

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: P332476-930

Luminaire Tested: **S123RDIW-S1165D755U930-4F0-1E-UDD-F**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P332476-930
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: S123RDIW-S1165D755U930-4F0-1E-UDD-F
Description: DEFINE 3 DIRECT-INDIRECT WALL MOUNT LED LUMINAIRE
DOWNLIGHT 1165 LUMENS PER FOOT, FLUSH SATIN WHITE DIFFUSER, REGRESSED
HOUSING
UPLIGHT 755 LUMENS PER FOOT, NO LENS
Light Source: -
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 6034.6 lumens
Efficiency: N/A
Efficacy: 100.9 lumens/watt
Spacing Criteria (0/90/45): 1.21 / 1.06 / 1.22
Luminous Opening: Rectangular (W 0.25' x L: 4' x H: 0')
CIE Type: General Diffuse

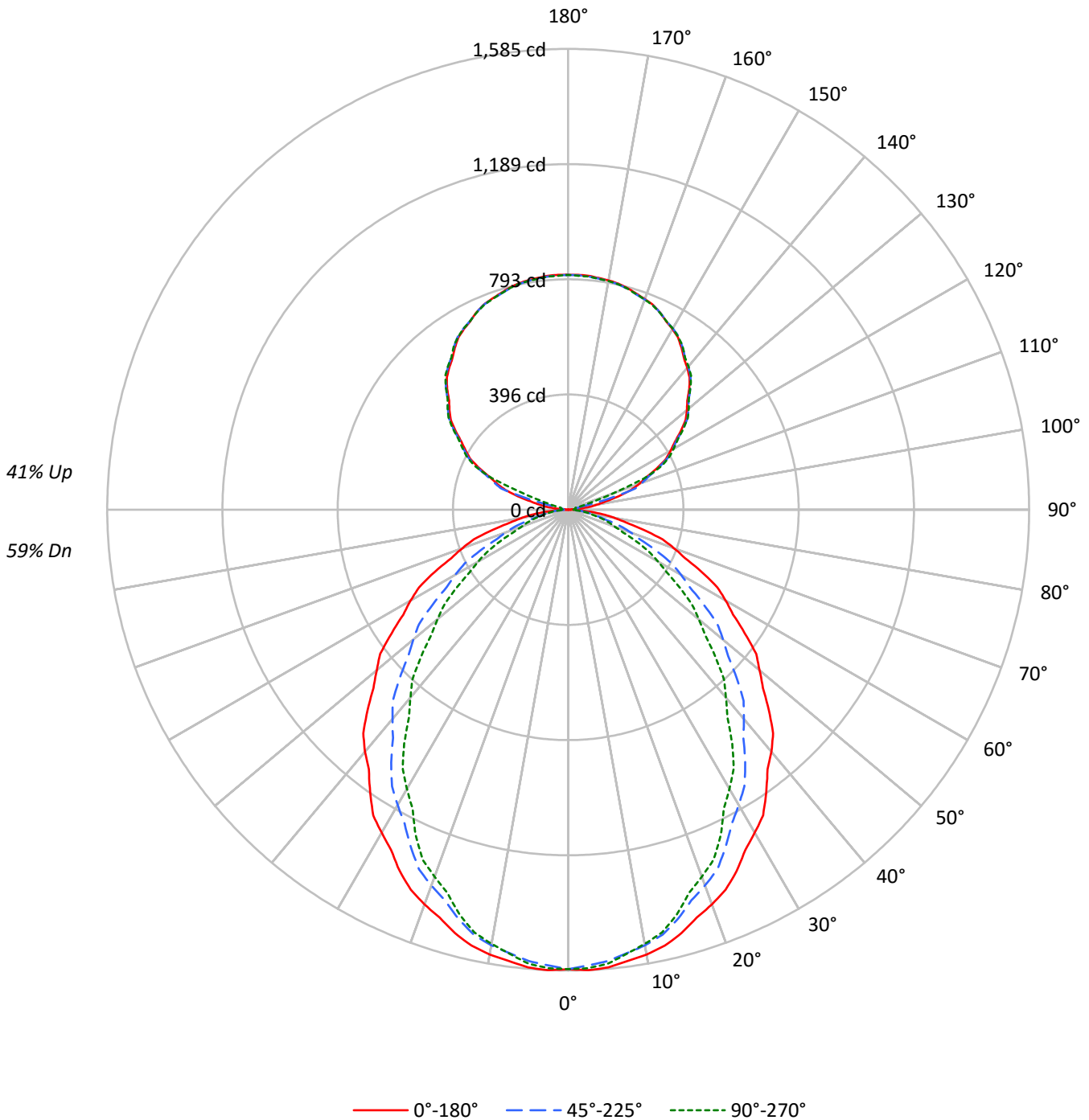
Input Watts (W): 59.8
Input Voltage (V): 120
Input Current (A_{in}): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



