

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: P332069-935

Luminaire Tested: **S123DIP-S1165D805U935-4F0-1E-UDD-F**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P332069-935
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: S123DIP-S1165D805U935-4F0-1E-UDD-F
Description: DEFINE 3 DIRECT-INDIRECT PENDANT LED LUMINAIRE
DOWNLIGHT 1165 LUMENS PER FOOT, FLUSH SATIN WHITE DIFFUSER
UPLIGHT 805 LUMENS PER FOOT, NO LENS
Light Source: -
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 6861.2 lumens
Efficiency: N/A
Efficacy: 113.0 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: General Diffuse

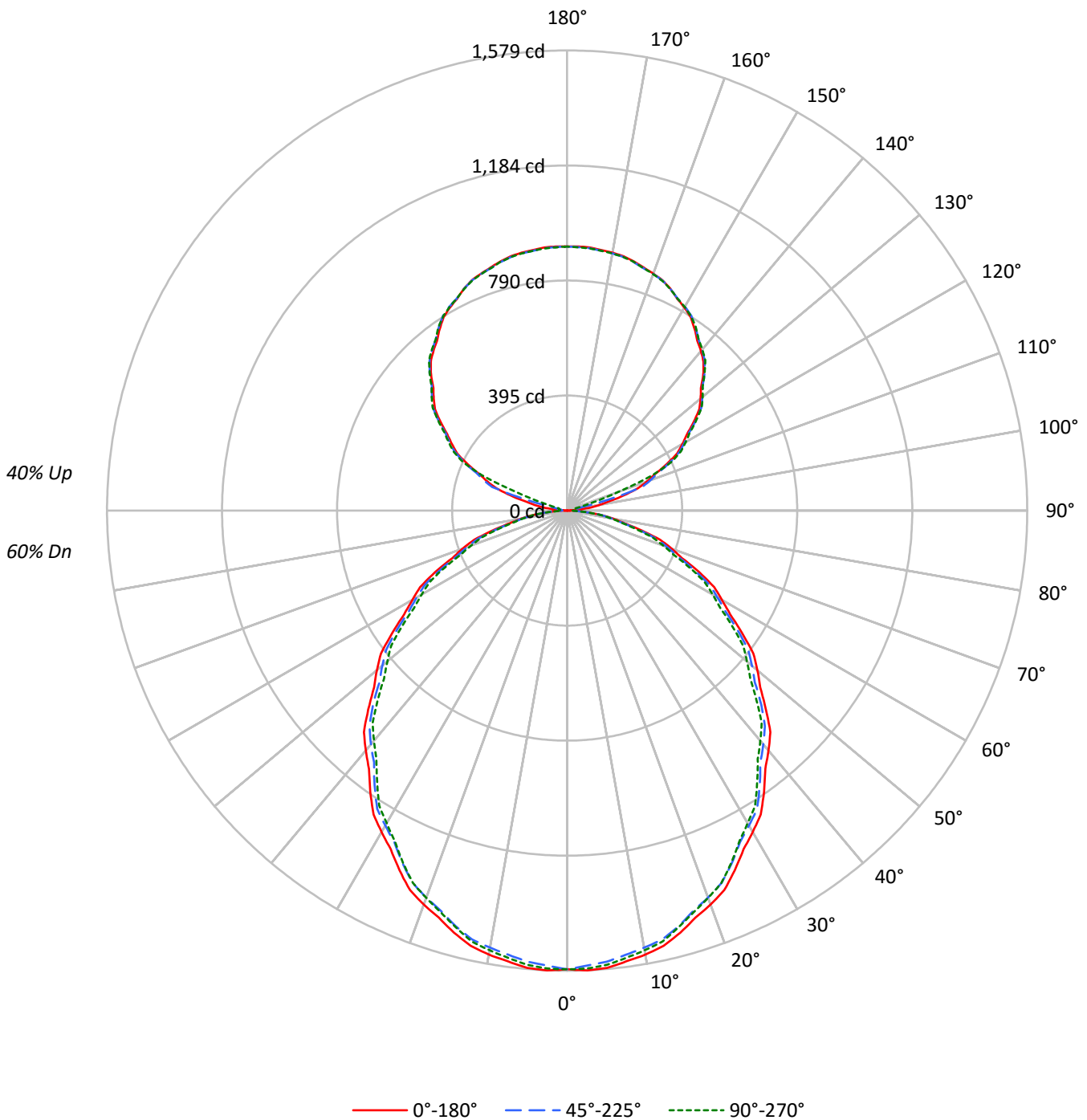
Input Watts (W): 60.7
Input Voltage (V): 120
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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	109	109	109	109	102	102	102	102	89	89	89	76	76	76	65	65	65	60
1	100	95	91	88	93	89	86	83	78	75	73	67	65	64	57	56	55	50
2	91	83	77	72	85	78	73	68	68	64	60	59	56	53	50	48	46	42
3	83	73	66	60	77	69	62	57	60	55	51	52	48	45	45	42	39	35
4	76	65	57	51	71	61	54	48	53	48	43	46	42	38	40	37	34	30
5	70	58	50	43	65	54	47	41	48	42	37	42	37	33	36	32	29	26
6	64	52	44	38	60	49	41	36	43	37	33	38	33	29	33	29	26	23
7	59	47	39	33	55	44	37	32	39	33	29	34	29	26	30	26	23	21
8	55	43	35	29	51	40	33	28	36	30	26	31	27	23	27	24	21	18
9	51	39	31	26	48	37	30	25	33	27	23	29	24	21	25	21	19	17
10	48	36	28	24	45	34	27	23	30	25	21	27	22	19	23	20	17	15

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	16942	16942	16942
5°	17022	16788	16904
10°	16909	16642	16746
15°	16711	16454	16485
20°	16479	16186	16200
25°	16170	15865	15833
30°	15830	15509	15392
35°	15473	15135	14939
40°	15100	14720	14491
45°	14690	14338	13988
50°	14277	13870	13485
55°	13741	13386	12979
60°	13199	12820	12411
65°	12720	12202	11826
70°	12013	11500	10990
75°	10975	10580	10131
80°	9899	9478	9397
85°	8682	8361	8028



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	148.3	2.2
