

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: P332922-830

Luminaire Tested: **S124RDIP-S575D1205U830-4F0-1E-UDD-F**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P332922-830
REPORT IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-1807-864-6,
Test Lab: INNOVATION CENTER
Issue Date: 3/3/2020
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: NEO-RAY
Catalog Number: S124RDIP-S575D1205U830-4F0-1E-UDD-F
Description: DEFINE 4 DIRECT-INDIRECT PENDANT LED LUMINAIRE
DOWNLIGHT 575 LUMENS PER FOOT, FLUSH SATIN WHITE DIFFUSER, REGRESSED
HOUSING
UPLIGHT 1205 LUMENS PER FOOT, NO LENS
Light Source: -
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 6746.8 lumens
Efficiency: N/A
Efficacy: 136.6 lumens/watt
Spacing Criteria (0/90/45): 1.2 / 1.09 / 1.24
Luminous Opening: Rectangular (W 0.33' x L: 4' x H: 0')
CIE Type: Semi-Indirect

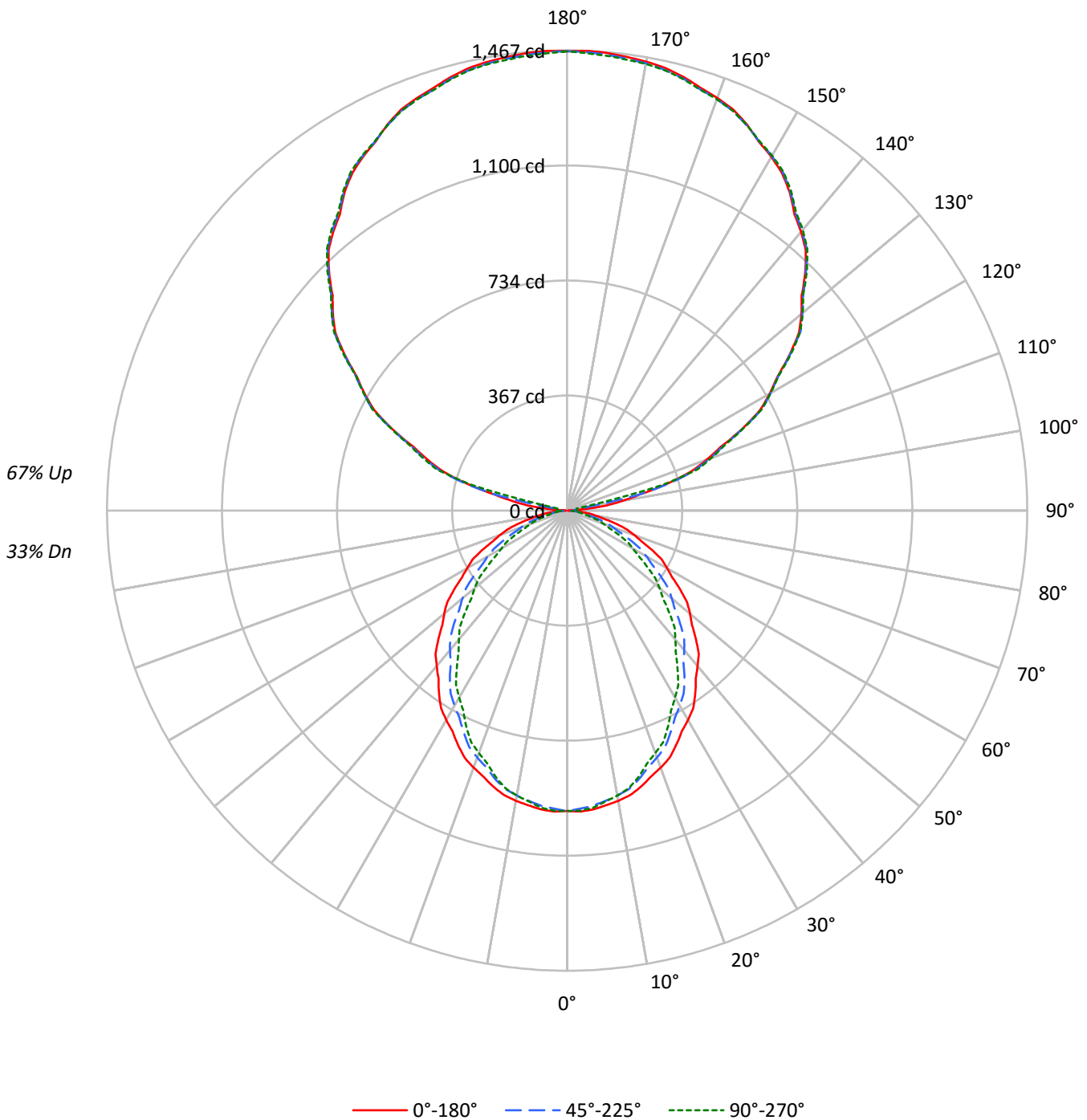
Input Watts (W): 49.4
Input Voltage (V): 120
Input Current (A_{in}): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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	103	103	103	103	93	93	93	93	74	74	74	56	56	56	40	40	40	33
1	94	90	86	83	85	81	78	75	65	63	61	50	48	47	36	35	34	28
2	86	79	73	68	77	71	66	62	57	54	51	44	42	40	32	30	29	24
3	78	69	62	57	70	63	57	52	50	46	43	39	36	34	28	27	25	20
4	72	61	54	48	64	56	49	44	45	40	36	35	32	29	25	23	22	18
5	66	55	47	41	59	50	43	38	40	35	31	31	28	25	23	21	19	15
6	61	49	41	36	54	44	38	33	36	31	27	28	25	22	21	19	17	14
7	56	44	36	31	50	40	33	29	33	28	24	26	22	19	19	17	15	12
8	52	40	32	27	47	36	30	25	30	25	21	23	20	17	17	15	13	11
9	48	36	29	24	43	33	27	23	27	22	19	21	18	16	16	14	12	10
10	45	33	26	22	41	30	24	20	25	20	17	20	16	14	15	13	11	9

