

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: P332665-935

Luminaire Tested: **S124DIP-S1020D1205U935-4F0-1E-UDD-D1**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P332665-935
REPORT IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-1807-864-10,
Test Lab: INNOVATION CENTER
Issue Date: 3/3/2020
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: NEO-RAY
Catalog Number: S124DIP-S1020D1205U935-4F0-1E-UDD-D1
Description: DEFINE 4 DIRECT-INDIRECT PENDANT LED LUMINAIRE
DOWNLIGHT 1020 LUMENS PER FOOT, DROP SATIN WHITE DIFFUSER
UPLIGHT 1205 LUMENS PER FOOT, FLUSH SATIN WHITE DIFFUSER
Light Source: -
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 7216.1 lumens
Efficiency: N/A
Efficacy: 110.3 lumens/watt
Spacing Criteria (0/90/45): 1.23 / 1.28 / 1.39
Luminous Opening: Rectangular w/ Sides (W: 0.33' x L: 4' x H: 0.08')
CIE Type: General Diffuse

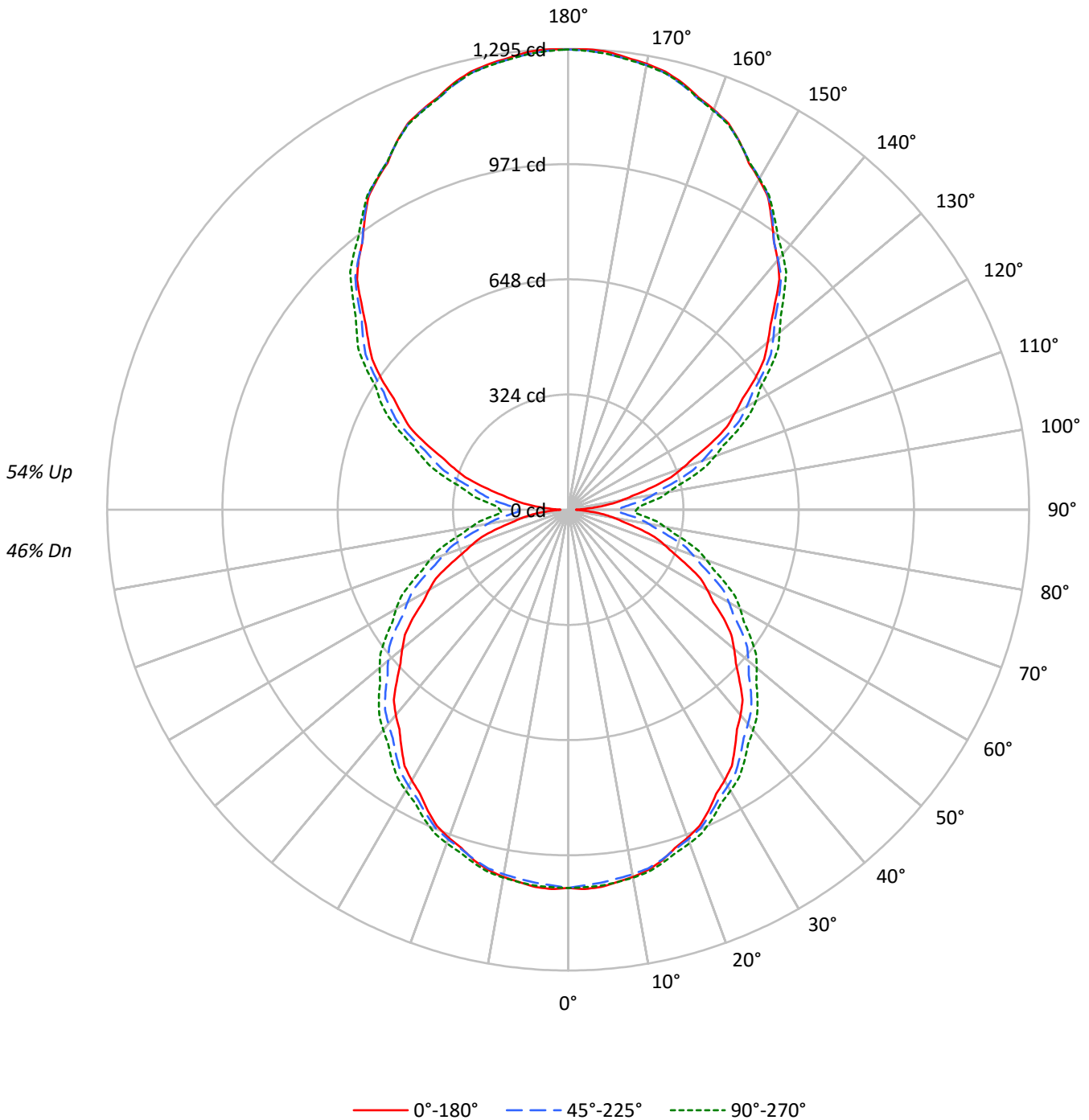
Input Watts (W): 65.4
Input Voltage (V): 120
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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	106	106	106	106	98	98	98	98	81	81	81	67	67	67	53	53	53	46
1	96	91	87	83	88	84	80	77	70	67	65	57	55	53	45	44	43	37
2	87	79	73	67	79	73	67	62	61	56	53	50	47	44	39	37	35	30
3	79	69	62	55	72	64	57	52	53	48	44	43	40	37	34	32	30	25
4	72	61	53	47	66	56	49	43	47	42	37	38	34	31	31	28	25	21
5	66	54	46	40	60	50	43	37	42	36	32	34	30	27	27	24	22	18
6	61	48	40	34	56	45	37	32	38	32	28	31	27	23	25	22	19	16
7	56	44	36	30	51	40	33	28	34	28	24	28	24	20	23	19	17	14
8	52	40	32	26	48	37	30	25	31	25	21	26	21	18	21	17	15	13
9	48	36	28	23	44	33	27	22	28	23	19	24	19	16	19	16	13	11
10	45	33	26	21	41	31	24	20	26	21	17	22	18	15	18	14	12	10