TEST NUMBER: P332476-930

CATALOG NUMBER: S123RDIW-S1165D755U930-4F0-1E-UDD-F

Luminous Intensity Polar Plot





TEST NUMBER: P332476-930

CATALOG NUMBER: S123RDIW-S1165D755U930-4F0-1E-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	76	76	76	65	65	65	59
1	100	96	92	89	93	90	87	84	78	76	74	68	66	64	58	56	55	51
2	92	84	78	73	85	79	74	69	69	65	61	60	57	54	51	49	47	43
3	84	74	67	61	78	70	63	58	61	56	52	53	49	46	46	43	41	37
4	77	66	58	52	72	62	55	50	55	49	45	48	43	40	41	38	35	32
5	71	59	51	45	66	56	48	43	49	43	39	43	38	35	37	34	31	28
6	65	53	45	39	61	50	43	38	44	39	34	39	34	31	34	30	27	25
7	60	48	40	35	56	46	38	33	40	35	30	36	31	27	31	27	24	22
8	56	44	36	31	52	42	34	30	37	31	27	33	28	25	29	25	22	20
9	52	40	33	28	49	38	31	27	34	28	24	30	25	22	26	23	20	18
10	49	37	30	25	46	35	28	24	31	26	22	28	23	20	25	21	18	16

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	17009	17009	17009
5°	17074	16839	16935
10°	16978	16628	16571
15°	16796	16238	16067
20°	16544	15753	15385
25°	16286	15206	14719
30°	15945	14574	13779
35°	15594	13943	12917
40°	15271	13200	11849
45°	14846	12466	10886
50°	14380	11632	9808
55°	13902	10678	8801
60°	13464	9657	7698
65°	12893	8550	6594
70°	12180	7179	5325
75°	11137	5648	5011
80°	9930	5002	4612
85°	8386	4434	4113



TEST NUMBER: P332476-930

CATALOG NUMBER: S123RDIW-S1165D755U930-4F0-1E-UDD-F

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	148.4	2.5
10°-20°	412.9	6.8
20°-30°	594.5	9.9
30°-40°	669.6	11.1
40°-50°	640.6	10.6
50°-60°	524.6	8.7
60°-70°	354.0	5.9
70°-80°	178.1	3.0
80°-90°	49.4	0.8
90°-100°	29.4	0.5
100°-110°	139.9	2.3
110°-120°	336.1	5.6
120°-130°	428.0	7.1
130°-140°	457.3	7.6
140°-150°	427.6	7.1
150°-160°	344.9	5.7
160°-170°	222.6	3.7
170°-180°	76.7	1.3
0°-30°	1155.7	19.2
0°-40°	1825.4	30.2
0°-60°	2990.6	49.6
0°-90°	3572.0	59.2
90°-120°	505.4	8.4
90°-150°	1818.3	30.1
90°-180°	2463.0	40.8
0°-180°	6034.6	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1580	1580	1580	1580	1580	
5°	1580	1573	1558	1569	1567	150
15°	1507	1492	1457	1451	1442	424
25°	1371	1338	1280	1254	1239	630
35°	1187	1139	1061	1008	983	742
45°	975	915	819	748	715	752
55°	741	675	569	497	469	664
65°	506	434	336	276	259	501
75°	268	206	136	124	120	286
85°	68	41	36	33	33	76
90°	1	7	14	17	18	5
95°	37	14	19	23	23	45
105°	179	182	131	31	26	190
115°	335	339	344	350	353	331
125°	473	477	480	481	482	422
135°	589	592	594	596	594	453
145°	679	683	684	686	686	425
155°	748	747	748	750	747	345
165°	789	787	786	791	787	223
175°	808	805	805	809	804	77
180°	808	808	808	808	808	



