

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: P332375-935

Luminaire Tested: **S123RDIP-S1165D805U935-4F0-1E-UDD-F**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P332375-935
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: S123RDIP-S1165D805U935-4F0-1E-UDD-F
Description: DEFINE 3 DIRECT-INDIRECT PENDANT LED LUMINAIRE
DOWNLIGHT 1165 LUMENS PER FOOT, FLUSH SATIN WHITE DIFFUSER, REGRESSED
HOUSING
UPLIGHT 805 LUMENS PER FOOT, NO LENS
Light Source: -
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 6535.4 lumens
Efficiency: N/A
Efficacy: 107.7 lumens/watt
Spacing Criteria (0/90/45): 1.21 / 1.06 / 1.22
Luminous Opening: Rectangular (W 0.25' x L: 4' x H: 0')
CIE Type: General Diffuse

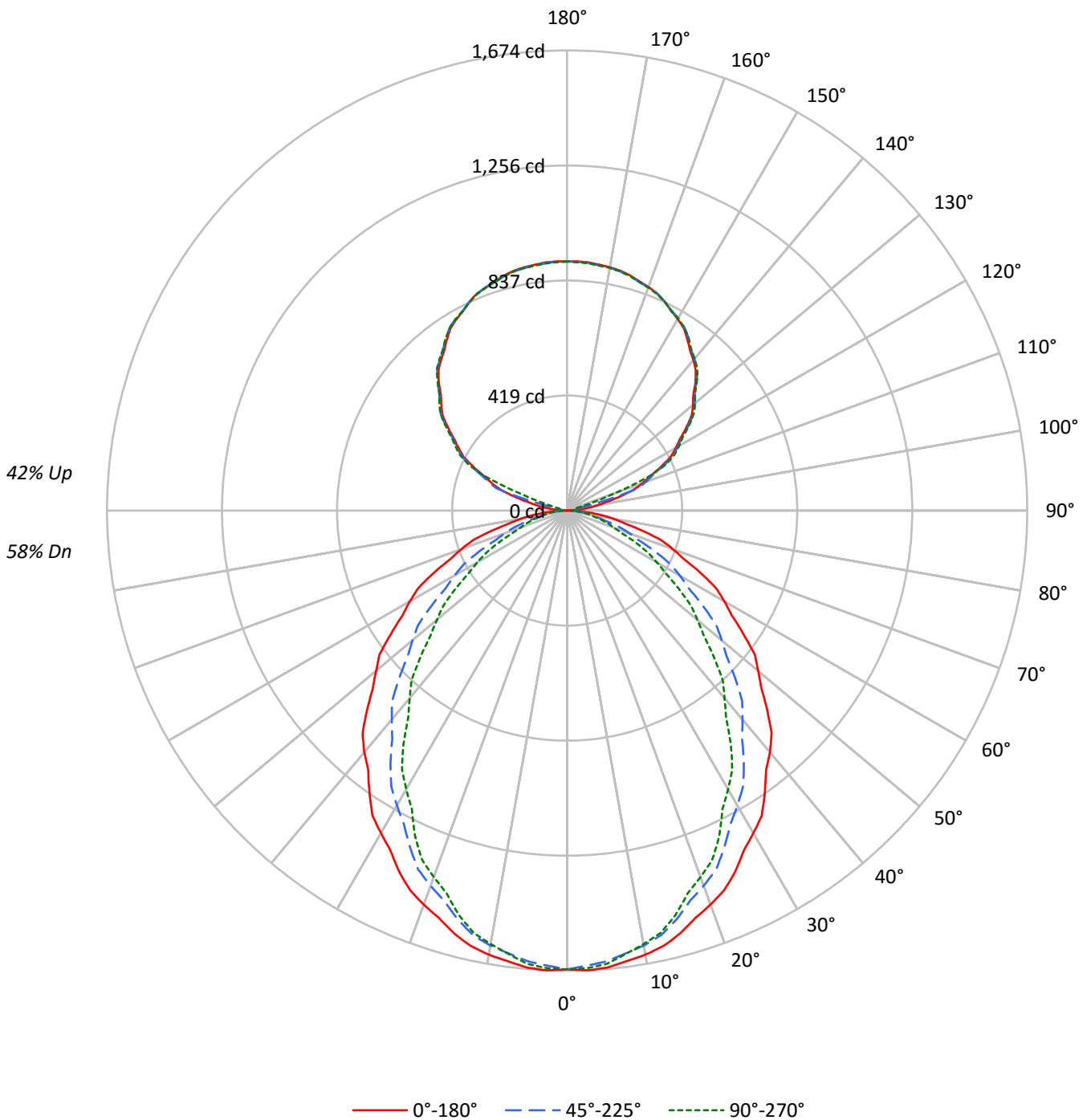
Input Watts (W): 60.7
Input Voltage (V): 120
Input Current (A_{in}): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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
RW	70	50	30	10	70	50	30	10	50	30	10	50	30	10	50	30	10
RCR																	
0	109	109	109	109	102	102	102	102	88	88	88	75	75	75	63	63	63
1	100	96	92	88	93	89	86	83	77	75	73	67	65	63	56	55	54
2	91	84	78	73	85	79	73	69	68	64	61	59	56	53	50	48	46
3	83	74	67	61	78	69	63	58	61	56	52	52	49	46	45	42	40
4	77	66	58	52	71	62	55	49	54	49	44	47	43	39	40	37	34
5	70	59	51	45	65	55	48	43	49	43	38	42	38	34	36	33	30
6	65	53	45	39	60	50	43	37	44	38	34	38	34	30	33	30	27
7	60	48	40	35	56	45	38	33	40	34	30	35	30	27	30	27	24
8	56	44	36	31	52	41	34	29	37	31	27	32	28	24	28	24	22
9	52	40	33	27	49	38	31	26	34	28	24	30	25	22	26	22	20
10	49	37	30	25	46	35	28	24	31	26	22	27	23	20	24	20	18

