

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: P332024

Luminaire Tested: **S123DIP-S1000D805U835-4F0-1E-UDD-F**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P332024
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-S1000D805U835-4F0-1E-UDD-F
Description: DEFINE 3 DIRECT-INDIRECT PENDANT LED LUMINAIRE
DOWNLIGHT 1000 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: 7330.8 lumens
Efficiency: N/A
Efficacy: 134.8 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

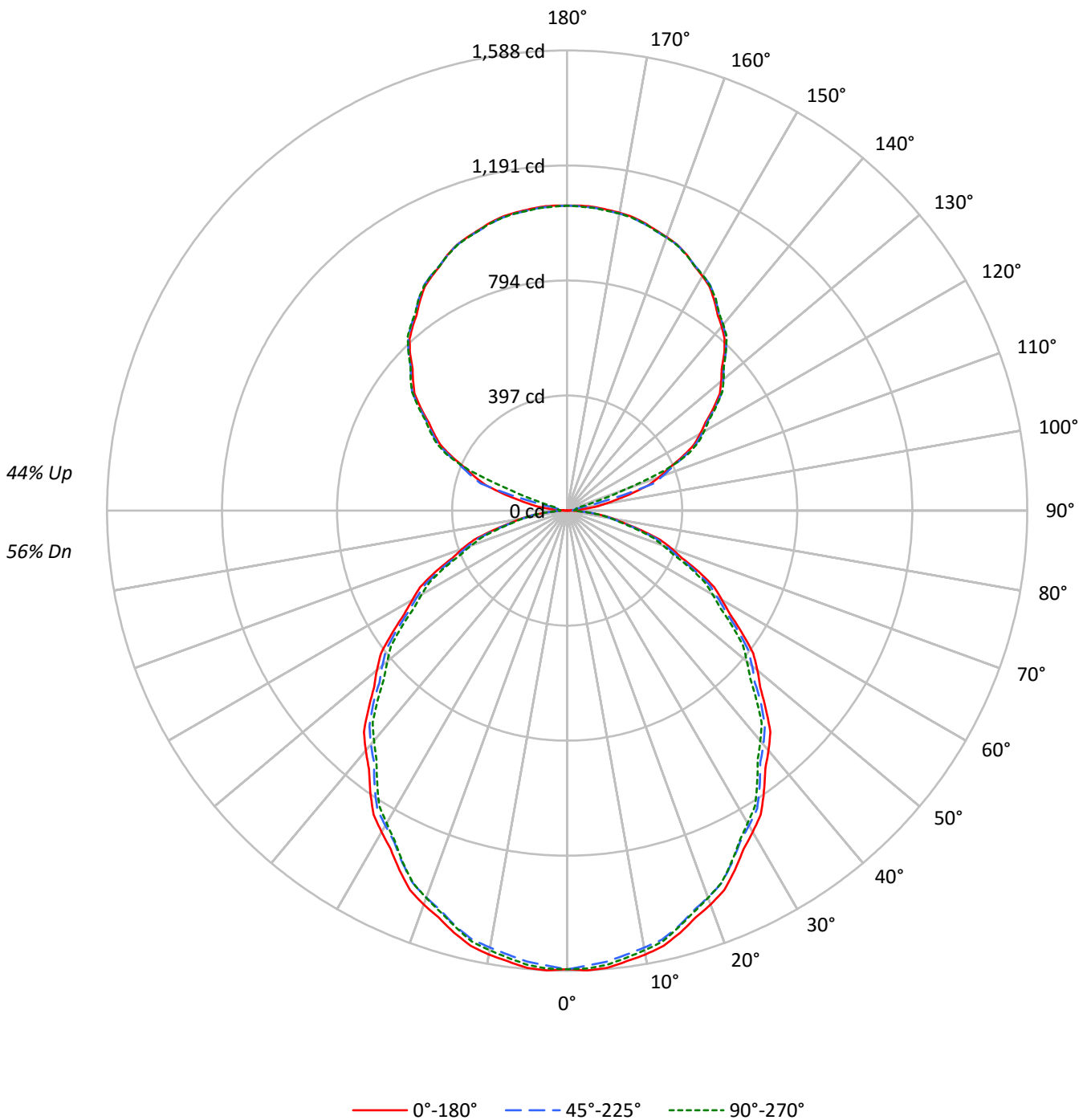
Input Watts (W): 54.4
Input Voltage (V): 120
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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	109	109	109	109	101	101	101	101	87	87	87	74	74	74	62	62	62	56
1	99	95	91	87	92	88	85	82	76	74	71	65	63	61	55	53	52	47
2	90	83	76	71	84	77	72	67	67	62	59	57	54	51	48	46	44	39
3	82	73	65	59	76	68	61	56	59	54	49	50	46	43	42	40	37	33
4	75	64	56	50	70	60	53	47	52	47	42	45	41	37	38	35	32	29
5	69	57	49	43	64	54	46	41	47	41	36	40	36	32	34	31	28	25
6	64	51	43	37	59	48	41	35	42	36	32	36	32	28	31	27	25	22
7	59	46	38	33	55	44	36	31	38	32	28	33	28	25	28	25	22	19
8	55	42	34	29	51	40	33	28	35	29	25	30	26	22	26	22	20	17
9	51	39	31	26	47	36	29	25	32	26	22	28	23	20	24	20	18	16
10	48	35	28	23	44	33	27	22	29	24	20	26	21	18	22	19	16	14