TEST NUMBER: P332476-930

CATALOG NUMBER: S123RDIW-S1165D755U930-4F0-1E-UDD-F

CANDELA DISTRIBUTION (FULL):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
0°	1580.2	1580.2	1580.2	1580.2	1580.2	1580.2	1580.2	1580.2	1580.2	1580.2	1580.2
2.5°	1585.3	1584.4	1583.5	1582.6	1581.7	1579.8	1577.1	1574.3	1571.7	1568.9	1571.4
5°	1580.2	1578.7	1577.4	1575.9	1574.5	1572.1	1568.6	1565.2	1561.8	1558.4	1561.0
7.5°	1565.5	1564.1	1562.5	1561.0	1559.4	1556.4	1552.0	1547.5	1543.1	1538.6	1540.1
10°	1553.3	1551.3	1549.3	1547.3	1545.3	1541.7	1536.6	1531.5	1526.3	1521.3	1521.5
12.5°	1535.9	1533.7	1531.4	1529.2	1527.0	1522.7	1516.5	1510.2	1503.9	1497.6	1497.5
15°	1507.2	1504.0	1500.9	1497.7	1494.6	1489.1	1481.1	1473.1	1465.1	1457.2	1455.7
17.5°	1471.0	1467.4	1463.7	1460.0	1456.5	1449.5	1439.4	1429.2	1419.1	1409.0	1406.0
20°	1444.3	1439.8	1435.3	1430.7	1426.1	1418.5	1407.6	1396.8	1385.9	1375.2	1371.4
22.5°	1414.6	1409.3	1404.1	1398.9	1393.7	1385.3	1373.8	1362.3	1350.8	1339.2	1334.6
25°	1371.3	1364.2	1357.1	1349.9	1342.8	1332.7	1319.6	1306.5	1293.4	1280.3	1274.3
27.5°	1318.7	1310.9	1303.0	1295.2	1287.3	1276.1	1261.5	1246.9	1232.3	1217.7	1209.4
30°	1282.9	1274.3	1265.8	1257.2	1248.7	1236.4	1220.5	1204.5	1188.6	1172.6	1162.9
32.5°	1247.0	1237.3	1227.6	1217.9	1208.3	1195.0	1178.1	1161.2	1144.4	1127.6	1117.0
35°	1186.7	1176.5	1166.2	1156.0	1145.7	1131.8	1114.1	1096.5	1078.8	1061.1	1048.9
37.5°	1125.8	1114.4	1102.9	1091.5	1080.2	1065.0	1046.2	1027.4	1008.5	989.6	975.8
40°	1086.8	1074.2	1061.7	1049.2	1036.7	1020.3	1000.0	979.8	959.6	939.4	924.5
42.5°	1042.7	1030.1	1017.7	1005.1	992.5	975.8	955.0	934.0	913.1	892.3	876.0
45°	975.3	962.5	949.7	936.9	924.0	906.6	884.7	862.7	840.8	818.9	802.7
47.5°	907.8	893.8	879.7	865.7	851.6	833.6	811.6	789.7	767.8	745.9	728.2
50°	858.7	845.3	831.8	818.5	805.1	786.9	763.9	740.8	717.7	694.6	676.9
52.5°	814.6	800.1	785.5	771.0	756.4	737.8	714.9	692.1	669.3	646.5	628.1
55°	740.8	726.8	712.8	698.9	684.9	665.9	641.6	617.4	593.2	569.0	552.5
57.5°	672.5	657.4	642.1	627.0	611.7	592.0	567.7	543.3	519.0	494.7	479.1
60°	625.4	609.8	594.1	578.5	562.7	543.1	519.4	495.9	472.2	448.6	433.2
62.5°	578.2	562.6	546.9	531.2	515.6	495.9	472.3	448.7	425.0	401.4	386.9
65°	506.2	490.6	474.9	459.3	443.6	424.6	402.4	380.2	358.0	335.7	321.8
67.5°	434.2	418.3	402.5	386.7	370.9	352.3	331.0	309.7	288.4	267.1	256.7
70°	387.0	371.7	356.3	340.9	325.5	307.9	288.0	268.0	248.1	228.1	218.2
72.5°	339.9	324.7	309.6	294.4	279.2	262.6	244.5	226.4	208.3	190.2	182.1
75°	267.8	254.2	240.5	226.8	213.2	198.5	182.9	167.1	151.5	135.8	133.0
77.5°	202.2	189.9	177.5	165.2	152.8	141.5	131.5	121.4	111.3	101.3	99.7
80°	160.2	148.5	136.8	125.1	113.5	104.7	98.7	92.7	86.7	80.7	79.9
82.5°	120.2	110.1	100.0	89.9	79.9	73.5	70.7	67.8	65.1	62.3	61.4
85°	67.9	61.6	55.4	49.2	42.9	39.3	38.5	37.6	36.8	35.9	35.3
87.5°	24.7	22.5	20.2	18.0	15.7	14.8	15.2	15.5	15.9	16.2	16.1
90°	0.6	2.0	3.3	4.6	6.0	7.5	9.2	10.9	12.6	14.4	14.9
92.5°	11.2	10.8	10.4	10.0	9.7	10.1	11.4	12.7	14.0	15.3	16.2
95°	36.6	31.1	25.7	20.2	14.8	12.7	14.2	15.7	17.1	18.6	19.6
97.5°	73.5	71.1	68.6	66.2	63.8	57.7	48.1	38.5	28.9	19.3	20.4
100°	101.4	104.0	106.7	109.4	112.0	103.0	82.2	61.4	40.6	19.8	20.9
102.5°	133.1	135.0	136.9	138.8	140.7	130.4	107.6	84.9	62.2	39.5	36.2
105°	178.8	180.3	181.7	183.2	184.7	179.4	167.4	155.4	143.4	131.4	107.8
107.5°	227.0	228.2	229.3	230.6	231.7	233.3	235.1	237.0	239.0	240.8	223.5
110°	259.2	260.2	261.3	262.4	263.4	264.7	266.2	267.7	269.1	270.6	266.2



