

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: P331820-935

Luminaire Tested: **S122RDIW-S675D1240U935-4F0-1E-UDD-F1**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P331820-935
REPORT IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-1807-864-8,
Test Lab: INNOVATION CENTER
Issue Date: 3/3/2020
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: NEO-RAY
Catalog Number: S122RDIW-S675D1240U935-4F0-1E-UDD-F1
Description: DEFINE 2 DIRECT-INDIRECT WALL MOUNT LED LUMINAIRE
DOWNLIGHT 675 LUMENS PER FOOT, FLUSH SATIN WHITE DIFFUSER, REGRESSED
HOUSING
UPLIGHT 1240 LUMENS PER FOOT, FLUSH SATIN WHITE DIFFUSER
Light Source: -
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 5702.1 lumens
Efficiency: N/A
Efficacy: 92.9 lumens/watt
Spacing Criteria (0/90/45): 1.2 / 0.99 / 1.16
Luminous Opening: Rectangular (W 0.17' x L: 4' x H: 0')
CIE Type: Semi-Indirect

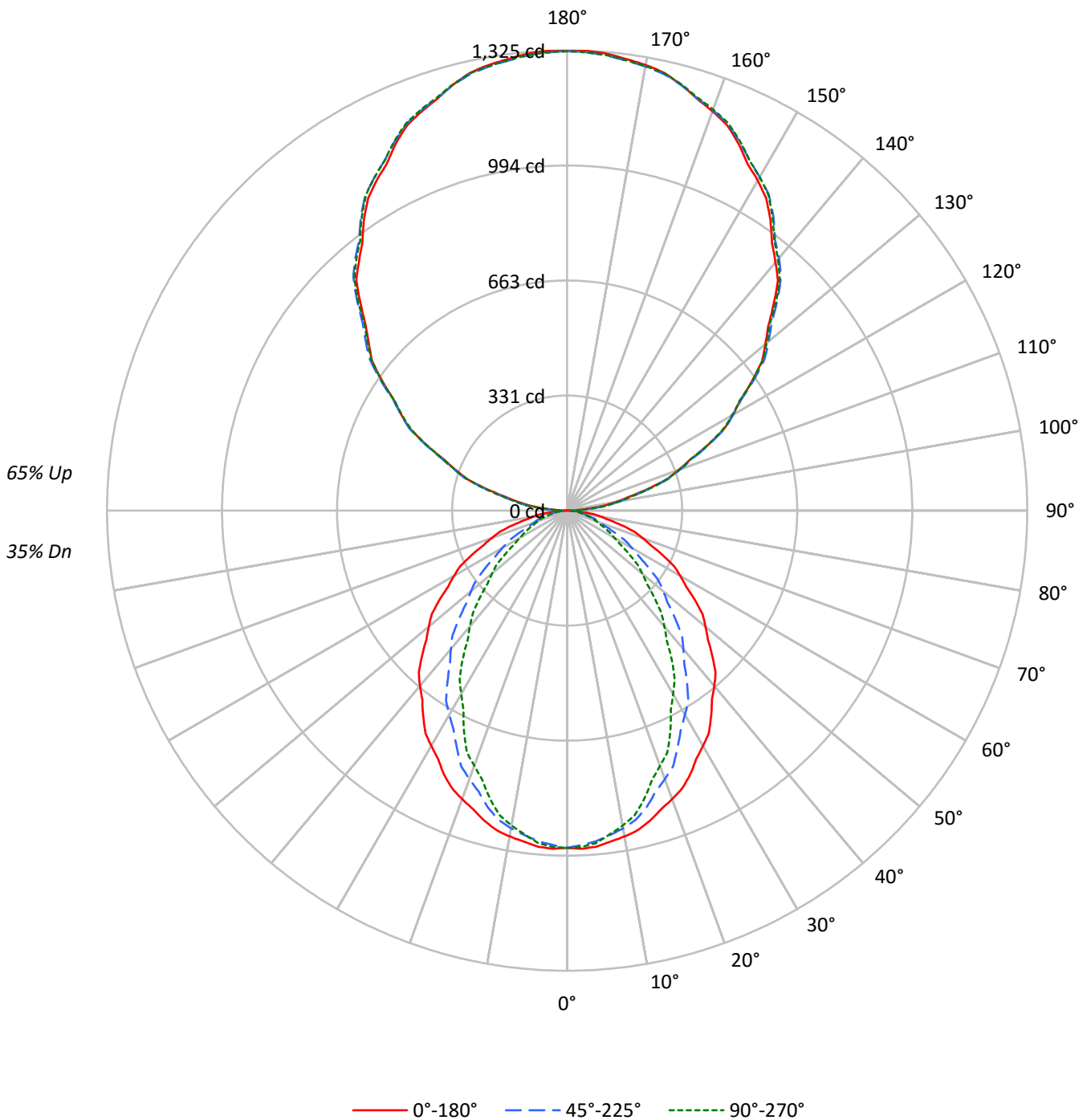
Input Watts (W): 61.4
Input Voltage (V): 120
Input Current (A_{in}): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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	75	75	75	58	58	58	42	42	42	35
1	95	91	87	84	86	82	79	76	66	64	62	51	50	49	38	37	36	30
2	87	80	74	69	78	72	67	63	58	55	52	46	43	41	34	32	31	26
3	79	70	63	58	71	64	58	53	52	47	44	41	38	35	30	28	27	22
4	72	62	55	49	65	57	50	45	46	41	38	36	33	30	27	25	23	19
5	67	56	48	42	60	51	44	39	41	36	33	33	29	27	25	22	21	17
6	61	50	42	37	55	46	39	34	37	32	29	30	26	23	23	20	18	15
7	57	45	37	32	51	41	34	30	34	29	25	27	23	21	21	18	16	14
8	53	41	33	28	48	37	31	26	31	26	22	25	21	19	19	17	15	12
9	49	37	30	25	44	34	28	23	28	23	20	23	19	17	18	15	13	11
10	46	34	27	23	41	31	25	21	26	21	18	21	18	15	16	14	12	10