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	8582	8582	8582
5°	8608	8387	8412
10°	8556	8250	8244
15°	8479	8091	8047
20°	8364	7916	7856
25°	8233	7719	7645
30°	8093	7524	7428
35°	7933	7324	7239
40°	7804	7134	7041
45°	7615	6958	6871
50°	7455	6755	6692
55°	7289	6565	6482
60°	7031	6322	6290
65°	6747	6061	6055
70°	6405	5763	5780
75°	5924	5435	5533
80°	5397	5119	5288
85°	4721	4842	5146



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	100.7	1.4
10°-20°	288.4	4.0
20°-30°	436.1	6.0
30°-40°	527.7	7.3
40°-50°	557.9	7.7
50°-60°	525.0	7.3
60°-70°	435.6	6.0
70°-80°	306.0	4.2
80°-90°	176.8	2.5
90°-100°	188.0	2.6
100°-110°	328.8	4.6
110°-120°	480.0	6.7
120°-130°	594.4	8.2
130°-140°	647.6	9.0
140°-150°	626.7	8.7
150°-160°	525.0	7.3
160°-170°	349.3	4.8
170°-180°	122.3	1.7
0°-30°	825.2	11.4
0°-40°	1352.9	18.7
0°-60°	2435.8	33.8
0°-90°	3354.1	46.5
90°-120°	996.7	13.8
90°-150°	2865.4	39.7
90°-180°	3862.0	53.5
0°-180°	7216.1	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1063	1063	1063	1063	1063	
5°	1064	1060	1052	1061	1061	101
15°	1020	1021	1018	1028	1027	287
25°	933	940	944	956	958	430
35°	817	831	843	859	863	511
45°	681	704	726	746	752	526
55°	533	559	594	617	625	475
65°	369	407	448	476	487	366
75°	205	249	299	331	343	218
85°	63	113	167	201	214	67
90°	22	81	140	179	192	16
95°	76	124	180	213	225	79
105°	244	270	317	348	362	259
115°	443	455	490	514	523	437
125°	640	640	668	687	693	570
135°	822	828	836	852	857	636
145°	996	999	1000	1006	1008	624
155°	1140	1140	1139	1143	1139	525
165°	1241	1238	1236	1242	1238	350
175°	1291	1287	1285	1292	1285	123
180°	1293	1293	1293	1293	1293	