TEST NUMBER: P332476-930

CATALOG NUMBER: S123RDIW-S1165D755U930-4F0-1E-UDD-F

CANDELA DISTRIBUTION (continued):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
112.5°	289.9	290.8	291.8	292.8	293.8	295.0	296.4	297.9	299.4	300.8	300.9
115°	335.3	336.1	337.0	337.8	338.6	339.6	340.8	341.9	343.2	344.4	345.7
117.5°	379.4	380.4	381.4	382.4	383.4	384.2	384.7	385.4	386.0	386.6	387.7
120°	406.8	408.0	409.2	410.3	411.6	412.4	412.8	413.2	413.6	413.9	415.1
122.5°	434.6	435.6	436.6	437.6	438.5	439.3	439.8	440.3	440.8	441.3	442.1
125°	472.8	473.9	474.9	476.0	477.0	477.8	478.3	478.9	479.4	480.0	480.2
127.5°	509.7	510.8	511.8	512.9	514.0	514.9	515.5	516.1	516.7	517.4	517.8
130°	532.7	533.9	534.9	536.0	537.0	537.9	538.3	538.9	539.4	540.0	540.5
132.5°	554.8	555.9	556.9	558.0	559.1	559.9	560.3	560.7	561.1	561.6	562.1
135°	588.6	589.4	590.1	590.9	591.7	592.4	593.0	593.5	594.0	594.5	594.9
137.5°	617.3	618.3	619.4	620.4	621.4	622.1	622.3	622.6	623.0	623.2	623.9
140°	636.5	637.3	638.1	639.0	639.8	640.3	640.7	641.2	641.6	642.0	642.5
142.5°	654.3	655.1	655.9	656.7	657.5	658.1	658.5	658.9	659.3	659.7	660.1
145°	679.1	680.0	681.0	681.9	682.9	683.5	683.7	684.0	684.3	684.5	684.8
147.5°	702.5	703.1	703.8	704.3	705.0	705.4	705.7	706.0	706.2	706.5	706.8
150°	717.0	717.3	717.7	718.1	718.5	718.8	719.2	719.4	719.7	719.9	720.2
152.5°	729.9	730.1	730.3	730.4	730.7	730.8	731.0	731.2	731.3	731.5	731.9
155°	748.1	747.9	747.6	747.3	747.1	747.0	747.1	747.3	747.4	747.5	748.2
157.5°	762.3	762.3	762.2	762.2	762.2	762.1	762.0	761.8	761.7	761.6	762.4
160°	770.9	770.8	770.7	770.5	770.4	770.3	770.1	770.0	769.9	769.7	770.5
162.5°	779.1	778.8	778.4	778.0	777.7	777.5	777.3	777.2	777.1	776.9	777.9
165°	789.0	788.6	788.1	787.7	787.3	787.1	786.9	786.8	786.7	786.5	787.6
167.5°	796.6	796.1	795.6	795.0	794.5	794.2	794.2	794.2	794.2	794.2	795.2
170°	801.0	800.4	799.9	799.3	798.8	798.5	798.5	798.5	798.5	798.5	799.6
172.5°	803.8	803.2	802.5	801.9	801.3	801.0	801.1	801.2	801.3	801.4	802.5
175°	807.6	806.8	806.2	805.5	804.9	804.6	804.7	804.9	805.0	805.1	806.1
177.5°	808.5	808.0	807.4	806.9	806.3	806.2	806.2	806.3	806.5	806.6	807.4
180°	807.6	807.6	807.6	807.6	807.6	807.6	807.6	807.6	807.6	807.6	807.6



