

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: P332176-927

Luminaire Tested: **S123DIW-S775D1535U927-4F0-1E-UDD-D**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P332176-927
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-S775D1535U927-4F0-1E-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: 7424.4 lumens
Efficiency: N/A
Efficacy: 109.0 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

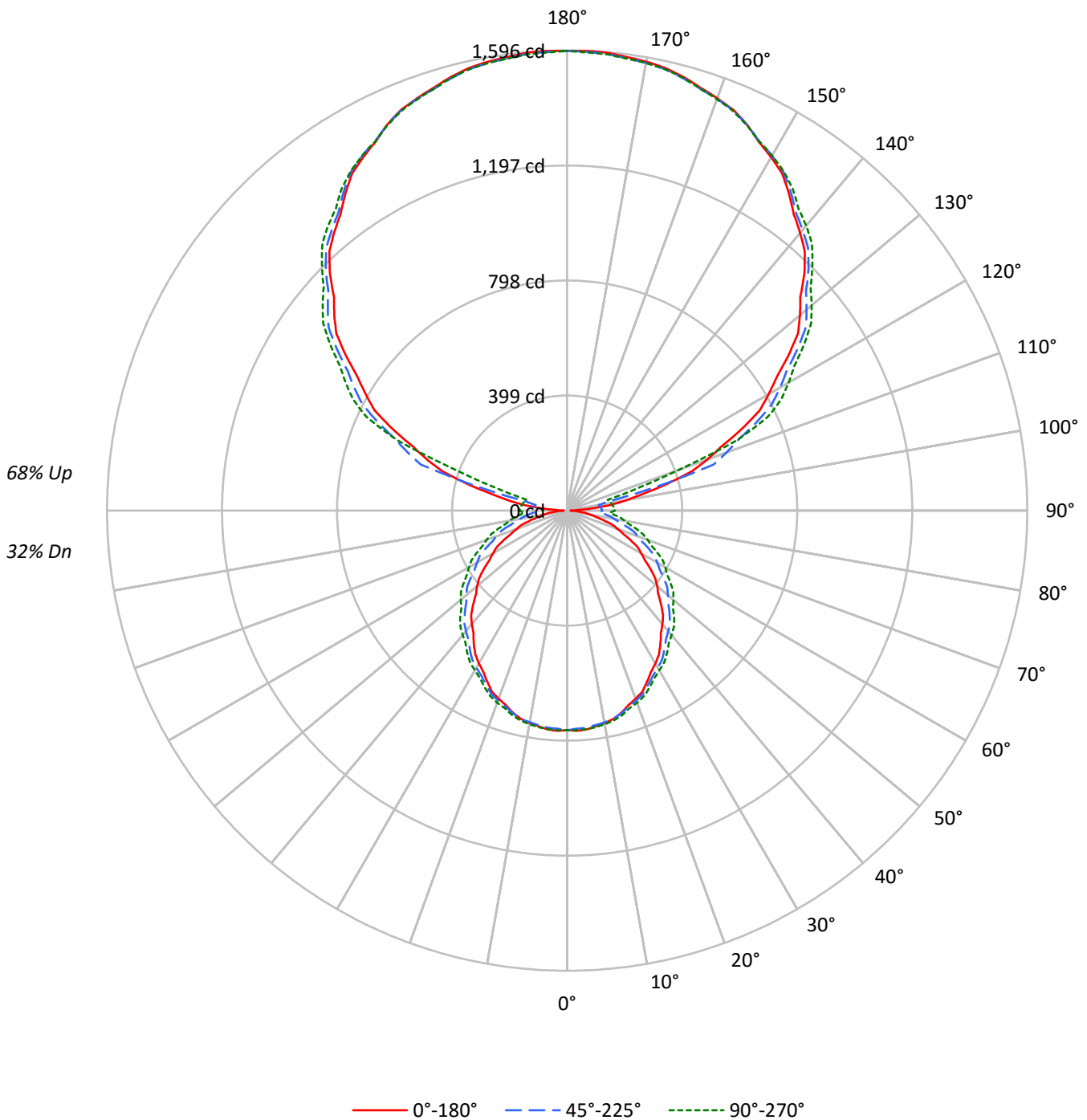
Input Watts (W): 68.1
Input Voltage (V): 120
Input Current (A_{in}): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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Luminous Intensity Polar Plot