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CANDELA DISTRIBUTION (FULL):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
0°	1063.1	1063.1	1063.1	1063.1	1063.1	1063.1	1063.1	1063.1	1063.1	1063.1	1063.1
2.5°	1066.9	1066.3	1065.6	1065.0	1064.3	1063.2	1061.4	1059.8	1058.1	1056.4	1057.8
5°	1064.2	1063.4	1062.6	1061.9	1061.1	1059.7	1057.9	1056.0	1054.2	1052.3	1054.5
7.5°	1055.2	1054.7	1054.2	1053.8	1053.3	1052.3	1050.8	1049.2	1047.7	1046.1	1048.5
10°	1047.6	1047.3	1047.1	1046.8	1046.5	1045.7	1044.4	1043.1	1041.7	1040.4	1042.8
12.5°	1037.1	1037.1	1037.0	1036.9	1036.9	1036.4	1035.5	1034.6	1033.7	1032.8	1035.0
15°	1020.2	1020.5	1020.7	1021.0	1021.2	1021.0	1020.2	1019.4	1018.6	1017.8	1020.2
17.5°	997.1	997.9	998.7	999.4	1000.3	1000.6	1000.4	1000.3	1000.1	1000.0	1002.4
20°	980.9	981.7	982.5	983.3	984.1	984.6	984.9	985.2	985.4	985.7	988.3
22.5°	962.8	963.8	964.8	965.9	966.8	967.6	968.0	968.5	969.0	969.5	972.2
25°	933.3	934.9	936.4	938.1	939.6	940.8	941.6	942.5	943.2	944.0	946.9
27.5°	900.4	902.8	905.1	907.4	909.7	911.5	912.7	914.0	915.2	916.4	919.1
30°	878.6	880.6	882.8	884.8	887.0	889.0	890.8	892.7	894.5	896.4	899.3
32.5°	854.7	857.3	859.8	862.4	864.9	867.2	869.3	871.3	873.4	875.5	878.7
35°	816.7	819.8	822.9	826.1	829.3	832.2	834.9	837.5	840.2	842.8	846.5
37.5°	778.3	782.0	785.6	789.3	792.9	796.3	799.6	802.9	806.2	809.5	813.2
40°	753.5	757.0	760.4	763.9	767.3	770.9	774.6	778.3	782.0	785.7	789.6
42.5°	725.0	728.8	732.7	736.6	740.4	744.5	748.8	753.2	757.5	761.9	766.3
45°	680.9	686.0	691.0	696.0	701.0	706.0	711.1	716.1	721.1	726.2	730.6
47.5°	638.8	643.9	649.1	654.4	659.5	665.0	670.8	676.7	682.5	688.3	692.9
50°	608.3	614.2	619.9	625.8	631.5	637.4	643.3	649.0	654.9	660.6	666.0
52.5°	577.8	583.7	589.4	595.3	601.2	607.3	614.0	620.7	627.3	634.0	639.3
55°	533.3	538.9	544.4	550.0	555.5	562.2	570.2	578.2	586.1	594.0	599.3
57.5°	483.5	490.4	497.3	504.2	511.1	518.4	526.3	534.3	542.1	550.0	556.3
60°	451.2	458.1	464.9	471.8	478.7	486.5	495.2	503.9	512.6	521.4	527.4
62.5°	419.7	427.2	434.8	442.3	449.8	457.9	466.7	475.4	484.1	492.8	498.9
65°	369.0	377.5	386.0	394.4	402.9	411.6	420.6	429.6	438.6	447.6	454.2
67.5°	320.2	329.2	338.2	347.2	356.2	365.5	375.1	384.8	394.4	404.1	410.8
70°	286.9	295.9	304.9	313.8	322.9	332.4	342.4	352.5	362.6	372.6	379.8
72.5°	254.5	263.7	272.9	282.1	291.4	301.3	311.9	322.6	333.4	344.1	350.9
75°	204.7	214.6	224.3	234.1	243.9	254.3	265.4	276.6	287.7	298.8	306.2
77.5°	158.3	168.7	179.1	189.4	199.8	210.8	222.5	234.1	245.7	257.4	264.8
80°	129.8	140.3	150.9	161.5	172.1	183.2	194.8	206.5	218.1	229.7	237.7
82.5°	101.2	112.2	123.2	134.2	145.2	156.5	168.2	179.8	191.5	203.1	211.2
85°	63.1	74.2	85.3	96.4	107.5	119.1	131.0	142.8	154.7	166.7	174.6
87.5°	35.8	47.1	58.4	69.7	80.9	92.6	104.5	116.5	128.4	140.3	148.3
90°	22.0	35.0	48.1	61.1	74.1	87.2	100.4	113.6	126.7	139.8	148.9
92.5°	39.5	51.8	64.1	76.5	88.8	101.3	113.9	126.5	139.1	151.7	160.0
95°	75.5	86.2	96.9	107.7	118.4	130.0	142.4	154.8	167.2	179.6	187.4
97.5°	118.9	128.0	137.1	146.2	155.3	166.2	178.7	191.3	203.9	216.5	224.1
100°	153.2	160.9	168.7	176.4	184.2	194.2	206.6	218.9	231.2	243.5	251.1
102.5°	189.9	196.3	202.8	209.1	215.5	224.6	236.6	248.5	260.5	272.3	279.9
105°	243.7	249.3	254.8	260.4	265.9	274.0	284.6	295.3	306.0	316.7	323.9
107.5°	302.6	307.2	311.8	316.4	321.0	328.0	337.3	346.8	356.2	365.6	372.7
110°	341.6	345.8	349.9	354.0	358.2	364.8	373.8	382.9	391.9	401.0	406.6