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	17963	17963	17963
5°	18031	17782	17884
10°	17930	17559	17500
15°	17736	17149	16967
20°	17472	16635	16247
25°	17199	16057	15543
30°	16839	15392	14551
35°	16469	14725	13641
40°	16127	13939	12513
45°	15678	13164	11496
50°	15185	12285	10357
55°	14681	11277	9295
60°	14219	10198	8129
65°	13616	9032	6963
70°	12862	7582	5624
75°	11761	5964	5294
80°	10488	5281	4866
85°	8855	4681	4347



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	156.7	2.4
10°-20°	436.0	6.7
20°-30°	627.8	9.6
30°-40°	707.2	10.8
40°-50°	676.5	10.4
50°-60°	554.0	8.5
60°-70°	373.8	5.7
70°-80°	188.1	2.9
80°-90°	52.3	0.8
90°-100°	32.9	0.5
100°-110°	157.0	2.4
110°-120°	377.1	5.8
120°-130°	480.2	7.3
130°-140°	513.1	7.9
140°-150°	479.8	7.3
150°-160°	387.0	5.9
160°-170°	249.8	3.8
170°-180°	86.1	1.3
0°-30°	1220.5	18.7
0°-40°	1927.7	29.5
0°-60°	3158.3	48.3
0°-90°	3772.4	57.7
90°-120°	567.0	8.7
90°-150°	2040.1	31.2
90°-180°	2763.0	42.3
0°-180°	6535.4	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1669	1669	1669	1669	1669	
5°	1669	1662	1646	1657	1655	158
15°	1592	1575	1539	1532	1523	448
25°	1448	1413	1352	1324	1309	666
35°	1253	1203	1121	1064	1038	784
45°	1030	967	865	790	755	794
55°	782	713	601	525	495	701
65°	535	458	355	291	273	529
75°	283	217	143	131	127	302
85°	72	43	38	35	35	81
90°	1	8	16	19	20	5
95°	41	15	21	25	26	51
105°	201	204	147	35	30	213
115°	376	380	386	393	396	371
125°	530	536	538	540	541	474
135°	660	664	667	669	667	508
145°	762	766	768	769	769	477
155°	839	838	839	842	838	387
165°	885	883	882	887	883	250
175°	906	903	903	907	903	86
180°	906	906	906	906	906	