TEST NUMBER: P332476-930

CATALOG NUMBER: S123RDIW-S1165D755U930-4F0-1E-UDD-F

CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
0°	1580.2	1580.2	1580.2	1580.2	1580.2	1580.2	1580.2	1580.2
2.5°	1573.9	1576.5	1578.9	1580.0	1579.5	1579.1	1578.6	1578.1
5°	1563.5	1566.1	1568.6	1569.6	1569.0	1568.5	1567.9	1567.3
7.5°	1541.5	1543.0	1544.3	1544.6	1543.6	1542.6	1541.6	1540.7
10°	1521.8	1522.1	1522.4	1521.8	1520.4	1519.0	1517.5	1516.1
12.5°	1497.3	1497.1	1497.0	1496.1	1494.4	1492.7	1491.1	1489.5
15°	1454.3	1452.9	1451.5	1449.8	1447.7	1445.8	1443.7	1441.8
17.5°	1403.0	1399.9	1396.9	1393.9	1390.9	1388.0	1385.0	1382.0
20°	1367.7	1364.0	1360.3	1356.7	1353.3	1349.9	1346.5	1343.1
22.5°	1330.0	1325.4	1320.8	1316.9	1313.7	1310.5	1307.3	1304.2
25°	1268.4	1262.3	1256.4	1251.8	1248.7	1245.5	1242.4	1239.3
27.5°	1201.1	1192.8	1184.5	1177.9	1173.1	1168.4	1163.6	1158.8
30°	1153.2	1143.6	1133.9	1126.8	1122.3	1117.7	1113.1	1108.6
32.5°	1106.4	1095.8	1085.2	1077.5	1072.7	1067.9	1063.2	1058.3
35°	1036.7	1024.4	1012.2	1003.5	998.3	993.2	988.1	983.0
37.5°	961.8	947.9	934.0	923.9	917.6	911.3	905.0	898.6
40°	909.8	895.0	880.2	869.5	862.9	856.4	849.9	843.3
42.5°	859.9	843.7	827.5	816.5	810.7	804.8	798.9	793.0
45°	786.4	770.2	754.0	742.5	735.6	728.8	721.9	715.1
47.5°	710.5	692.9	675.2	663.4	657.3	651.2	645.1	639.0
50°	659.3	641.6	623.9	611.9	605.4	598.8	592.2	585.7
52.5°	609.8	591.4	573.1	560.9	555.1	549.3	543.4	537.5
55°	536.0	519.4	503.0	491.9	486.2	480.5	474.7	469.0
57.5°	463.5	447.8	432.3	422.0	417.2	412.4	407.5	402.7
60°	417.8	402.4	387.0	376.9	372.1	367.2	362.4	357.6
62.5°	372.4	358.0	343.5	333.8	328.6	323.6	318.5	313.5
65°	307.9	293.9	280.0	271.4	268.3	265.1	262.0	258.9
67.5°	246.2	235.8	225.3	218.5	215.2	211.7	208.4	205.0
70°	208.1	198.2	188.3	181.7	178.6	175.5	172.3	169.2
72.5°	173.9	165.8	157.6	152.9	151.6	150.3	149.0	147.7
75°	130.1	127.3	124.4	122.8	122.2	121.6	121.1	120.5
77.5°	98.2	96.6	95.1	94.0	93.4	92.9	92.3	91.7
80°	79.0	78.2	77.3	76.6	76.1	75.5	74.9	74.4
82.5°	60.6	59.8	58.9	58.4	58.3	58.1	58.0	58.0
85°	34.7	34.2	33.6	33.3	33.3	33.3	33.3	33.3
87.5°	16.0	15.8	15.7	15.6	15.4	15.2	15.1	14.8
90°	15.5	16.0	16.6	17.0	17.2	17.4	17.7	18.0
92.5°	17.0	17.9	18.8	19.2	19.4	19.6	19.7	19.9
95°	20.5	21.4	22.3	22.8	22.8	22.8	22.8	22.8
97.5°	21.4	22.5	23.6	24.2	24.3	24.5	24.6	24.7
100°	21.9	23.0	24.1	24.7	24.8	24.9	25.0	25.2
102.5°	32.9	29.6	26.3	24.7	24.9	25.2	25.4	25.7
105°	84.2	60.6	37.0	25.4	25.6	25.8	26.2	26.4
107.5°	206.2	188.9	171.6	154.1	136.2	118.5	100.7	82.9
110°	261.8	257.4	253.0	241.2	222.2	203.1	184.0	165.0