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	17038	17038	17038
5°	17117	16883	17001
10°	17004	16736	16840
15°	16805	16547	16577
20°	16573	16276	16292
25°	16262	15954	15922
30°	15918	15597	15478
35°	15559	15219	15023
40°	15185	14802	14573
45°	14772	14420	14067
50°	14359	13949	13561
55°	13818	13461	13052
60°	13272	12893	12482
65°	12791	12271	11889
70°	12079	11566	11050
75°	11038	10643	10189
80°	9955	9534	9447
85°	8744	8410	8065



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	149.1	2.0
10°-20°	421.0	5.7
20°-30°	621.9	8.5
30°-40°	726.5	9.9
40°-50°	730.4	10.0
50°-60°	641.5	8.8
60°-70°	478.0	6.5
70°-80°	272.3	3.7
80°-90°	81.1	1.1
90°-100°	38.3	0.5
100°-110°	182.3	2.5
110°-120°	438.0	6.0
120°-130°	557.7	7.6
130°-140°	595.9	8.1
140°-150°	557.2	7.6
150°-160°	449.5	6.1
160°-170°	290.1	4.0
170°-180°	100.0	1.4
0°-30°	1192.0	16.3
0°-40°	1918.5	26.2
0°-60°	3290.4	44.9
0°-90°	4121.8	56.2
90°-120°	658.6	9.0
90°-150°	2369.4	32.3
90°-180°	3209.0	43.8
0°-180°	7330.8	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1583	1583	1583	1583	1583	
5°	1584	1577	1562	1575	1573	150
15°	1508	1502	1485	1495	1488	425
25°	1369	1360	1343	1344	1341	630
35°	1184	1175	1158	1150	1143	740
45°	970	964	947	932	924	749
55°	736	734	717	703	696	659
65°	502	495	482	471	467	495
75°	265	260	256	249	245	284
85°	71	68	68	65	65	78
90°	1	9	19	22	24	6
95°	48	18	24	29	30	59
105°	233	237	171	41	34	247
115°	437	442	449	456	460	431
125°	616	622	625	627	629	550
135°	767	772	775	777	775	590
145°	885	890	892	894	894	554
155°	975	973	974	978	973	449
165°	1028	1026	1025	1031	1026	290
175°	1052	1049	1049	1054	1048	100
180°	1052	1052	1052	1052	1052	