10°-20°	418.7	6.1
20°-30°	618.4	9.0
30°-40°	722.4	10.5
40°-50°	726.3	10.6
50°-60°	638.0	9.3
60°-70°	475.3	6.9
70°-80°	270.8	3.9
80°-90°	80.3	1.2
90°-100°	32.9	0.5
100°-110°	157.0	2.3
110°-120°	377.1	5.5
120°-130°	480.2	7.0
130°-140°	513.1	7.5
140°-150°	479.8	7.0
150°-160°	387.0	5.6
160°-170°	249.8	3.6
170°-180°	86.1	1.3
0°-30°	1185.3	17.3
0°-40°	1907.7	27.8
0°-60°	3272.0	47.7
0°-90°	4098.3	59.7
90°-120°	567.0	8.3
90°-150°	2040.1	29.7
90°-180°	2763.0	40.3
0°-180°	6861.2	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1574	1574	1574	1574	1574	
5°	1575	1568	1554	1566	1564	149
15°	1500	1494	1476	1486	1479	423
25°	1362	1353	1336	1337	1333	627
35°	1178	1169	1152	1144	1137	736
45°	965	959	942	926	919	745
55°	732	730	713	699	692	656
65°	499	492	479	469	464	493
75°	264	259	254	248	244	282
85°	70	68	68	65	65	77
90°	1	8	16	19	20	6
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°	1574.0	1574.0	1574.0	1574.0	1574.0	1574.0	1574.0	1574.0	1574.0	1574.0	1574.0
2.5°	1579.4	1578.5	1577.5	1576.6	1575.5	1573.7	1571.2	1568.5	1565.8	1563.1	1565.6
5°	1575.4	1573.9	1572.4	1570.9	1569.3	1566.9	1563.7	1560.3	1557.0	1553.7	1556.7
7.5°	1560.0	1558.4	1556.9	1555.4	1553.9	1551.4	1548.0	1544.6	1541.2	1537.7	1540.4
10°	1547.0	1545.4	1543.9	1542.4	1540.9	1538.3	1534.3	1530.4	1526.5	1522.6	1525.3
12.5°	1529.7	1528.4	1527.1	1525.9	1524.6	1522.1	1518.5	1514.8	1511.1	1507.4	1509.4
15°	1499.6	1498.4	1497.2	1496.0	1494.8	1492.2	1488.3	1484.4	1480.5	1476.5	1478.9
17.5°	1464.6	1463.1	1461.5	1460.0	1458.4	1455.7	1451.7	1447.9	1443.9	1440.0	1441.7
20°	1438.6	1436.8	1435.0	1433.2	1431.5	1428.6	1424.7	1420.8	1416.9	1413.0	1414.2
22.5°	1409.5	1407.6	1405.8	1404.0	1402.2	1399.4	1395.4	1391.5	1387.7	1383.7	1384.7
25°	1361.5	1359.7	1357.9	1356.1	1354.4	1351.4	1347.6	1343.7	1339.7	1335.8	1336.1
27.5°	1310.4	1308.6	1306.9	1305.1	1303.4	1300.5	1296.2	1292.0	1287.8	1283.6	1283.8
30°	1273.6	1272.0	1270.6	1269.0	1267.6	1264.7	1260.5	1256.3	1252.1	1247.8	1247.8
