

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: P332176-930

Luminaire Tested: **S123DIW-S775D1535U930-4F0-1E-UDD-D**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P332176-930
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: S123DIW-S775D1535U930-4F0-1E-UDD-D
Description: DEFINE 3 DIRECT-INDIRECT WALL MOUNT LED LUMINAIRE
DOWNLIGHT 775 LUMENS PER FOOT, DROP SATIN WHITE DIFFUSER
UPLIGHT 1535 LUMENS PER FOOT, NO LENS
Light Source: -
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 7641.1 lumens
Efficiency: N/A
Efficacy: 112.2 lumens/watt
Spacing Criteria (0/90/45): 1.2 / 1.26 / 1.37
Luminous Opening: Rectangular w/ Sides (W: 0.25' x L: 4' x H: 0.08')
CIE Type: Semi-Indirect

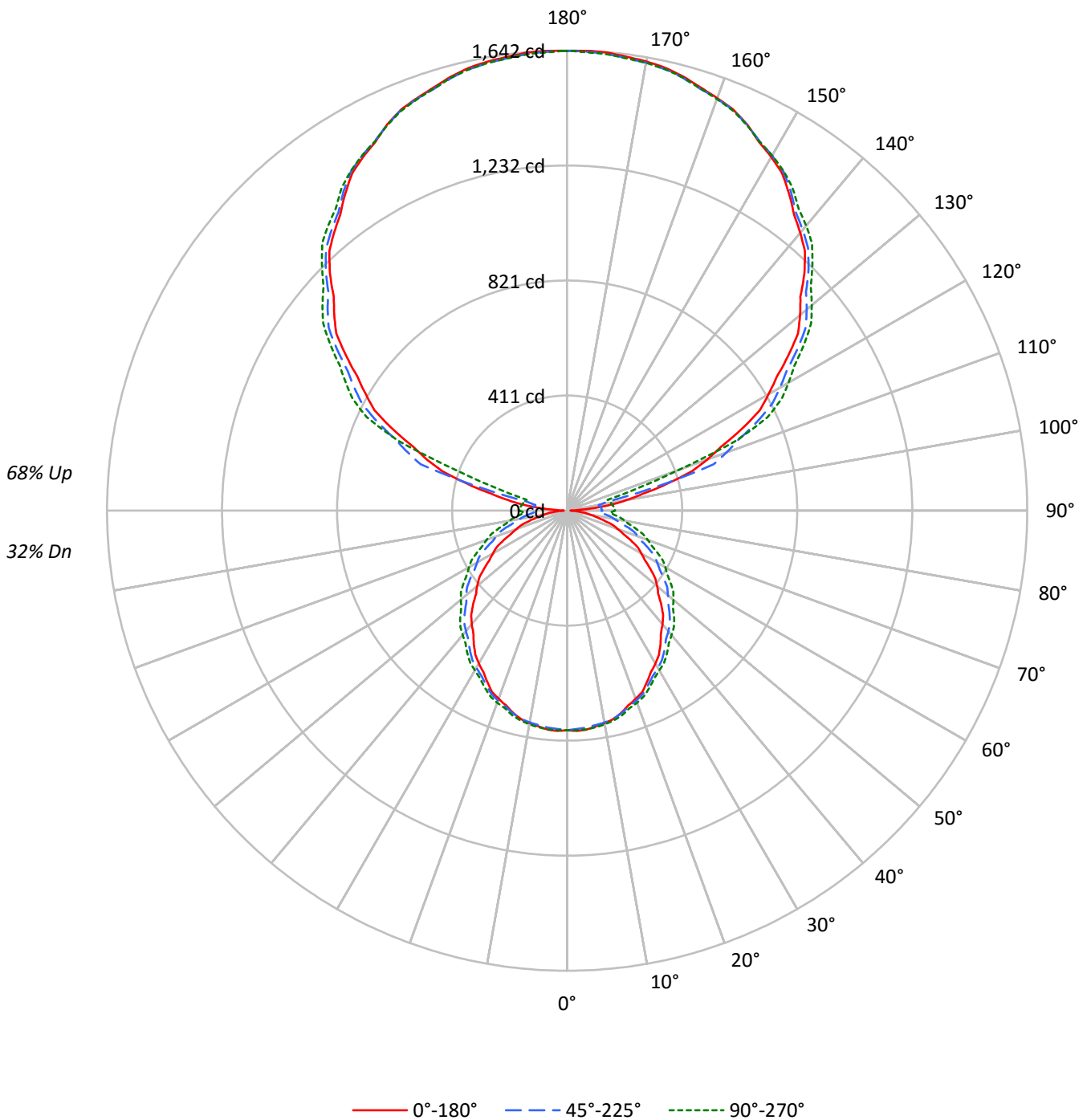
Input Watts (W): 68.1
Input Voltage (V): 120
Input Current (A_{in}): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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Luminous Intensity Polar Plot





