

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: P332179-927

Luminaire Tested: **S123DIW-S775D1535U927-4F0-1E-UDD-F1**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P332179-927
REPORT IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-1807-864-9,
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-F1
Description: DEFINE 3 DIRECT-INDIRECT WALL MOUNT LED LUMINAIRE
DOWNLIGHT 775 LUMENS PER FOOT, FLUSH SATIN WHITE DIFFUSER
UPLIGHT 1535 LUMENS PER FOOT, FLUSH SATIN WHITE DIFFUSER
Light Source: -
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 6728.0 lumens
Efficiency: N/A
Efficacy: 98.8 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: Semi-Indirect

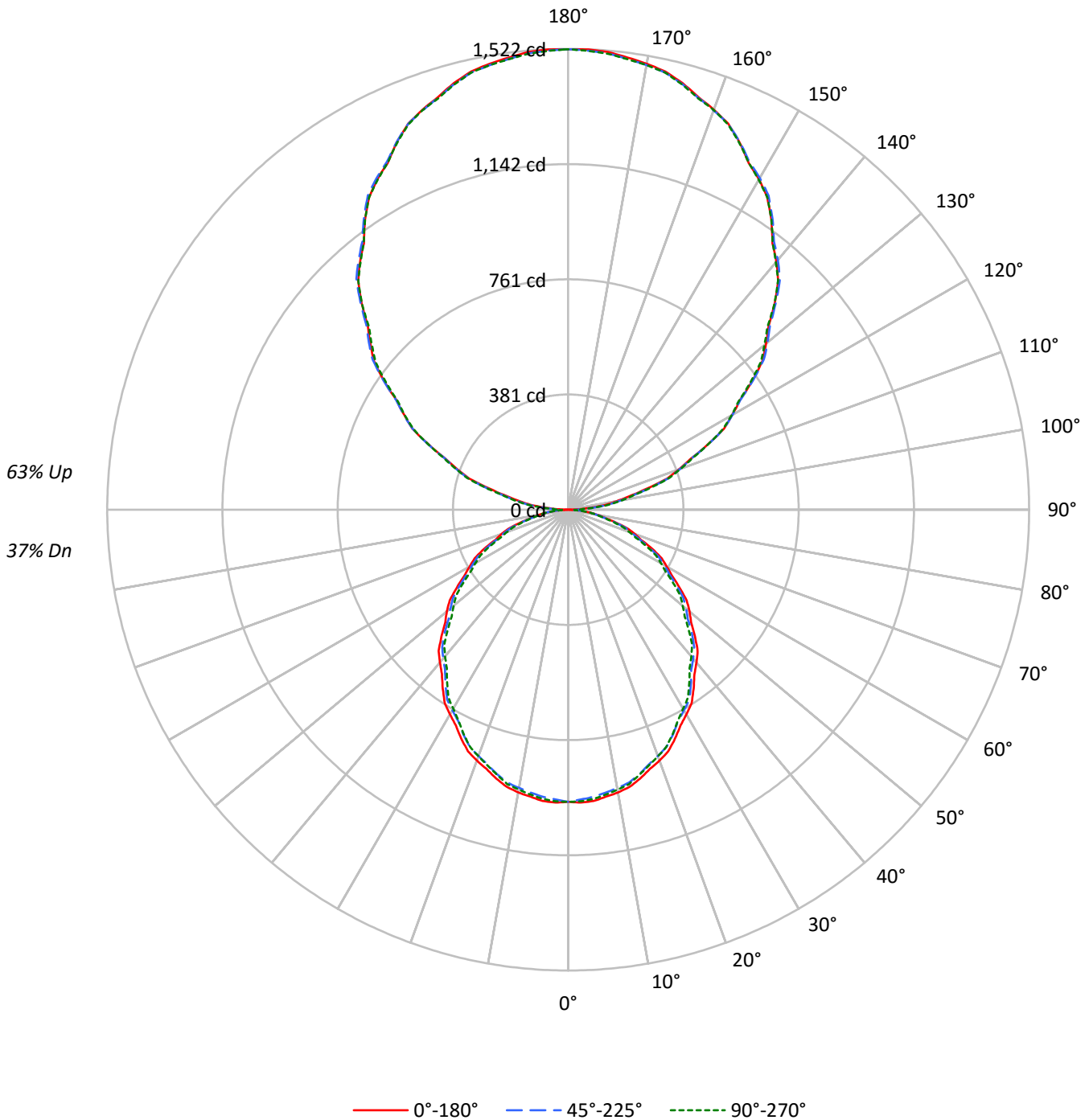
Input Watts (W): 68.1
Input Voltage (V): 120
Input Current (A_{in}): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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	104	104	104	104	94	94	94	94	76	76	76	60	60	60	45	45	45	37
1	95	91	87	83	86	82	79	76	67	64	62	52	51	50	39	38	37	31
2	86	79	73	68	78	72	67	62	58	55	52	46	43	41	34	33	31	26
3	79	69	62	57	71	63	57	52	51	47	43	41	38	35	31	29	27	22
4	72	61	54	48	65	56	49	44	46	41	37	36	33	30	27	25	23	19
5	66	55	47	41	60	50	43	38	41	36	32	32	29	26	25	22	20	17
6	61	49	41	35	55	45	38	33	37	31	28	29	25	23	22	20	18	14
7	56	44	36	31	51	40	33	29	33	28	24	27	23	20	20	18	16	13
8	52	40	32	27	47	37	30	25	30	25	21	24	20	18	19	16	14	11
9	48	36	29	24	44	33	27	22	28	23	19	22	19	16	17	15	13	10
10	45	33	26	21	41	31	24	20	25	20	17	21	17	14	16	13	11	9

