

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: P333061-840

Luminaire Tested: **S124RDIW-S795D770U840-4F0-1E-UDD-F**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P333061-840
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: S124RDIW-S795D770U840-4F0-1E-UDD-F
Description: DEFINE 4 DIRECT-INDIRECT WALL MOUNT LED LUMINAIRE
DOWNLIGHT 795 LUMENS PER FOOT, FLUSH SATIN WHITE DIFFUSER, REGRESSED
HOUSING
UPLIGHT 770 LUMENS PER FOOT, NO LENS
Light Source: -
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 6344.3 lumens
Efficiency: N/A
Efficacy: 141.0 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: General Diffuse

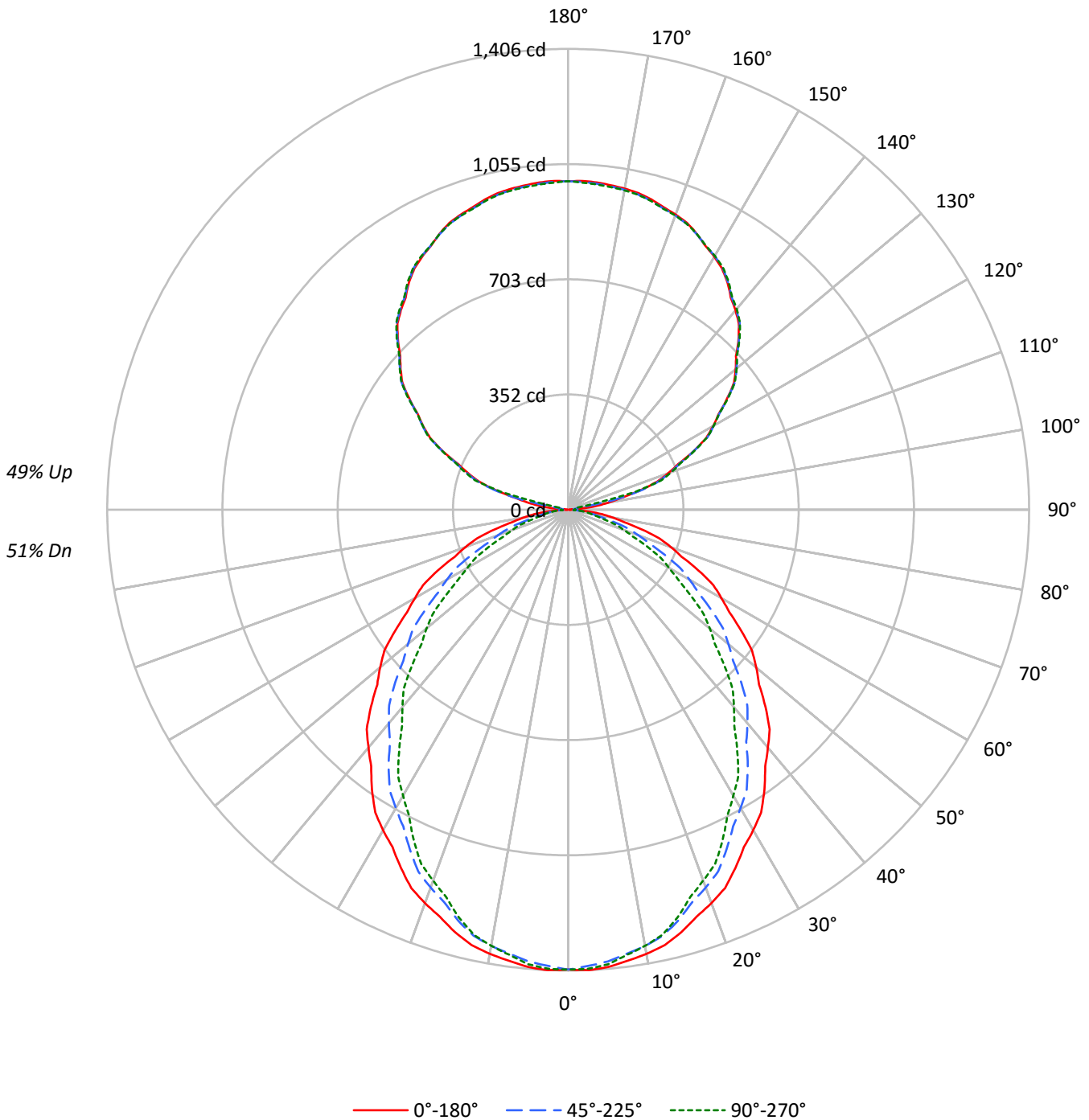
Input Watts (W): 45
Input Voltage (V): 120
Input Current (A_{in}): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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	107	107	107	107	99	99	99	99	84	84	84		70	70	70		57	57	57	51
1	98	94	90	87	91	87	84	81	74	72	70		62	60	59		51	50	49	44
2	90	82	76	71	83	76	71	67	65	61	58		55	52	50		45	43	42	37
3	82	73	66	60	76	68	61	56	58	53	49		49	45	42		40	38	36	32
4	75	65	57	51	69	60	53	48	51	46	42		43	40	36		36	33	31	27
5	69	58	50	44	64	54	47	41	46	41	36		39	35	32		33	30	27	24
6	64	52	44	38	59	48	41	36	42	36	32		35	31	28		30	26	24	21
7	59	47	39	33	54	44	37	32	38	32	28		32	28	25		27	24	21	19
8	55	43	35	30	51	40	33	28	35	29	25		30	25	22		25	22	19	17
9	51	39	31	26	47	36	30	25	32	26	23		27	23	20		23	20	17	15
10	48	36	29	24	44	33	27	23	29	24	20		25	21	18		21	18	16	14

