

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: P332066-840

Luminaire Tested: **S123DIP-S1165D805U840-4F0-1E-UDD-D**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P332066-840
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-S1165D805U840-4F0-1E-UDD-D
Description: DEFINE 3 DIRECT-INDIRECT PENDANT LED LUMINAIRE
DOWNLIGHT 1165 LUMENS PER FOOT, DROP SATIN WHITE DIFFUSER
UPLIGHT 805 LUMENS PER FOOT, NO LENS
Light Source: -
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 8140.6 lumens
Efficiency: N/A
Efficacy: 134.1 lumens/watt
Spacing Criteria (0/90/45): 1.2 / 1.26 / 1.37
Luminous Opening: Rectangular w/ Sides (W: 0.25' x L: 4' x H: 0.08')
CIE Type: General Diffuse

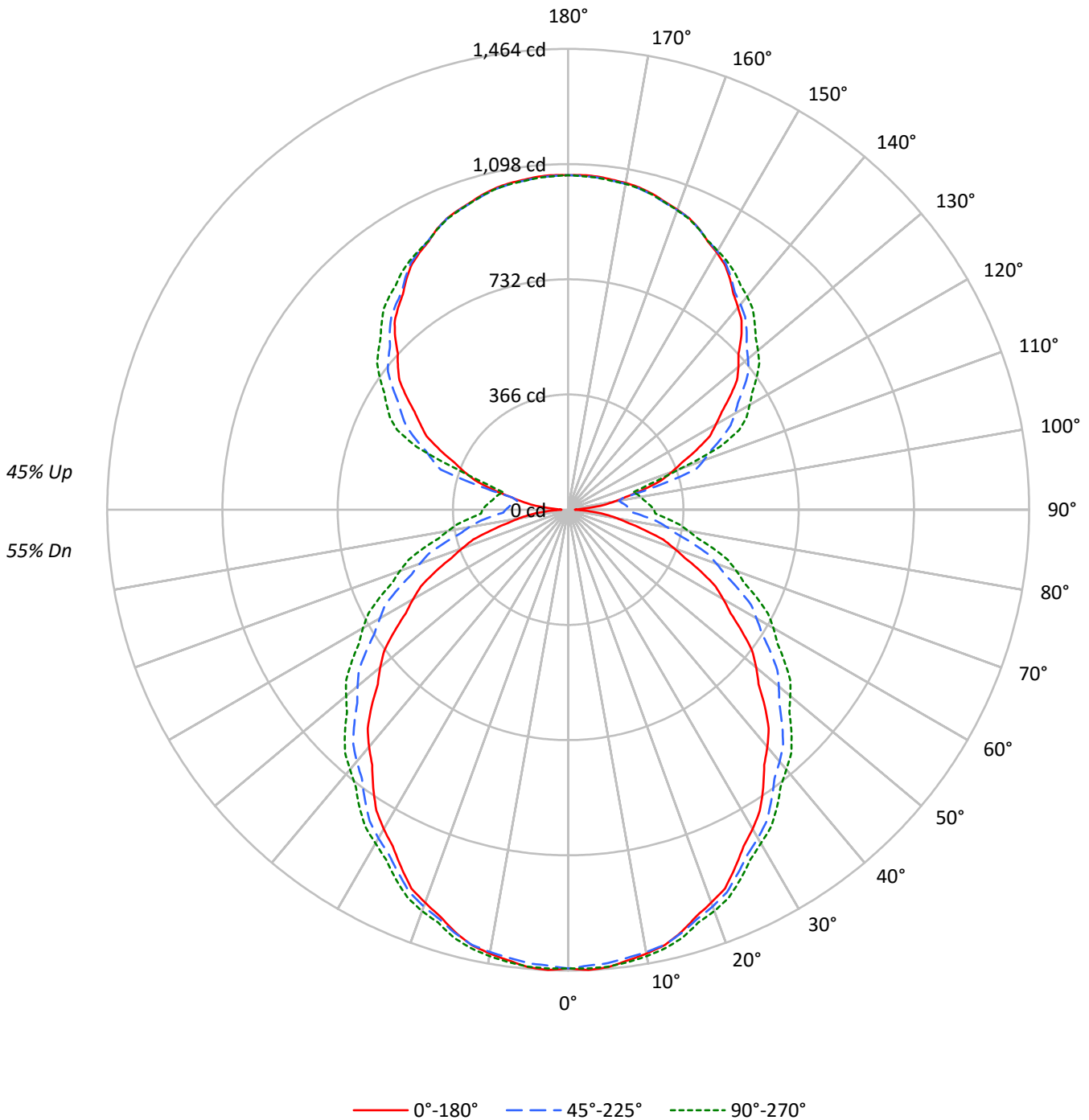
Input Watts (W): 60.7
Input Voltage (V): 120
Input Current (A_{in}): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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Luminous Intensity Polar Plot