TEST NUMBER: P332176-930

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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	103	103	103	103	92	92	92	92	73	73	73	55	55	55	39	39	39	32
1	93	88	84	81	83	80	76	73	63	61	58	48	46	45	34	33	32	25
2	84	77	71	65	75	69	64	59	55	51	48	41	39	37	29	28	26	21
3	77	67	60	54	69	61	54	49	48	44	40	36	33	31	26	24	22	17
4	70	59	51	45	63	53	47	41	42	38	34	32	29	26	23	21	19	15
5	64	53	45	39	57	48	41	35	38	33	29	29	25	22	20	18	16	13
6	59	47	39	33	53	42	36	30	34	29	25	26	22	19	18	16	14	11
7	54	42	34	29	49	38	31	27	31	26	22	23	20	17	17	14	13	10
8	50	38	31	25	45	35	28	23	28	23	19	21	18	15	15	13	11	9
9	47	35	27	22	42	32	25	21	25	20	17	20	16	13	14	12	10	8
10	44	32	25	20	39	29	23	18	23	19	15	18	15	12	13	11	9	7

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	8436	8436	8436
5°	8462	8223	8228
10°	8386	8033	7993
15°	8278	7819	7738
20°	8123	7573	7456
25°	7933	7290	7160
30°	7737	7036	6861
35°	7518	6767	6621
40°	7310	6522	6365
45°	7079	6288	6161
50°	6848	6055	5934
55°	6597	5818	5731
60°	6352	5577	5522
65°	6098	5319	5274
70°	5718	5030	5022
75°	5236	4699	4763
80°	4684	4372	4467
85°	4170	4150	4296



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	74.3	1.0
10°-20°	211.8	2.8
20°-30°	316.7	4.1
30°-40°	378.3	5.0
40°-50°	395.8	5.2
50°-60°	371.4	4.9
60°-70°	310.2	4.1
70°-80°	221.9	2.9
80°-90°	136.9	1.8
90°-100°	142.7	1.9
100°-110°	345.3	4.5
110°-120°	723.6	9.5
120°-130°	892.8	11.7
130°-140°	939.5	12.3
140°-150°	871.0	11.4
150°-160°	700.8	9.2
160°-170°	452.3	5.9
170°-180°	155.9	2.0
0°-30°	602.8	7.9
0°-40°	981.1	12.8
0°-60°	1748.2	22.9
0°-90°	2417.3	31.6
90°-120°	1211.6	15.9
90°-150°	3914.9	51.2
90°-180°	5224.0	68.4
0°-180°	7641.1	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	784	784	784	784	784	
5°	785	783	778	784	784	74
15°	747	749	749	757	756	210
25°	674	683	686	696	697	311
35°	580	594	605	618	622	363
45°	475	495	516	532	540	366
55°	362	390	421	443	451	324
65°	250	284	321	346	355	247
75°	136	176	219	246	257	145
85°	42	85	130	158	167	44
90°	12	67	126	158	171	11
95°	84	71	122	156	166	99
105°	370	398	331	150	149	392
115°	686	704	745	776	789	677
125°	963	974	1002	1022	1031	860
135°	1197	1204	1218	1236	1238	921
145°	1381	1388	1391	1400	1403	864
155°	1520	1518	1519	1524	1518	700
165°	1603	1599	1598	1607	1599	453
175°	1640	1635	1636	1643	1634	156
180°	1640	1640	1640	1640	1640	