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	7733	7733	7733
5°	7750	7656	7703
10°	7702	7564	7564
15°	7614	7405	7350
20°	7491	7196	7064
25°	7337	6951	6774
30°	7185	6693	6413
35°	7019	6427	6050
40°	6817	6122	5658
45°	6632	5819	5259
50°	6420	5471	4835
55°	6194	5111	4376
60°	5945	4713	3907
65°	5717	4216	3446
70°	5384	3670	2924
75°	4966	3044	2380
80°	4328	2320	2180
85°	3668	2103	1973



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	90.0	1.3
10°-20°	250.9	3.7
20°-30°	362.3	5.4
30°-40°	410.7	6.1
40°-50°	396.6	5.9
50°-60°	329.8	4.9
60°-70°	227.7	3.4
70°-80°	115.4	1.7
80°-90°	33.8	0.5
90°-100°	50.1	0.7
100°-110°	319.3	4.7
110°-120°	610.8	9.1
120°-130°	775.4	11.5
130°-140°	829.7	12.3
140°-150°	775.8	11.5
150°-160°	625.7	9.3
160°-170°	403.5	6.0
170°-180°	139.1	2.1
0°-30°	703.2	10.4
0°-40°	1113.9	16.5
0°-60°	1840.3	27.3
0°-90°	2217.3	32.9
90°-120°	980.2	14.5
90°-150°	3361.2	49.8
90°-180°	4529.0	67.1
0°-180°	6746.8	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	958	958	958	958	958	
5°	956	953	945	952	951	91
15°	911	904	886	884	879	257
25°	824	810	780	768	760	379
35°	712	688	652	628	614	445
45°	581	553	510	475	461	448
55°	440	410	363	326	311	394
65°	299	267	221	190	180	295
75°	159	132	98	81	76	168
85°	40	26	23	21	21	45
90°	3	15	24	30	33	5
95°	60	25	24	30	32	77
105°	330	336	342	349	312	345
115°	616	619	618	620	620	605
125°	865	869	867	871	872	772
135°	1073	1072	1077	1079	1081	827
145°	1238	1241	1241	1242	1244	773
155°	1357	1358	1355	1359	1356	625
165°	1431	1426	1426	1434	1425	404
175°	1464	1458	1459	1467	1456	139
180°	1464	1464	1464	1464	1464	