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CANDELA DISTRIBUTION (FULL):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
0°	1668.8	1668.8	1668.8	1668.8	1668.8	1668.8	1668.8	1668.8	1668.8	1668.8	1668.8
2.5°	1674.2	1673.2	1672.2	1671.3	1670.3	1668.4	1665.5	1662.6	1659.7	1656.8	1659.5
5°	1668.8	1667.2	1665.8	1664.2	1662.8	1660.2	1656.6	1652.9	1649.3	1645.7	1648.5
7.5°	1653.3	1651.7	1650.1	1648.5	1646.8	1643.6	1639.0	1634.3	1629.6	1624.9	1626.4
10°	1640.4	1638.2	1636.2	1634.0	1631.9	1628.2	1622.7	1617.3	1611.9	1606.5	1606.8
12.5°	1622.0	1619.6	1617.2	1614.9	1612.6	1608.1	1601.5	1594.8	1588.2	1581.6	1581.4
15°	1591.6	1588.3	1585.0	1581.7	1578.4	1572.5	1564.1	1555.7	1547.2	1538.9	1537.3
17.5°	1553.4	1549.6	1545.8	1541.9	1538.1	1530.8	1520.1	1509.3	1498.7	1488.0	1484.8
20°	1525.3	1520.5	1515.7	1510.9	1506.1	1498.0	1486.5	1475.1	1463.6	1452.2	1448.3
22.5°	1493.9	1488.3	1482.8	1477.3	1471.8	1462.9	1450.8	1438.6	1426.5	1414.3	1409.5
25°	1448.1	1440.6	1433.1	1425.6	1418.1	1407.4	1393.5	1379.8	1365.9	1352.0	1345.7
27.5°	1392.7	1384.4	1376.1	1367.8	1359.4	1347.6	1332.2	1316.8	1301.4	1286.0	1277.2
30°	1354.8	1345.7	1336.7	1327.7	1318.7	1305.7	1288.9	1272.0	1255.3	1238.4	1228.1
32.5°	1316.9	1306.7	1296.4	1286.2	1276.0	1262.0	1244.1	1226.3	1208.5	1190.8	1179.6
35°	1253.3	1242.4	1231.6	1220.8	1210.0	1195.2	1176.6	1158.0	1139.3	1120.6	1107.7
37.5°	1188.9	1176.8	1164.8	1152.7	1140.7	1124.7	1104.8	1084.9	1065.1	1045.1	1030.4
40°	1147.7	1134.5	1121.2	1108.0	1094.8	1077.5	1056.1	1034.7	1013.4	992.0	976.4
42.5°	1101.1	1087.9	1074.7	1061.4	1048.2	1030.5	1008.5	986.4	964.3	942.3	925.1
45°	1029.9	1016.4	1002.9	989.4	975.8	957.4	934.3	911.1	887.9	864.8	847.7
47.5°	958.7	943.9	929.0	914.2	899.3	880.3	857.1	834.0	810.8	787.7	769.0
50°	906.8	892.7	878.5	864.4	850.2	831.0	806.7	782.3	757.9	733.6	714.9
52.5°	860.2	844.9	829.6	814.2	798.8	779.1	755.0	730.9	706.8	682.7	663.3
55°	782.3	767.5	752.8	738.0	723.3	703.2	677.6	652.0	626.5	600.9	583.5
57.5°	710.2	694.2	678.1	662.1	646.0	625.2	599.5	573.8	548.1	522.5	505.9
60°	660.5	643.9	627.4	610.9	594.3	573.5	548.5	523.7	498.7	473.7	457.4
62.5°	610.6	594.1	577.6	561.0	544.5	523.7	498.8	473.8	448.8	423.9	408.6
65°	534.6	518.1	501.5	485.0	468.5	448.4	425.0	401.5	378.1	354.6	339.8
67.5°	458.6	441.8	425.1	408.4	391.7	372.0	349.6	327.0	304.5	282.1	271.0
70°	408.7	392.5	376.3	360.0	343.8	325.1	304.1	283.0	262.0	240.9	230.4
72.5°	359.0	342.9	326.9	310.9	294.9	277.3	258.2	239.1	220.0	200.9	192.3
75°	282.8	268.5	254.0	239.5	225.2	209.7	193.1	176.5	160.0	143.4	140.4
77.5°	213.5	200.5	187.4	174.4	161.4	149.5	138.9	128.2	117.5	106.9	105.3
80°	169.2	156.9	144.5	132.2	119.9	110.6	104.2	97.9	91.6	85.2	84.4
82.5°	126.9	116.3	105.6	95.0	84.4	77.6	74.6	71.6	68.7	65.8	64.8
85°	71.7	65.1	58.5	51.9	45.3	41.5	40.6	39.7	38.8	37.9	37.3
87.5°	26.1	23.8	21.4	19.1	16.7	15.8	16.1	16.5	16.9	17.3	17.2
90°	0.7	2.2	3.7	5.2	6.6	8.4	10.3	12.2	14.2	16.2	16.8
92.5°	12.5	12.1	11.7	11.3	10.8	11.4	12.8	14.3	15.8	17.2	18.2
95°	41.1	35.0	28.8	22.6	16.5	14.3	15.9	17.6	19.2	20.8	22.0
97.5°	82.5	79.8	77.1	74.3	71.5	64.7	54.0	43.2	32.5	21.7	22.9
100°	113.7	116.8	119.8	122.7	125.7	115.5	92.2	68.9	45.5	22.2	23.4
102.5°	149.3	151.4	153.6	155.8	157.9	146.3	120.8	95.2	69.7	44.3	40.6
105°	200.6	202.2	203.9	205.5	207.2	201.3	187.8	174.4	160.8	147.4	121.0
107.5°	254.7	256.1	257.4	258.6	259.9	261.7	263.8	266.0	268.0	270.2	250.8
110°	290.8	292.0	293.2	294.4	295.6	297.0	298.7	300.3	302.0	303.6	298.7