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	15681	15681	15681
5°	15741	15486	15571
10°	15621	15231	15101
15°	15442	14780	14355
20°	15192	14136	13426
25°	14938	13402	12527
30°	14585	12652	11373
35°	14241	11832	10360
40°	13894	10985	9187
45°	13486	10035	8127
50°	13069	9075	7086
55°	12645	8042	6086
60°	12148	6952	5050
65°	11584	5841	4604
70°	10914	4810	4230
75°	10087	4386	3949
80°	8908	3924	3598
85°	7003	3094	3094



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	90.9	1.6
10°-20°	249.6	4.4
20°-30°	350.5	6.1
30°-40°	382.2	6.7
40°-50°	351.5	6.2
50°-60°	276.0	4.8
60°-70°	180.0	3.2
70°-80°	92.8	1.6
80°-90°	29.4	0.5
90°-100°	83.8	1.5
100°-110°	260.4	4.6
110°-120°	445.0	7.8
120°-130°	585.3	10.3
130°-140°	656.9	11.5
140°-150°	644.1	11.3
150°-160°	540.2	9.5
160°-170°	358.3	6.3
170°-180°	125.2	2.2
0°-30°	691.1	12.1
0°-40°	1073.3	18.8
0°-60°	1700.8	29.8
0°-90°	2002.9	35.1
90°-120°	789.2	13.8
90°-150°	2675.4	46.9
90°-180°	3699.0	64.9
0°-180°	5702.1	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	971	971	971	971	971	
5°	971	966	956	963	961	92
15°	924	913	884	868	859	260
25°	838	809	752	718	703	385
35°	722	676	600	547	526	452
45°	591	530	440	379	356	456
55°	449	379	286	235	216	401
65°	303	232	153	125	120	300
75°	162	102	70	64	63	171
85°	38	20	17	17	17	45
90°	1	15	39	37	38	5
95°	58	69	72	71	69	67
105°	240	243	246	248	248	253
115°	447	453	451	450	447	442
125°	650	659	656	653	652	580
135°	841	852	855	854	851	649
145°	1020	1028	1035	1036	1032	637
155°	1167	1170	1173	1178	1176	537
165°	1269	1268	1268	1275	1270	358
175°	1321	1318	1315	1322	1316	125
180°	1323	1323	1323	1323	1323	