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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°	8196	8196	8196
5°	8222	7990	7994
10°	8148	7806	7766
15°	8043	7597	7518
20°	7893	7358	7245
25°	7708	7084	6957
30°	7517	6836	6666
35°	7305	6575	6434
40°	7102	6337	6184
45°	6877	6109	5986
50°	6655	5883	5766
55°	6409	5652	5569
60°	6171	5417	5366
65°	5924	5168	5126
70°	5555	4887	4879
75°	5090	4566	4628
80°	4551	4249	4341
85°	4050	4032	4175



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	72.2	1.0
10°-20°	205.8	2.8
20°-30°	307.8	4.1
30°-40°	367.5	5.0
40°-50°	384.5	5.2
50°-60°	360.9	4.9
60°-70°	301.4	4.1
70°-80°	215.6	2.9
80°-90°	133.1	1.8
90°-100°	138.6	1.9
100°-110°	335.5	4.5
110°-120°	703.1	9.5
120°-130°	867.5	11.7
130°-140°	912.9	12.3
140°-150°	846.3	11.4
150°-160°	680.9	9.2
160°-170°	439.5	5.9
170°-180°	151.5	2.0
0°-30°	585.7	7.9
0°-40°	953.3	12.8
0°-60°	1698.6	22.9
0°-90°	2348.7	31.6
90°-120°	1177.2	15.9
90°-150°	3803.9	51.2
90°-180°	5076.0	68.4
0°-180°	7424.4	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	761	761	761	761	761	
5°	762	760	756	762	761	72
15°	726	728	728	735	735	204
25°	655	663	666	676	677	302
35°	564	577	588	600	604	353
45°	461	481	502	517	524	356
55°	352	379	409	430	438	315
65°	243	276	312	336	345	240
75°	132	171	212	239	250	141
85°	41	82	126	153	163	43
90°	12	65	122	154	166	11
95°	81	69	119	151	161	96
105°	360	387	322	146	145	381
115°	666	685	724	754	767	658
125°	936	946	974	993	1002	836
135°	1164	1170	1184	1201	1203	895
145°	1342	1349	1351	1360	1364	839
155°	1477	1475	1476	1481	1474	680
165°	1557	1554	1553	1561	1554	440
175°	1594	1588	1589	1597	1588	152
180°	1594	1594	1594	1594	1594	



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CATALOG NUMBER: S123DIW-S775D1535U927-4F0-1E-UDD-D

