

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: P333069-930

Luminaire Tested: **S124RDIW-S795D1340U930-4F0-1E-UDD-F**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P333069-930
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-S795D1340U930-4F0-1E-UDD-F
Description: DEFINE 4 DIRECT-INDIRECT WALL MOUNT LED LUMINAIRE
DOWNLIGHT 795 LUMENS PER FOOT, FLUSH SATIN WHITE DIFFUSER, REGRESSED
HOUSING
UPLIGHT 1340 LUMENS PER FOOT, NO LENS
Light Source: -
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 6994.3 lumens
Efficiency: N/A
Efficacy: 113.9 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: Semi-Indirect

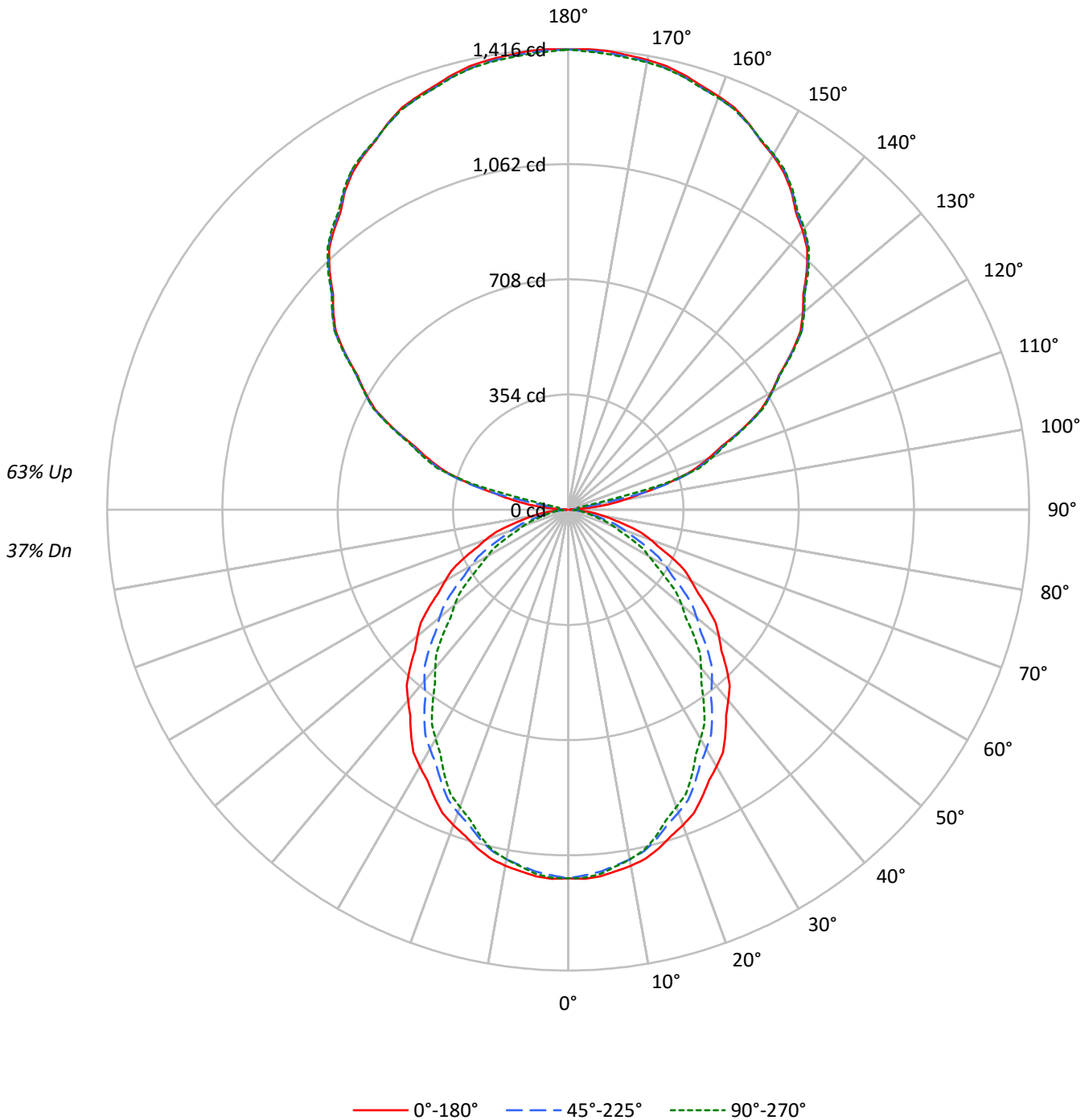
Input Watts (W): 61.4
Input Voltage (V): 120
Input Current (A_{in}): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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	104	104	104	104	94	94	94	94	76	76	76	60	60	60	45	45	45	37
1	95	91	87	84	86	83	80	77	67	65	63	53	51	50	40	39	38	32
2	87	80	74	69	79	72	67	63	59	55	52	47	44	42	35	34	32	27
3	79	70	63	57	72	64	58	53	52	48	44	41	38	36	31	29	28	23
4	73	62	54	49	66	57	50	45	46	42	38	37	34	31	28	26	24	20
5	67	55	47	42	60	51	44	39	42	37	33	33	30	27	25	23	21	17
6	61	50	42	36	55	45	39	34	37	32	28	30	26	23	23	21	19	15
7	57	45	37	32	51	41	34	29	34	29	25	27	24	21	21	18	17	14
8	53	41	33	28	48	37	31	26	31	26	22	25	21	19	19	17	15	12
9	49	37	30	25	44	34	28	23	28	23	20	23	19	17	18	15	13	11
10	46	34	27	22	41	31	25	21	26	21	18	21	18	15	17	14	12	10

