

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: P333070-830

Luminaire Tested: **S124RDIW-S795D1340U830-4F0-1E-UDD-F1**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P333070-830
REPORT IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-1807-864-10,
Test Lab: INNOVATION CENTER
Issue Date: 3/3/2020
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: NEO-RAY
Catalog Number: S124RDIW-S795D1340U830-4F0-1E-UDD-F1
Description: DEFINE 4 DIRECT-INDIRECT WALL MOUNT LED LUMINAIRE
DOWNLIGHT 795 LUMENS PER FOOT, FLUSH SATIN WHITE DIFFUSER, REGRESSED
HOUSING
UPLIGHT 1340 LUMENS PER FOOT, FLUSH SATIN WHITE DIFFUSER
Light Source: -
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 7414.9 lumens
Efficiency: N/A
Efficacy: 120.8 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

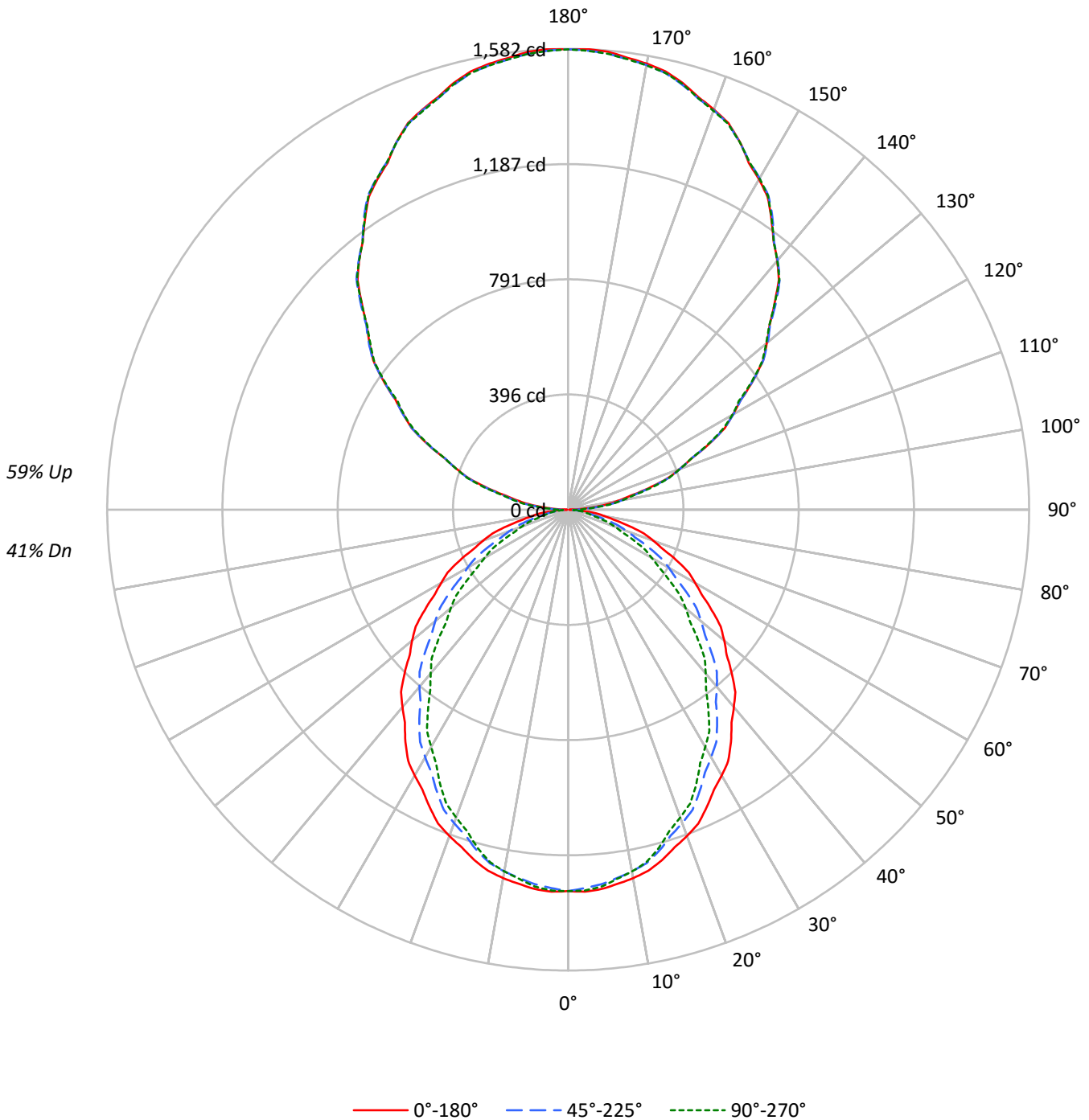
Input Watts (W): 61.4
Input Voltage (V): 120
Input Current (A_{in}): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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	105	105	105	105	96	96	96	96	78	78	78	62	62	62	48	48	48	41
1	96	92	88	85	87	84	81	78	69	67	65	55	54	52	42	42	41	35
2	88	80	74	69	80	73	68	64	61	57	54	49	46	44	38	36	35	30
3	80	71	64	58	73	65	59	54	54	49	45	43	40	37	34	31	30	25
4	73	63	55	49	66	58	51	46	48	43	39	39	35	32	30	28	26	22
5	67	56	48	42	61	51	44	39	43	38	34	35	31	28	27	25	22	19
6	62	50	42	37	56	46	39	34	38	33	29	31	27	25	25	22	20	17
7	57	45	38	32	52	42	35	30	35	30	26	29	25	22	23	20	18	15
8	53	41	34	28	48	38	31	27	32	27	23	26	22	19	21	18	16	13
9	49	37	30	25	45	35	28	24	29	24	21	24	20	17	19	16	14	12
10	46	34	27	23	42	32	25	21	27	22	18	22	18	16	18	15	13	11