TEST NUMBER: P332476-930

CATALOG NUMBER: S123RDIW-S1165D755U930-4F0-1E-UDD-F

CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
112.5°	301.0	301.1	301.2	299.1	295.1	291.1	287.1	283.1
115°	347.1	348.4	349.7	350.7	351.1	351.7	352.2	352.8
117.5°	388.7	389.8	390.9	391.4	391.6	391.7	391.8	391.9
120°	416.1	417.2	418.2	418.7	418.7	418.7	418.7	418.7
122.5°	442.8	443.5	444.3	444.7	444.8	444.9	445.1	445.2
125°	480.5	480.8	481.0	481.3	481.6	481.8	482.1	482.3
127.5°	518.3	518.7	519.1	519.2	518.9	518.6	518.4	518.1
130°	541.0	541.5	542.1	542.3	541.9	541.7	541.4	541.1
132.5°	562.6	563.1	563.7	563.8	563.4	563.0	562.6	562.2
135°	595.3	595.7	596.1	596.1	595.7	595.3	594.9	594.5
137.5°	624.5	625.2	625.8	626.0	625.7	625.4	625.2	624.9
140°	643.0	643.5	644.1	644.2	643.9	643.7	643.4	643.1
142.5°	660.6	661.0	661.4	661.5	661.0	660.7	660.3	659.9
145°	685.1	685.3	685.6	685.7	685.7	685.7	685.7	685.7
147.5°	707.0	707.3	707.6	707.4	706.8	706.1	705.6	704.9
150°	720.5	720.7	721.0	721.0	720.6	720.2	719.7	719.3
152.5°	732.4	732.9	733.4	733.3	732.7	732.1	731.5	730.8
155°	748.9	749.5	750.2	750.2	749.3	748.5	747.7	746.9
157.5°	763.2	763.9	764.8	764.7	763.6	762.5	761.6	760.5
160°	771.4	772.2	772.9	772.9	771.9	771.0	770.1	769.2
162.5°	778.8	779.7	780.6	780.6	779.8	778.9	778.1	777.3
165°	788.6	789.7	790.8	790.8	789.9	789.0	788.1	787.1
167.5°	796.3	797.4	798.5	798.5	797.4	796.3	795.2	794.2
170°	800.6	801.8	802.8	802.8	801.8	800.6	799.6	798.5
172.5°	803.6	804.6	805.7	805.6	804.5	803.3	802.1	801.0
175°	807.0	808.0	808.9	808.8	807.7	806.7	805.6	804.5
177.5°	808.3	809.1	810.0	809.8	808.8	807.7	806.7	805.6
180°	807.6	807.6	807.6	807.6	807.6	807.6	807.6	807.6

(END OF REPORT)