6	1578.1	1575.6	1572.2	1568.6	1565.2	1561.7	1564.4
10°	1571.0	1569.5	1567.9	1566.4	1564.9	1562.2	1558.2	1554.2	1550.2	1546.3	1549.0
12.5°	1553.4	1552.2	1550.8	1549.5	1548.3	1545.8	1542.1	1538.3	1534.6	1530.9	1532.9
15°	1522.9	1521.7	1520.5	1519.2	1518.0	1515.4	1511.5	1507.5	1503.5	1499.5	1502.0
17.5°	1487.4	1485.8	1484.3	1482.7	1481.1	1478.3	1474.3	1470.4	1466.4	1462.4	1464.1
20°	1461.1	1459.3	1457.4	1455.5	1453.7	1450.8	1446.8	1442.9	1439.0	1434.9	1436.1
22.5°	1431.4	1429.6	1427.7	1425.8	1424.0	1421.2	1417.1	1413.2	1409.3	1405.2	1406.2
25°	1382.7	1380.9	1379.1	1377.3	1375.3	1372.5	1368.5	1364.5	1360.6	1356.6	1356.9
27.5°	1330.8	1329.0	1327.2	1325.4	1323.6	1320.6	1316.4	1312.1	1307.8	1303.5	1303.7
30°	1293.3	1291.8	1290.3	1288.8	1287.3	1284.3	1280.1	1275.8	1271.5	1267.3	1267.3
32.5°	1256.0	1253.9	1251.9	1249.9	1247.9	1245.3	1241.9	1238.7	1235.4	1232.0	1230.3
35°	1195.8	1194.0	1192.1	1190.3	1188.4	1185.6	1181.5	1177.6	1173.7	1169.6	1167.8
37.5°	1134.2	1131.9	1129.5	1127.2	1124.9	1121.8	1117.7	1113.7	1109.6	1105.6	1103.4
40°	1091.4	1089.4	1087.6	1085.8	1084.0	1081.0	1076.6	1072.4	1068.1	1063.8	1061.4
42.5°	1048.4	1046.3	1044.3	1042.2	1040.2	1036.9	1032.7	1028.4	1024.1	1019.9	1017.4
45°	980.0	978.8	977.5	976.3	975.1	972.5	968.6	964.5	960.6	956.6	953.0
47.5°	912.1	910.3	908.6	906.8	905.0	902.2	898.6	894.8	891.1	887.4	883.7
50°	866.0	864.3	862.8	861.3	859.8	857.1	853.0	849.1	845.2	841.2	837.8
52.5°	817.5	816.5	815.5	814.5	813.3	810.7	806.6	802.3	798.1	793.9	791.0
55°	743.6	743.3	743.0	742.7	742.4	740.2	736.3	732.3	728.3	724.4	720.9
57.5°	673.2	672.2	671.2	670.1	669.0	666.9	663.8	660.6	657.4	654.3	651.3
60°	622.6	622.3	622.0	621.7	621.4	619.5	615.7	612.1	608.4	604.8	602.0
62.5°	577.5	576.7	575.9	575.1	574.4	572.2	568.5	564.8	561.2	557.4	554.7
65°	507.2	505.6	504.1	502.6	501.1	498.8	495.7	492.7	489.6	486.6	484.1
67.5°	432.7	431.3	430.0	428.7	427.3	425.5	423.1	420.8	418.5	416.2	414.0
70°	387.6	385.8	384.0	382.1	380.3	378.4	376.6	374.8	372.9	371.1	369.0
72.5°	340.3	339.0	337.6	336.3	335.0	333.3	331.1	329.1	327.0	324.9	323.1
75°	268.0	266.8	265.6	264.4	263.2	262.1	261.2	260.2	259.3	258.4	256.9
77.5°	204.0	203.3	202.6	202.0	201.3	200.4	199.3	198.2	197.1	196.0	195.0
80°	162.2	161.3	160.4	159.5	158.5	157.7	157.1	156.5	155.9	155.3	155.0
82.5°	121.5	121.3	121.2	121.0	120.8	120.6	120.5	120.4	120.3	120.2	119.6
85°	71.5	70.9	70.3	69.7	69.1	68.8	68.8	68.8	68.8	68.8	68.1
87.5°	28.8	28.4	28.0	27.6	27.2	27.1	27.2	27.4	27.6	27.8	27.7
90°	0.7	2.4	4.0	5.7	7.4	9.3	11.4	13.5	15.7	17.9	18.5
92.5°	13.8	13.3	12.9	12.4	12.0	12.5	14.1	15.8	17.4	19.0	20.1
95°	45.3	38.6	31.8	25.0	18.3	15.8	17.6	19.4	21.2	23.0	24.2
97.5°	91.1	88.1	85.0	82.0	79.0	71.5	59.6	47.7	35.9	23.9	25.2
100°	125.6	128.9	132.2	135.5	138.8	127.5	101.8	76.0	50.3	24.5	25.9
102.5°	164.8	167.2	169.6	172.0	174.3	161.5	133.3	105.1	77.1	48.9	44.8
105°	221.5	223.3	225.1	226.9	228.7	222.2	207.3	192.5	177.6	162.8	133.5
107.5°	281.1	282.7	284.1	285.6	287.0	288.9	291.2	293.6	296.0	298.3	276.8
110°	321.0	322.3	323.7	325.0	326.3	327.9	329.7	331.5	333.4	335.2	329.7