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	10571	10571	10571
5°	10594	10464	10529
10°	10528	10339	10339
15°	10407	10122	10046
20°	10241	9836	9655
25°	10029	9502	9260
30°	9822	9149	8766
35°	9594	8784	8270
40°	9319	8368	7734
45°	9065	7955	7188
50°	8776	7479	6610
55°	8466	6984	5983
60°	8126	6442	5341
65°	7815	5765	4713
70°	7360	5016	4001
75°	6784	4161	3250
80°	5918	3166	2985
85°	5011	2881	2686



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	123.0	1.7
10°-20°	343.0	4.6
20°-30°	495.3	6.7
30°-40°	561.4	7.6
40°-50°	542.1	7.3
50°-60°	450.8	6.1
60°-70°	311.3	4.2
70°-80°	157.8	2.1
80°-90°	45.2	0.6
90°-100°	104.3	1.4
100°-110°	308.8	4.2
110°-120°	524.1	7.1
120°-130°	691.1	9.3
130°-140°	776.2	10.5
140°-150°	762.7	10.3
150°-160°	641.5	8.7
160°-170°	426.8	5.8
170°-180°	149.5	2.0
0°-30°	961.2	13.0
0°-40°	1522.6	20.5
0°-60°	2515.6	33.9
0°-90°	3029.8	40.9
90°-120°	937.2	12.6
90°-150°	3167.3	42.7
90°-180°	4385.0	59.1
0°-180°	7414.9	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1309	1309	1309	1309	1309	
5°	1307	1303	1291	1301	1299	124
15°	1245	1235	1211	1209	1202	351
25°	1126	1106	1067	1050	1040	519
35°	974	940	891	858	839	608
45°	794	756	697	649	630	612
55°	602	560	496	446	425	538
65°	409	365	302	260	247	404
75°	218	180	133	111	104	230
85°	54	35	31	29	29	61
90°	4	17	27	34	37	7
95°	73	84	93	96	97	82
105°	285	286	291	295	298	302
115°	533	533	530	529	528	525
125°	776	776	775	772	770	692
135°	1001	1008	1008	1006	1002	774
145°	1216	1221	1222	1221	1218	761
155°	1394	1393	1392	1397	1392	641
165°	1517	1513	1511	1518	1513	427
175°	1578	1572	1571	1578	1571	150
180°	1580	1580	1580	1580	1580	