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CANDELA DISTRIBUTION (FULL):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
0°	971.2	971.2	971.2	971.2	971.2	971.2	971.2	971.2	971.2	971.2	971.2
2.5°	974.7	974.0	973.2	972.4	971.6	970.3	968.6	966.9	965.3	963.5	965.1
5°	971.2	970.3	969.3	968.3	967.3	965.6	963.0	960.5	957.9	955.5	957.2
7.5°	961.2	960.0	958.8	957.6	956.4	954.2	951.3	948.4	945.4	942.5	942.9
10°	952.8	951.4	950.0	948.6	947.3	944.7	940.7	936.9	933.0	929.0	928.5
12.5°	942.2	940.6	938.8	937.2	935.5	932.2	927.2	922.2	917.1	912.1	911.1
15°	923.8	921.6	919.5	917.3	915.2	910.8	904.1	897.5	890.9	884.2	880.5
17.5°	901.1	897.9	894.6	891.2	887.9	882.1	873.6	865.0	856.5	848.0	843.6
20°	884.2	880.3	876.4	872.5	868.6	861.8	852.0	842.2	832.5	822.7	817.8
22.5°	865.9	861.6	857.2	852.8	848.4	840.8	829.7	818.7	807.7	796.7	790.4
25°	838.5	832.2	826.0	819.8	813.6	803.9	791.1	778.2	765.3	752.3	744.3
27.5°	805.5	798.7	791.9	785.1	778.3	767.6	753.1	738.6	724.0	709.5	700.2
30°	782.3	774.8	767.4	760.0	752.6	741.1	725.4	709.8	694.1	678.6	668.6
32.5°	759.7	751.1	742.4	733.7	725.0	712.7	696.8	680.9	665.0	649.0	637.7
35°	722.5	712.6	702.6	692.6	682.7	669.1	651.9	634.7	617.5	600.3	588.0
37.5°	685.3	674.2	663.3	652.4	641.4	626.8	608.6	590.2	571.9	553.5	540.0
40°	659.2	647.5	635.8	624.1	612.3	597.0	578.1	559.1	540.2	521.2	507.4
42.5°	632.5	620.2	607.8	595.5	583.2	567.1	547.6	528.1	508.4	488.9	474.5
45°	590.6	577.6	564.5	551.4	538.3	521.5	501.0	480.5	459.9	439.5	425.6
47.5°	549.8	536.0	522.1	508.2	494.4	476.9	455.7	434.5	413.4	392.2	378.4
50°	520.3	506.4	492.6	478.7	464.9	447.2	425.7	404.2	382.7	361.3	347.8
52.5°	491.5	477.0	462.5	448.1	433.5	415.8	394.8	373.8	352.8	331.7	318.7
55°	449.2	433.9	418.7	403.5	388.2	370.1	349.0	327.9	306.8	285.7	274.0
57.5°	405.7	390.1	374.4	358.9	343.2	325.3	305.0	284.7	264.4	244.2	233.4
60°	376.2	360.6	344.9	329.3	313.7	295.8	275.7	255.5	235.5	215.3	205.3
62.5°	347.3	331.7	316.1	300.5	284.8	267.4	248.3	229.1	209.9	190.7	181.2
65°	303.2	287.4	271.6	255.8	240.0	223.3	205.7	188.1	170.5	152.9	146.3
67.5°	260.7	245.0	229.3	213.6	197.9	182.1	166.3	150.5	134.7	118.8	115.8
70°	231.2	215.9	200.7	185.5	170.2	155.8	142.4	128.9	115.5	101.9	100.0
72.5°	203.0	188.4	173.8	159.2	144.6	131.9	121.1	110.2	99.4	88.6	87.0
75°	161.7	148.1	134.4	120.7	107.0	96.9	90.2	83.6	77.0	70.3	69.0
77.5°	121.1	109.1	97.1	85.2	73.2	65.5	62.3	59.2	56.0	52.8	51.9
80°	95.8	85.8	75.9	66.0	56.0	50.0	48.0	46.1	44.2	42.2	41.4
82.5°	72.6	64.8	57.1	49.2	41.5	36.9	35.6	34.3	33.0	31.7	31.2
85°	37.8	33.7	29.6	25.5	21.4	19.0	18.4	17.9	17.3	16.7	16.7
87.5°	11.5	10.8	10.2	9.5	8.9	9.0	10.2	11.3	12.3	13.4	13.2
90°	1.1	4.1	7.1	10.1	13.0	17.2	22.7	28.2	33.6	39.1	38.6
92.5°	19.9	22.0	24.3	26.4	28.6	30.3	31.6	32.9	34.2	35.5	35.6
95°	58.0	60.5	63.0	65.5	68.0	69.5	70.0	70.4	70.9	71.5	71.5
97.5°	106.1	108.2	110.5	112.6	114.8	116.3	117.3	118.2	119.2	120.1	120.1
100°	141.8	143.8	145.8	147.7	149.7	151.1	151.8	152.6	153.3	154.0	154.0
102.5°	179.3	180.9	182.4	184.1	185.6	186.9	187.9	188.8	189.8	190.7	190.9
105°	240.0	240.7	241.5	242.3	243.0	243.7	244.1	244.6	245.1	245.6	246.1
107.5°	301.2	302.3	303.4	304.4	305.6	306.1	306.1	306.1	306.1	306.1	306.3
110°	340.5	342.0	343.5	345.0	346.5	347.2	347.2	347.2	347.2	347.2	347.2