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CANDELA DISTRIBUTION (continued):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
112.5°	325.3	326.3	327.4	328.5	329.6	330.9	332.6	334.2	335.9	337.5	337.6
115°	376.3	377.2	378.1	379.0	379.9	381.0	382.4	383.7	385.0	386.4	387.9
117.5°	425.7	426.8	427.9	429.0	430.1	431.0	431.7	432.4	433.1	433.8	435.0
120°	456.4	457.7	459.1	460.4	461.8	462.7	463.1	463.6	464.0	464.4	465.6
122.5°	487.6	488.7	489.8	490.9	492.1	492.8	493.4	494.0	494.6	495.2	496.0
125°	530.5	531.6	532.8	534.0	535.2	536.1	536.7	537.3	537.9	538.5	538.8
127.5°	571.9	573.1	574.3	575.5	576.7	577.6	578.3	579.1	579.8	580.5	581.0
130°	597.7	598.9	600.1	601.3	602.5	603.4	604.0	604.6	605.2	605.8	606.4
132.5°	622.5	623.7	624.9	626.1	627.3	628.1	628.6	629.0	629.6	630.1	630.7
135°	660.3	661.2	662.1	663.1	663.9	664.7	665.3	665.9	666.5	667.1	667.5
137.5°	692.7	693.8	694.9	696.0	697.2	697.9	698.3	698.6	698.9	699.2	700.0
140°	714.2	715.1	716.0	716.9	717.8	718.4	718.9	719.4	719.8	720.2	720.8
142.5°	734.1	735.0	735.9	736.8	737.7	738.4	738.8	739.3	739.7	740.2	740.6
145°	762.0	763.0	764.1	765.1	766.2	766.8	767.2	767.4	767.8	768.0	768.4
147.5°	788.2	788.9	789.6	790.3	791.0	791.5	791.8	792.0	792.4	792.6	793.0
150°	804.3	804.9	805.3	805.7	806.2	806.6	806.8	807.2	807.4	807.8	808.0
152.5°	818.9	819.2	819.3	819.6	819.8	819.9	820.1	820.3	820.5	820.7	821.2
155°	839.4	839.1	838.8	838.5	838.2	838.1	838.3	838.4	838.5	838.7	839.5
157.5°	855.2	855.2	855.2	855.1	855.1	855.1	854.9	854.8	854.6	854.5	855.4
160°	865.0	864.8	864.7	864.5	864.4	864.2	864.1	863.9	863.8	863.6	864.5
162.5°	874.1	873.7	873.3	873.0	872.5	872.3	872.1	872.0	871.8	871.7	872.7
165°	885.2	884.7	884.2	883.8	883.4	883.0	883.0	882.8	882.6	882.4	883.6
167.5°	893.8	893.2	892.6	892.0	891.4	891.0	891.0	891.0	891.0	891.0	892.3
170°	898.6	898.0	897.4	896.8	896.2	896.0	896.0	896.0	896.0	896.0	897.2
172.5°	901.8	901.1	900.4	899.7	899.0	898.7	898.8	898.9	899.1	899.1	900.3
175°	906.0	905.3	904.6	903.8	903.0	902.8	902.8	903.0	903.2	903.4	904.4
177.5°	907.1	906.5	905.9	905.3	904.7	904.5	904.6	904.7	904.8	904.9	905.9
180°	906.0	906.0	906.0	906.0	906.0	906.0	906.0	906.0	906.0	906.0	906.0