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CANDELA DISTRIBUTION (FULL):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
0°	1582.9	1582.9	1582.9	1582.9	1582.9	1582.9	1582.9	1582.9	1582.9	1582.9	1582.9
2.5°	1588.3	1587.4	1586.4	1585.4	1584.5	1582.6	1580.0	1577.3	1574.7	1572.0	1574.4
5°	1584.2	1582.7	1581.2	1579.7	1578.2	1575.8	1572.5	1569.1	1565.8	1562.5	1565.5
7.5°	1568.7	1567.2	1565.7	1564.2	1562.7	1560.2	1556.8	1553.3	1549.9	1546.4	1549.1
10°	1555.7	1554.2	1552.6	1551.1	1549.6	1546.9	1543.0	1539.0	1535.1	1531.2	1533.9
12.5°	1538.2	1537.0	1535.7	1534.4	1533.2	1530.7	1527.0	1523.3	1519.6	1515.9	1517.9
15°	1508.0	1506.8	1505.6	1504.4	1503.2	1500.6	1496.7	1492.8	1488.8	1484.9	1487.3
17.5°	1472.9	1471.3	1469.8	1468.2	1466.6	1463.9	1459.9	1456.0	1452.1	1448.1	1449.8
20°	1446.8	1445.0	1443.2	1441.3	1439.5	1436.6	1432.7	1428.8	1424.9	1420.9	1422.1
22.5°	1417.4	1415.6	1413.8	1411.9	1410.1	1407.3	1403.3	1399.4	1395.5	1391.5	1392.5
25°	1369.2	1367.4	1365.6	1363.8	1361.9	1359.1	1355.1	1351.2	1347.3	1343.3	1343.6
27.5°	1317.8	1316.0	1314.2	1312.5	1310.7	1307.7	1303.5	1299.3	1295.0	1290.8	1291.0
30°	1280.7	1279.2	1277.7	1276.2	1274.7	1271.8	1267.6	1263.3	1259.1	1254.9	1254.9
32.5°	1243.7	1241.7	1239.7	1237.7	1235.7	1233.1	1229.8	1226.6	1223.3	1220.0	1218.3
35°	1184.1	1182.3	1180.5	1178.7	1176.8	1174.0	1170.0	1166.1	1162.2	1158.2	1156.4
37.5°	1123.1	1120.8	1118.5	1116.2	1113.9	1110.8	1106.8	1102.8	1098.8	1094.8	1092.6
40°	1080.7	1078.8	1077.0	1075.2	1073.4	1070.4	1066.1	1061.9	1057.7	1053.4	1051.0
42.5°	1038.2	1036.1	1034.1	1032.0	1030.0	1026.8	1022.6	1018.4	1014.1	1009.9	1007.5
45°	970.4	969.2	968.0	966.8	965.6	963.0	959.1	955.1	951.2	947.3	943.7
47.5°	903.2	901.4	899.7	897.9	896.2	893.4	889.8	886.1	882.4	878.7	875.1
50°	857.5	855.9	854.4	852.9	851.4	848.7	844.7	840.8	836.9	833.0	829.6
52.5°	809.5	808.5	807.5	806.5	805.4	802.8	798.7	794.5	790.3	786.1	783.3
55°	736.3	736.0	735.7	735.4	735.1	733.0	729.1	725.1	721.2	717.3	713.9
57.5°	666.6	665.6	664.6	663.6	662.5	660.4	657.3	654.1	651.0	647.9	644.9
60°	616.5	616.2	615.9	615.6	615.3	613.4	609.7	606.1	602.5	598.9	596.1
62.5°	571.9	571.1	570.3	569.5	568.8	566.6	562.9	559.3	555.7	552.0	549.3
65°	502.2	500.7	499.2	497.7	496.2	493.9	490.9	487.9	484.8	481.8	479.4
67.5°	428.5	427.1	425.8	424.5	423.1	421.3	419.0	416.7	414.4	412.1	410.0
70°	383.8	382.0	380.2	378.4	376.6	374.7	372.9	371.1	369.3	367.5	365.4
72.5°	337.0	335.7	334.3	333.0	331.7	330.0	327.9	325.9	323.8	321.7	319.9
75°	265.4	264.2	263.0	261.8	260.6	259.5	258.6	257.7	256.8	255.9	254.4
77.5°	202.0	201.3	200.6	200.0	199.3	198.4	197.4	196.3	195.2	194.1	193.1
80°	160.6	159.7	158.8	157.9	157.0	156.2	155.6	155.0	154.4	153.8	153.5
82.5°	120.3	120.1	120.0	119.8	119.6	119.4	119.3	119.2	119.1	119.0	118.4
85°	70.8	70.2	69.6	69.0	68.4	68.1	68.1	68.1	68.1	68.1	67.4
87.5°	28.5	28.1	27.7	27.3	27.0	26.9	27.1	27.3	27.5	27.7	27.6
90°	0.8	2.5	4.3	6.0	7.7	9.7	12.0	14.2	16.5	18.8	19.5
92.5°	14.5	14.1	13.6	13.1	12.6	13.2	14.9	16.6	18.3	20.0	21.1
95°	47.7	40.6	33.4	26.3	19.2	16.6	18.5	20.4	22.3	24.2	25.5
97.5°	95.8	92.7	89.5	86.3	83.1	75.2	62.7	50.2	37.7	25.2	26.6
100°	132.1	135.6	139.1	142.5	146.0	134.2	107.1	80.0	52.9	25.8	27.2
102.5°	173.4	175.9	178.4	180.9	183.4	169.9	140.3	110.6	81.0	51.4	47.1
105°	233.0	234.9	236.8	238.7	240.6	233.8	218.1	202.5	186.8	171.2	140.5
107.5°	295.8	297.4	298.9	300.4	301.9	303.9	306.4	308.9	311.3	313.8	291.3
110°	337.7	339.1	340.5	341.9	343.3	344.9	346.9	348.8	350.7	352.6	346.9