32.5°	1236.7	1234.8	1232.8	1230.8	1228.8	1226.2	1223.0	1219.7	1216.4	1213.2	1211.5
35°	1177.5	1175.7	1173.9	1172.1	1170.3	1167.4	1163.5	1159.6	1155.6	1151.8	1150.0
37.5°	1116.8	1114.6	1112.2	1110.0	1107.7	1104.6	1100.6	1096.7	1092.7	1088.6	1086.5
40°	1074.6	1072.8	1071.0	1069.2	1067.4	1064.4	1060.1	1055.9	1051.7	1047.6	1045.2
42.5°	1032.3	1030.4	1028.3	1026.2	1024.2	1021.1	1016.8	1012.6	1008.4	1004.3	1001.9
45°	965.0	963.8	962.6	961.4	960.2	957.6	953.7	949.8	945.9	941.9	938.4
47.5°	898.1	896.4	894.7	892.9	891.1	888.5	884.8	881.1	877.4	873.7	870.2
50°	852.6	851.2	849.6	848.2	846.6	844.0	840.0	836.1	832.2	828.3	825.0
52.5°	805.0	804.0	803.0	801.9	800.9	798.3	794.2	790.1	785.9	781.7	778.9
55°	732.2	731.9	731.6	731.3	731.0	728.9	725.0	721.1	717.1	713.3	710.0
57.5°	662.9	661.9	660.8	659.9	658.8	656.8	653.6	650.5	647.4	644.2	641.3
60°	613.1	612.8	612.5	612.2	611.9	609.9	606.3	602.7	599.1	595.5	592.8
62.5°	568.7	567.9	567.1	566.4	565.6	563.4	559.7	556.1	552.6	549.0	546.2
65°	499.4	497.9	496.4	494.9	493.4	491.1	488.1	485.1	482.1	479.1	476.7
67.5°	426.0	424.7	423.4	422.1	420.8	419.0	416.6	414.4	412.1	409.8	407.7
70°	381.7	379.9	378.1	376.3	374.4	372.6	370.8	369.0	367.2	365.4	363.3
72.5°	335.1	333.8	332.4	331.1	329.8	328.1	326.1	324.0	322.0	319.9	318.1
75°	263.9	262.7	261.5	260.3	259.1	258.0	257.2	256.2	255.4	254.4	253.0
77.5°	200.9	200.2	199.5	198.9	198.2	197.3	196.2	195.2	194.1	193.0	192.0
80°	159.7	158.8	157.9	157.0	156.1	155.3	154.7	154.1	153.5	152.9	152.7
82.5°	119.7	119.4	119.2	119.1	118.9	118.7	118.6	118.6	118.4	118.3	117.8
85°	70.3	69.7	69.1	68.5	67.9	67.7	67.7	67.7	67.7	67.7	67.1
87.5°	28.3	27.9	27.5	27.0	26.6	26.4	26.6	26.8	26.9	27.0	26.9
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°	1574.0	1574.0	1574.0	1574.0	1574.0	1574.0	1574.0	1574.0
2.5°	1568.0	1570.4	1572.8	1573.9	1573.6	1573.4	1573.1	1573.0
5°	1559.7	1562.7	1565.7	1566.9	1566.3	1565.7	1565.1	1564.5
7.5°	1543.2	1545.8	1548.6	1549.7	1549.4	1549.0	1548.7	1548.3