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CANDELA DISTRIBUTION (FULL):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
0°	957.9	957.9	957.9	957.9	957.9	957.9	957.9	957.9	957.9	957.9	957.9
2.5°	960.3	959.7	959.2	958.7	958.2	957.2	955.7	954.3	952.8	951.4	952.8
5°	956.4	955.7	955.1	954.4	953.9	952.5	950.6	948.6	946.6	944.7	946.3
7.5°	947.7	947.1	946.4	945.7	945.0	943.4	940.8	938.3	935.8	933.2	934.2
10°	939.5	938.8	937.9	937.1	936.3	934.4	931.5	928.5	925.6	922.7	923.3
12.5°	929.0	928.0	927.1	926.1	925.2	923.0	919.5	916.1	912.7	909.2	909.6
15°	911.0	909.5	908.0	906.5	905.0	902.3	898.2	894.2	890.0	886.0	885.7
17.5°	889.1	886.9	884.9	882.7	880.6	877.1	872.2	867.3	862.4	857.5	856.7
20°	872.0	870.0	867.8	865.7	863.6	859.8	854.2	848.7	843.1	837.6	836.3
22.5°	853.3	850.9	848.6	846.1	843.8	839.6	833.7	827.7	821.8	815.9	813.9
25°	823.7	820.8	817.7	814.8	811.9	807.1	800.4	793.7	787.0	780.4	777.6
27.5°	792.6	788.9	785.2	781.6	777.8	772.4	765.3	758.2	751.0	743.9	740.5
30°	770.8	766.8	762.7	758.7	754.6	748.7	741.0	733.4	725.7	718.0	714.0
32.5°	748.0	743.4	738.8	734.1	729.6	723.3	715.4	707.5	699.6	691.6	686.9
35°	712.2	707.0	701.7	696.5	691.4	684.7	676.5	668.4	660.2	652.1	646.5
37.5°	673.9	668.5	663.2	657.8	652.3	645.2	636.1	627.1	618.1	609.1	602.9
40°	646.9	641.5	636.1	630.7	625.4	618.0	608.8	599.5	590.2	580.9	574.0
42.5°	621.0	615.5	609.8	604.2	598.5	590.9	581.2	571.5	561.8	552.1	545.2
45°	580.9	574.9	568.8	562.8	556.8	548.8	539.0	529.3	519.5	509.7	501.7
47.5°	539.4	533.2	526.9	520.7	514.4	506.2	496.1	486.0	475.8	465.6	457.3
50°	511.2	504.8	498.5	492.1	485.8	477.4	466.9	456.6	446.1	435.6	427.5
52.5°	482.5	476.3	470.0	463.8	457.5	449.1	438.4	427.7	417.0	406.3	398.0
55°	440.1	433.6	427.1	420.5	414.0	405.4	394.8	384.3	373.6	363.1	354.6
57.5°	398.1	391.3	384.6	377.8	371.0	362.4	351.9	341.5	331.1	320.7	312.1
60°	368.2	361.7	355.2	348.6	342.1	333.7	323.2	312.7	302.4	291.9	283.4
62.5°	341.2	334.4	327.6	320.8	314.1	305.4	294.6	284.0	273.2	262.6	254.8
65°	299.3	292.3	285.2	278.2	271.2	262.5	252.0	241.7	231.2	220.7	213.8
67.5°	255.7	248.9	242.2	235.5	228.8	220.6	210.9	201.2	191.6	181.9	175.9
70°	228.1	221.2	214.4	207.5	200.8	192.7	183.3	174.1	164.8	155.5	150.1
72.5°	198.8	192.6	186.3	180.2	174.0	166.5	157.8	149.0	140.2	131.4	126.9
75°	159.2	153.2	147.1	141.1	135.1	128.2	120.6	112.8	105.2	97.6	93.8
77.5°	118.9	113.9	108.8	103.6	98.5	92.8	86.6	80.5	74.3	68.1	65.9
80°	93.1	88.4	83.7	79.0	74.3	69.5	64.6	59.7	54.8	49.9	49.4
82.5°	70.9	66.5	62.2	57.9	53.5	50.0	47.1	44.3	41.6	38.7	38.4
85°	39.6	36.4	33.1	29.8	26.6	24.7	24.2	23.8	23.2	22.7	22.4
87.5°	14.1	13.7	13.1	12.6	12.2	12.0	12.3	12.5	12.8	13.0	13.2
90°	3.3	5.9	8.7	11.3	13.9	16.3	18.3	20.2	22.1	24.1	25.5
92.5°	13.8	13.9	14.1	14.2	14.4	15.5	17.3	19.3	21.3	23.2	24.7
95°	60.2	51.9	43.6	35.4	27.1	23.1	23.4	23.6	23.8	24.1	25.5
97.5°	127.9	133.1	138.3	143.4	148.5	137.5	110.4	83.2	56.1	28.9	29.0
100°	179.6	184.0	188.4	192.7	197.2	182.6	148.9	115.4	81.8	48.2	44.0
102.5°	237.4	240.6	243.8	247.0	250.2	249.7	245.3	240.9	236.6	232.1	187.6
105°	329.6	331.1	332.5	334.0	335.5	336.9	338.1	339.2	340.4	341.7	343.9
107.5°	415.3	416.0	416.8	417.5	418.2	419.4	421.0	422.7	424.3	426.0	427.1
110°	473.2	473.8	474.6	475.3	476.1	477.1	478.6	480.0	481.5	483.0	483.4