CANDELA DISTRIBUTION (FULL):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
0°	761.4	761.4	761.4	761.4	761.4	761.4	761.4	761.4	761.4	761.4	761.4
2.5°	764.8	764.3	763.9	763.4	763.0	762.2	761.0	759.9	758.7	757.5	758.7
5°	762.3	761.9	761.5	761.2	760.8	760.1	759.0	757.9	756.8	755.7	757.2
7.5°	754.8	754.9	754.9	755.0	755.1	754.6	753.5	752.5	751.4	750.4	752.2
10°	748.2	748.5	748.9	749.3	749.6	749.4	748.5	747.6	746.6	745.7	747.6
12.5°	740.2	740.8	741.2	741.8	742.3	742.3	741.6	741.0	740.4	739.7	741.4
15°	725.8	726.4	726.9	727.5	728.0	728.2	728.0	727.9	727.6	727.5	729.3
17.5°	707.6	708.7	709.8	710.8	711.9	712.5	712.4	712.3	712.3	712.2	713.8
20°	694.3	695.4	696.5	697.6	698.7	699.4	699.8	700.2	700.5	700.9	702.6
22.5°	680.3	681.4	682.5	683.7	684.8	685.6	686.1	686.6	687.1	687.6	689.8
25°	655.3	657.1	658.9	660.8	662.7	663.8	664.4	665.0	665.5	666.1	668.4
27.5°	630.1	632.2	634.3	636.4	638.5	640.1	641.3	642.5	643.6	644.8	646.9
30°	612.1	614.6	617.0	619.3	621.7	623.7	625.1	626.6	628.1	629.5	631.8
32.5°	592.2	594.9	597.6	600.3	603.0	605.3	607.2	609.2	611.1	613.0	615.4
35°	564.0	567.0	570.0	572.9	575.8	578.5	580.9	583.3	585.7	588.1	590.9
37.5°	534.2	537.5	540.8	544.2	547.5	550.6	553.6	556.5	559.4	562.4	565.5
40°	514.3	517.6	520.9	524.3	527.5	531.1	534.7	538.4	542.1	545.8	548.9
42.5°	492.3	496.5	500.5	504.5	508.6	512.5	516.3	520.2	524.0	527.9	531.3
45°	461.2	465.6	470.0	474.4	478.9	483.4	488.0	492.6	497.3	501.8	505.3
47.5°	428.5	433.6	438.6	443.5	448.5	453.7	459.0	464.2	469.5	474.8	478.7
50°	407.3	412.4	417.6	422.8	427.9	433.3	439.1	444.8	450.5	456.2	460.4
52.5°	384.7	390.1	395.6	401.1	406.5	412.4	418.7	425.0	431.3	437.6	442.0
55°	351.7	357.7	363.8	369.9	376.0	382.4	389.0	395.7	402.3	408.9	413.9
57.5°	319.5	325.8	332.2	338.5	344.9	351.6	358.9	366.2	373.4	380.7	385.7
60°	297.0	303.6	310.2	316.9	323.5	330.6	338.2	345.7	353.2	360.8	366.0
62.5°	275.7	282.5	289.3	296.0	302.9	310.2	318.2	326.2	334.2	342.2	347.4
65°	243.0	250.3	257.4	264.6	271.8	279.4	287.6	295.6	303.8	311.9	317.4
67.5°	209.8	217.5	225.1	232.7	240.3	248.3	256.6	264.8	273.1	281.4	287.4
70°	186.6	194.6	202.5	210.4	218.3	226.7	235.6	244.4	253.3	262.1	268.0
72.5°	165.4	173.3	181.3	189.2	197.1	205.7	214.8	223.9	233.1	242.2	248.3
75°	131.9	140.5	149.2	157.9	166.5	175.5	184.7	193.9	203.1	212.4	218.4
77.5°	102.7	111.5	120.2	128.9	137.6	146.6	156.0	165.2	174.5	183.8	190.2
80°	82.1	91.2	100.2	109.2	118.3	127.5	137.1	146.7	156.3	165.9	172.1
82.5°	64.2	73.4	82.5	91.7	100.9	110.4	120.1	129.8	139.6	149.3	155.6
85°	40.6	49.8	59.1	68.3	77.5	87.0	96.8	106.5	116.3	126.1	132.4
87.5°	22.3	32.0	41.7	51.4	61.2	71.1	81.1	91.2	101.2	111.4	117.9
90°	12.0	23.6	35.3	47.0	58.6	70.9	83.7	96.5	109.3	122.2	129.4
92.5°	32.2	39.5	47.0	54.3	61.8	71.4	83.3	95.1	106.9	118.7	126.5
95°	81.4	77.8	74.1	70.6	66.9	71.1	83.0	95.0	106.9	118.8	126.4
97.5°	153.3	155.0	156.6	158.3	159.9	155.6	145.3	134.9	124.6	114.3	121.9
100°	207.6	218.8	230.0	241.1	252.2	241.5	209.0	176.4	143.9	111.2	118.7
102.5°	269.5	278.6	287.6	296.8	305.9	292.2	255.6	219.1	182.6	146.1	144.8
105°	359.6	366.9	374.2	381.5	388.8	384.6	368.8	353.1	337.3	321.5	280.1
107.5°	453.8	459.9	466.0	472.0	478.1	486.7	498.0	509.3	520.5	531.8	502.6
110°	516.6	522.0	527.4	532.9	538.3	546.1	556.4	566.6	576.9	587.2	583.3