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CANDELA DISTRIBUTION (continued):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
112.5°	377.8	379.0	380.3	381.5	382.8	384.3	386.3	388.2	390.1	392.0	392.1
115°	437.0	438.1	439.1	440.2	441.2	442.5	444.1	445.6	447.2	448.8	450.5
117.5°	494.4	495.7	497.0	498.3	499.5	500.6	501.4	502.2	503.0	503.8	505.2
120°	530.1	531.6	533.2	534.7	536.3	537.4	537.9	538.4	538.9	539.4	540.8
122.5°	566.3	567.6	568.9	570.2	571.5	572.4	573.1	573.8	574.4	575.1	576.1
125°	616.1	617.4	618.8	620.2	621.6	622.7	623.4	624.0	624.7	625.4	625.8
127.5°	664.2	665.6	667.0	668.4	669.8	670.9	671.7	672.6	673.4	674.2	674.8
130°	694.2	695.6	697.0	698.4	699.8	700.8	701.5	702.2	702.9	703.6	704.3
132.5°	723.0	724.4	725.8	727.2	728.6	729.5	730.1	730.6	731.2	731.8	732.5
135°	766.9	768.0	769.0	770.1	771.1	772.0	772.7	773.4	774.1	774.8	775.3
137.5°	804.5	805.8	807.1	808.4	809.7	810.6	811.0	811.4	811.7	812.1	813.0
140°	829.5	830.5	831.6	832.6	833.7	834.4	835.0	835.5	836.0	836.5	837.2
142.5°	852.6	853.7	854.7	855.8	856.8	857.6	858.1	858.6	859.1	859.7	860.2
145°	885.0	886.2	887.4	888.6	889.9	890.6	891.0	891.3	891.7	892.0	892.4
147.5°	915.5	916.3	917.1	917.9	918.7	919.3	919.6	919.9	920.3	920.6	921.0
150°	934.2	934.8	935.3	935.8	936.3	936.8	937.1	937.5	937.8	938.2	938.5
152.5°	951.1	951.4	951.6	951.9	952.1	952.3	952.5	952.7	953.0	953.2	953.8
155°	974.9	974.6	974.2	973.9	973.5	973.4	973.6	973.8	973.9	974.1	975.0
157.5°	993.3	993.3	993.3	993.2	993.2	993.1	992.9	992.8	992.6	992.4	993.5
160°	1004.6	1004.4	1004.3	1004.1	1003.9	1003.7	1003.6	1003.4	1003.2	1003.0	1004.1
162.5°	1015.2	1014.8	1014.3	1013.9	1013.4	1013.1	1012.9	1012.8	1012.6	1012.4	1013.6
165°	1028.1	1027.5	1027.0	1026.5	1026.0	1025.6	1025.5	1025.3	1025.1	1024.9	1026.3
167.5°	1038.1	1037.4	1036.7	1036.0	1035.3	1034.9	1034.9	1034.9	1034.9	1034.9	1036.3
170°	1043.7	1043.0	1042.3	1041.6	1040.9	1040.6	1040.6	1040.6	1040.6	1040.6	1042.0
172.5°	1047.4	1046.6	1045.8	1044.9	1044.1	1043.8	1043.9	1044.0	1044.2	1044.3	1045.7
175°	1052.3	1051.4	1050.6	1049.7	1048.8	1048.5	1048.6	1048.8	1049.0	1049.2	1050.4
177.5°	1053.5	1052.9	1052.2	1051.5	1050.8	1050.5	1050.6	1050.8	1050.9	1051.0	1052.2
180°	1052.3	1052.3	1052.3	1052.3	1052.3	1052.3	1052.3	1052.3	1052.3	1052.3	1052.3