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CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
0°	1668.8	1668.8	1668.8	1668.8	1668.8	1668.8	1668.8	1668.8
2.5°	1662.2	1664.8	1667.4	1668.5	1668.0	1667.6	1667.1	1666.6
5°	1651.1	1653.9	1656.6	1657.6	1657.0	1656.4	1655.8	1655.2
7.5°	1627.9	1629.4	1630.9	1631.2	1630.1	1629.1	1628.1	1627.0
10°	1607.1	1607.4	1607.7	1607.1	1605.6	1604.1	1602.6	1601.1
12.5°	1581.2	1581.1	1580.9	1579.9	1578.2	1576.4	1574.7	1573.0
15°	1535.9	1534.3	1532.8	1531.0	1528.9	1526.8	1524.7	1522.6
17.5°	1481.6	1478.3	1475.2	1472.1	1468.9	1465.8	1462.7	1459.5
20°	1444.4	1440.5	1436.6	1432.8	1429.2	1425.6	1422.0	1418.4
22.5°	1404.5	1399.7	1394.8	1390.7	1387.3	1384.0	1380.6	1377.3
25°	1339.5	1333.1	1326.8	1322.0	1318.7	1315.3	1312.1	1308.7
27.5°	1268.4	1259.6	1250.9	1244.0	1238.9	1233.9	1228.8	1223.7
30°	1217.9	1207.7	1197.5	1190.0	1185.2	1180.3	1175.5	1170.7
32.5°	1168.4	1157.2	1146.0	1137.9	1132.8	1127.7	1122.7	1117.7
35°	1094.8	1081.8	1068.9	1059.7	1054.3	1048.9	1043.4	1038.1
37.5°	1015.7	1001.1	986.4	975.7	969.1	962.3	955.7	949.0
40°	960.8	945.1	929.5	918.3	911.3	904.4	897.5	890.5
42.5°	908.1	891.0	873.9	862.3	856.1	849.9	843.7	837.5
45°	830.5	813.4	796.3	784.1	776.9	769.6	762.4	755.2
47.5°	750.4	731.8	713.1	700.6	694.1	687.7	681.2	674.9
50°	696.3	677.6	658.9	646.2	639.3	632.3	625.4	618.5
52.5°	643.9	624.6	605.2	592.4	586.2	580.1	573.9	567.7
55°	566.0	548.5	531.2	519.4	513.4	507.4	501.4	495.3
57.5°	489.5	472.9	456.5	445.7	440.6	435.5	430.3	425.2
60°	441.2	425.0	408.7	398.0	393.0	387.8	382.7	377.6
62.5°	393.3	378.1	362.7	352.5	347.1	341.7	336.4	331.1
65°	325.1	310.4	295.7	286.6	283.4	280.0	276.7	273.4
67.5°	260.0	249.0	238.0	230.7	227.2	223.6	220.1	216.5
70°	219.8	209.3	198.8	191.9	188.6	185.3	181.9	178.7
72.5°	183.7	175.0	166.4	161.4	160.1	158.7	157.3	155.9
75°	137.4	134.4	131.4	129.7	129.1	128.5	127.9	127.3
77.5°	103.7	102.0	100.4	99.3	98.7	98.1	97.5	96.9
80°	83.4	82.6	81.6	80.9	80.3	79.7	79.1	78.5
82.5°	64.0	63.1	62.2	61.6	61.6	61.4	61.3	61.2
85°	36.7	36.1	35.5	35.2	35.2	35.2	35.2	35.2
87.5°	17.0	17.0	16.8	16.7	16.5	16.3	16.1	15.9
90°	17.4	17.9	18.5	19.0	19.3	19.6	19.9	20.2
92.5°	19.1	20.1	21.1	21.6	21.8	22.0	22.1	22.4
95°	23.0	24.0	25.1	25.6	25.6	25.6	25.6	25.6
97.5°	24.1	25.2	26.4	27.1	27.3	27.5	27.6	27.7
100°	24.6	25.8	27.0	27.6	27.8	28.0	28.2	28.2
102.5°	36.9	33.1	29.4	27.7	28.0	28.2	28.5	28.8
105°	94.5	68.0	41.5	28.4	28.8	29.0	29.4	29.6
107.5°	231.4	212.0	192.5	172.8	152.9	132.9	113.0	93.0
110°	293.7	288.8	283.9	270.7	249.3	227.9	206.5	185.1