TEST NUMBER: P332066-840

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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	108	108	108	108	101	101	101	101	86	86	86	73	73	73	61	61	61	55
1	98	93	89	85	90	86	82	79	74	71	68	62	60	58	52	50	49	44
2	89	80	74	68	82	75	69	64	64	60	56	54	51	48	45	43	40	36
3	81	70	63	56	74	65	58	53	56	51	46	48	43	40	40	37	34	30
4	74	62	54	47	68	58	50	45	50	44	39	42	38	34	35	32	29	25
5	67	55	47	40	62	51	44	38	44	38	34	38	33	29	32	28	25	22
6	62	49	41	35	57	46	39	33	40	34	29	34	29	26	29	25	22	19
7	57	45	36	30	53	42	34	29	36	30	26	31	26	23	26	22	19	17
8	53	40	32	27	49	38	31	25	33	27	23	28	23	20	24	20	17	15
9	50	37	29	24	46	35	28	23	30	24	20	26	21	18	22	18	16	13
10	46	34	26	21	43	32	25	20	28	22	18	24	19	16	20	17	14	12

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	15685	15685	15685
5°	15735	15290	15299
10°	15593	14937	14863
15°	15393	14539	14387
20°	15105	14082	13865
25°	14751	13556	13315
30°	14388	13084	12757
35°	13980	12583	12311
40°	13592	12128	11834
45°	13161	11692	11453
50°	12735	11259	11034
55°	12267	10818	10657
60°	11808	10368	10270
65°	11339	9889	9809
70°	10633	9352	9336
75°	9740	8736	8855
80°	8709	8132	8306
85°	7760	7716	7988



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	138.1	1.7
10°-20°	393.8	4.8
20°-30°	589.0	7.2
30°-40°	703.4	8.6
40°-50°	735.9	9.0
50°-60°	690.6	8.5
60°-70°	576.8	7.1
70°-80°	412.7	5.1
80°-90°	249.1	3.1
90°-100°	193.0	2.4
100°-110°	297.6	3.7
110°-120°	518.1	6.4
120°-130°	606.5	7.5
130°-140°	621.2	7.6
140°-150°	566.9	7.0
150°-160°	454.0	5.6
160°-170°	293.0	3.6
170°-180°	101.0	1.2
0°-30°	1120.9	13.8
0°-40°	1824.3	22.4
0°-60°	3250.8	39.9
0°-90°	4489.4	55.1
90°-120°	1008.7	12.4
90°-150°	2803.4	34.4
90°-180°	3651.0	44.8
0°-180°	8140.6	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1457	1457	1457	1457	1457	
5°	1459	1455	1446	1458	1457	138
15°	1389	1393	1392	1407	1406	391
25°	1254	1269	1275	1294	1295	578
35°	1079	1105	1126	1148	1156	675
45°	883	921	960	990	1003	680
55°	673	726	783	824	838	602
65°	465	528	597	643	660	459
75°	252	327	406	457	478	270
85°	78	157	241	293	311	82
90°	21	107	198	253	273	16
95°	66	98	182	234	252	73
105°	248	292	292	203	213	262
115°	449	475	537	582	599	444
125°	627	636	682	716	730	560
135°	778	782	801	831	838	599
145°	895	899	901	915	922	560
155°	984	983	984	987	983	453
165°	1038	1036	1035	1041	1036	293
175°	1063	1059	1060	1064	1059	101
180°	1063	1063	1063	1063	1063	