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CANDELA DISTRIBUTION (FULL):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
0°	783.7	783.7	783.7	783.7	783.7	783.7	783.7	783.7	783.7	783.7	783.7
2.5°	787.1	786.6	786.2	785.7	785.3	784.4	783.3	782.0	780.8	779.6	780.8
5°	784.6	784.2	783.7	783.4	783.0	782.3	781.1	780.0	778.9	777.7	779.3
7.5°	776.8	776.9	777.0	777.1	777.1	776.7	775.5	774.5	773.3	772.3	774.1
10°	770.1	770.4	770.8	771.2	771.5	771.3	770.3	769.4	768.4	767.4	769.4
12.5°	761.8	762.4	762.9	763.4	763.9	763.9	763.3	762.6	762.0	761.3	763.0
15°	747.0	747.5	748.1	748.7	749.3	749.4	749.3	749.1	748.9	748.7	750.6
17.5°	728.2	729.4	730.5	731.6	732.7	733.3	733.2	733.1	733.0	733.0	734.7
20°	714.5	715.7	716.8	718.0	719.1	719.8	720.2	720.6	721.0	721.4	723.1
22.5°	700.2	701.3	702.5	703.6	704.7	705.6	706.1	706.6	707.2	707.7	709.9
25°	674.4	676.3	678.2	680.1	682.0	683.2	683.8	684.4	684.9	685.5	687.9
27.5°	648.5	650.6	652.8	654.9	657.1	658.8	660.0	661.2	662.4	663.7	665.8
30°	630.0	632.5	635.0	637.4	639.8	641.9	643.4	644.9	646.5	647.9	650.2
32.5°	609.5	612.3	615.1	617.8	620.6	623.0	624.9	627.0	628.9	630.9	633.3
35°	580.5	583.5	586.6	589.6	592.6	595.4	597.9	600.3	602.8	605.3	608.1
37.5°	549.8	553.2	556.6	560.0	563.5	566.6	569.7	572.7	575.8	578.8	582.0
40°	529.3	532.7	536.1	539.6	542.9	546.6	550.3	554.2	557.9	561.7	564.9
42.5°	506.7	510.9	515.1	519.3	523.4	527.5	531.4	535.4	539.3	543.3	546.8
45°	474.7	479.2	483.7	488.3	492.8	497.5	502.2	507.0	511.8	516.5	520.1
47.5°	441.0	446.2	451.3	456.5	461.6	466.9	472.4	477.8	483.2	488.6	492.7
50°	419.1	424.4	429.7	435.1	440.4	446.0	451.9	457.8	463.7	469.5	473.9
52.5°	395.9	401.5	407.2	412.8	418.4	424.4	431.0	437.4	443.9	450.4	454.9
55°	362.0	368.2	374.5	380.7	387.0	393.5	400.4	407.2	414.0	420.9	426.0
57.5°	328.8	335.3	341.9	348.4	355.0	361.9	369.4	376.9	384.3	391.8	397.0
60°	305.7	312.4	319.3	326.1	333.0	340.2	348.1	355.8	363.5	371.4	376.7
62.5°	283.7	290.7	297.7	304.7	311.7	319.3	327.5	335.7	344.0	352.2	357.5
65°	250.1	257.6	264.9	272.3	279.7	287.6	296.0	304.3	312.7	321.0	326.7
67.5°	216.0	223.8	231.7	239.5	247.4	255.6	264.1	272.6	281.0	289.6	295.8
70°	192.1	200.2	208.4	216.5	224.7	233.3	242.5	251.5	260.7	269.8	275.8
72.5°	170.2	178.4	186.5	194.7	202.8	211.7	221.0	230.5	239.9	249.2	255.5
75°	135.7	144.6	153.6	162.5	171.4	180.6	190.0	199.6	209.0	218.6	224.8
77.5°	105.7	114.7	123.7	132.6	141.6	150.9	160.5	170.1	179.6	189.1	195.8
80°	84.5	93.8	103.1	112.4	121.7	131.3	141.1	151.0	160.9	170.7	177.2
82.5°	66.0	75.5	85.0	94.4	103.9	113.6	123.6	133.6	143.7	153.7	160.1
85°	41.8	51.3	60.8	70.3	79.7	89.5	99.6	109.7	119.7	129.8	136.2
87.5°	23.0	32.9	43.0	52.9	62.9	73.1	83.5	93.8	104.2	114.6	121.3
90°	12.3	24.3	36.4	48.3	60.3	73.0	86.1	99.3	112.5	125.7	133.2
92.5°	33.1	40.7	48.3	55.9	63.6	73.5	85.7	97.8	110.1	122.2	130.2
95°	83.7	80.1	76.3	72.6	68.9	73.2	85.4	97.8	110.0	122.3	130.0
97.5°	157.8	159.5	161.2	162.9	164.6	160.1	149.5	138.8	128.2	117.6	125.5
100°	213.7	225.2	236.7	248.1	259.6	248.6	215.1	181.6	148.1	114.5	122.1
102.5°	277.4	286.7	296.0	305.4	314.8	300.7	263.1	225.5	187.9	150.3	149.0
105°	370.1	377.6	385.1	392.6	400.1	395.8	379.6	363.4	347.2	330.9	288.3
107.5°	467.0	473.3	479.6	485.8	492.0	500.9	512.6	524.2	535.7	547.3	517.2
110°	531.7	537.3	542.8	548.5	554.0	562.1	572.7	583.2	593.8	604.4	600.3