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	11326	11326	11326
5°	11351	11212	11281
10°	11280	11077	11077
15°	11150	10845	10764
20°	10972	10539	10345
25°	10745	10180	9922
30°	10523	9803	9392
35°	10279	9411	8861
40°	9985	8965	8286
45°	9712	8524	7702
50°	9403	8013	7082
55°	9071	7484	6410
60°	8707	6902	5724
65°	8373	6178	5049
70°	7886	5375	4286
75°	7271	4457	3484
80°	6341	3394	3199
85°	5372	3084	2881



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	131.8	2.1
10°-20°	367.5	5.8
20°-30°	530.6	8.4
30°-40°	601.5	9.5
40°-50°	580.8	9.2
50°-60°	483.0	7.6
60°-70°	333.5	5.3
70°-80°	169.1	2.7
80°-90°	46.3	0.7
90°-100°	34.3	0.5
100°-110°	218.6	3.4
110°-120°	418.1	6.6
120°-130°	530.7	8.4
130°-140°	567.9	9.0
140°-150°	531.0	8.4
150°-160°	428.2	6.7
160°-170°	276.2	4.4
170°-180°	95.2	1.5
0°-30°	1029.9	16.2
0°-40°	1631.4	25.7
0°-60°	2695.2	42.5
0°-90°	3244.1	51.1
90°-120°	670.9	10.6
90°-150°	2300.6	36.3
90°-180°	3100.0	48.9
0°-180°	6344.3	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1403	1403	1403	1403	1403	
5°	1401	1396	1384	1394	1392	133
15°	1334	1324	1298	1295	1288	376
25°	1206	1186	1143	1125	1114	556
35°	1043	1008	955	919	899	651
45°	851	810	747	696	675	656
55°	644	600	532	478	455	576
65°	438	391	323	279	264	433
75°	233	193	143	119	112	246
85°	58	38	33	31	31	65
90°	2	10	16	21	22	5
95°	41	17	16	21	22	53
105°	226	230	234	239	214	236
115°	421	423	423	424	424	414
125°	592	595	594	596	597	529
135°	735	734	737	738	740	566
145°	847	849	849	850	852	529
155°	929	929	927	930	928	428
165°	980	976	976	981	975	277
175°	1002	998	998	1004	996	95
180°	1002	1002	1002	1002	1002	