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CANDELA DISTRIBUTION (FULL):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
0°	1457.2	1457.2	1457.2	1457.2	1457.2	1457.2	1457.2	1457.2	1457.2	1457.2	1457.2
2.5°	1463.6	1462.8	1461.9	1461.1	1460.2	1458.6	1456.4	1454.1	1451.9	1449.7	1451.9
5°	1458.9	1458.1	1457.4	1456.7	1456.0	1454.6	1452.5	1450.4	1448.2	1446.1	1449.0
7.5°	1444.5	1444.7	1444.8	1445.0	1445.1	1444.2	1442.1	1440.1	1438.0	1435.9	1439.5
10°	1431.9	1432.6	1433.3	1434.0	1434.7	1434.1	1432.4	1430.6	1428.9	1427.0	1430.6
12.5°	1416.6	1417.5	1418.6	1419.6	1420.6	1420.5	1419.3	1418.1	1416.8	1415.6	1418.9
15°	1389.0	1390.1	1391.1	1392.2	1393.2	1393.6	1393.2	1392.9	1392.5	1392.2	1395.7
17.5°	1354.0	1356.1	1358.3	1360.4	1362.5	1363.5	1363.4	1363.2	1363.1	1362.9	1366.1
20°	1328.7	1330.8	1332.9	1335.0	1337.2	1338.6	1339.3	1340.0	1340.7	1341.4	1344.5
22.5°	1302.0	1304.1	1306.3	1308.4	1310.5	1312.0	1313.0	1314.0	1314.9	1316.0	1320.0
25°	1254.1	1257.6	1261.1	1264.7	1268.2	1270.4	1271.5	1272.5	1273.6	1274.7	1279.3
27.5°	1205.8	1209.8	1213.9	1217.9	1221.8	1225.1	1227.3	1229.5	1231.8	1234.1	1238.0
30°	1171.5	1176.1	1180.6	1185.3	1189.8	1193.6	1196.4	1199.2	1202.0	1204.9	1209.1
32.5°	1133.4	1138.5	1143.7	1148.8	1154.0	1158.4	1162.1	1165.8	1169.4	1173.1	1177.6
35°	1079.4	1085.1	1090.8	1096.4	1102.1	1107.1	1111.8	1116.3	1120.8	1125.5	1130.7
37.5°	1022.3	1028.6	1035.0	1041.4	1047.7	1053.7	1059.3	1065.0	1070.7	1076.3	1082.3
40°	984.2	990.6	996.9	1003.2	1009.6	1016.3	1023.4	1030.4	1037.4	1044.5	1050.6
42.5°	942.3	950.1	957.9	965.5	973.3	980.9	988.3	995.5	1002.9	1010.3	1016.8
45°	882.6	891.1	899.5	908.0	916.5	925.1	933.9	942.7	951.6	960.4	967.0
47.5°	820.0	829.6	839.2	848.9	858.5	868.3	878.4	888.5	898.6	908.7	916.1
50°	779.4	789.3	799.2	809.0	818.9	829.3	840.3	851.2	862.1	873.0	881.2
52.5°	736.3	746.7	757.1	767.6	778.0	789.3	801.3	813.3	825.5	837.5	846.0
55°	673.1	684.7	696.3	708.0	719.6	731.7	744.5	757.2	769.9	782.6	792.1
57.5°	611.5	623.6	635.7	647.8	660.0	673.1	686.9	700.8	714.7	728.6	738.2
60°	568.3	581.0	593.7	606.4	619.0	632.7	647.1	661.6	676.1	690.5	700.4
62.5°	527.7	540.7	553.6	566.6	579.6	593.7	609.0	624.3	639.6	655.0	664.8
65°	465.1	478.9	492.6	506.3	520.2	534.8	550.3	565.8	581.4	596.8	607.4
67.5°	401.6	416.3	430.8	445.5	460.0	475.2	491.0	506.9	522.6	538.5	550.0
70°	357.2	372.3	387.5	402.6	417.9	433.9	450.8	467.8	484.7	501.6	512.9
72.5°	316.5	331.7	346.9	362.0	377.2	393.5	411.0	428.5	446.1	463.5	475.1
75°	252.4	269.0	285.6	302.2	318.7	335.8	353.5	371.1	388.7	406.4	418.0
77.5°	196.5	213.3	229.9	246.7	263.4	280.6	298.4	316.2	334.0	351.7	364.1
80°	157.1	174.4	191.8	209.0	226.3	244.1	262.5	280.8	299.1	317.5	329.5
82.5°	122.9	140.5	158.0	175.6	193.1	211.3	229.8	248.5	267.1	285.7	297.7
85°	77.8	95.4	113.1	130.7	148.3	166.5	185.2	203.9	222.6	241.3	253.3
87.5°	42.4	60.3	78.3	96.1	114.0	132.2	150.7	169.2	187.5	206.0	218.1
90°	21.4	40.5	59.5	78.6	97.6	117.2	137.5	157.7	178.0	198.3	211.1
92.5°	34.0	49.2	64.2	79.4	94.4	111.7	131.2	150.6	170.0	189.5	202.3
95°	65.6	72.2	78.8	85.3	91.9	104.7	124.0	143.2	162.4	181.7	193.8
97.5°	112.4	121.6	130.8	140.0	149.1	155.6	159.6	163.4	167.2	171.2	183.1
100°	147.7	162.5	177.3	192.1	206.9	208.7	197.6	186.4	175.3	164.2	175.8
102.5°	188.1	200.9	213.5	226.2	238.8	238.2	224.3	210.4	196.4	182.5	188.0
105°	248.0	258.3	268.7	279.1	289.5	294.5	293.9	293.2	292.6	292.0	270.7
107.5°	309.5	318.3	327.0	335.8	344.5	357.3	374.2	391.1	408.0	424.9	411.5
110°	350.6	358.3	366.1	373.9	381.6	393.5	409.5	425.6	441.6	457.7	461.0