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CANDELA DISTRIBUTION (continued):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
112.5°	594.1	598.8	603.6	608.4	613.1	620.6	630.9	641.2	651.4	661.7	666.6
115°	685.6	689.5	693.4	697.3	701.2	707.8	717.1	726.4	735.6	744.9	752.1
117.5°	774.9	778.3	781.7	785.1	788.6	794.1	801.8	809.3	817.0	824.7	831.4
120°	829.8	833.2	836.6	839.9	843.3	848.6	855.7	862.7	869.8	876.9	883.4
122.5°	886.4	888.8	891.4	893.8	896.3	901.1	908.1	915.1	922.0	929.0	934.7
125°	963.0	965.2	967.4	969.6	971.7	976.1	982.7	989.2	995.8	1002.4	1006.9
127.5°	1038.1	1040.1	1042.0	1044.1	1046.0	1049.9	1055.8	1061.6	1067.5	1073.3	1078.0
130°	1084.9	1086.9	1088.8	1090.9	1092.8	1096.3	1101.1	1106.0	1110.8	1115.7	1120.5
132.5°	1129.1	1131.2	1133.3	1135.5	1137.6	1140.6	1144.5	1148.4	1152.3	1156.3	1160.7
135°	1197.4	1198.8	1200.3	1201.8	1203.1	1205.4	1208.6	1211.8	1215.0	1218.1	1222.4
137.5°	1255.7	1257.7	1259.6	1261.4	1263.4	1265.2	1267.0	1268.8	1270.6	1272.3	1276.6
140°	1294.0	1295.7	1297.3	1298.9	1300.6	1302.0	1303.4	1304.8	1306.2	1307.6	1311.5
142.5°	1330.2	1331.6	1333.1	1334.6	1336.0	1337.3	1338.2	1339.0	1340.0	1340.9	1344.3
145°	1380.6	1382.3	1384.1	1385.7	1387.4	1388.5	1389.1	1389.6	1390.2	1390.7	1392.8
147.5°	1427.3	1428.6	1429.8	1431.0	1432.2	1433.1	1433.7	1434.3	1434.8	1435.3	1436.3
150°	1456.5	1457.3	1458.2	1459.0	1459.8	1460.4	1461.0	1461.6	1462.1	1462.6	1463.1
152.5°	1482.9	1483.3	1483.6	1484.0	1484.4	1484.7	1485.1	1485.4	1485.7	1486.0	1487.0
155°	1519.9	1519.4	1518.8	1518.3	1517.8	1517.6	1517.9	1518.2	1518.4	1518.7	1520.0
157.5°	1548.7	1548.7	1548.6	1548.5	1548.5	1548.3	1548.0	1547.8	1547.5	1547.2	1548.8
160°	1566.3	1565.9	1565.7	1565.5	1565.1	1564.9	1564.6	1564.3	1564.1	1563.8	1565.5
162.5°	1582.8	1582.1	1581.4	1580.7	1580.0	1579.5	1579.2	1579.0	1578.7	1578.4	1580.3
165°	1602.8	1602.0	1601.2	1600.4	1599.5	1599.0	1598.7	1598.5	1598.2	1597.9	1600.1
167.5°	1618.4	1617.3	1616.2	1615.2	1614.0	1613.6	1613.6	1613.6	1613.6	1613.6	1615.7
170°	1627.2	1626.1	1625.0	1623.9	1622.9	1622.3	1622.3	1622.3	1622.3	1622.3	1624.5
172.5°	1633.0	1631.7	1630.4	1629.1	1627.8	1627.3	1627.5	1627.7	1627.9	1628.2	1630.4
175°	1640.5	1639.2	1637.9	1636.6	1635.2	1634.6	1634.9	1635.2	1635.4	1635.7	1637.6
177.5°	1642.5	1641.4	1640.4	1639.3	1638.2	1637.8	1638.0	1638.2	1638.4	1638.7	1640.4
180°	1640.5	1640.5	1640.5	1640.5	1640.5	1640.5	1640.5	1640.5	1640.5	1640.5	1640.5