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	10384	10384	10384
5°	10432	10289	10361
10°	10363	10200	10263
15°	10242	10085	10104
20°	10100	9919	9929
25°	9911	9723	9704
30°	9701	9506	9434
35°	9483	9276	9155
40°	9254	9021	8882
45°	9003	8788	8573
50°	8751	8500	8264
55°	8422	8203	7955
60°	8088	7858	7608
65°	7796	7480	7246
70°	7361	7046	6735
75°	6729	6488	6209
80°	6069	5808	5759
85°	5323	5125	4915



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	90.9	1.4
10°-20°	256.6	3.8
20°-30°	379.0	5.6
30°-40°	442.7	6.6
40°-50°	445.1	6.6
50°-60°	391.0	5.8
60°-70°	291.3	4.3
70°-80°	166.0	2.5
80°-90°	52.1	0.8
90°-100°	99.1	1.5
100°-110°	296.5	4.4
110°-120°	504.3	7.5
120°-130°	663.4	9.9
130°-140°	745.6	11.1
140°-150°	732.9	10.9
150°-160°	617.0	9.2
160°-170°	410.7	6.1
170°-180°	143.8	2.1
0°-30°	726.5	10.8
0°-40°	1169.2	17.4
0°-60°	2005.3	29.8
0°-90°	2514.7	37.4
90°-120°	899.9	13.4
90°-150°	3041.8	45.2
90°-180°	4213.0	62.6
0°-180°	6728.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	965	965	965	965	965	
5°	966	961	952	960	959	91
15°	919	915	905	911	907	259
25°	834	829	819	819	817	384
35°	722	716	706	701	697	451
45°	591	588	577	568	563	456
55°	449	447	437	428	424	402
65°	306	302	294	287	284	302
75°	162	158	156	152	149	173
85°	43	42	42	40	40	47
90°	1	13	29	33	36	7
95°	70	79	88	93	93	79
105°	269	272	282	282	284	288
115°	508	511	509	510	509	502
125°	743	746	744	739	735	662
135°	964	971	970	965	963	743
145°	1170	1172	1175	1174	1170	730
155°	1339	1339	1340	1344	1337	616
165°	1459	1455	1455	1461	1454	411
175°	1517	1513	1512	1519	1511	144
180°	1521	1521	1521	1521	1521	