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	9143	9143	9143
5°	9164	9052	9108
10°	9107	8943	8943
15°	9002	8756	8690
20°	8858	8508	8352
25°	8675	8219	8011
30°	8496	7914	7582
35°	8298	7597	7154
40°	8061	7238	6690
45°	7841	6882	6218
50°	7592	6469	5718
55°	7323	6042	5175
60°	7030	5572	4621
65°	6758	4988	4076
70°	6366	4338	3460
75°	5870	3599	2813
80°	5119	2738	2580
85°	4335	2492	2325



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	106.4	1.5
10°-20°	296.7	4.2
20°-30°	428.4	6.1
30°-40°	485.6	6.9
40°-50°	468.9	6.7
50°-60°	389.9	5.6
60°-70°	269.3	3.8
70°-80°	136.5	2.0
80°-90°	39.1	0.6
90°-100°	48.4	0.7
100°-110°	308.3	4.4
110°-120°	589.8	8.4
120°-130°	748.7	10.7
130°-140°	801.1	11.5
140°-150°	749.1	10.7
150°-160°	604.1	8.6
160°-170°	389.6	5.6
170°-180°	134.3	1.9
0°-30°	831.5	11.9
0°-40°	1317.1	18.8
0°-60°	2176.0	31.1
0°-90°	2620.8	37.5
90°-120°	946.5	13.5
90°-150°	3245.5	46.4
90°-180°	4374.0	62.5
0°-180°	6994.3	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1133	1133	1133	1133	1133	
5°	1131	1127	1117	1125	1124	107
15°	1077	1069	1048	1046	1040	303
25°	974	957	923	908	899	449
35°	842	813	771	742	726	526
45°	687	654	603	562	545	529
55°	520	484	429	386	368	465
65°	354	316	261	225	213	349
75°	188	156	115	96	90	199
85°	47	30	27	25	25	53
90°	3	15	23	29	32	5
95°	58	24	23	29	31	75
105°	318	325	330	337	301	333
115°	594	597	596	598	598	585
125°	835	839	838	841	842	746
135°	1036	1036	1040	1042	1044	798
145°	1195	1198	1198	1199	1201	746
155°	1310	1311	1308	1312	1309	604
165°	1382	1377	1377	1384	1376	390
175°	1414	1408	1409	1417	1405	135
180°	1414	1414	1414	1414	1414	