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CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
0°	1582.9	1582.9	1582.9	1582.9	1582.9	1582.9	1582.9	1582.9
2.5°	1576.8	1579.3	1581.7	1582.8	1582.5	1582.3	1582.0	1581.8
5°	1568.5	1571.5	1574.6	1575.8	1575.2	1574.6	1574.0	1573.4
7.5°	1551.9	1554.6	1557.3	1558.5	1558.1	1557.8	1557.4	1557.0
10°	1536.6	1539.3	1542.1	1543.1	1542.5	1541.9	1541.3	1540.7
12.5°	1519.9	1521.9	1523.9	1524.7	1524.4	1524.0	1523.6	1523.3
15°	1489.7	1492.1	1494.6	1494.9	1493.1	1491.2	1489.4	1487.6
17.5°	1451.5	1453.2	1454.9	1455.4	1454.8	1454.1	1453.4	1452.8
20°	1423.3	1424.6	1425.8	1425.9	1425.0	1424.1	1423.2	1422.3
22.5°	1393.5	1394.4	1395.4	1395.3	1394.2	1393.0	1391.9	1390.7
25°	1343.9	1344.3	1344.6	1344.3	1343.3	1342.4	1341.5	1340.6
27.5°	1291.3	1291.5	1291.8	1291.3	1290.2	1289.0	1287.9	1286.7
30°	1254.9	1254.9	1254.9	1253.8	1251.7	1249.6	1247.5	1245.3
32.5°	1216.6	1215.0	1213.3	1211.8	1210.7	1209.5	1208.4	1207.2
35°	1154.6	1152.8	1151.0	1149.3	1147.8	1146.3	1144.8	1143.3
37.5°	1090.5	1088.3	1086.1	1084.5	1083.6	1082.6	1081.6	1080.7
40°	1048.6	1046.2	1043.8	1041.9	1040.7	1039.5	1038.3	1037.1
42.5°	1005.0	1002.6	1000.2	998.4	997.2	996.0	994.8	993.6
45°	940.0	936.4	932.8	930.2	928.7	927.2	925.7	924.1
47.5°	871.5	868.0	864.4	862.0	860.6	859.3	858.0	856.6
50°	826.3	823.0	819.6	817.1	815.3	813.4	811.6	809.8
52.5°	780.4	777.6	774.8	772.4	770.6	768.8	767.0	765.2
55°	710.6	707.3	704.0	701.5	700.0	698.5	697.0	695.5
57.5°	641.9	639.0	636.0	633.6	631.9	630.1	628.4	626.6
60°	593.4	590.7	588.0	585.9	584.3	582.8	581.3	579.8
62.5°	546.6	543.9	541.1	539.3	538.2	537.2	536.2	535.2
65°	477.0	474.5	472.1	470.5	469.6	468.7	467.7	466.8
67.5°	407.9	405.8	403.7	402.0	400.7	399.4	398.1	396.9
70°	363.2	361.1	359.0	357.2	355.7	354.2	352.7	351.1
72.5°	318.0	316.1	314.2	312.9	312.1	311.3	310.6	309.8
75°	252.9	251.3	249.8	248.6	247.7	246.8	245.9	245.0
77.5°	192.0	191.0	190.0	189.5	189.5	189.5	189.5	189.5
80°	153.2	152.9	152.6	152.4	152.4	152.4	152.4	152.4
82.5°	117.9	117.3	116.8	116.4	116.1	115.9	115.7	115.4
85°	66.8	66.2	65.6	65.3	65.3	65.3	65.3	65.3
87.5°	27.5	27.4	27.3	27.3	27.3	27.4	27.5	27.6
90°	20.2	20.8	21.5	22.1	22.4	22.8	23.1	23.5
92.5°	22.2	23.3	24.5	25.1	25.3	25.5	25.7	26.0
95°	26.7	27.9	29.1	29.7	29.7	29.7	29.7	29.7
97.5°	28.0	29.3	30.7	31.5	31.7	31.9	32.0	32.2
100°	28.6	30.0	31.4	32.1	32.3	32.5	32.7	32.8
102.5°	42.8	38.5	34.2	32.2	32.5	32.8	33.1	33.5
105°	109.7	79.0	48.2	33.0	33.4	33.7	34.1	34.4
107.5°	268.7	246.2	223.6	200.7	177.6	154.4	131.2	108.0
110°	341.1	335.4	329.7	314.4	289.5	264.7	239.8	215.0