TEST NUMBER: P332375-935

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CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
112.5°	337.7	337.8	337.9	335.6	331.1	326.6	322.1	317.6
115°	389.3	390.9	392.4	393.4	394.0	394.6	395.2	395.8
117.5°	436.2	437.4	438.5	439.2	439.4	439.5	439.5	439.7
120°	466.8	468.0	469.2	469.8	469.8	469.8	469.8	469.8
122.5°	496.8	497.7	498.5	498.9	499.1	499.2	499.4	499.5
125°	539.1	539.4	539.7	540.0	540.3	540.6	540.9	541.2
127.5°	581.4	581.9	582.4	582.5	582.2	581.9	581.6	581.3
130°	607.0	607.6	608.2	608.4	608.0	607.8	607.4	607.2
132.5°	631.2	631.8	632.4	632.5	632.1	631.7	631.3	630.9
135°	668.0	668.4	668.8	668.8	668.4	668.0	667.5	667.1
137.5°	700.7	701.4	702.1	702.3	702.1	701.7	701.5	701.1
140°	721.4	722.0	722.6	722.8	722.5	722.2	721.9	721.6
142.5°	741.1	741.6	742.1	742.1	741.7	741.2	740.9	740.5
145°	768.6	769.0	769.2	769.4	769.4	769.4	769.4	769.4
147.5°	793.2	793.6	793.8	793.7	793.0	792.3	791.6	790.9
150°	808.3	808.7	808.9	808.9	808.4	808.0	807.5	807.1
152.5°	821.7	822.3	822.9	822.8	822.1	821.4	820.7	820.0
155°	840.2	840.9	841.7	841.6	840.8	839.8	839.0	838.0
157.5°	856.3	857.1	858.1	857.9	856.8	855.6	854.5	853.3
160°	865.4	866.3	867.2	867.1	866.1	865.0	864.0	863.0
162.5°	873.7	874.8	875.7	875.8	874.9	873.9	873.1	872.1
165°	884.8	886.1	887.3	887.3	886.3	885.2	884.2	883.1
167.5°	893.5	894.7	895.9	895.9	894.7	893.5	892.3	891.0
170°	898.3	899.5	900.7	900.7	899.5	898.3	897.2	896.0
172.5°	901.6	902.8	904.0	903.9	902.6	901.3	899.9	898.6
175°	905.4	906.5	907.5	907.4	906.3	905.1	903.9	902.7
177.5°	906.9	907.8	908.8	908.7	907.5	906.3	905.1	903.9
180°	906.0	906.0	906.0	906.0	906.0	906.0	906.0	906.0

(END OF REPORT)