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CANDELA DISTRIBUTION (continued):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
112.5°	529.2	530.6	531.8	533.1	534.4	535.5	536.1	536.8	537.5	538.2	538.1
115°	615.5	616.2	617.0	617.6	618.4	618.7	618.4	618.2	617.9	617.6	618.2
117.5°	693.2	694.2	695.2	696.2	697.1	697.9	698.4	699.0	699.6	700.0	699.9
120°	745.8	746.8	747.8	748.8	749.7	750.1	749.9	749.6	749.3	749.1	749.6
122.5°	794.8	795.5	796.1	796.6	797.2	797.7	798.1	798.3	798.7	799.1	799.4
125°	865.2	866.2	867.1	868.1	869.1	869.3	868.8	868.4	867.9	867.4	868.1
127.5°	931.8	932.0	932.3	932.6	932.7	933.4	934.5	935.7	936.8	937.9	937.7
130°	974.7	975.0	975.2	975.4	975.7	976.2	976.9	977.6	978.4	979.1	979.3
132.5°	1014.2	1014.6	1015.0	1015.5	1015.9	1016.6	1017.5	1018.4	1019.4	1020.3	1020.5
135°	1073.3	1073.1	1072.8	1072.5	1072.3	1072.7	1073.7	1074.6	1075.6	1076.6	1077.0
137.5°	1125.7	1125.8	1125.9	1126.0	1126.1	1126.6	1127.7	1128.8	1129.8	1130.9	1131.4
140°	1159.8	1160.3	1160.7	1161.3	1161.8	1162.2	1162.7	1163.2	1163.7	1164.2	1164.9
142.5°	1190.4	1191.4	1192.2	1193.1	1194.0	1194.6	1194.9	1195.1	1195.4	1195.7	1196.3
145°	1237.6	1238.3	1239.1	1239.7	1240.5	1240.9	1240.9	1240.9	1240.9	1240.9	1241.1
147.5°	1275.0	1276.4	1277.7	1279.1	1280.4	1281.0	1280.8	1280.5	1280.3	1280.1	1280.3
150°	1302.2	1303.2	1304.1	1305.1	1306.1	1306.5	1306.2	1306.0	1305.7	1305.4	1305.4
152.5°	1324.9	1325.8	1326.5	1327.3	1328.0	1328.2	1327.9	1327.4	1326.9	1326.5	1326.9
155°	1357.0	1357.2	1357.4	1357.6	1357.9	1357.6	1357.0	1356.2	1355.5	1354.7	1355.8
157.5°	1383.8	1383.7	1383.6	1383.5	1383.3	1382.8	1382.0	1381.2	1380.4	1379.5	1380.7
160°	1399.7	1398.9	1398.2	1397.5	1396.8	1396.3	1396.0	1395.7	1395.5	1395.2	1396.8
162.5°	1413.6	1412.8	1411.8	1410.9	1409.9	1409.4	1409.1	1408.9	1408.6	1408.4	1409.9
165°	1431.4	1430.2	1429.0	1427.8	1426.5	1426.0	1426.0	1426.0	1426.0	1426.0	1427.9
167.5°	1445.4	1444.2	1442.9	1441.6	1440.4	1439.6	1439.5	1439.4	1439.3	1439.1	1441.2
170°	1453.3	1451.9	1450.4	1449.0	1447.5	1446.9	1447.1	1447.4	1447.6	1447.8	1449.8
172.5°	1458.6	1457.1	1455.7	1454.2	1452.7	1452.1	1452.4	1452.6	1452.8	1453.1	1455.0
175°	1464.2	1462.8	1461.3	1459.9	1458.4	1457.8	1458.0	1458.3	1458.6	1458.8	1460.9
177.5°	1466.9	1465.6	1464.1	1462.8	1461.4	1460.9	1461.3	1461.7	1462.2	1462.5	1464.1
180°	1464.2	1464.2	1464.2	1464.2	1464.2	1464.2	1464.2	1464.2	1464.2	1464.2	1464.2