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CANDELA DISTRIBUTION (FULL):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
0°	1402.9	1402.9	1402.9	1402.9	1402.9	1402.9	1402.9	1402.9	1402.9	1402.9	1402.9
2.5°	1406.3	1405.5	1404.7	1404.0	1403.2	1401.8	1399.7	1397.7	1395.5	1393.4	1395.5
5°	1400.7	1399.8	1398.8	1397.9	1396.8	1395.0	1392.1	1389.3	1386.3	1383.5	1385.9
7.5°	1388.1	1387.0	1386.0	1385.0	1384.0	1381.7	1378.0	1374.2	1370.5	1366.8	1368.3
10°	1376.0	1374.8	1373.6	1372.4	1371.2	1368.5	1364.2	1359.9	1355.6	1351.3	1352.2
12.5°	1360.5	1359.2	1357.8	1356.3	1355.0	1351.8	1346.8	1341.6	1336.6	1331.5	1332.1
15°	1334.1	1332.0	1329.8	1327.7	1325.5	1321.5	1315.5	1309.5	1303.5	1297.6	1297.1
17.5°	1302.1	1299.0	1295.9	1292.8	1289.7	1284.5	1277.4	1270.2	1263.0	1255.9	1254.6
20°	1277.2	1274.0	1271.0	1267.9	1264.8	1259.2	1251.0	1242.9	1234.8	1226.7	1224.8
22.5°	1249.7	1246.2	1242.7	1239.2	1235.8	1229.6	1220.9	1212.2	1203.6	1194.9	1192.0
25°	1206.3	1201.9	1197.7	1193.4	1189.1	1182.0	1172.3	1162.5	1152.7	1142.9	1138.8
27.5°	1160.7	1155.4	1149.9	1144.6	1139.1	1131.3	1120.7	1110.3	1099.8	1089.4	1084.4
30°	1128.9	1123.0	1117.0	1111.1	1105.1	1096.5	1085.3	1074.1	1062.8	1051.6	1045.6
32.5°	1095.4	1088.7	1082.0	1075.2	1068.5	1059.3	1047.7	1036.1	1024.5	1012.9	1006.0
35°	1043.0	1035.4	1027.7	1020.1	1012.5	1002.7	990.8	978.8	966.8	954.9	946.8
37.5°	986.9	979.1	971.2	963.3	955.4	944.9	931.7	918.5	905.2	892.0	882.9
40°	947.5	939.6	931.7	923.8	915.9	905.1	891.5	878.0	864.3	850.7	840.7
42.5°	909.6	901.3	893.1	884.8	876.6	865.4	851.2	837.0	822.8	808.6	798.4
45°	850.7	841.9	833.0	824.3	815.4	803.9	789.5	775.2	760.8	746.6	734.9
47.5°	789.9	780.8	771.7	762.5	753.5	741.4	726.6	711.7	696.8	681.9	669.7
50°	748.7	739.4	730.0	720.7	711.4	699.1	683.9	668.6	653.3	638.0	626.1
52.5°	706.6	697.5	688.3	679.2	670.1	657.7	642.1	626.4	610.8	595.1	583.0
55°	644.5	634.9	625.4	615.8	606.3	593.8	578.2	562.7	547.2	531.7	519.3
57.5°	583.1	573.1	563.2	553.3	543.3	530.7	515.4	500.2	484.9	469.6	457.1
60°	539.3	529.7	520.2	510.6	501.0	488.7	473.3	458.1	442.8	427.5	415.1
62.5°	499.7	489.8	479.9	469.9	460.0	447.2	431.5	415.9	400.2	384.6	373.0
65°	438.3	428.0	417.7	407.5	397.2	384.5	369.1	353.9	338.6	323.4	313.1
67.5°	374.5	364.7	354.8	345.0	335.1	323.2	308.9	294.8	280.5	266.4	257.5
70°	334.1	324.1	314.0	304.0	294.0	282.2	268.5	254.9	241.4	227.7	219.8
72.5°	291.1	282.1	273.0	263.9	254.8	243.9	231.1	218.1	205.3	192.5	185.7
75°	233.1	224.3	215.4	206.6	197.7	187.7	176.5	165.3	154.1	142.9	137.3
77.5°	174.2	166.7	159.3	151.8	144.2	135.9	126.9	117.9	108.8	99.7	96.4
80°	136.4	129.5	122.6	115.6	108.8	101.7	94.5	87.4	80.2	73.0	72.3
82.5°	103.8	97.5	91.1	84.7	78.4	73.1	69.1	64.9	60.8	56.8	56.1
85°	58.0	53.2	48.5	43.7	38.9	36.2	35.4	34.7	34.0	33.3	32.8
87.5°	20.2	19.1	17.9	16.8	15.6	15.0	15.1	15.1	15.2	15.3	15.3
90°	2.2	4.0	6.0	7.8	9.6	11.2	12.5	13.8	15.1	16.5	17.5
92.5°	9.5	9.6	9.7	9.7	9.8	10.6	11.9	13.2	14.5	15.9	16.9
95°	41.2	35.5	29.9	24.2	18.6	15.9	16.0	16.2	16.4	16.5	17.5
97.5°	87.6	91.1	94.6	98.2	101.7	94.1	75.5	57.0	38.4	19.8	19.9
100°	122.9	125.9	129.0	131.9	134.9	124.9	102.0	79.0	55.9	33.0	30.2
102.5°	162.5	164.7	166.9	169.2	171.3	170.9	167.9	164.9	161.9	159.0	128.4
105°	225.6	226.6	227.6	228.6	229.6	230.6	231.4	232.2	233.1	233.9	235.4
107.5°	284.3	284.8	285.3	285.8	286.3	287.1	288.2	289.3	290.4	291.5	292.4
110°	323.9	324.4	324.9	325.4	325.8	326.6	327.6	328.6	329.6	330.5	330.9