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CANDELA DISTRIBUTION (continued):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
112.5°	391.0	397.5	403.9	410.5	417.0	428.0	443.4	458.9	474.3	489.8	498.9
115°	449.3	454.5	459.9	465.1	470.4	480.2	494.4	508.8	523.0	537.3	547.5
117.5°	507.0	510.8	514.7	518.7	522.5	530.9	543.6	556.3	569.1	581.8	591.6
120°	541.6	545.0	548.4	551.7	555.0	562.8	574.9	587.1	599.3	611.5	621.0
122.5°	578.2	580.5	582.7	584.9	587.1	594.1	605.8	617.6	629.3	641.1	649.8
125°	626.9	628.3	629.7	631.1	632.5	638.6	649.6	660.6	671.5	682.4	690.1
127.5°	675.5	676.6	677.6	678.6	679.7	684.9	694.2	703.6	712.9	722.2	729.7
130°	705.8	706.9	707.9	709.0	710.0	714.5	722.3	729.9	737.7	745.5	752.9
132.5°	733.7	735.0	736.3	737.6	738.9	742.8	748.9	755.2	761.3	767.6	774.7
135°	777.7	778.4	779.1	779.8	780.5	783.2	787.7	792.2	796.9	801.4	808.3
137.5°	815.3	816.3	817.4	818.4	819.5	821.3	823.8	826.4	829.0	831.5	838.0
140°	839.3	840.3	841.3	842.4	843.4	844.8	846.4	848.0	849.5	851.1	857.1
142.5°	862.6	863.4	864.1	864.9	865.7	866.5	867.2	868.0	868.7	869.4	874.7
145°	895.3	896.2	897.1	898.0	898.8	899.4	899.8	900.1	900.5	900.8	904.0
147.5°	924.5	925.3	926.1	927.0	927.8	928.4	928.7	929.0	929.4	929.7	930.9
150°	943.4	944.0	944.5	945.0	945.5	946.0	946.3	946.7	947.1	947.5	947.8
152.5°	960.5	960.8	961.0	961.3	961.5	961.7	961.9	962.1	962.4	962.6	963.2
155°	984.5	984.2	983.8	983.5	983.1	983.0	983.2	983.4	983.5	983.7	984.6
157.5°	1003.1	1003.1	1003.1	1003.0	1003.0	1002.9	1002.7	1002.6	1002.4	1002.2	1003.3
160°	1014.5	1014.3	1014.2	1014.0	1013.8	1013.6	1013.5	1013.3	1013.1	1012.9	1014.0
162.5°	1025.2	1024.8	1024.3	1023.9	1023.4	1023.1	1022.9	1022.8	1022.6	1022.4	1023.6
165°	1038.2	1037.6	1037.1	1036.6	1036.1	1035.7	1035.6	1035.4	1035.2	1035.0	1036.4
167.5°	1048.3	1047.6	1046.9	1046.2	1045.5	1045.1	1045.1	1045.1	1045.1	1045.1	1046.5
170°	1054.0	1053.3	1052.6	1051.9	1051.2	1050.9	1050.9	1050.9	1050.9	1050.9	1052.3
172.5°	1057.7	1056.9	1056.1	1055.2	1054.4	1054.1	1054.2	1054.3	1054.5	1054.6	1056.0
175°	1062.7	1061.8	1061.0	1060.1	1059.1	1058.8	1058.9	1059.1	1059.3	1059.6	1060.8
177.5°	1063.9	1063.3	1062.6	1061.9	1061.2	1060.9	1061.0	1061.2	1061.3	1061.4	1062.6
180°	1062.7	1062.7	1062.7	1062.7	1062.7	1062.7	1062.7	1062.7	1062.7	1062.7	1062.7