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CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
0°	957.9	957.9	957.9	957.9	957.9	957.9	957.9	957.9
2.5°	954.3	955.7	957.2	957.8	957.7	957.5	957.4	957.3
5°	947.9	949.6	951.2	951.9	951.5	951.2	950.8	950.6
7.5°	935.3	936.3	937.5	937.6	937.2	936.6	936.1	935.6
10°	924.0	924.6	925.3	925.3	924.6	924.0	923.3	922.7
12.5°	909.9	910.3	910.8	910.5	909.6	908.7	907.8	906.8
15°	885.3	885.0	884.7	884.0	882.8	881.7	880.5	879.4
17.5°	855.7	854.8	853.8	852.5	850.8	849.1	847.3	845.6
20°	835.0	833.7	832.4	830.7	828.6	826.4	824.3	822.2
22.5°	812.0	810.0	808.0	806.3	804.5	802.8	801.1	799.3
25°	774.9	772.0	769.3	767.1	765.4	763.8	762.2	760.5
27.5°	737.0	733.6	730.2	727.3	724.9	722.6	720.3	717.9
30°	709.9	705.8	701.7	698.4	695.8	693.1	690.6	688.0
32.5°	682.2	677.5	672.7	669.1	666.7	664.2	661.7	659.2
35°	640.9	635.4	629.9	625.7	622.7	619.7	616.8	613.9
37.5°	596.6	590.5	584.3	579.8	576.7	573.8	570.9	568.0
40°	567.2	560.3	553.5	548.7	545.6	542.7	539.8	536.9
42.5°	538.2	531.2	524.2	519.2	516.1	513.1	510.0	507.0
45°	493.8	485.8	477.8	472.3	469.4	466.5	463.5	460.6
47.5°	449.0	440.7	432.4	426.7	423.5	420.3	417.1	413.8
50°	419.3	411.2	403.0	397.5	394.4	391.2	388.1	385.0
52.5°	389.7	381.4	373.2	367.5	364.2	361.0	357.8	354.6
55°	346.1	337.6	329.1	323.4	320.3	317.2	314.1	310.9
57.5°	303.4	294.8	286.3	280.8	278.4	276.1	273.7	271.4
60°	274.9	266.5	258.0	252.5	249.9	247.2	244.7	242.0
62.5°	246.9	239.1	231.3	226.3	224.2	222.2	220.1	218.0
65°	206.8	199.7	192.7	188.2	186.3	184.4	182.4	180.4
67.5°	169.8	163.8	157.8	153.7	151.6	149.4	147.2	145.1
70°	144.8	139.4	133.9	130.4	128.8	127.2	125.5	123.9
72.5°	122.2	117.6	113.0	110.0	108.5	107.0	105.5	104.0
75°	90.0	86.3	82.6	80.2	79.2	78.2	77.3	76.3
77.5°	63.7	61.5	59.3	58.1	57.8	57.5	57.2	56.9
80°	48.9	48.4	47.9	47.6	47.4	47.2	47.1	46.9
82.5°	38.0	37.6	37.3	37.0	36.9	36.7	36.6	36.4
85°	22.1	21.8	21.4	21.3	21.3	21.3	21.3	21.3
87.5°	13.4	13.5	13.7	13.9	14.1	14.3	14.5	14.8
90°	27.1	28.5	30.0	30.9	31.4	31.9	32.3	32.9
92.5°	26.1	27.6	29.0	29.9	30.0	30.1	30.2	30.3
95°	27.1	28.5	30.0	30.8	31.0	31.3	31.5	31.8
97.5°	29.2	29.3	29.5	29.7	30.0	30.2	30.4	30.6
100°	39.9	35.8	31.7	29.7	30.0	30.2	30.4	30.6
102.5°	142.9	98.3	53.6	31.4	31.4	31.5	31.5	31.6
105°	346.1	348.3	350.4	347.1	338.4	329.6	320.9	312.2
107.5°	428.2	429.2	430.3	431.3	432.3	433.2	434.0	435.0
110°	484.0	484.5	484.9	485.5	486.3	487.0	487.8	488.4