TEST NUMBER: P332190-840

CATALOG NUMBER: S123DIW-S1000D755U840-4F0-1E-UDD-F

CANDELA DISTRIBUTION (continued):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
112.5°	359.1	360.2	361.4	362.6	363.9	365.4	367.2	369.0	370.8	372.6	372.7
115°	415.4	416.4	417.4	418.4	419.4	420.6	422.1	423.5	425.1	426.6	428.2
117.5°	470.0	471.2	472.4	473.6	474.8	475.8	476.6	477.4	478.1	478.9	480.2
120°	503.8	505.3	506.9	508.3	509.8	510.8	511.3	511.8	512.3	512.7	514.1
122.5°	538.4	539.6	540.8	542.0	543.2	544.1	544.7	545.4	546.0	546.6	547.5
125°	585.6	586.9	588.2	589.6	590.9	591.9	592.5	593.2	593.8	594.5	594.8
127.5°	631.4	632.7	634.0	635.3	636.6	637.7	638.5	639.2	640.1	640.9	641.4
130°	659.8	661.3	662.6	663.9	665.2	666.2	666.8	667.5	668.1	668.8	669.4
132.5°	687.2	688.5	689.8	691.2	692.6	693.5	694.0	694.5	695.0	695.6	696.2
135°	729.0	730.0	730.9	732.0	733.0	733.8	734.5	735.1	735.8	736.4	736.9
137.5°	764.7	765.9	767.2	768.4	769.7	770.5	770.8	771.2	771.6	771.9	772.7
140°	788.4	789.4	790.4	791.4	792.4	793.1	793.7	794.2	794.7	795.2	795.8
142.5°	810.4	811.4	812.4	813.4	814.5	815.2	815.7	816.2	816.7	817.2	817.7
145°	841.2	842.3	843.5	844.7	845.9	846.6	846.9	847.3	847.6	847.9	848.2
147.5°	870.2	870.9	871.7	872.4	873.2	873.7	874.1	874.4	874.7	875.0	875.5
150°	888.1	888.5	889.0	889.5	890.0	890.4	890.8	891.1	891.4	891.7	892.1
152.5°	904.0	904.3	904.5	904.7	905.0	905.2	905.4	905.6	905.8	906.1	906.6
155°	926.7	926.3	926.0	925.6	925.3	925.2	925.4	925.6	925.7	925.9	926.8
157.5°	944.2	944.2	944.1	944.1	944.1	944.0	943.8	943.6	943.5	943.3	944.3
160°	954.9	954.7	954.6	954.4	954.2	954.1	953.9	953.7	953.6	953.4	954.4
162.5°	965.0	964.6	964.1	963.7	963.3	963.0	962.8	962.7	962.5	962.3	963.5
165°	977.2	976.7	976.2	975.7	975.2	974.9	974.7	974.5	974.4	974.2	975.5
167.5°	986.7	986.0	985.4	984.7	984.1	983.7	983.7	983.7	983.7	983.7	985.0
170°	992.1	991.4	990.8	990.1	989.5	989.1	989.1	989.1	989.1	989.1	990.4
172.5°	995.6	994.8	994.0	993.3	992.5	992.1	992.3	992.4	992.5	992.7	994.0
175°	1000.3	999.4	998.6	997.7	996.9	996.6	996.7	996.9	997.1	997.2	998.5
177.5°	1001.4	1000.8	1000.1	999.5	998.8	998.6	998.7	998.8	999.0	999.1	1000.1
180°	1000.3	1000.3	1000.3	1000.3	1000.3	1000.3	1000.3	1000.3	1000.3	1000.3	1000.3