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CANDELA DISTRIBUTION (FULL):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
0°	964.7	964.7	964.7	964.7	964.7	964.7	964.7	964.7	964.7	964.7	964.7
2.5°	968.0	967.4	966.9	966.2	965.7	964.6	962.9	961.3	959.6	958.1	959.5
5°	965.5	964.6	963.7	962.7	961.8	960.4	958.3	956.3	954.3	952.2	954.1
7.5°	956.1	955.1	954.2	953.3	952.4	950.9	948.7	946.7	944.5	942.5	944.1
10°	948.1	947.1	946.3	945.3	944.4	942.8	940.3	937.9	935.6	933.2	934.9
12.5°	937.5	936.7	936.0	935.2	934.4	932.9	930.7	928.4	926.1	923.8	925.1
15°	919.1	918.3	917.6	916.9	916.1	914.6	912.1	909.7	907.4	905.0	906.4
17.5°	897.6	896.7	895.7	894.8	893.8	892.2	889.8	887.3	884.9	882.6	883.6
20°	881.7	880.6	879.6	878.5	877.3	875.5	873.1	870.8	868.4	865.9	866.7
22.5°	863.8	862.7	861.6	860.5	859.4	857.6	855.2	852.9	850.5	848.0	848.7
25°	834.5	833.4	832.3	831.2	830.0	828.3	825.9	823.5	821.1	818.7	818.9
27.5°	803.1	802.0	801.0	799.9	798.8	797.0	794.4	791.9	789.3	786.6	786.8
30°	780.5	779.6	778.7	777.8	776.8	775.1	772.5	769.9	767.4	764.8	764.8
32.5°	758.0	756.8	755.5	754.3	753.1	751.5	749.5	747.5	745.5	743.5	742.5
35°	721.7	720.6	719.5	718.4	717.2	715.5	713.0	710.7	708.3	705.9	704.8
37.5°	684.4	683.1	681.7	680.2	678.9	677.0	674.5	672.1	669.6	667.3	665.9
40°	658.6	657.5	656.4	655.3	654.2	652.4	649.7	647.2	644.6	642.0	640.6
42.5°	632.7	631.4	630.2	629.0	627.7	625.8	623.2	620.6	618.1	615.4	614.0
45°	591.4	590.7	589.9	589.2	588.4	586.9	584.5	582.1	579.7	577.3	575.1
47.5°	550.4	549.4	548.3	547.2	546.1	544.5	542.2	540.0	537.7	535.5	533.3
50°	522.6	521.7	520.7	519.8	518.9	517.2	514.8	512.5	510.0	507.6	505.6
52.5°	493.4	492.7	492.1	491.5	490.8	489.3	486.7	484.2	481.6	479.1	477.4
55°	448.8	448.5	448.4	448.2	448.0	446.7	444.3	442.0	439.5	437.1	435.1
57.5°	406.3	405.7	405.0	404.4	403.8	402.5	400.6	398.6	396.7	394.8	393.0
60°	375.7	375.6	375.4	375.2	375.0	373.8	371.6	369.4	367.2	365.0	363.3
62.5°	348.6	348.1	347.6	347.1	346.7	345.3	343.1	340.9	338.7	336.4	334.8
65°	306.1	305.1	304.2	303.3	302.4	301.0	299.1	297.3	295.5	293.7	292.2
67.5°	261.1	260.3	259.5	258.6	257.9	256.7	255.4	254.0	252.5	251.2	249.9
70°	233.9	232.8	231.7	230.6	229.5	228.4	227.3	226.2	225.1	223.9	222.7
72.5°	205.4	204.5	203.7	203.0	202.2	201.1	199.9	198.6	197.3	196.1	195.0
75°	161.8	161.0	160.3	159.5	158.8	158.1	157.6	157.0	156.5	156.0	155.0
77.5°	123.1	122.7	122.3	121.9	121.4	121.0	120.3	119.6	119.0	118.3	117.6
80°	97.9	97.4	96.8	96.3	95.7	95.2	94.8	94.5	94.1	93.7	93.6
82.5°	73.4	73.2	73.1	73.0	72.9	72.8	72.7	72.6	72.6	72.5	72.2
85°	43.1	42.8	42.4	42.1	41.7	41.5	41.5	41.5	41.5	41.5	41.1
87.5°	17.5	17.6	17.7	17.7	17.8	18.1	18.7	19.3	19.8	20.4	20.4
90°	1.2	3.9	6.5	9.2	11.8	14.9	18.3	21.8	25.2	28.7	29.7
92.5°	28.9	30.7	32.5	34.3	36.1	38.0	40.0	41.9	43.9	45.9	46.7
95°	70.5	72.3	74.2	76.0	78.0	79.9	82.0	84.1	86.3	88.4	89.4
97.5°	125.2	126.6	127.9	129.4	130.7	132.1	133.7	135.2	136.8	138.3	139.6
100°	162.5	164.1	165.6	167.2	168.8	170.3	171.6	172.9	174.3	175.6	176.4
102.5°	205.5	206.4	207.4	208.3	209.3	210.6	212.4	214.1	215.9	217.6	218.5
105°	268.8	269.3	269.8	270.4	270.9	272.4	274.7	277.1	279.6	281.9	281.9
107.5°	342.4	342.7	343.0	343.3	343.6	344.3	345.2	346.2	347.1	348.1	349.0
110°	388.2	388.8	389.3	389.8	390.4	390.9	391.4	392.0	392.4	393.0	394.1