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CANDELA DISTRIBUTION (FULL):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
0°	1132.6	1132.6	1132.6	1132.6	1132.6	1132.6	1132.6	1132.6	1132.6	1132.6	1132.6
2.5°	1135.4	1134.7	1134.1	1133.5	1132.9	1131.7	1130.0	1128.4	1126.7	1124.9	1126.7
5°	1130.8	1130.1	1129.3	1128.5	1127.7	1126.3	1123.9	1121.6	1119.2	1117.0	1118.9
7.5°	1120.6	1119.8	1119.0	1118.2	1117.4	1115.5	1112.5	1109.5	1106.4	1103.4	1104.6
10°	1110.9	1109.9	1109.0	1108.0	1107.0	1104.8	1101.4	1097.9	1094.5	1091.0	1091.7
12.5°	1098.4	1097.3	1096.2	1095.0	1094.0	1091.4	1087.3	1083.1	1079.0	1075.0	1075.5
15°	1077.1	1075.4	1073.6	1071.9	1070.2	1066.9	1062.0	1057.2	1052.4	1047.6	1047.2
17.5°	1051.2	1048.7	1046.2	1043.7	1041.2	1037.1	1031.3	1025.5	1019.7	1013.9	1012.8
20°	1031.1	1028.6	1026.1	1023.6	1021.1	1016.6	1010.0	1003.5	996.9	990.3	988.8
22.5°	1008.9	1006.1	1003.3	1000.5	997.7	992.7	985.7	978.7	971.7	964.7	962.4
25°	973.9	970.4	966.9	963.4	960.0	954.3	946.4	938.5	930.6	922.7	919.4
27.5°	937.1	932.8	928.4	924.1	919.7	913.3	904.8	896.4	887.9	879.5	875.5
30°	911.4	906.6	901.8	897.0	892.2	885.3	876.2	867.2	858.0	849.0	844.2
32.5°	884.4	879.0	873.5	868.0	862.7	855.2	845.9	836.5	827.1	817.7	812.2
35°	842.0	835.9	829.7	823.5	817.4	809.5	799.9	790.2	780.6	770.9	764.4
37.5°	796.8	790.4	784.1	777.7	771.4	762.9	752.2	741.5	730.8	720.2	712.8
40°	764.9	758.6	752.2	745.8	739.5	730.8	719.7	708.8	697.8	686.8	678.7
42.5°	734.3	727.7	721.1	714.4	707.7	698.6	687.2	675.7	664.3	652.8	644.6
45°	686.8	679.7	672.5	665.4	658.3	649.0	637.4	625.8	614.2	602.8	593.3
47.5°	637.7	630.4	623.1	615.6	608.3	598.6	586.6	574.5	562.6	550.5	540.7
50°	604.5	597.0	589.4	581.9	574.4	564.4	552.1	539.8	527.4	515.1	505.5
52.5°	570.5	563.1	555.7	548.4	541.0	531.0	518.4	505.7	493.1	480.5	470.7
55°	520.3	512.6	504.9	497.2	489.5	479.4	466.8	454.3	441.8	429.3	419.2
57.5°	470.8	462.7	454.7	446.7	438.6	428.4	416.1	403.8	391.5	379.1	369.0
60°	435.4	427.6	420.0	412.2	404.5	394.5	382.1	369.8	357.5	345.1	335.1
62.5°	403.4	395.4	387.4	379.4	371.4	361.0	348.4	335.7	323.1	310.5	301.2
65°	353.8	345.5	337.2	329.0	320.7	310.4	298.0	285.7	273.4	261.1	252.7
67.5°	302.3	294.4	286.4	278.5	270.5	260.9	249.4	238.0	226.5	215.1	207.9
70°	269.7	261.6	253.5	245.4	237.3	227.8	216.8	205.8	194.9	183.8	177.5
72.5°	235.1	227.7	220.4	213.0	205.7	196.9	186.5	176.1	165.8	155.4	149.9
75°	188.2	181.1	173.9	166.8	159.6	151.6	142.5	133.5	124.4	115.4	110.9
77.5°	140.6	134.6	128.6	122.5	116.4	109.7	102.5	95.1	87.8	80.5	77.9
80°	110.1	104.5	99.0	93.4	87.8	82.1	76.3	70.5	64.7	58.9	58.4
82.5°	83.8	78.7	73.5	68.4	63.3	59.0	55.8	52.4	49.1	45.8	45.3
85°	46.8	43.0	39.1	35.3	31.4	29.2	28.6	28.0	27.5	26.9	26.5
87.5°	16.6	15.9	15.2	14.4	13.7	13.5	13.7	13.9	14.1	14.3	14.5
90°	3.2	5.8	8.3	10.9	13.5	15.7	17.6	19.5	21.4	23.2	24.7
92.5°	13.3	13.5	13.6	13.8	13.9	14.9	16.8	18.7	20.5	22.4	23.8
95°	58.1	50.1	42.2	34.2	26.2	22.3	22.6	22.8	23.0	23.2	24.7
97.5°	123.5	128.5	133.5	138.4	143.4	132.8	106.6	80.4	54.1	27.9	28.0
100°	173.4	177.7	181.9	186.1	190.4	176.3	143.8	111.4	78.9	46.6	42.6
102.5°	229.3	232.4	235.5	238.6	241.7	241.1	236.8	232.7	228.4	224.2	181.1
105°	318.3	319.7	321.1	322.5	323.9	325.2	326.4	327.6	328.7	330.0	332.1
107.5°	401.0	401.7	402.4	403.1	403.8	405.0	406.6	408.1	409.8	411.4	412.4
110°	456.8	457.5	458.3	458.9	459.7	460.7	462.1	463.5	465.0	466.4	466.8