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CANDELA DISTRIBUTION (continued):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
112.5°	383.4	384.9	386.3	387.9	389.3	389.9	389.8	389.6	389.3	389.2	388.6
115°	446.6	448.1	449.5	451.0	452.5	453.0	452.5	452.0	451.5	451.0	450.8
117.5°	509.5	511.5	513.5	515.5	517.5	517.8	516.3	515.0	513.6	512.2	511.6
120°	551.5	553.5	555.5	557.5	559.5	559.5	557.5	555.5	553.5	551.5	551.5
122.5°	589.9	592.3	594.7	597.0	599.4	599.9	598.6	597.2	595.7	594.3	593.7
125°	649.7	651.9	654.2	656.4	658.7	659.4	658.7	658.0	657.2	656.4	655.7
127.5°	708.0	710.8	713.7	716.5	719.4	720.3	719.5	718.5	717.6	716.7	715.8
130°	744.7	747.9	751.1	754.3	757.5	758.9	758.5	757.9	757.4	756.9	756.4
132.5°	785.7	788.3	791.0	793.6	796.3	797.6	797.7	797.8	797.9	798.0	796.9
135°	840.7	843.3	846.1	848.9	851.6	853.2	853.7	854.2	854.7	855.1	854.9
137.5°	898.5	900.7	902.9	905.2	907.4	908.9	909.5	910.2	910.8	911.5	911.3
140°	933.3	935.6	937.8	940.0	942.3	944.0	945.2	946.5	947.7	948.9	948.9
142.5°	969.1	971.3	973.5	975.8	978.0	979.5	980.3	981.2	982.1	982.9	983.1
145°	1020.4	1022.2	1023.9	1025.6	1027.3	1029.0	1030.4	1031.9	1033.5	1034.9	1035.2
147.5°	1066.2	1068.2	1070.3	1072.5	1074.5	1076.1	1077.0	1078.1	1079.0	1080.0	1080.6
150°	1097.4	1098.9	1100.4	1101.9	1103.4	1104.7	1105.6	1106.6	1107.6	1108.6	1109.3
152.5°	1125.2	1126.6	1128.1	1129.5	1131.1	1132.4	1133.6	1134.8	1136.0	1137.2	1138.2
155°	1166.7	1167.4	1168.1	1168.9	1169.7	1170.4	1171.1	1171.8	1172.6	1173.4	1174.6
157.5°	1202.1	1202.6	1203.2	1203.7	1204.1	1204.6	1205.1	1205.5	1205.9	1206.4	1208.1
160°	1223.6	1224.1	1224.6	1225.1	1225.5	1226.0	1226.2	1226.4	1226.7	1226.9	1228.4
162.5°	1243.2	1243.4	1243.5	1243.5	1243.6	1243.8	1244.1	1244.3	1244.6	1244.8	1246.5
165°	1269.4	1269.1	1268.9	1268.6	1268.3	1268.3	1268.3	1268.3	1268.3	1268.3	1270.0
167.5°	1291.2	1290.5	1289.8	1289.0	1288.2	1287.9	1287.8	1287.8	1287.7	1287.6	1289.4
170°	1302.9	1302.1	1301.4	1300.6	1299.9	1299.4	1299.2	1298.9	1298.6	1298.4	1300.1
172.5°	1310.9	1310.2	1309.4	1308.6	1307.9	1307.4	1307.2	1306.9	1306.7	1306.4	1308.2
175°	1320.7	1320.0	1319.2	1318.4	1317.8	1317.2	1316.6	1316.1	1315.6	1315.1	1316.9
177.5°	1324.7	1324.1	1323.5	1322.9	1322.3	1321.9	1321.5	1321.0	1320.7	1320.3	1321.5
180°	1322.9	1322.9	1322.9	1322.9	1322.9	1322.9	1322.9	1322.9	1322.9	1322.9	1322.9