10°	1528.0	1530.7	1533.4	1534.5	1533.9	1533.3	1532.7	1532.1
12.5°	1511.4	1513.4	1515.4	1516.2	1515.8	1515.4	1515.1	1514.8
15°	1481.4	1483.8	1486.2	1486.5	1484.7	1482.9	1481.1	1479.3
17.5°	1443.4	1445.1	1446.7	1447.3	1446.7	1446.0	1445.3	1444.7
20°	1415.4	1416.6	1417.8	1417.9	1417.0	1416.1	1415.2	1414.3
22.5°	1385.7	1386.6	1387.6	1387.5	1386.4	1385.2	1384.1	1382.9
25°	1336.4	1336.7	1337.0	1336.7	1335.8	1334.9	1334.0	1333.1
27.5°	1284.1	1284.3	1284.5	1284.1	1283.0	1281.8	1280.7	1279.5
30°	1247.8	1247.8	1247.8	1246.8	1244.7	1242.6	1240.4	1238.4
32.5°	1209.8	1208.2	1206.4	1205.1	1203.9	1202.7	1201.6	1200.5
35°	1148.1	1146.3	1144.5	1142.9	1141.3	1139.9	1138.3	1136.9
37.5°	1084.3	1082.2	1080.0	1078.5	1077.5	1076.5	1075.6	1074.6
40°	1042.8	1040.3	1037.9	1036.1	1034.9	1033.7	1032.5	1031.3
42.5°	999.4	997.0	994.6	992.8	991.6	990.4	989.2	988.0
45°	934.8	931.2	927.6	925.0	923.5	922.0	920.5	918.9
47.5°	866.7	863.2	859.5	857.1	855.8	854.5	853.2	851.9
50°	821.7	818.4	815.0	812.5	810.7	808.9	807.1	805.3
52.5°	776.1	773.3	770.4	768.1	766.3	764.5	762.7	760.9
55°	706.6	703.4	700.0	697.6	696.1	694.6	693.1	691.6
57.5°	638.3	635.4	632.4	630.1	628.4	626.6	624.8	623.1
60°	590.1	587.4	584.7	582.6	581.1	579.5	578.1	576.5
62.5°	543.5	540.8	538.1	536.2	535.2	534.2	533.2	532.2
65°	474.3	471.9	469.5	467.9	466.9	466.1	465.1	464.3
67.5°	405.6	403.5	401.4	399.7	398.5	397.2	395.9	394.7
70°	361.2	359.1	357.0	355.2	353.7	352.1	350.7	349.2
72.5°	316.2	314.4	312.5	311.2	310.4	309.6	308.8	308.1
75°	251.4	249.9	248.4	247.2	246.3	245.4	244.5	243.6
77.5°	191.0	189.9	188.9	188.4	188.4	188.4	188.4	188.4
80°	152.3	152.1	151.7	151.6	151.6	151.6	151.6	151.6
82.5°	117.2	116.7	116.1	115.7	115.5	115.3	115.0	114.8
85°	66.5	65.9	65.3	65.0	65.0	65.0	65.0	65.0
87.5°	26.8	26.7	26.6	26.5	26.6	26.7	26.7	26.8
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: P332069-935

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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)