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CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
0°	1457.2	1457.2	1457.2	1457.2	1457.2	1457.2	1457.2	1457.2
2.5°	1454.1	1456.4	1458.6	1459.7	1459.4	1459.1	1458.8	1458.5
5°	1451.8	1454.6	1457.4	1458.6	1458.3	1457.9	1457.6	1457.2
7.5°	1443.0	1446.5	1450.1	1451.7	1451.2	1450.8	1450.4	1450.0
10°	1434.1	1437.6	1441.2	1442.6	1441.9	1441.2	1440.5	1439.8
12.5°	1422.2	1425.4	1428.7	1429.9	1429.2	1428.5	1427.7	1427.0
15°	1399.2	1402.7	1406.2	1407.9	1407.5	1407.1	1406.8	1406.4
17.5°	1369.3	1372.5	1375.6	1377.0	1376.5	1376.0	1375.5	1375.0
20°	1347.7	1350.9	1354.0	1355.8	1356.1	1356.6	1356.9	1357.3
22.5°	1324.0	1328.1	1332.0	1333.9	1333.7	1333.5	1333.3	1333.1
25°	1283.8	1288.5	1293.0	1295.4	1295.4	1295.4	1295.4	1295.4
27.5°	1241.9	1245.9	1249.8	1251.9	1252.2	1252.5	1252.8	1253.1
30°	1213.4	1217.6	1221.7	1223.9	1223.9	1223.9	1223.9	1223.9
32.5°	1182.1	1186.7	1191.1	1193.9	1194.7	1195.6	1196.4	1197.2
35°	1136.1	1141.3	1146.6	1150.0	1151.4	1152.9	1154.3	1155.6
37.5°	1088.2	1094.3	1100.2	1103.8	1105.0	1106.1	1107.2	1108.3
40°	1056.5	1062.5	1068.5	1072.2	1073.6	1075.0	1076.4	1077.8
42.5°	1023.4	1030.0	1036.5	1040.8	1042.7	1044.7	1046.6	1048.6
45°	973.8	980.5	987.2	992.0	994.8	997.6	1000.5	1003.2
47.5°	923.7	931.3	938.9	943.7	945.8	948.1	950.3	952.4
50°	889.3	897.5	905.5	910.8	913.3	915.7	918.3	920.7
52.5°	854.3	862.7	871.1	876.9	879.9	882.9	886.0	889.0
55°	801.6	811.1	820.7	826.9	829.7	832.5	835.4	838.2
57.5°	747.8	757.4	767.0	773.5	776.8	780.1	783.5	786.7
60°	710.2	720.1	730.0	736.9	740.8	744.7	748.5	752.5
62.5°	674.7	684.6	694.5	701.3	704.8	708.4	712.1	715.6
65°	618.0	628.6	639.2	646.2	649.7	653.3	656.8	660.4
67.5°	561.6	573.2	584.7	592.0	595.0	597.9	600.9	603.9
70°	524.2	535.5	546.7	554.2	557.7	561.3	564.7	568.3
72.5°	486.7	498.3	509.8	517.4	520.9	524.4	528.0	531.5
75°	429.7	441.3	452.9	460.9	465.1	469.4	473.6	477.8
77.5°	376.3	388.6	400.9	408.6	411.9	415.2	418.4	421.6
80°	341.4	353.5	365.5	373.2	376.8	380.3	383.8	387.3
82.5°	309.7	321.7	333.7	341.4	345.0	348.5	352.0	355.6
85°	265.3	277.3	289.2	297.0	300.5	304.1	307.6	311.1
87.5°	230.2	242.5	254.6	262.5	266.0	269.6	273.3	276.8
90°	223.7	236.4	249.1	257.4	261.3	265.2	269.0	272.9
92.5°	215.1	227.9	240.8	248.9	252.4	255.8	259.2	262.8
95°	205.9	218.1	230.2	238.1	241.7	245.2	248.7	252.3
97.5°	195.0	206.9	218.8	226.6	230.4	234.0	237.7	241.5
100°	187.4	199.0	210.7	218.3	222.1	225.8	229.4	233.2
102.5°	193.6	199.2	204.8	209.5	213.4	217.2	221.1	224.9
105°	249.6	228.4	207.2	198.4	202.0	205.5	209.0	212.6
107.5°	398.2	384.9	371.5	354.8	334.5	314.2	293.9	273.6
110°	464.4	467.8	471.2	461.7	439.5	417.2	395.0	372.6