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CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
0°	971.2	971.2	971.2	971.2	971.2	971.2	971.2	971.2
2.5°	966.6	968.2	969.7	970.3	970.1	969.7	969.5	969.1
5°	958.9	960.7	962.4	963.0	962.4	961.8	961.3	960.7
7.5°	943.4	943.9	944.4	944.2	943.1	942.2	941.2	940.1
10°	927.9	927.3	926.7	925.8	924.6	923.5	922.3	921.1
12.5°	910.1	909.0	907.9	906.5	904.5	902.6	900.6	898.6
15°	876.8	873.1	869.4	866.5	864.6	862.6	860.7	858.8
17.5°	839.2	834.7	830.3	826.5	823.1	819.8	816.4	813.0
20°	813.0	808.0	803.1	798.6	794.3	790.0	785.7	781.4
22.5°	784.1	777.8	771.5	766.8	763.5	760.3	757.2	754.0
25°	736.3	728.3	720.3	714.9	712.0	709.0	706.1	703.2
27.5°	690.8	681.5	672.2	665.1	660.5	655.8	651.2	646.5
30°	658.7	648.7	638.7	631.1	625.8	620.5	615.3	610.0
32.5°	626.3	614.9	603.6	595.4	590.4	585.5	580.5	575.6
35°	575.8	563.4	551.1	542.8	538.5	534.2	529.9	525.6
37.5°	526.4	512.9	499.4	490.1	485.2	480.3	475.4	470.5
40°	493.4	479.6	465.7	456.2	451.2	446.1	441.0	435.9
42.5°	460.2	445.8	431.5	421.9	417.0	412.1	407.2	402.2
45°	411.7	397.9	384.0	374.7	370.1	365.3	360.7	355.9
47.5°	364.6	350.9	337.0	328.0	323.7	319.5	315.2	311.0
50°	334.3	320.8	307.4	298.5	294.5	290.3	286.3	282.1
52.5°	305.7	292.7	279.7	271.3	267.5	263.7	259.9	256.1
55°	262.3	250.5	238.8	231.1	227.4	223.6	219.9	216.2
57.5°	222.7	212.0	201.2	194.2	191.1	188.0	184.9	181.8
60°	195.4	185.5	175.5	168.9	165.8	162.7	159.5	156.4
62.5°	171.8	162.2	152.7	147.1	145.2	143.4	141.5	139.6
65°	139.7	133.0	126.4	122.8	122.2	121.6	121.0	120.5
67.5°	112.7	109.7	106.7	104.8	104.2	103.6	103.0	102.3
70°	98.1	96.1	94.1	92.8	92.0	91.2	90.4	89.6
72.5°	85.3	83.7	82.1	81.0	80.5	80.1	79.6	79.1
75°	67.6	66.2	64.8	64.1	63.9	63.7	63.5	63.3
77.5°	51.1	50.4	49.6	49.1	48.7	48.5	48.1	47.8
80°	40.6	39.9	39.1	38.7	38.7	38.7	38.7	38.7
82.5°	30.7	30.2	29.8	29.5	29.5	29.5	29.5	29.5
85°	16.7	16.7	16.7	16.7	16.7	16.7	16.7	16.7
87.5°	12.9	12.7	12.4	12.3	12.4	12.4	12.5	12.5
90°	38.1	37.6	37.1	36.9	37.2	37.5	37.7	38.0
92.5°	35.7	35.8	35.9	36.0	36.0	36.1	36.2	36.2
95°	71.5	71.5	71.5	71.2	70.7	70.2	69.7	69.2
97.5°	120.1	120.1	120.1	120.1	120.0	120.0	119.9	119.9
100°	154.0	154.0	154.0	153.9	153.7	153.4	153.2	152.9
102.5°	191.1	191.3	191.5	191.5	191.2	191.0	190.7	190.5
105°	246.6	247.1	247.6	247.9	247.9	247.9	247.9	247.9
107.5°	306.5	306.7	306.9	306.4	305.3	304.2	303.0	301.9
110°	347.2	347.2	347.2	346.8	346.1	345.3	344.6	343.9