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CANDELA DISTRIBUTION (continued):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
112.5°	362.2	363.1	364.1	364.9	365.8	366.5	367.0	367.4	367.9	368.4	368.3
115°	421.3	421.8	422.3	422.7	423.2	423.4	423.2	423.1	422.9	422.7	423.1
117.5°	474.5	475.1	475.8	476.5	477.2	477.7	478.1	478.4	478.8	479.2	479.1
120°	510.5	511.2	511.8	512.5	513.1	513.4	513.2	513.1	512.9	512.7	513.1
122.5°	544.1	544.4	544.8	545.2	545.6	545.9	546.2	546.4	546.6	546.9	547.1
125°	592.2	592.9	593.5	594.2	594.8	595.0	594.7	594.4	594.0	593.7	594.2
127.5°	637.7	637.9	638.1	638.2	638.4	638.9	639.6	640.5	641.2	642.0	641.9
130°	667.1	667.3	667.5	667.6	667.8	668.1	668.6	669.1	669.6	670.1	670.3
132.5°	694.2	694.5	694.8	695.0	695.3	695.8	696.4	697.1	697.7	698.3	698.5
135°	734.6	734.5	734.3	734.1	734.0	734.2	734.9	735.5	736.2	736.9	737.2
137.5°	770.4	770.5	770.6	770.6	770.7	771.1	771.8	772.5	773.4	774.1	774.4
140°	793.9	794.2	794.5	794.9	795.2	795.5	795.9	796.2	796.5	796.9	797.3
142.5°	814.9	815.5	816.1	816.6	817.2	817.6	817.8	818.0	818.2	818.4	818.8
145°	847.1	847.6	848.1	848.6	849.1	849.3	849.3	849.3	849.3	849.3	849.5
147.5°	872.7	873.6	874.5	875.5	876.5	876.8	876.7	876.5	876.3	876.2	876.3
150°	891.3	891.9	892.6	893.3	893.9	894.2	894.0	893.8	893.7	893.5	893.5
152.5°	906.9	907.4	908.0	908.5	909.0	909.1	908.8	908.6	908.3	908.0	908.2
155°	928.8	929.0	929.1	929.3	929.5	929.3	928.8	928.3	927.8	927.3	928.0
157.5°	947.3	947.2	947.1	947.0	946.8	946.4	945.9	945.3	944.7	944.2	945.0
160°	958.0	957.5	957.0	956.5	956.0	955.6	955.5	955.3	955.1	955.0	956.0
162.5°	967.6	966.9	966.3	965.7	965.0	964.6	964.5	964.3	964.1	964.0	965.0
165°	979.8	978.9	978.1	977.2	976.4	976.0	976.0	976.0	976.0	976.0	977.3
167.5°	989.4	988.5	987.6	986.7	985.8	985.4	985.3	985.2	985.1	985.0	986.4
170°	994.7	993.7	992.7	991.7	990.8	990.3	990.5	990.7	990.8	991.0	992.3
172.5°	998.4	997.3	996.3	995.3	994.3	993.9	994.1	994.2	994.4	994.6	995.9
175°	1002.2	1001.2	1000.3	999.3	998.3	997.8	997.9	998.2	998.4	998.5	1000.0
177.5°	1004.0	1003.1	1002.2	1001.2	1000.3	1000.0	1000.3	1000.5	1000.8	1001.0	1002.1
180°	1002.2	1002.2	1002.2	1002.2	1002.2	1002.2	1002.2	1002.2	1002.2	1002.2	1002.2