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CANDELA DISTRIBUTION (FULL):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
0°	1309.4	1309.4	1309.4	1309.4	1309.4	1309.4	1309.4	1309.4	1309.4	1309.4	1309.4
2.5°	1312.6	1311.8	1311.1	1310.4	1309.7	1308.3	1306.4	1304.5	1302.5	1300.5	1302.5
5°	1307.3	1306.5	1305.5	1304.7	1303.7	1302.0	1299.3	1296.7	1293.9	1291.3	1293.5
7.5°	1295.5	1294.6	1293.6	1292.7	1291.8	1289.6	1286.1	1282.6	1279.1	1275.6	1277.1
10°	1284.3	1283.2	1282.0	1280.9	1279.8	1277.2	1273.3	1269.2	1265.3	1261.2	1262.1
12.5°	1269.8	1268.6	1267.2	1265.9	1264.7	1261.7	1257.0	1252.2	1247.5	1242.7	1243.3
15°	1245.2	1243.2	1241.1	1239.2	1237.2	1233.4	1227.8	1222.2	1216.6	1211.1	1210.6
17.5°	1215.3	1212.4	1209.5	1206.6	1203.7	1198.9	1192.2	1185.5	1178.8	1172.1	1170.9
20°	1192.0	1189.1	1186.3	1183.4	1180.4	1175.3	1167.6	1160.1	1152.4	1144.9	1143.1
22.5°	1166.4	1163.1	1159.9	1156.6	1153.4	1147.6	1139.5	1131.4	1123.3	1115.2	1112.6
25°	1125.9	1121.8	1117.9	1113.8	1109.8	1103.2	1094.1	1085.0	1075.8	1066.7	1062.9
27.5°	1083.4	1078.4	1073.3	1068.3	1063.2	1055.8	1046.0	1036.3	1026.5	1016.8	1012.1
30°	1053.7	1048.1	1042.5	1037.0	1031.4	1023.4	1013.0	1002.5	991.9	981.5	975.9
32.5°	1022.4	1016.2	1009.8	1003.5	997.3	988.7	977.9	967.0	956.2	945.4	939.0
35°	973.5	966.4	959.2	952.1	945.0	935.9	924.7	913.5	902.4	891.3	883.7
37.5°	921.1	913.8	906.4	899.1	891.7	881.9	869.6	857.2	844.9	832.5	824.1
40°	884.3	876.9	869.6	862.2	854.9	844.8	832.1	819.4	806.7	794.0	784.7
42.5°	848.9	841.2	833.6	825.9	818.1	807.7	794.5	781.2	768.0	754.7	745.2
45°	794.0	785.8	777.5	769.3	761.0	750.3	736.9	723.5	710.1	696.8	685.9
47.5°	737.3	728.8	720.3	711.7	703.2	692.0	678.2	664.2	650.4	636.4	625.1
50°	698.8	690.1	681.4	672.7	664.0	652.5	638.3	624.1	609.7	595.5	584.4
52.5°	659.5	651.0	642.4	634.0	625.5	613.9	599.3	584.7	570.0	555.4	544.1
55°	601.5	592.6	583.7	574.8	565.9	554.2	539.7	525.2	510.8	496.2	484.7
57.5°	544.2	534.9	525.7	516.4	507.1	495.3	481.1	466.8	452.6	438.3	426.6
60°	503.3	494.4	485.5	476.5	467.6	456.1	441.8	427.5	413.3	399.0	387.4
62.5°	466.4	457.1	447.9	438.6	429.3	417.4	402.7	388.1	373.5	358.9	348.2
65°	409.1	399.4	389.8	380.3	370.7	358.8	344.5	330.3	316.0	301.8	292.2
67.5°	349.5	340.4	331.1	322.0	312.7	301.6	288.3	275.1	261.8	248.6	240.3
70°	311.8	302.5	293.0	283.7	274.4	263.3	250.6	237.9	225.3	212.5	205.2
72.5°	271.7	263.3	254.8	246.3	237.8	227.6	215.7	203.6	191.6	179.6	173.3
75°	217.5	209.3	201.0	192.8	184.5	175.2	164.8	154.3	143.8	133.4	128.2
77.5°	162.6	155.6	148.6	141.7	134.6	126.9	118.5	110.0	101.5	93.0	90.0
80°	127.3	120.8	114.4	107.9	101.5	94.9	88.2	81.5	74.8	68.1	67.5
82.5°	96.9	91.0	85.0	79.1	73.1	68.2	64.5	60.6	56.7	53.0	52.4
85°	54.1	49.7	45.2	40.8	36.3	33.7	33.1	32.4	31.8	31.1	30.6
87.5°	19.1	18.4	17.5	16.7	15.8	15.6	15.8	16.1	16.3	16.6	16.8
90°	3.7	6.7	9.6	12.6	15.6	18.2	20.4	22.5	24.7	26.9	28.6
92.5°	26.2	29.6	33.0	36.4	39.9	42.3	43.8	45.3	46.8	48.4	49.4
95°	73.3	75.8	78.2	80.7	83.1	85.3	87.2	89.1	91.0	92.9	93.7
97.5°	128.1	130.1	132.1	133.9	135.9	138.0	140.3	142.5	144.7	146.9	147.9
100°	171.2	172.2	173.3	174.4	175.5	177.2	179.6	182.1	184.5	187.0	187.6
102.5°	216.1	216.6	217.0	217.4	217.8	219.1	221.4	223.7	225.8	228.1	228.8
105°	284.8	285.1	285.4	285.6	285.9	286.5	287.7	288.8	289.8	291.0	291.7
107.5°	356.9	357.2	357.6	357.9	358.3	358.4	358.6	358.8	359.0	359.1	359.9
110°	405.9	406.3	406.9	407.5	408.0	408.1	407.8	407.6	407.4	407.1	406.5