TEST NUMBER: P331820-935

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CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
112.5°	388.0	387.4	386.8	386.2	385.6	385.1	384.6	384.0
115°	450.6	450.3	450.0	449.5	448.8	448.1	447.3	446.6
117.5°	511.0	510.4	509.8	509.2	508.4	507.6	507.0	506.2
120°	551.5	551.5	551.5	551.1	550.4	549.7	548.9	548.2
122.5°	593.2	592.6	592.0	591.4	590.9	590.3	589.8	589.3
125°	655.0	654.2	653.5	653.0	652.7	652.5	652.2	651.9
127.5°	715.0	714.0	713.2	712.3	711.5	710.8	710.0	709.1
130°	756.0	755.4	754.9	754.2	753.2	752.3	751.2	750.2
132.5°	795.8	794.7	793.7	792.7	791.9	791.1	790.3	789.5
135°	854.7	854.5	854.2	853.7	852.9	852.2	851.4	850.7
137.5°	911.0	910.9	910.7	910.1	909.0	908.1	907.1	906.1
140°	948.9	948.9	948.9	948.5	947.4	946.5	945.5	944.5
142.5°	983.3	983.5	983.7	983.3	982.3	981.3	980.3	979.3
145°	1035.4	1035.7	1035.9	1035.5	1034.6	1033.5	1032.6	1031.6
147.5°	1081.1	1081.7	1082.2	1082.0	1081.1	1080.1	1079.2	1078.2
150°	1110.1	1110.9	1111.6	1111.6	1110.9	1110.1	1109.3	1108.6
152.5°	1139.1	1140.0	1140.9	1140.9	1140.0	1139.1	1138.2	1137.2
155°	1175.9	1177.1	1178.3	1178.5	1177.8	1177.1	1176.3	1175.6
157.5°	1209.8	1211.4	1213.1	1213.4	1212.2	1211.0	1209.8	1208.6
160°	1229.9	1231.4	1232.9	1233.1	1232.2	1231.1	1230.2	1229.2
162.5°	1248.2	1249.8	1251.5	1251.8	1250.6	1249.4	1248.2	1247.1
165°	1271.7	1273.4	1275.2	1275.4	1274.2	1273.0	1271.7	1270.5
167.5°	1291.2	1292.9	1294.6	1294.9	1293.6	1292.3	1291.0	1289.7
170°	1301.8	1303.6	1305.4	1305.4	1304.0	1302.5	1301.0	1299.5
172.5°	1309.9	1311.6	1313.4	1313.5	1312.0	1310.5	1309.1	1307.5
175°	1318.6	1320.3	1322.1	1322.2	1320.7	1319.2	1317.8	1316.2
177.5°	1322.7	1323.9	1325.0	1325.0	1323.9	1322.7	1321.5	1320.3
180°	1322.9	1322.9	1322.9	1322.9	1322.9	1322.9	1322.9	1322.9

(END OF REPORT)