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CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
0°	1402.9	1402.9	1402.9	1402.9	1402.9	1402.9	1402.9	1402.9
2.5°	1397.7	1399.7	1401.8	1402.8	1402.6	1402.4	1402.2	1402.0
5°	1388.3	1390.7	1393.1	1394.0	1393.5	1393.1	1392.6	1392.1
7.5°	1369.8	1371.4	1372.9	1373.2	1372.5	1371.7	1371.0	1370.2
10°	1353.2	1354.1	1355.1	1355.1	1354.1	1353.2	1352.2	1351.3
12.5°	1332.7	1333.2	1333.8	1333.4	1332.1	1330.8	1329.4	1328.1
15°	1296.7	1296.2	1295.7	1294.6	1292.9	1291.2	1289.6	1287.9
17.5°	1253.2	1251.9	1250.5	1248.6	1246.1	1243.5	1241.0	1238.5
20°	1222.8	1220.9	1219.0	1216.6	1213.5	1210.3	1207.2	1204.2
22.5°	1189.2	1186.3	1183.5	1180.7	1178.2	1175.7	1173.2	1170.6
25°	1134.8	1130.7	1126.7	1123.5	1121.1	1118.7	1116.3	1113.9
27.5°	1079.3	1074.4	1069.3	1065.1	1061.7	1058.2	1054.8	1051.4
30°	1039.7	1033.7	1027.7	1022.8	1019.1	1015.2	1011.4	1007.5
32.5°	999.1	992.2	985.2	980.0	976.3	972.7	969.1	965.4
35°	938.7	930.6	922.5	916.3	912.0	907.7	903.3	899.1
37.5°	873.8	864.7	855.7	849.0	844.8	840.4	836.2	831.8
40°	830.7	820.6	810.6	803.4	799.2	794.9	790.6	786.3
42.5°	788.2	778.0	767.8	760.4	755.9	751.4	747.0	742.5
45°	723.2	711.4	699.7	691.8	687.4	683.2	678.8	674.6
47.5°	657.6	645.5	633.4	624.9	620.3	615.5	610.8	606.0
50°	614.2	602.3	590.3	582.1	577.5	573.0	568.5	563.9
52.5°	570.9	558.8	546.5	538.2	533.4	528.7	524.0	519.3
55°	506.9	494.4	482.1	473.6	469.1	464.5	460.0	455.4
57.5°	444.4	431.8	419.2	411.2	407.8	404.3	400.9	397.5
60°	402.7	390.3	377.9	369.7	366.0	362.1	358.3	354.5
62.5°	361.6	350.2	338.7	331.4	328.4	325.4	322.2	319.2
65°	302.8	292.6	282.3	275.7	272.9	269.9	267.1	264.3
67.5°	248.7	239.9	231.1	225.1	222.0	218.7	215.6	212.5
70°	212.0	204.1	196.2	191.1	188.7	186.3	183.9	181.6
72.5°	179.0	172.3	165.5	161.1	159.0	156.7	154.5	152.3
75°	131.9	126.4	120.9	117.4	116.0	114.6	113.1	111.7
77.5°	93.3	90.1	86.8	85.0	84.6	84.2	83.8	83.3
80°	71.6	70.9	70.2	69.7	69.5	69.2	69.0	68.8
82.5°	55.6	55.1	54.6	54.2	54.0	53.7	53.5	53.3
85°	32.3	31.9	31.4	31.1	31.1	31.1	31.1	31.1
87.5°	15.3	15.3	15.3	15.5	15.8	16.1	16.3	16.6
90°	18.5	19.5	20.5	21.1	21.5	21.8	22.1	22.5
92.5°	17.9	18.9	19.9	20.4	20.5	20.6	20.6	20.7
95°	18.5	19.5	20.5	21.1	21.2	21.4	21.6	21.7
97.5°	20.0	20.1	20.2	20.3	20.5	20.7	20.8	21.0
100°	27.4	24.4	21.6	20.3	20.5	20.7	20.8	21.0
102.5°	97.9	67.3	36.8	21.4	21.5	21.5	21.5	21.6
105°	236.9	238.3	239.8	237.6	231.7	225.6	219.6	213.7
107.5°	293.1	293.8	294.6	295.2	295.9	296.5	297.1	297.7
110°	331.2	331.5	331.9	332.3	332.9	333.4	333.9	334.4