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CANDELA DISTRIBUTION (continued):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
112.5°	382.3	385.6	389.0	392.4	395.8	401.7	410.1	418.5	427.0	435.4	441.2
115°	443.2	445.7	448.1	450.4	452.8	458.0	466.1	474.1	482.1	490.1	495.7
117.5°	501.9	503.4	505.1	506.7	508.2	512.9	520.5	528.1	535.6	543.1	547.9
120°	540.1	541.8	543.5	545.2	546.8	551.2	558.2	565.2	572.2	579.2	583.4
122.5°	580.9	581.4	581.9	582.5	583.0	586.7	593.7	600.5	607.5	614.5	619.0
125°	640.0	639.7	639.5	639.2	638.9	642.0	648.3	654.7	661.2	667.5	672.1
127.5°	694.3	694.7	695.2	695.5	695.9	698.5	703.3	707.9	712.6	717.4	721.7
130°	731.8	732.2	732.6	733.0	733.4	735.7	739.9	744.2	748.4	752.7	757.0
132.5°	771.0	771.2	771.5	771.7	771.9	773.6	776.8	780.1	783.3	786.4	790.6
135°	821.7	822.9	824.3	825.6	827.0	828.5	830.4	832.2	834.1	835.9	839.7
137.5°	878.0	878.4	878.7	879.2	879.5	880.3	881.6	882.8	884.1	885.3	888.6
140°	915.7	915.8	916.0	916.2	916.4	916.6	916.9	917.1	917.4	917.7	920.8
142.5°	949.1	949.5	949.9	950.3	950.7	950.7	950.4	950.0	949.7	949.3	952.4
145°	996.5	997.1	997.7	998.3	999.0	999.4	999.6	999.9	1000.1	1000.3	1001.7
147.5°	1043.7	1044.5	1045.3	1046.1	1046.9	1047.2	1047.1	1046.9	1046.7	1046.5	1046.5
150°	1072.5	1073.2	1073.8	1074.4	1075.0	1075.3	1075.3	1075.3	1075.3	1075.3	1075.3
152.5°	1098.8	1099.2	1099.8	1100.2	1100.7	1101.0	1101.2	1101.4	1101.6	1101.7	1102.3
155°	1140.3	1140.3	1140.3	1140.3	1140.3	1140.2	1140.1	1139.8	1139.5	1139.4	1140.2
157.5°	1175.5	1175.2	1174.7	1174.4	1174.0	1173.7	1173.7	1173.6	1173.6	1173.5	1174.2
160°	1196.4	1196.2	1195.9	1195.7	1195.5	1195.2	1195.1	1194.8	1194.6	1194.4	1195.1
162.5°	1215.6	1215.0	1214.4	1213.8	1213.2	1212.9	1212.6	1212.5	1212.2	1211.9	1213.1
165°	1241.4	1240.7	1240.0	1239.4	1238.7	1238.1	1237.7	1237.3	1236.8	1236.4	1237.7
167.5°	1261.2	1260.2	1259.3	1258.4	1257.5	1257.0	1257.1	1257.1	1257.1	1257.1	1258.5
170°	1272.4	1271.3	1270.1	1269.0	1267.9	1267.5	1267.7	1267.9	1268.2	1268.4	1269.7
172.5°	1280.4	1279.4	1278.5	1277.6	1276.7	1276.2	1276.3	1276.3	1276.3	1276.4	1277.9
175°	1291.4	1290.3	1289.2	1288.1	1286.9	1286.2	1286.1	1285.8	1285.6	1285.4	1286.9
177.5°	1295.0	1294.1	1293.2	1292.4	1291.4	1291.0	1291.0	1291.0	1291.0	1291.0	1292.3
180°	1293.4	1293.4	1293.4	1293.4	1293.4	1293.4	1293.4	1293.4	1293.4	1293.4	1293.4