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CANDELA DISTRIBUTION (continued):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
112.5°	577.3	581.9	586.5	591.1	595.7	603.0	613.0	623.0	633.0	642.9	647.7
115°	666.1	669.9	673.8	677.6	681.4	687.7	696.7	705.8	714.7	723.7	730.8
117.5°	753.0	756.2	759.5	762.9	766.2	771.6	779.0	786.4	793.8	801.3	807.8
120°	806.3	809.5	812.9	816.1	819.4	824.5	831.4	838.3	845.1	852.0	858.3
122.5°	861.3	863.6	866.1	868.5	870.9	875.5	882.3	889.1	895.9	902.7	908.2
125°	935.7	937.8	939.9	942.1	944.1	948.4	954.8	961.2	967.6	974.0	978.3
127.5°	1008.7	1010.6	1012.5	1014.5	1016.4	1020.2	1025.9	1031.5	1037.2	1042.9	1047.4
130°	1054.2	1056.1	1058.0	1059.9	1061.8	1065.2	1069.9	1074.7	1079.3	1084.1	1088.7
132.5°	1097.1	1099.2	1101.2	1103.3	1105.3	1108.3	1112.1	1115.9	1119.7	1123.5	1127.8
135°	1163.5	1164.8	1166.3	1167.7	1169.0	1171.2	1174.3	1177.4	1180.5	1183.6	1187.7
137.5°	1220.1	1222.0	1223.8	1225.7	1227.6	1229.3	1231.1	1232.8	1234.5	1236.2	1240.4
140°	1257.4	1258.9	1260.5	1262.1	1263.7	1265.1	1266.5	1267.8	1269.2	1270.5	1274.3
142.5°	1292.4	1293.9	1295.3	1296.7	1298.1	1299.3	1300.2	1301.1	1302.0	1302.9	1306.2
145°	1341.5	1343.1	1344.8	1346.4	1348.1	1349.2	1349.7	1350.2	1350.8	1351.3	1353.3
147.5°	1386.8	1388.1	1389.3	1390.4	1391.6	1392.5	1393.1	1393.6	1394.1	1394.6	1395.6
150°	1415.2	1416.0	1416.8	1417.6	1418.4	1419.0	1419.6	1420.1	1420.6	1421.2	1421.7
152.5°	1440.8	1441.2	1441.5	1441.9	1442.3	1442.6	1443.0	1443.3	1443.6	1443.9	1444.9
155°	1476.8	1476.3	1475.8	1475.3	1474.7	1474.6	1474.9	1475.1	1475.4	1475.6	1476.9
157.5°	1504.8	1504.8	1504.7	1504.6	1504.6	1504.4	1504.1	1503.9	1503.6	1503.3	1504.9
160°	1521.9	1521.5	1521.3	1521.1	1520.8	1520.5	1520.3	1520.0	1519.7	1519.5	1521.1
162.5°	1537.9	1537.2	1536.6	1535.9	1535.2	1534.7	1534.5	1534.2	1533.9	1533.7	1535.5
165°	1557.4	1556.6	1555.8	1555.0	1554.2	1553.7	1553.4	1553.2	1552.9	1552.6	1554.7
167.5°	1572.5	1571.5	1570.4	1569.4	1568.3	1567.8	1567.8	1567.8	1567.8	1567.8	1569.9
170°	1581.0	1580.0	1578.9	1577.9	1576.8	1576.3	1576.3	1576.3	1576.3	1576.3	1578.4
172.5°	1586.7	1585.5	1584.2	1582.9	1581.7	1581.1	1581.4	1581.6	1581.8	1582.0	1584.1
175°	1594.0	1592.8	1591.4	1590.1	1588.8	1588.2	1588.6	1588.8	1589.0	1589.4	1591.2
177.5°	1595.9	1594.9	1593.9	1592.8	1591.7	1591.3	1591.6	1591.7	1592.0	1592.2	1593.9
180°	1594.0	1594.0	1594.0	1594.0	1594.0	1594.0	1594.0	1594.0	1594.0	1594.0	1594.0