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CANDELA DISTRIBUTION (continued):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
112.5°	456.7	456.8	456.9	457.0	457.1	456.9	456.5	455.9	455.4	455.0	454.9
115°	532.9	532.9	532.9	532.9	532.9	532.7	532.2	531.6	531.0	530.5	530.3
117.5°	604.8	605.0	605.3	605.5	605.7	605.6	605.2	604.8	604.5	604.1	603.1
120°	652.7	653.8	654.9	656.0	657.0	657.2	656.4	655.6	654.8	653.9	652.6
122.5°	702.6	703.0	703.5	703.9	704.4	704.4	704.0	703.6	703.2	702.9	701.9
125°	776.2	776.2	776.2	776.2	776.2	776.1	775.8	775.5	775.2	775.0	774.4
127.5°	842.9	843.8	844.6	845.4	846.2	846.4	845.9	845.6	845.1	844.6	844.1
130°	889.9	890.7	891.6	892.3	893.2	893.5	893.5	893.5	893.5	893.5	893.0
132.5°	937.8	938.4	939.0	939.6	940.2	940.4	940.2	939.9	939.7	939.5	939.0
135°	1001.1	1002.8	1004.4	1006.0	1007.7	1008.4	1008.4	1008.4	1008.4	1008.4	1008.0
137.5°	1070.1	1070.8	1071.6	1072.3	1073.1	1073.7	1074.1	1074.6	1075.0	1075.4	1074.7
140°	1116.1	1116.5	1117.1	1117.7	1118.2	1118.4	1118.4	1118.4	1118.4	1118.4	1118.2
142.5°	1158.1	1158.6	1159.1	1159.7	1160.3	1160.4	1160.2	1160.0	1159.8	1159.5	1159.5
145°	1216.3	1217.4	1218.4	1219.6	1220.6	1221.3	1221.5	1221.8	1222.1	1222.4	1222.1
147.5°	1273.9	1275.3	1276.6	1277.9	1279.1	1279.7	1279.5	1279.3	1279.0	1278.8	1278.7
150°	1309.2	1310.2	1311.4	1312.4	1313.5	1314.0	1314.0	1314.0	1314.0	1314.0	1314.0
152.5°	1342.4	1343.0	1343.7	1344.3	1345.0	1345.5	1345.7	1345.9	1346.1	1346.3	1347.0
155°	1393.5	1393.5	1393.5	1393.5	1393.5	1393.4	1393.1	1392.8	1392.5	1392.3	1393.4
157.5°	1436.5	1436.1	1435.6	1435.0	1434.5	1434.3	1434.3	1434.2	1434.2	1434.1	1434.9
160°	1462.0	1461.7	1461.4	1461.1	1460.8	1460.6	1460.3	1460.1	1459.8	1459.5	1460.3
162.5°	1485.4	1484.7	1484.0	1483.3	1482.6	1482.1	1481.9	1481.6	1481.3	1481.0	1482.5
165°	1516.9	1516.2	1515.3	1514.5	1513.7	1513.1	1512.5	1511.9	1511.4	1510.8	1512.5
167.5°	1541.2	1540.0	1538.9	1537.8	1536.6	1536.1	1536.2	1536.2	1536.3	1536.3	1537.9
170°	1554.8	1553.5	1552.2	1550.8	1549.4	1548.9	1549.2	1549.4	1549.7	1549.9	1551.6
172.5°	1564.6	1563.5	1562.4	1561.2	1560.1	1559.5	1559.6	1559.6	1559.7	1559.7	1561.6
175°	1578.1	1576.7	1575.4	1574.0	1572.6	1571.8	1571.6	1571.3	1571.0	1570.7	1572.6
177.5°	1582.4	1581.4	1580.3	1579.2	1578.1	1577.6	1577.6	1577.6	1577.6	1577.6	1579.1
180°	1580.5	1580.5	1580.5	1580.5	1580.5	1580.5	1580.5	1580.5	1580.5	1580.5	1580.5