TEST NUMBER: P333061-840

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CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
112.5°	368.2	368.2	368.1	368.4	369.0	369.6	370.3	370.9
115°	423.4	423.7	424.1	424.2	424.2	424.2	424.2	424.2
117.5°	479.0	479.0	478.9	478.8	478.8	478.7	478.6	478.6
120°	513.4	513.7	514.0	514.0	513.7	513.4	513.1	512.7
122.5°	547.3	547.5	547.8	547.6	547.3	546.9	546.6	546.3
125°	594.7	595.2	595.7	596.0	596.2	596.3	596.5	596.7
127.5°	641.8	641.7	641.6	641.5	641.4	641.2	641.1	641.0
130°	670.4	670.7	670.9	670.9	670.9	670.9	670.9	670.9
132.5°	698.6	698.8	699.0	699.0	698.9	698.7	698.6	698.5
135°	737.5	737.9	738.2	738.5	738.8	739.2	739.5	739.8
137.5°	774.8	775.2	775.5	775.7	775.6	775.5	775.4	775.3
140°	797.8	798.3	798.8	799.2	799.3	799.5	799.7	799.8
142.5°	819.2	819.5	819.9	820.1	820.1	820.1	820.2	820.2
145°	849.6	849.8	850.0	850.2	850.5	850.9	851.2	851.5
147.5°	876.4	876.6	876.7	876.9	877.0	877.2	877.4	877.5
150°	893.5	893.5	893.5	893.6	893.8	893.9	894.1	894.2
152.5°	908.5	908.7	909.0	909.1	909.0	908.9	908.8	908.7
155°	928.6	929.3	929.9	930.0	929.5	929.0	928.5	928.1
157.5°	945.9	946.8	947.7	947.7	946.8	945.9	945.0	944.2
160°	957.0	958.0	959.0	959.0	958.0	957.0	956.0	955.0
162.5°	966.0	966.9	968.0	968.0	966.8	965.6	964.5	963.4
165°	978.7	980.0	981.3	981.3	979.8	978.3	976.7	975.2
167.5°	988.0	989.4	990.9	990.8	989.1	987.4	985.7	984.1
170°	993.6	995.0	996.3	996.1	994.5	992.8	991.2	989.5
172.5°	997.2	998.6	999.9	999.7	997.8	996.1	994.3	992.5
175°	1001.5	1003.0	1004.5	1004.2	1002.2	1000.3	998.3	996.2
177.5°	1003.2	1004.2	1005.3	1005.0	1003.4	1001.8	1000.3	998.7
180°	1002.2	1002.2	1002.2	1002.2	1002.2	1002.2	1002.2	1002.2

(END OF REPORT)