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CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
0°	783.7	783.7	783.7	783.7	783.7	783.7	783.7	783.7
2.5°	782.0	783.3	784.4	785.0	784.8	784.6	784.5	784.4
5°	780.7	782.3	783.7	784.4	784.2	784.1	783.9	783.7
7.5°	776.0	778.0	779.8	780.6	780.4	780.2	780.0	779.8
10°	771.3	773.1	775.0	775.8	775.4	775.0	774.7	774.3
12.5°	764.8	766.5	768.3	769.0	768.6	768.3	767.8	767.4
15°	752.4	754.4	756.3	757.1	756.9	756.8	756.5	756.4
17.5°	736.4	738.1	739.8	740.5	740.3	740.0	739.7	739.5
20°	724.8	726.5	728.2	729.1	729.4	729.5	729.7	729.9
22.5°	712.0	714.2	716.3	717.4	717.3	717.1	717.1	716.9
25°	690.5	692.9	695.4	696.6	696.6	696.6	696.6	696.6
27.5°	667.9	670.0	672.1	673.3	673.4	673.6	673.8	673.9
30°	652.5	654.8	657.0	658.2	658.2	658.2	658.2	658.2
32.5°	635.7	638.1	640.6	642.0	642.5	642.9	643.4	643.8
35°	611.0	613.8	616.6	618.5	619.2	620.0	620.7	621.5
37.5°	585.2	588.5	591.7	593.6	594.2	594.8	595.4	596.1
40°	568.2	571.4	574.6	576.6	577.4	578.1	578.9	579.7
42.5°	550.3	553.8	557.4	559.7	560.8	561.8	562.9	563.9
45°	523.7	527.3	530.9	533.5	535.0	536.5	538.0	539.6
47.5°	496.8	500.8	504.9	507.5	508.7	509.9	511.0	512.2
50°	478.3	482.6	487.0	489.8	491.1	492.4	493.8	495.1
52.5°	459.4	464.0	468.5	471.6	473.2	474.8	476.5	478.1
55°	431.1	436.3	441.3	444.7	446.2	447.7	449.2	450.8
57.5°	402.2	407.3	412.5	416.0	417.8	419.6	421.3	423.1
60°	382.0	387.3	392.6	396.3	398.4	400.5	402.6	404.6
62.5°	362.9	368.2	373.5	377.1	379.0	381.0	382.9	384.8
65°	332.4	338.0	343.7	347.6	349.4	351.3	353.3	355.1
67.5°	302.0	308.3	314.5	318.4	319.9	321.6	323.2	324.7
70°	281.9	288.0	294.1	298.0	299.9	301.8	303.7	305.7
72.5°	261.7	267.9	274.2	278.3	280.1	282.0	283.9	285.8
75°	231.1	237.3	243.6	247.9	250.1	252.4	254.7	257.0
77.5°	202.4	209.0	215.6	219.7	221.5	223.2	225.0	226.7
80°	183.6	190.0	196.6	200.7	202.6	204.5	206.4	208.3
82.5°	166.6	173.0	179.4	183.6	185.6	187.4	189.3	191.2
85°	142.7	149.1	155.6	159.7	161.6	163.5	165.4	167.3
87.5°	127.9	134.6	141.3	145.6	147.7	149.6	151.6	153.6
90°	140.8	148.3	155.9	160.9	163.3	165.8	168.1	170.6
92.5°	138.3	146.3	154.3	159.4	161.4	163.5	165.6	167.6
95°	137.9	145.6	153.4	158.2	160.1	162.0	164.0	165.8
97.5°	133.2	141.0	148.9	153.9	156.0	158.2	160.4	162.6
100°	129.8	137.5	145.2	150.1	152.2	154.4	156.6	158.7
102.5°	147.7	146.3	144.9	145.4	147.8	150.2	152.5	155.0
105°	245.7	203.1	160.5	140.2	142.5	144.7	147.0	149.3
107.5°	487.1	457.1	427.0	394.8	360.3	325.8	291.4	256.9
110°	596.3	592.3	588.3	567.7	530.5	493.3	456.1	418.8