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CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
0°	761.4	761.4	761.4	761.4	761.4	761.4	761.4	761.4
2.5°	759.9	761.0	762.2	762.7	762.6	762.4	762.2	762.2
5°	758.6	760.1	761.5	762.2	762.0	761.8	761.7	761.4
7.5°	754.0	755.9	757.7	758.5	758.3	758.1	757.9	757.6
10°	749.4	751.2	753.0	753.8	753.4	753.0	752.7	752.3
12.5°	743.1	744.8	746.5	747.2	746.8	746.5	746.1	745.7
15°	731.1	733.0	734.8	735.6	735.5	735.3	735.1	734.9
17.5°	715.5	717.2	718.8	719.5	719.3	719.0	718.7	718.5
20°	704.3	705.9	707.6	708.4	708.7	708.8	709.0	709.2
22.5°	691.8	694.0	696.0	697.0	697.0	696.8	696.7	696.6
25°	670.9	673.3	675.7	676.8	676.8	676.8	676.8	676.8
27.5°	649.0	651.0	653.1	654.2	654.3	654.5	654.7	654.8
30°	634.0	636.2	638.4	639.5	639.5	639.5	639.5	639.5
32.5°	617.7	620.0	622.4	623.8	624.2	624.7	625.1	625.6
35°	593.7	596.4	599.1	600.9	601.7	602.4	603.1	603.9
37.5°	568.6	571.8	574.9	576.8	577.3	578.0	578.5	579.2
40°	552.1	555.2	558.3	560.2	561.0	561.7	562.4	563.2
42.5°	534.7	538.1	541.6	543.8	544.9	545.9	546.9	548.0
45°	508.8	512.3	515.9	518.3	519.8	521.3	522.8	524.3
47.5°	482.7	486.6	490.6	493.1	494.2	495.4	496.5	497.6
50°	464.7	468.9	473.2	475.9	477.2	478.5	479.8	481.1
52.5°	446.4	450.8	455.2	458.2	459.8	461.4	463.0	464.5
55°	418.9	423.9	428.8	432.1	433.6	435.0	436.5	438.0
57.5°	390.8	395.8	400.8	404.2	405.9	407.7	409.3	411.1
60°	371.1	376.3	381.4	385.1	387.1	389.1	391.2	393.2
62.5°	352.6	357.7	362.9	366.4	368.3	370.2	372.1	373.9
65°	323.0	328.4	334.0	337.7	339.5	341.4	343.3	345.1
67.5°	293.4	299.5	305.5	309.3	310.9	312.4	314.0	315.5
70°	273.9	279.8	285.7	289.5	291.4	293.3	295.1	297.0
72.5°	254.3	260.3	266.4	270.4	272.2	274.0	275.8	277.7
75°	224.5	230.6	236.7	240.8	243.0	245.3	247.5	249.7
77.5°	196.6	203.0	209.5	213.5	215.2	216.9	218.6	220.3
80°	178.4	184.7	191.0	195.0	196.9	198.7	200.6	202.4
82.5°	161.8	168.1	174.4	178.4	180.3	182.1	183.9	185.8
85°	138.6	144.9	151.1	155.2	157.0	158.9	160.7	162.6
87.5°	124.3	130.8	137.3	141.5	143.5	145.4	147.3	149.2
90°	136.8	144.1	151.5	156.3	158.7	161.1	163.3	165.7
92.5°	134.4	142.1	150.0	154.9	156.9	158.9	160.9	162.9
95°	134.0	141.5	149.1	153.8	155.6	157.4	159.3	161.1
97.5°	129.4	137.0	144.7	149.6	151.6	153.8	155.8	158.0
100°	126.1	133.6	141.1	145.8	147.9	150.0	152.2	154.2
102.5°	143.5	142.1	140.8	141.3	143.6	145.9	148.2	150.6
105°	238.8	197.3	155.9	136.3	138.5	140.6	142.8	145.0
107.5°	473.3	444.1	414.9	383.6	350.1	316.6	283.1	249.6
110°	579.4	575.5	571.6	551.6	515.5	479.3	443.1	406.9