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CANDELA DISTRIBUTION (continued):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
112.5°	510.9	512.3	513.6	514.8	516.1	517.0	517.7	518.4	519.0	519.7	519.6
115°	594.3	595.0	595.7	596.4	597.1	597.4	597.1	596.9	596.6	596.4	596.9
117.5°	669.4	670.3	671.2	672.2	673.1	673.8	674.4	674.9	675.4	676.0	675.9
120°	720.2	721.1	722.0	723.0	723.9	724.2	724.1	723.8	723.6	723.3	723.8
122.5°	767.5	768.1	768.7	769.2	769.8	770.2	770.5	770.9	771.2	771.5	771.8
125°	835.4	836.3	837.3	838.2	839.2	839.4	838.9	838.5	838.0	837.6	838.2
127.5°	899.7	899.9	900.2	900.4	900.7	901.3	902.4	903.4	904.6	905.6	905.5
130°	941.2	941.4	941.7	941.8	942.1	942.6	943.3	944.0	944.7	945.4	945.7
132.5°	979.3	979.7	980.1	980.5	980.9	981.6	982.5	983.3	984.2	985.1	985.4
135°	1036.3	1036.1	1035.8	1035.7	1035.4	1035.8	1036.7	1037.6	1038.6	1039.5	1040.0
137.5°	1086.9	1087.0	1087.0	1087.2	1087.3	1087.9	1088.8	1089.9	1091.0	1091.9	1092.5
140°	1119.9	1120.4	1120.8	1121.3	1121.8	1122.3	1122.7	1123.2	1123.6	1124.1	1124.8
142.5°	1149.5	1150.3	1151.2	1152.0	1152.9	1153.4	1153.7	1154.0	1154.3	1154.5	1155.1
145°	1195.0	1195.6	1196.4	1197.1	1197.8	1198.2	1198.2	1198.2	1198.2	1198.2	1198.4
147.5°	1231.1	1232.4	1233.8	1235.1	1236.4	1237.0	1236.7	1236.5	1236.2	1236.0	1236.2
150°	1257.4	1258.3	1259.2	1260.2	1261.1	1261.4	1261.3	1261.0	1260.8	1260.5	1260.5
152.5°	1279.4	1280.1	1280.8	1281.6	1282.4	1282.5	1282.1	1281.7	1281.2	1280.8	1281.2
155°	1310.3	1310.4	1310.7	1310.9	1311.2	1310.9	1310.3	1309.5	1308.8	1308.1	1309.0
157.5°	1336.3	1336.1	1335.9	1335.8	1335.7	1335.2	1334.4	1333.6	1332.9	1332.0	1333.3
160°	1351.4	1350.8	1350.1	1349.3	1348.7	1348.2	1347.9	1347.7	1347.4	1347.3	1348.7
162.5°	1365.0	1364.1	1363.3	1362.4	1361.5	1360.9	1360.7	1360.4	1360.2	1359.9	1361.3
165°	1382.2	1381.0	1379.8	1378.6	1377.4	1376.9	1376.9	1376.9	1376.9	1376.9	1378.8
167.5°	1395.7	1394.5	1393.3	1392.0	1390.8	1390.1	1390.0	1389.8	1389.7	1389.5	1391.6
170°	1403.3	1401.9	1400.4	1399.1	1397.7	1397.1	1397.3	1397.5	1397.7	1398.0	1399.9
172.5°	1408.3	1407.0	1405.6	1404.1	1402.7	1402.2	1402.4	1402.6	1402.8	1403.0	1404.9
175°	1413.9	1412.4	1411.0	1409.7	1408.2	1407.6	1407.9	1408.1	1408.3	1408.6	1410.7
177.5°	1416.4	1415.1	1413.7	1412.4	1411.1	1410.6	1411.0	1411.4	1411.8	1412.2	1413.6
180°	1413.9	1413.9	1413.9	1413.9	1413.9	1413.9	1413.9	1413.9	1413.9	1413.9	1413.9