TEST NUMBER: P332190-840

CATALOG NUMBER: S123DIW-S1000D755U840-4F0-1E-UDD-F

CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
0°	1598.5	1598.5	1598.5	1598.5	1598.5	1598.5	1598.5	1598.5
2.5°	1592.4	1594.9	1597.3	1598.4	1598.1	1597.9	1597.6	1597.4
5°	1584.0	1587.0	1590.1	1591.3	1590.7	1590.1	1589.5	1588.9
7.5°	1567.2	1569.9	1572.7	1573.9	1573.5	1573.2	1572.8	1572.4
10°	1551.8	1554.5	1557.3	1558.3	1557.7	1557.1	1556.5	1555.9
12.5°	1534.9	1536.9	1538.9	1539.7	1539.4	1539.0	1538.6	1538.3
15°	1504.4	1506.8	1509.3	1509.6	1507.8	1505.9	1504.1	1502.3
17.5°	1465.8	1467.5	1469.3	1469.8	1469.2	1468.4	1467.7	1467.1
20°	1437.3	1438.7	1439.9	1440.0	1439.1	1438.1	1437.2	1436.3
22.5°	1407.2	1408.2	1409.2	1409.1	1408.0	1406.7	1405.6	1404.4
25°	1357.2	1357.6	1357.9	1357.6	1356.6	1355.6	1354.7	1353.8
27.5°	1304.0	1304.2	1304.5	1304.0	1302.9	1301.7	1300.6	1299.4
30°	1267.3	1267.3	1267.3	1266.2	1264.0	1261.9	1259.8	1257.6
32.5°	1228.6	1227.0	1225.3	1223.8	1222.6	1221.4	1220.3	1219.1
35°	1166.0	1164.2	1162.4	1160.6	1159.1	1157.6	1156.1	1154.6
37.5°	1101.3	1099.0	1096.8	1095.2	1094.3	1093.3	1092.3	1091.4
40°	1058.9	1056.5	1054.1	1052.2	1051.0	1049.8	1048.5	1047.3
42.5°	1014.9	1012.5	1010.1	1008.2	1007.0	1005.8	1004.6	1003.4
45°	949.3	945.6	942.0	939.4	937.9	936.3	934.8	933.2
47.5°	880.1	876.6	872.9	870.5	869.1	867.8	866.5	865.1
50°	834.5	831.1	827.7	825.2	823.3	821.4	819.6	817.8
52.5°	788.1	785.3	782.4	780.0	778.2	776.4	774.6	772.7
55°	717.6	714.3	710.9	708.4	706.9	705.4	703.9	702.4
57.5°	648.2	645.3	642.3	639.9	638.1	636.3	634.6	632.8
60°	599.3	596.5	593.8	591.7	590.1	588.5	587.0	585.5
62.5°	552.0	549.3	546.4	544.6	543.5	542.5	541.5	540.5
65°	481.7	479.2	476.8	475.1	474.2	473.3	472.3	471.4
67.5°	411.9	409.8	407.7	406.0	404.7	403.3	402.0	400.8
70°	366.8	364.7	362.5	360.7	359.2	357.7	356.2	354.6
72.5°	321.1	319.2	317.3	316.0	315.2	314.4	313.7	312.9
75°	255.4	253.8	252.3	251.1	250.1	249.2	248.3	247.4
77.5°	193.9	192.9	191.9	191.4	191.4	191.4	191.4	191.4
80°	154.7	154.4	154.1	153.9	153.9	153.9	153.9	153.9
82.5°	119.1	118.5	118.0	117.5	117.2	117.0	116.8	116.5
85°	67.5	66.9	66.2	65.9	65.9	65.9	65.9	65.9
87.5°	27.6	27.5	27.3	27.3	27.4	27.4	27.5	27.6
90°	19.2	19.8	20.5	21.0	21.3	21.6	21.9	22.3
92.5°	21.1	22.2	23.2	23.8	24.0	24.2	24.4	24.6
95°	25.3	26.5	27.7	28.3	28.3	28.3	28.3	28.3
97.5°	26.6	27.9	29.2	30.0	30.1	30.3	30.5	30.6
100°	27.2	28.5	29.8	30.6	30.7	30.9	31.0	31.2
102.5°	40.7	36.7	32.5	30.6	30.9	31.2	31.5	31.8
105°	104.3	75.0	45.8	31.4	31.7	32.0	32.4	32.7
107.5°	255.4	234.0	212.6	190.9	168.7	146.7	124.7	102.7
110°	324.3	318.8	313.4	298.8	275.2	251.6	227.9	204.4