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CANDELA DISTRIBUTION (continued):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
112.5°	436.0	436.3	436.7	437.0	437.3	437.5	437.6	437.7	437.8	437.9	439.2
115°	507.7	508.5	509.3	510.1	510.9	511.0	510.5	509.9	509.5	508.9	509.1
117.5°	579.9	580.4	580.9	581.5	581.9	581.9	581.2	580.5	579.8	579.2	579.1
120°	624.8	626.4	628.0	629.5	631.1	631.3	629.9	628.6	627.2	626.0	625.7
122.5°	671.6	672.7	673.9	675.1	676.3	676.5	675.8	675.1	674.5	673.8	673.0
125°	743.0	743.8	744.7	745.4	746.2	746.3	745.8	745.3	744.7	744.3	743.1
127.5°	809.0	810.6	812.4	814.0	815.8	816.3	815.7	815.2	814.6	814.0	812.5
130°	852.9	855.1	857.1	859.3	861.4	862.1	861.3	860.5	859.7	858.9	857.9
132.5°	896.9	899.0	901.1	903.2	905.4	906.2	905.5	905.0	904.4	903.8	902.5
135°	964.0	965.6	967.2	968.8	970.4	971.1	970.8	970.5	970.3	970.0	968.9
137.5°	1026.1	1027.5	1028.8	1030.2	1031.4	1032.5	1033.2	1033.8	1034.5	1035.2	1034.1
140°	1069.1	1070.5	1071.8	1073.1	1074.4	1075.2	1075.5	1075.8	1076.0	1076.3	1076.0
142.5°	1108.3	1109.6	1111.0	1112.3	1113.6	1114.5	1115.0	1115.5	1115.9	1116.4	1116.2
145°	1169.5	1170.1	1170.5	1171.1	1171.6	1172.3	1173.1	1173.9	1174.6	1175.4	1175.2
147.5°	1223.0	1223.9	1224.9	1225.9	1226.9	1227.6	1228.4	1229.2	1229.9	1230.7	1230.7
150°	1260.3	1260.8	1261.3	1261.9	1262.4	1262.9	1263.5	1264.0	1264.5	1265.0	1265.0
152.5°	1290.9	1291.6	1292.4	1293.1	1293.8	1294.3	1294.7	1295.0	1295.3	1295.6	1296.1
155°	1339.1	1339.1	1339.1	1339.1	1339.1	1339.3	1339.5	1339.7	1340.1	1340.3	1341.4
157.5°	1380.2	1379.9	1379.6	1379.3	1379.0	1378.9	1379.1	1379.3	1379.5	1379.7	1380.9
160°	1406.0	1405.5	1404.9	1404.4	1403.9	1403.6	1403.6	1403.6	1403.6	1403.6	1404.9
162.5°	1428.9	1428.2	1427.4	1426.7	1426.0	1425.7	1425.9	1426.2	1426.3	1426.6	1427.9
165°	1458.6	1457.8	1457.0	1456.2	1455.4	1455.0	1455.0	1455.0	1455.0	1455.0	1456.6
167.5°	1482.3	1481.1	1480.1	1479.0	1478.0	1477.6	1477.7	1478.0	1478.2	1478.4	1480.0
170°	1495.6	1494.5	1493.5	1492.4	1491.4	1490.8	1490.8	1490.8	1490.8	1490.8	1492.7
172.5°	1506.1	1505.1	1504.0	1502.9	1501.9	1501.3	1501.3	1501.3	1501.3	1501.3	1503.0
175°	1517.1	1516.1	1515.0	1513.9	1512.8	1512.4	1512.4	1512.4	1512.4	1512.4	1513.9
177.5°	1521.6	1520.8	1520.0	1519.1	1518.2	1517.8	1517.8	1517.8	1517.8	1517.8	1519.1
180°	1520.7	1520.7	1520.7	1520.7	1520.7	1520.7	1520.7	1520.7	1520.7	1520.7	1520.7