TEST NUMBER: P332176-930

CATALOG NUMBER: S123DIW-S775D1535U930-4F0-1E-UDD-D

CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
112.5°	671.6	676.5	681.4	680.7	674.2	667.6	661.1	654.6
115°	759.4	766.6	773.9	778.9	781.5	784.1	786.7	789.3
117.5°	838.0	844.7	851.4	855.7	857.3	859.0	860.7	862.4
120°	889.9	896.4	903.0	906.9	908.2	909.5	910.9	912.2
122.5°	940.5	946.2	951.9	955.6	957.2	958.7	960.2	961.7
125°	1011.5	1015.9	1020.5	1023.7	1025.6	1027.4	1029.3	1031.2
127.5°	1082.6	1087.2	1091.8	1094.5	1095.3	1096.0	1096.7	1097.5
130°	1125.1	1129.8	1134.5	1137.2	1137.8	1138.3	1139.0	1139.5
132.5°	1165.3	1169.8	1174.4	1176.9	1177.5	1177.9	1178.5	1179.0
135°	1226.6	1230.8	1235.0	1237.2	1237.4	1237.5	1237.6	1237.8
137.5°	1280.9	1285.2	1289.5	1291.8	1292.2	1292.7	1293.1	1293.5
140°	1315.5	1319.4	1323.3	1325.5	1325.9	1326.3	1326.7	1327.1
142.5°	1347.8	1351.2	1354.5	1356.4	1356.6	1356.7	1357.0	1357.1
145°	1394.8	1396.9	1399.0	1400.4	1401.1	1401.9	1402.6	1403.4
147.5°	1437.3	1438.4	1439.3	1439.6	1439.0	1438.4	1437.9	1437.3
150°	1463.7	1464.3	1464.8	1464.8	1464.4	1464.0	1463.5	1463.1
152.5°	1488.0	1489.0	1490.0	1489.8	1488.7	1487.5	1486.3	1485.1
155°	1521.4	1522.7	1524.1	1524.0	1522.3	1520.7	1519.1	1517.5
157.5°	1550.5	1552.1	1553.7	1553.5	1551.4	1549.2	1547.1	1545.0
160°	1567.1	1568.6	1570.3	1570.2	1568.2	1566.4	1564.5	1562.6
162.5°	1582.1	1584.0	1585.8	1585.8	1584.2	1582.5	1580.9	1579.2
165°	1602.2	1604.4	1606.6	1606.7	1604.8	1603.0	1601.0	1599.1
167.5°	1617.9	1620.0	1622.2	1622.2	1620.0	1617.9	1615.7	1613.6
170°	1626.6	1628.8	1631.0	1631.0	1628.8	1626.6	1624.5	1622.3
172.5°	1632.5	1634.7	1636.8	1636.7	1634.3	1632.0	1629.5	1627.2
175°	1639.5	1641.4	1643.3	1643.2	1641.0	1638.8	1636.6	1634.5
177.5°	1642.1	1643.8	1645.6	1645.4	1643.2	1641.0	1638.8	1636.7
180°	1640.5	1640.5	1640.5	1640.5	1640.5	1640.5	1640.5	1640.5

(END OF REPORT)