TEST NUMBER: P332024

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CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
112.5°	392.2	392.3	392.4	389.8	384.6	379.3	374.1	368.9
115°	452.2	454.0	455.7	456.9	457.6	458.3	459.0	459.7
117.5°	506.6	508.0	509.3	510.1	510.3	510.4	510.5	510.7
120°	542.2	543.6	545.0	545.7	545.7	545.7	545.7	545.7
122.5°	577.0	578.0	579.0	579.5	579.7	579.8	580.0	580.1
125°	626.1	626.5	626.8	627.2	627.5	627.9	628.2	628.6
127.5°	675.3	675.9	676.4	676.5	676.2	675.9	675.5	675.2
130°	705.0	705.7	706.4	706.6	706.2	705.9	705.5	705.2
132.5°	733.1	733.8	734.5	734.6	734.2	733.7	733.2	732.7
135°	775.8	776.3	776.8	776.8	776.3	775.8	775.3	774.8
137.5°	813.8	814.6	815.5	815.7	815.4	815.0	814.7	814.3
140°	837.9	838.6	839.3	839.5	839.1	838.8	838.4	838.1
142.5°	860.8	861.3	861.9	861.9	861.4	860.9	860.5	860.0
145°	892.7	893.1	893.4	893.6	893.6	893.6	893.6	893.6
147.5°	921.3	921.7	922.0	921.8	921.0	920.2	919.4	918.6
150°	938.8	939.2	939.5	939.5	938.9	938.4	937.9	937.4
152.5°	954.4	955.0	955.7	955.6	954.8	954.0	953.2	952.4
155°	975.9	976.7	977.6	977.5	976.5	975.4	974.4	973.3
157.5°	994.5	995.5	996.6	996.4	995.1	993.7	992.4	991.0
160°	1005.1	1006.2	1007.2	1007.1	1005.9	1004.7	1003.5	1002.3
162.5°	1014.8	1016.0	1017.1	1017.2	1016.1	1015.0	1014.0	1012.9
165°	1027.7	1029.1	1030.5	1030.6	1029.4	1028.1	1026.9	1025.7
167.5°	1037.7	1039.1	1040.5	1040.5	1039.1	1037.7	1036.3	1034.9
170°	1043.3	1044.7	1046.1	1046.1	1044.7	1043.3	1042.0	1040.6
172.5°	1047.1	1048.5	1049.9	1049.8	1048.3	1046.8	1045.2	1043.7
175°	1051.6	1052.8	1054.0	1053.9	1052.6	1051.2	1049.8	1048.4
177.5°	1053.3	1054.4	1055.5	1055.4	1054.0	1052.6	1051.2	1049.8
180°	1052.3	1052.3	1052.3	1052.3	1052.3	1052.3	1052.3	1052.3

(END OF REPORT)