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CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
0°	964.7	964.7	964.7	964.7	964.7	964.7	964.7	964.7
2.5°	961.0	962.5	963.9	964.6	964.5	964.3	964.2	964.0
5°	955.9	957.7	959.6	960.4	960.0	959.6	959.3	958.9
7.5°	945.8	947.5	949.1	949.8	949.6	949.4	949.1	949.0
10°	936.5	938.1	939.8	940.5	940.1	939.7	939.4	939.0
12.5°	926.3	927.5	928.8	929.2	929.0	928.8	928.6	928.4
15°	907.9	909.3	910.9	911.0	909.9	908.8	907.8	906.7
17.5°	884.6	885.7	886.7	887.0	886.6	886.2	885.8	885.4
20°	867.4	868.2	868.9	869.0	868.5	867.9	867.4	866.8
22.5°	849.2	849.9	850.4	850.3	849.7	849.0	848.3	847.6
25°	819.0	819.3	819.4	819.3	818.7	818.2	817.6	817.1
27.5°	787.0	787.1	787.3	787.0	786.3	785.6	784.9	784.2
30°	764.8	764.8	764.8	764.1	762.9	761.5	760.3	759.0
32.5°	741.5	740.5	739.4	738.6	737.8	737.1	736.4	735.8
35°	703.7	702.6	701.5	700.4	699.5	698.6	697.7	696.7
37.5°	664.6	663.2	661.9	661.0	660.4	659.8	659.2	658.6
40°	639.1	637.6	636.1	635.0	634.3	633.5	632.8	632.1
42.5°	612.5	611.0	609.6	608.5	607.8	607.0	606.3	605.5
45°	572.9	570.7	568.5	566.9	566.0	565.1	564.1	563.2
47.5°	531.2	529.0	526.8	525.3	524.5	523.7	522.9	522.0
50°	503.6	501.5	499.6	498.0	496.9	495.7	494.6	493.5
52.5°	475.6	473.9	472.1	470.8	469.7	468.6	467.5	466.4
55°	433.1	431.0	429.0	427.5	426.6	425.7	424.8	423.9
57.5°	391.2	389.4	387.6	386.2	385.1	384.0	382.9	381.9
60°	361.6	360.0	358.3	357.0	356.1	355.2	354.3	353.4
62.5°	333.1	331.4	329.8	328.7	328.0	327.4	326.8	326.1
65°	290.7	289.2	287.7	286.7	286.1	285.6	285.0	284.5
67.5°	248.6	247.3	246.0	244.9	244.2	243.4	242.6	241.9
70°	221.4	220.1	218.8	217.7	216.7	215.9	214.9	214.0
72.5°	193.8	192.7	191.5	190.7	190.2	189.7	189.3	188.8
75°	154.1	153.2	152.3	151.5	151.0	150.4	149.9	149.3
77.5°	117.0	116.4	115.7	115.5	115.5	115.5	115.5	115.5
80°	93.4	93.2	93.0	92.9	92.9	92.9	92.9	92.9
82.5°	71.9	71.5	71.1	70.9	70.8	70.7	70.5	70.3
85°	40.7	40.4	40.0	39.8	39.8	39.8	39.8	39.8
87.5°	20.4	20.5	20.6	20.7	20.8	20.9	21.0	21.1
90°	30.8	31.8	33.0	33.7	34.2	34.8	35.3	35.8
92.5°	47.5	48.4	49.3	49.5	49.2	48.9	48.6	48.2
95°	90.5	91.6	92.6	93.2	93.2	93.2	93.2	93.2
97.5°	140.8	142.0	143.2	143.8	143.7	143.5	143.5	143.4
100°	177.2	178.0	178.8	179.4	180.0	180.5	181.0	181.6
102.5°	219.3	220.1	220.9	221.2	221.1	220.9	220.9	220.8
105°	281.9	281.9	281.9	282.2	282.7	283.3	283.8	284.3
107.5°	349.8	350.6	351.5	351.7	351.4	351.1	350.8	350.5
110°	395.1	396.2	397.3	397.5	397.0	396.5	395.9	395.4