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CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
0°	1063.1	1063.1	1063.1	1063.1	1063.1	1063.1	1063.1	1063.1
2.5°	1059.4	1060.8	1062.3	1062.9	1062.7	1062.5	1062.3	1062.1
5°	1056.5	1058.7	1060.8	1061.7	1061.4	1061.2	1060.9	1060.7
7.5°	1050.9	1053.3	1055.7	1056.7	1056.4	1056.2	1055.9	1055.7
10°	1045.2	1047.6	1050.0	1051.0	1050.8	1050.5	1050.2	1050.0
12.5°	1037.2	1039.3	1041.5	1042.6	1042.5	1042.4	1042.4	1042.3
15°	1022.6	1024.9	1027.3	1028.4	1028.1	1027.9	1027.6	1027.3
17.5°	1004.8	1007.3	1009.7	1010.8	1010.6	1010.4	1010.1	1010.0
20°	990.9	993.6	996.3	997.6	997.6	997.6	997.6	997.6
22.5°	974.7	977.4	980.1	981.6	982.1	982.4	982.8	983.3
25°	949.9	952.7	955.6	957.3	957.5	957.8	958.0	958.3
27.5°	921.8	924.5	927.2	928.7	929.0	929.4	929.6	930.0
30°	902.2	905.1	908.0	909.7	910.2	910.8	911.4	911.9
32.5°	882.1	885.5	888.8	890.7	891.2	891.7	892.3	892.9
35°	850.2	853.9	857.6	859.9	860.7	861.4	862.3	863.1
37.5°	817.0	820.8	824.5	826.8	827.7	828.5	829.3	830.2
40°	793.6	797.5	801.6	804.1	805.1	806.2	807.3	808.3
42.5°	770.7	775.1	779.5	782.0	782.9	783.8	784.6	785.4
45°	735.1	739.7	744.2	747.1	748.4	749.7	751.1	752.3
47.5°	697.6	702.2	707.0	710.1	711.6	713.3	714.8	716.4
50°	671.2	676.6	681.8	685.3	686.9	688.5	690.0	691.6
52.5°	644.6	649.9	655.2	658.6	660.2	661.8	663.4	665.0
55°	604.6	609.9	615.2	618.6	620.2	621.8	623.4	625.0
57.5°	562.6	568.9	575.1	579.0	580.5	582.0	583.5	585.0
60°	533.6	539.7	545.7	549.8	552.0	554.1	556.2	558.3
62.5°	505.0	511.1	517.2	521.2	523.4	525.5	527.6	529.8
65°	460.8	467.4	474.1	478.5	480.5	482.7	484.7	486.9
67.5°	417.5	424.2	430.9	435.3	437.4	439.5	441.5	443.6
70°	386.8	394.0	401.1	405.7	407.5	409.4	411.2	413.1
72.5°	357.9	364.8	371.8	376.3	378.3	380.4	382.5	384.5
75°	313.6	321.0	328.4	333.3	335.7	338.1	340.4	342.9
77.5°	272.4	279.9	287.4	292.5	295.0	297.6	300.1	302.6
80°	245.6	253.6	261.5	266.5	268.6	270.8	272.9	275.0
82.5°	219.4	227.6	235.7	240.9	243.2	245.6	247.9	250.2
85°	182.5	190.5	198.4	203.7	206.4	209.0	211.6	214.3
87.5°	156.2	164.2	172.1	177.3	179.7	182.1	184.5	186.9
90°	157.9	166.9	175.9	181.7	184.3	186.8	189.3	191.9
92.5°	168.2	176.5	184.8	190.1	192.5	194.8	197.3	199.7
95°	195.2	203.0	210.9	215.9	218.3	220.7	223.1	225.4
97.5°	231.9	239.6	247.4	252.4	254.6	256.9	259.2	261.5
100°	258.7	266.3	273.9	278.6	280.4	282.3	284.1	286.0
102.5°	287.5	295.1	302.6	307.5	309.7	311.9	314.2	316.4
105°	331.2	338.5	345.8	350.8	353.6	356.4	359.1	362.0
107.5°	379.8	386.9	394.1	398.6	400.5	402.3	404.2	406.0
110°	412.2	417.8	423.5	427.7	430.5	433.3	436.1	438.9