TEST NUMBER: P332066-840

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CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
112.5°	507.9	516.8	525.8	529.2	527.0	524.8	522.6	520.5
115°	557.7	567.9	578.1	585.0	588.5	592.1	595.6	599.2
117.5°	601.4	611.2	621.0	627.3	630.3	633.1	636.0	638.8
120°	630.5	640.0	649.5	655.5	657.9	660.5	662.9	665.4
122.5°	658.7	667.5	676.3	682.1	684.7	687.3	689.8	692.5
125°	697.9	705.7	713.5	718.7	721.5	724.4	727.2	730.0
127.5°	737.2	744.8	752.3	757.1	759.2	761.2	763.3	765.3
130°	760.3	767.7	775.1	779.7	781.4	783.3	785.0	786.8
132.5°	781.8	788.9	796.1	800.5	802.4	804.4	806.3	808.2
135°	815.2	822.0	829.0	833.0	834.2	835.5	836.7	838.0
137.5°	844.4	850.8	857.3	861.1	862.5	863.9	865.4	866.8
140°	863.1	869.1	875.0	878.8	880.2	881.6	883.0	884.4
142.5°	880.0	885.2	890.6	893.8	895.1	896.4	897.7	899.0
145°	907.2	910.4	913.5	915.8	917.3	918.7	920.1	921.5
147.5°	932.1	933.3	934.5	935.3	935.8	936.2	936.8	937.2
150°	948.1	948.5	948.8	949.1	949.3	949.5	949.6	949.8
152.5°	963.8	964.4	965.1	965.0	964.4	963.7	963.1	962.4
155°	985.5	986.3	987.2	987.1	986.1	985.0	984.0	982.9
157.5°	1004.3	1005.3	1006.4	1006.2	1004.9	1003.5	1002.2	1000.8
160°	1015.0	1016.1	1017.1	1017.0	1015.8	1014.6	1013.4	1012.2
162.5°	1024.8	1026.0	1027.1	1027.2	1026.1	1025.0	1024.0	1022.9
165°	1037.8	1039.3	1040.7	1040.8	1039.6	1038.2	1037.0	1035.8
167.5°	1047.9	1049.4	1050.8	1050.8	1049.4	1047.9	1046.5	1045.1
170°	1053.6	1055.0	1056.4	1056.4	1055.0	1053.6	1052.3	1050.9
172.5°	1057.4	1058.8	1060.3	1060.2	1058.6	1057.1	1055.5	1054.0
175°	1062.0	1063.2	1064.4	1064.3	1063.0	1061.6	1060.2	1058.7
177.5°	1063.7	1064.8	1065.9	1065.8	1064.4	1063.0	1061.6	1060.2
180°	1062.7	1062.7	1062.7	1062.7	1062.7	1062.7	1062.7	1062.7

(END OF REPORT)