TEST NUMBER: P332179-927

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CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
112.5°	440.5	441.7	443.0	443.6	443.5	443.4	443.3	443.1
115°	509.5	509.7	509.9	509.9	509.7	509.5	509.1	508.9
117.5°	579.0	579.0	578.9	578.5	577.7	577.0	576.3	575.5
120°	625.4	625.2	624.9	624.5	624.0	623.4	622.9	622.3
122.5°	672.3	671.7	671.0	670.3	669.6	668.8	668.0	667.3
125°	742.1	741.0	740.0	738.9	737.8	736.8	735.7	734.7
127.5°	811.0	809.5	808.0	806.7	805.5	804.2	803.0	801.8
130°	856.7	855.7	854.7	853.2	851.4	849.5	847.6	845.7
132.5°	901.3	900.0	898.7	897.4	896.0	894.5	893.0	891.6
135°	967.9	966.8	965.7	965.0	964.4	963.8	963.4	962.8
137.5°	1033.0	1031.9	1030.8	1029.7	1028.6	1027.7	1026.7	1025.6
140°	1075.8	1075.5	1075.2	1074.2	1072.3	1070.5	1068.6	1066.8
142.5°	1115.9	1115.6	1115.4	1114.5	1113.1	1111.7	1110.2	1108.8
145°	1174.9	1174.6	1174.4	1173.7	1172.7	1171.6	1170.5	1169.5
147.5°	1230.7	1230.7	1230.7	1229.9	1228.3	1226.7	1225.0	1223.4
150°	1265.0	1265.0	1265.0	1264.2	1262.7	1261.1	1259.5	1257.9
152.5°	1296.5	1296.9	1297.4	1296.9	1295.5	1294.1	1292.7	1291.3
155°	1342.4	1343.5	1344.6	1344.2	1342.3	1340.5	1338.6	1336.7
157.5°	1382.0	1383.1	1384.2	1384.0	1382.5	1381.0	1379.5	1378.1
160°	1406.3	1407.6	1408.9	1409.1	1408.0	1406.9	1405.9	1404.8
162.5°	1429.2	1430.5	1431.9	1431.7	1430.0	1428.3	1426.6	1424.9
165°	1458.2	1459.8	1461.3	1461.3	1459.4	1457.5	1455.6	1453.8
167.5°	1481.7	1483.4	1484.9	1484.9	1483.4	1481.7	1480.0	1478.4
170°	1494.5	1496.4	1498.3	1498.3	1496.4	1494.5	1492.7	1490.8
172.5°	1504.6	1506.3	1507.9	1507.8	1505.9	1504.1	1502.2	1500.4
175°	1515.5	1517.1	1518.7	1518.5	1516.7	1514.8	1513.0	1511.2
177.5°	1520.4	1521.6	1522.9	1522.8	1521.3	1519.8	1518.4	1516.9
180°	1520.7	1520.7	1520.7	1520.7	1520.7	1520.7	1520.7	1520.7

(END OF REPORT)