TEST NUMBER: P332176-927

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CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
112.5°	652.5	657.4	662.1	661.4	655.1	648.7	642.4	636.0
115°	737.8	744.9	751.9	756.8	759.3	761.8	764.4	766.9
117.5°	814.3	820.8	827.3	831.4	833.0	834.6	836.3	838.0
120°	864.7	871.0	877.4	881.2	882.5	883.8	885.1	886.4
122.5°	913.9	919.4	925.0	928.5	930.0	931.5	933.0	934.5
125°	982.8	987.1	991.6	994.7	996.5	998.3	1000.1	1002.0
127.5°	1051.9	1056.4	1060.9	1063.5	1064.2	1064.9	1065.6	1066.4
130°	1093.2	1097.8	1102.3	1104.9	1105.5	1106.0	1106.7	1107.2
132.5°	1132.3	1136.6	1141.1	1143.5	1144.1	1144.5	1145.1	1145.6
135°	1191.8	1195.9	1200.0	1202.1	1202.3	1202.4	1202.5	1202.7
137.5°	1244.6	1248.7	1252.9	1255.2	1255.6	1256.0	1256.4	1256.8
140°	1278.2	1282.0	1285.8	1287.9	1288.3	1288.7	1289.1	1289.5
142.5°	1309.6	1312.9	1316.1	1318.0	1318.1	1318.3	1318.5	1318.7
145°	1355.3	1357.3	1359.3	1360.7	1361.4	1362.2	1362.9	1363.6
147.5°	1396.5	1397.6	1398.5	1398.8	1398.2	1397.6	1397.1	1396.5
150°	1422.2	1422.8	1423.2	1423.3	1422.9	1422.4	1422.0	1421.7
152.5°	1445.8	1446.8	1447.7	1447.6	1446.4	1445.3	1444.1	1443.0
155°	1478.3	1479.6	1480.9	1480.7	1479.2	1477.6	1476.0	1474.5
157.5°	1506.5	1508.1	1509.7	1509.4	1507.4	1505.3	1503.2	1501.2
160°	1522.7	1524.2	1525.7	1525.7	1523.8	1521.9	1520.1	1518.3
162.5°	1537.2	1539.1	1540.8	1540.9	1539.3	1537.6	1536.0	1534.4
165°	1556.8	1558.9	1561.1	1561.2	1559.3	1557.5	1555.6	1553.8
167.5°	1572.0	1574.1	1576.2	1576.2	1574.1	1572.0	1569.9	1567.8
170°	1580.5	1582.6	1584.8	1584.8	1582.6	1580.5	1578.4	1576.3
172.5°	1586.2	1588.3	1590.4	1590.3	1588.0	1585.7	1583.3	1581.0
175°	1593.0	1594.8	1596.7	1596.6	1594.4	1592.4	1590.2	1588.2
177.5°	1595.5	1597.2	1598.9	1598.7	1596.6	1594.5	1592.4	1590.3
180°	1594.0	1594.0	1594.0	1594.0	1594.0	1594.0	1594.0	1594.0

(END OF REPORT)