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CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
0°	1132.6	1132.6	1132.6	1132.6	1132.6	1132.6	1132.6	1132.6
2.5°	1128.4	1130.0	1131.7	1132.5	1132.4	1132.2	1132.0	1131.9
5°	1120.8	1122.7	1124.7	1125.4	1125.0	1124.7	1124.3	1123.9
7.5°	1105.9	1107.2	1108.4	1108.6	1108.1	1107.4	1106.9	1106.2
10°	1092.5	1093.2	1094.1	1094.1	1093.2	1092.5	1091.7	1091.0
12.5°	1076.0	1076.4	1076.8	1076.5	1075.5	1074.4	1073.3	1072.2
15°	1046.8	1046.4	1046.0	1045.2	1043.8	1042.4	1041.1	1039.8
17.5°	1011.8	1010.7	1009.6	1008.0	1006.0	1004.0	1001.9	999.9
20°	987.2	985.7	984.1	982.2	979.7	977.1	974.6	972.2
22.5°	960.1	957.7	955.4	953.2	951.2	949.2	947.1	945.1
25°	916.2	912.9	909.6	907.0	905.1	903.2	901.2	899.3
27.5°	871.4	867.4	863.3	859.9	857.1	854.4	851.6	848.8
30°	839.4	834.5	829.7	825.7	822.7	819.6	816.5	813.4
32.5°	806.6	801.0	795.4	791.2	788.2	785.3	782.4	779.4
35°	757.8	751.3	744.8	739.7	736.3	732.8	729.3	725.9
37.5°	705.5	698.1	690.8	685.4	682.0	678.5	675.1	671.6
40°	670.7	662.5	654.4	648.7	645.2	641.7	638.3	634.8
42.5°	636.3	628.1	619.9	613.9	610.3	606.7	603.1	599.4
45°	583.8	574.4	564.9	558.5	555.0	551.5	548.0	544.6
47.5°	530.9	521.1	511.4	504.5	500.8	496.9	493.1	489.3
50°	495.9	486.2	476.5	469.9	466.3	462.6	458.9	455.3
52.5°	460.9	451.1	441.2	434.5	430.6	426.8	423.1	419.2
55°	409.2	399.2	389.2	382.4	378.7	375.0	371.4	367.7
57.5°	358.8	348.6	338.4	332.0	329.2	326.4	323.7	320.9
60°	325.1	315.1	305.1	298.5	295.5	292.4	289.3	286.2
62.5°	292.0	282.7	273.5	267.6	265.1	262.7	260.2	257.7
65°	244.4	236.2	227.9	222.6	220.3	217.9	215.6	213.4
67.5°	200.8	193.7	186.5	181.7	179.2	176.6	174.1	171.5
70°	171.1	164.8	158.4	154.3	152.4	150.4	148.5	146.6
72.5°	144.6	139.1	133.6	130.0	128.3	126.5	124.7	122.9
75°	106.5	102.1	97.6	94.8	93.7	92.5	91.3	90.2
77.5°	75.3	72.7	70.1	68.6	68.3	68.0	67.7	67.3
80°	57.8	57.2	56.7	56.3	56.1	55.8	55.7	55.5
82.5°	44.9	44.5	44.1	43.8	43.6	43.4	43.2	43.0
85°	26.1	25.8	25.4	25.1	25.1	25.1	25.1	25.1
87.5°	14.6	14.8	14.8	15.1	15.3	15.6	15.8	16.1
90°	26.1	27.5	28.9	29.8	30.3	30.8	31.2	31.7
92.5°	25.3	26.7	28.0	28.8	28.9	29.0	29.1	29.2
95°	26.1	27.5	28.9	29.8	29.9	30.2	30.4	30.7
97.5°	28.2	28.4	28.5	28.7	28.9	29.1	29.4	29.6
100°	38.6	34.6	30.6	28.7	28.9	29.1	29.4	29.6
102.5°	138.0	94.9	51.8	30.2	30.3	30.3	30.4	30.5
105°	334.2	336.3	338.4	335.3	326.8	318.3	309.8	301.4
107.5°	413.4	414.5	415.5	416.5	417.4	418.2	419.1	420.0
110°	467.3	467.7	468.2	468.8	469.5	470.3	470.9	471.7