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CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
0°	1309.4	1309.4	1309.4	1309.4	1309.4	1309.4	1309.4	1309.4
2.5°	1304.5	1306.4	1308.3	1309.3	1309.1	1308.9	1308.7	1308.5
5°	1295.7	1298.0	1300.2	1301.1	1300.6	1300.2	1299.8	1299.3
7.5°	1278.5	1280.0	1281.4	1281.7	1281.0	1280.3	1279.6	1278.8
10°	1263.0	1263.9	1264.8	1264.8	1263.9	1263.0	1262.1	1261.2
12.5°	1243.9	1244.3	1244.9	1244.5	1243.3	1242.1	1240.8	1239.5
15°	1210.2	1209.8	1209.3	1208.3	1206.7	1205.1	1203.6	1202.0
17.5°	1169.7	1168.5	1167.2	1165.4	1163.0	1160.6	1158.3	1155.9
20°	1141.3	1139.5	1137.7	1135.5	1132.6	1129.6	1126.7	1123.9
22.5°	1109.9	1107.2	1104.6	1102.0	1099.7	1097.3	1095.0	1092.6
25°	1059.1	1055.4	1051.6	1048.6	1046.3	1044.1	1041.9	1039.6
27.5°	1007.4	1002.8	998.1	994.1	990.9	987.7	984.5	981.3
30°	970.3	964.8	959.2	954.6	951.1	947.5	944.0	940.4
32.5°	932.5	926.0	919.5	914.6	911.3	907.9	904.5	901.1
35°	876.1	868.6	861.0	855.2	851.2	847.2	843.1	839.1
37.5°	815.6	807.1	798.6	792.4	788.4	784.4	780.4	776.4
40°	775.3	765.9	756.6	749.9	745.9	741.9	737.9	733.9
42.5°	735.7	726.1	716.6	709.7	705.5	701.3	697.2	693.0
45°	675.0	664.0	653.1	645.6	641.6	637.6	633.6	629.6
47.5°	613.8	602.5	591.2	583.2	578.9	574.5	570.0	565.6
50°	573.3	562.1	550.9	543.3	539.0	534.8	530.6	526.3
52.5°	532.8	521.5	510.1	502.3	497.9	493.4	489.1	484.7
55°	473.1	461.5	450.0	442.1	437.8	433.6	429.3	425.1
57.5°	414.8	403.0	391.2	383.8	380.6	377.4	374.2	371.0
60°	375.9	364.3	352.7	345.1	341.6	338.0	334.4	330.8
62.5°	337.5	326.9	316.1	309.3	306.5	303.7	300.8	297.9
65°	282.6	273.1	263.4	257.3	254.7	251.9	249.3	246.7
67.5°	232.1	223.9	215.7	210.1	207.2	204.2	201.2	198.3
70°	197.8	190.5	183.1	178.3	176.2	173.9	171.6	169.5
72.5°	167.1	160.8	154.5	150.3	148.4	146.3	144.2	142.1
75°	123.1	118.0	112.8	109.6	108.3	107.0	105.6	104.2
77.5°	87.1	84.1	81.1	79.4	79.0	78.6	78.2	77.8
80°	66.8	66.2	65.5	65.0	64.8	64.6	64.4	64.2
82.5°	51.9	51.5	51.0	50.6	50.4	50.1	50.0	49.8
85°	30.2	29.8	29.3	29.0	29.0	29.0	29.0	29.0
87.5°	16.9	17.1	17.2	17.4	17.7	18.0	18.3	18.6
90°	30.2	31.8	33.4	34.5	35.1	35.6	36.1	36.7
92.5°	50.3	51.4	52.3	53.0	53.3	53.6	53.9	54.3
95°	94.5	95.4	96.1	96.6	96.6	96.6	96.6	96.6
97.5°	148.9	149.9	150.8	151.4	151.4	151.4	151.4	151.4
100°	188.1	188.7	189.2	189.5	189.5	189.5	189.5	189.5
102.5°	229.6	230.4	231.1	231.6	231.9	232.1	232.2	232.5
105°	292.6	293.4	294.2	295.0	295.8	296.6	297.5	298.2
107.5°	360.6	361.4	362.2	362.5	362.5	362.4	362.4	362.3
110°	406.0	405.4	404.9	405.0	405.9	406.6	407.5	408.3