TEST NUMBER: P332922-830

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CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
112.5°	538.0	537.9	537.8	538.2	539.1	540.1	541.0	541.9
115°	618.7	619.2	619.6	619.9	619.9	619.9	619.9	619.9
117.5°	699.8	699.7	699.6	699.6	699.5	699.4	699.3	699.2
120°	750.1	750.5	751.0	751.0	750.5	750.1	749.6	749.1
122.5°	799.7	799.9	800.2	800.1	799.7	799.2	798.6	798.1
125°	868.8	869.6	870.3	870.8	871.0	871.3	871.6	871.8
127.5°	937.6	937.5	937.4	937.2	937.0	936.8	936.6	936.4
130°	979.6	979.9	980.1	980.1	980.1	980.1	980.1	980.1
132.5°	1020.8	1021.1	1021.2	1021.2	1021.1	1020.9	1020.7	1020.5
135°	1077.5	1078.0	1078.6	1079.0	1079.5	1080.0	1080.4	1080.9
137.5°	1132.0	1132.5	1133.0	1133.2	1133.1	1132.9	1132.7	1132.7
140°	1165.6	1166.4	1167.2	1167.6	1167.8	1168.1	1168.3	1168.6
142.5°	1196.8	1197.3	1197.9	1198.2	1198.3	1198.3	1198.3	1198.3
145°	1241.3	1241.6	1241.8	1242.2	1242.6	1243.1	1243.7	1244.2
147.5°	1280.4	1280.6	1280.8	1281.0	1281.3	1281.6	1281.8	1282.0
150°	1305.4	1305.4	1305.4	1305.6	1305.8	1306.1	1306.4	1306.6
152.5°	1327.3	1327.7	1328.0	1328.1	1328.0	1327.9	1327.8	1327.6
155°	1356.7	1357.6	1358.7	1358.8	1358.0	1357.3	1356.6	1355.8
157.5°	1382.1	1383.3	1384.6	1384.6	1383.3	1382.1	1380.7	1379.5
160°	1398.2	1399.7	1401.1	1401.1	1399.7	1398.2	1396.8	1395.2
162.5°	1411.4	1412.8	1414.3	1414.2	1412.5	1410.9	1409.2	1407.5
165°	1429.8	1431.8	1433.7	1433.6	1431.4	1429.2	1427.0	1424.8
167.5°	1443.4	1445.5	1447.7	1447.5	1445.1	1442.7	1440.2	1437.8
170°	1451.7	1453.7	1455.7	1455.4	1452.9	1450.5	1448.1	1445.7
172.5°	1457.0	1459.0	1460.8	1460.6	1457.9	1455.3	1452.6	1450.0
175°	1463.2	1465.4	1467.5	1467.2	1464.2	1461.3	1458.4	1455.5
177.5°	1465.7	1467.2	1468.8	1468.4	1466.0	1463.7	1461.3	1459.1
180°	1464.2	1464.2	1464.2	1464.2	1464.2	1464.2	1464.2	1464.2

(END OF REPORT)