TEST NUMBER: P332665-935

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CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
112.5°	446.9	452.8	458.6	462.5	464.8	467.1	469.3	471.6
115°	501.3	506.9	512.5	516.1	517.7	519.4	521.0	522.6
117.5°	552.7	557.4	562.1	565.3	567.1	568.7	570.4	572.0
120°	587.5	591.8	595.9	599.3	601.8	604.4	607.0	609.5
122.5°	623.5	628.1	632.6	635.4	636.5	637.7	638.8	639.8
125°	676.7	681.3	685.9	688.7	689.8	691.0	692.2	693.3
127.5°	726.0	730.4	734.7	737.5	739.0	740.5	741.8	743.3
130°	761.3	765.6	769.9	772.4	773.1	773.9	774.6	775.2
132.5°	794.7	798.7	802.9	805.6	806.8	808.0	809.3	810.5
135°	843.5	847.3	851.1	853.5	854.4	855.3	856.3	857.1
137.5°	891.9	895.2	898.5	900.8	902.2	903.7	905.2	906.6
140°	924.1	927.3	930.6	932.7	933.8	934.9	936.0	937.1
142.5°	955.3	958.3	961.2	963.3	964.3	965.4	966.5	967.5
145°	1003.1	1004.4	1005.7	1006.7	1007.0	1007.5	1007.8	1008.2
147.5°	1046.6	1046.6	1046.6	1047.0	1047.6	1048.3	1048.9	1049.5
150°	1075.3	1075.3	1075.3	1075.2	1075.0	1074.8	1074.5	1074.4
152.5°	1102.8	1103.4	1103.9	1103.9	1103.3	1102.7	1102.1	1101.6
155°	1141.2	1142.0	1142.9	1142.9	1142.0	1141.2	1140.2	1139.4
157.5°	1174.9	1175.5	1176.2	1176.2	1175.4	1174.7	1173.9	1173.2
160°	1195.7	1196.4	1197.0	1196.8	1195.7	1194.6	1193.5	1192.4
162.5°	1214.4	1215.6	1216.8	1216.9	1215.7	1214.6	1213.5	1212.4
165°	1239.1	1240.4	1241.7	1241.9	1241.0	1240.2	1239.2	1238.4
167.5°	1259.8	1261.2	1262.5	1262.5	1261.1	1259.7	1258.4	1257.0
170°	1271.1	1272.4	1273.8	1273.6	1272.0	1270.5	1268.9	1267.4
172.5°	1279.4	1280.9	1282.5	1282.5	1280.8	1279.3	1277.7	1276.2
175°	1288.5	1290.0	1291.6	1291.6	1290.0	1288.5	1286.9	1285.4
177.5°	1293.5	1294.8	1296.0	1295.9	1294.4	1293.0	1291.6	1290.2
180°	1293.4	1293.4	1293.4	1293.4	1293.4	1293.4	1293.4	1293.4

(END OF REPORT)