TEST NUMBER: P333069-930

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CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
112.5°	519.4	519.3	519.3	519.7	520.6	521.5	522.4	523.3
115°	597.4	597.9	598.3	598.5	598.5	598.5	598.5	598.5
117.5°	675.7	675.6	675.6	675.5	675.4	675.3	675.2	675.1
120°	724.2	724.7	725.2	725.2	724.7	724.2	723.8	723.3
122.5°	772.1	772.4	772.7	772.6	772.1	771.6	771.2	770.7
125°	838.9	839.7	840.3	840.8	841.1	841.3	841.6	841.8
127.5°	905.4	905.2	905.1	904.9	904.7	904.5	904.3	904.2
130°	945.8	946.1	946.3	946.5	946.5	946.5	946.5	946.5
132.5°	985.6	985.9	986.1	986.1	985.9	985.8	985.5	985.4
135°	1040.5	1040.9	1041.4	1041.9	1042.4	1042.8	1043.3	1043.7
137.5°	1093.0	1093.5	1094.1	1094.2	1094.1	1094.0	1093.8	1093.6
140°	1125.5	1126.3	1126.9	1127.4	1127.6	1127.9	1128.1	1128.4
142.5°	1155.6	1156.1	1156.7	1156.9	1157.0	1157.0	1157.1	1157.1
145°	1198.6	1198.8	1199.1	1199.5	1199.9	1200.4	1200.9	1201.3
147.5°	1236.4	1236.6	1236.7	1237.0	1237.2	1237.5	1237.6	1237.9
150°	1260.5	1260.5	1260.5	1260.6	1260.9	1261.1	1261.3	1261.6
152.5°	1281.6	1282.0	1282.3	1282.5	1282.3	1282.1	1282.1	1281.9
155°	1310.0	1310.9	1311.9	1312.0	1311.3	1310.6	1309.9	1309.2
157.5°	1334.5	1335.7	1336.9	1336.9	1335.7	1334.5	1333.3	1332.0
160°	1350.1	1351.4	1352.9	1352.9	1351.4	1350.1	1348.7	1347.3
162.5°	1362.8	1364.2	1365.5	1365.5	1363.9	1362.3	1360.7	1359.1
165°	1380.6	1382.5	1384.4	1384.2	1382.2	1380.1	1377.9	1375.8
167.5°	1393.7	1395.7	1397.8	1397.7	1395.3	1392.9	1390.7	1388.3
170°	1401.7	1403.6	1405.5	1405.2	1403.0	1400.6	1398.2	1395.9
172.5°	1406.8	1408.8	1410.6	1410.3	1407.7	1405.2	1402.6	1400.1
175°	1412.8	1415.0	1417.1	1416.7	1413.9	1411.0	1408.2	1405.4
177.5°	1415.2	1416.7	1418.2	1417.8	1415.5	1413.3	1411.0	1408.8
180°	1413.9	1413.9	1413.9	1413.9	1413.9	1413.9	1413.9	1413.9

(END OF REPORT)