TEST NUMBER: P333070-830

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CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
112.5°	454.8	454.7	454.5	454.6	454.7	454.9	455.1	455.2
115°	530.0	529.7	529.4	529.1	528.9	528.6	528.3	528.1
117.5°	602.3	601.3	600.4	599.6	599.1	598.6	598.0	597.5
120°	651.3	649.9	648.6	648.1	648.7	649.2	649.8	650.3
122.5°	701.0	700.1	699.2	698.2	697.2	696.3	695.3	694.3
125°	773.9	773.4	772.8	772.2	771.8	771.2	770.6	770.1
127.5°	843.6	843.0	842.4	842.0	841.6	841.1	840.7	840.3
130°	892.5	891.9	891.4	890.6	889.5	888.3	887.3	886.2
132.5°	938.4	937.9	937.4	936.9	936.4	935.9	935.6	935.1
135°	1007.4	1006.8	1006.3	1005.6	1004.8	1004.0	1003.1	1002.3
137.5°	1074.0	1073.4	1072.6	1072.3	1072.5	1072.7	1072.8	1073.0
140°	1117.9	1117.7	1117.4	1117.1	1116.8	1116.5	1116.3	1116.1
142.5°	1159.4	1159.4	1159.3	1159.2	1159.2	1159.1	1159.1	1159.0
145°	1221.8	1221.5	1221.3	1220.8	1219.9	1219.1	1218.3	1217.5
147.5°	1278.4	1278.2	1278.0	1277.7	1277.4	1277.1	1277.0	1276.7
150°	1314.0	1314.0	1314.0	1313.9	1313.6	1313.3	1313.1	1312.9
152.5°	1347.6	1348.3	1349.0	1348.9	1348.2	1347.5	1346.8	1346.0
155°	1394.5	1395.5	1396.7	1396.7	1395.5	1394.5	1393.4	1392.3
157.5°	1435.7	1436.5	1437.4	1437.3	1436.3	1435.4	1434.5	1433.6
160°	1461.1	1462.0	1462.7	1462.4	1461.1	1459.8	1458.4	1457.1
162.5°	1483.9	1485.4	1486.9	1487.0	1485.5	1484.2	1482.9	1481.5
165°	1514.1	1515.7	1517.4	1517.7	1516.6	1515.4	1514.4	1513.3
167.5°	1539.5	1541.2	1542.8	1542.8	1541.1	1539.4	1537.8	1536.1
170°	1553.2	1554.8	1556.5	1556.3	1554.4	1552.6	1550.7	1548.8
172.5°	1563.4	1565.3	1567.2	1567.1	1565.2	1563.3	1561.4	1559.5
175°	1574.5	1576.4	1578.4	1578.4	1576.4	1574.5	1572.6	1570.7
177.5°	1580.6	1582.2	1583.7	1583.6	1581.9	1580.1	1578.4	1576.6
180°	1580.5	1580.5	1580.5	1580.5	1580.5	1580.5	1580.5	1580.5

(END OF REPORT)