TEST NUMBER: P332190-840

CATALOG NUMBER: S123DIW-S1000D755U840-4F0-1E-UDD-F

CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
112.5°	372.8	372.9	373.0	370.5	365.6	360.6	355.6	350.6
115°	429.9	431.5	433.1	434.3	434.9	435.7	436.3	437.0
117.5°	481.5	482.8	484.1	484.8	485.0	485.1	485.2	485.4
120°	515.4	516.7	518.1	518.7	518.7	518.7	518.7	518.7
122.5°	548.5	549.4	550.4	550.9	551.0	551.1	551.3	551.4
125°	595.1	595.5	595.8	596.1	596.5	596.8	597.1	597.4
127.5°	642.0	642.5	643.0	643.1	642.8	642.4	642.1	641.8
130°	670.1	670.8	671.5	671.7	671.3	671.0	670.7	670.2
132.5°	696.9	697.5	698.2	698.3	697.8	697.4	696.9	696.4
135°	737.4	737.9	738.4	738.4	737.9	737.4	736.9	736.4
137.5°	773.6	774.4	775.2	775.4	775.1	774.7	774.4	774.1
140°	796.5	797.1	797.8	798.0	797.6	797.3	797.0	796.6
142.5°	818.2	818.7	819.2	819.3	818.8	818.4	817.9	817.4
145°	848.6	848.9	849.2	849.4	849.4	849.4	849.4	849.4
147.5°	875.8	876.1	876.5	876.2	875.5	874.6	873.9	873.1
150°	892.4	892.7	893.0	893.0	892.5	892.0	891.5	891.0
152.5°	907.2	907.8	908.4	908.3	907.6	906.8	906.1	905.2
155°	927.6	928.4	929.3	929.2	928.2	927.2	926.1	925.1
157.5°	945.3	946.2	947.3	947.2	945.8	944.5	943.3	942.0
160°	955.4	956.4	957.4	957.4	956.1	955.0	953.8	952.7
162.5°	964.6	965.7	966.8	966.8	965.8	964.8	963.8	962.8
165°	976.8	978.2	979.5	979.6	978.5	977.2	976.1	974.9
167.5°	986.3	987.7	989.1	989.1	987.7	986.3	985.0	983.7
170°	991.7	993.1	994.4	994.4	993.1	991.7	990.4	989.1
172.5°	995.3	996.6	997.9	997.8	996.4	995.0	993.5	992.1
175°	999.6	1000.8	1001.9	1001.8	1000.5	999.2	997.8	996.5
177.5°	1001.2	1002.2	1003.3	1003.1	1001.8	1000.5	999.2	997.8
180°	1000.3	1000.3	1000.3	1000.3	1000.3	1000.3	1000.3	1000.3

(END OF REPORT)