

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: P332440-830

Luminaire Tested: **S123RDIW-S775D1030U830-4F0-1E-UDD-F**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P332440-830
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: S123RDIW-S775D1030U830-4F0-1E-UDD-F
Description: DEFINE 3 DIRECT-INDIRECT WALL MOUNT LED LUMINAIRE
DOWNLIGHT 775 LUMENS PER FOOT, FLUSH SATIN WHITE DIFFUSER, REGRESSED
HOUSING
UPLIGHT 1030 LUMENS PER FOOT, NO LENS
Light Source: -
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 6638.4 lumens
Efficiency: N/A
Efficacy: 126.2 lumens/watt
Spacing Criteria (0/90/45): 1.21 / 1.06 / 1.22
Luminous Opening: Rectangular (W 0.25' x L: 4' x H: 0')
CIE Type: General Diffuse

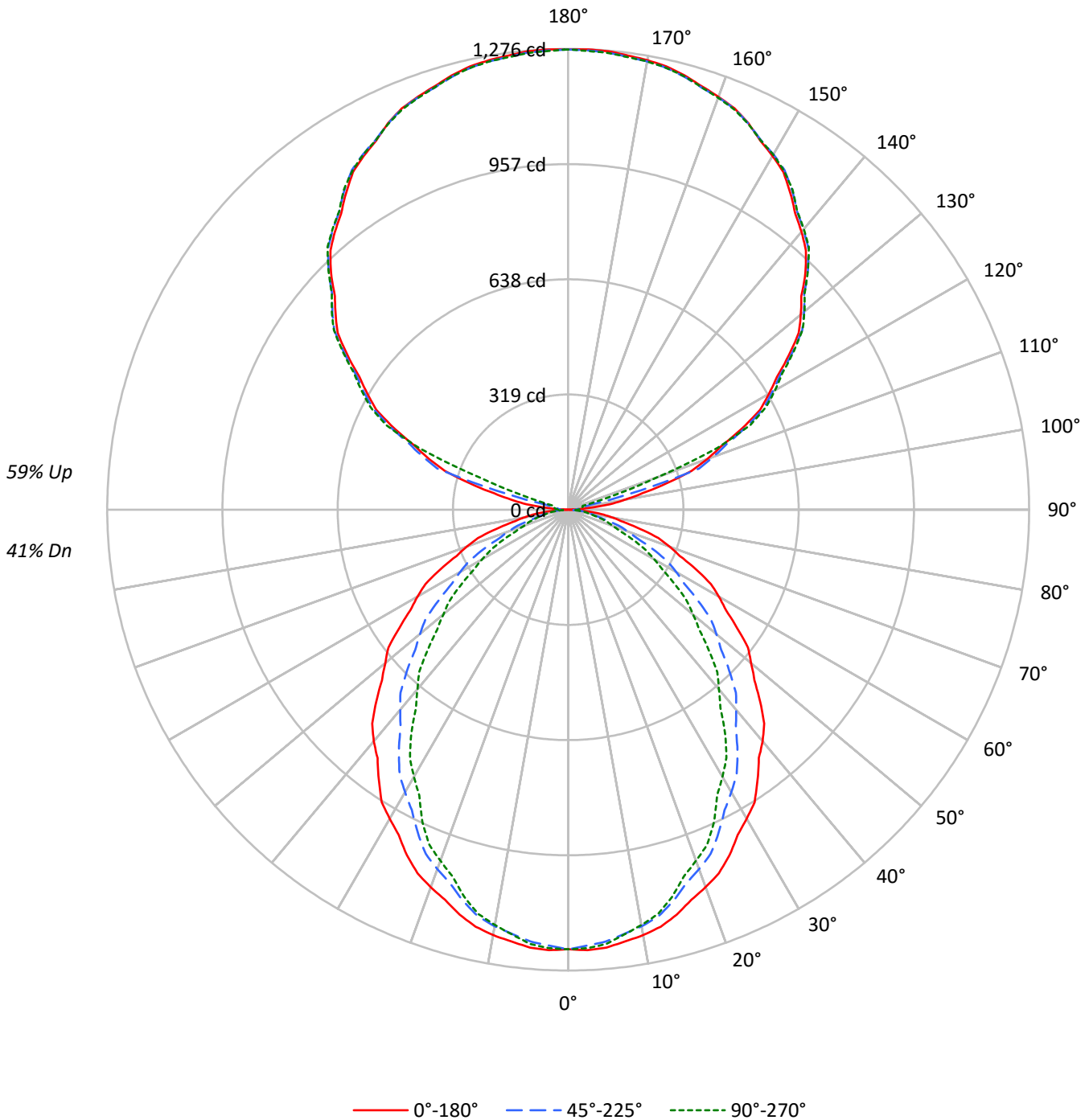
Input Watts (W): 52.6
Input Voltage (V): 120
Input Current (A_{in}): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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	79	79	79	63	63	63	48	48	48	41
1	96	92	88	85	88	84	81	78	69	67	65	56	54	53	43	42	41	35
2	88	81	75	70	80	74	69	64	61	57	54	49	47	44	38	37	35	30
3	80	71	64	58	73	65	59	54	54	50	46	44	41	38	34	32	30	26
4	73	63	55	49	67	58	51	46	48	43	39	39	35	33	31	28	26	22
5	67	56	48	42	61	52	45	40	43	38	34	35	31	28	28	25	23	20
6	62	50	43	37	57	46	39	34	39	34	30	32	28	25	25	22	20	17
7	57	46	38	32	52	42	35	30	35	30	26	29	25	22	23	20	18	15
8	53	41	34	29	49	38	31	27	32	27	23	27	23	20	21	18	16	14
9	50	38	30	25	45	35	28	24	29	24	21	24	21	18	20	17	15	13
10	46	35	28	23	42	32	26	21	27	22	19	23	19	16	18	15	13	11

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	13099	13099	13099
5°	13149	12967	13042
10°	13074	12804	12761
15°	12933	12504	12373
20°	12741	12129	11848
25°	12542	11709	11334
30°	12279	11225	10611
35°	12009	10738	9947
40°	11760	10165	9125
45°	11432	9601	8383
50°	11072	8957	7552
55°	10704	8223	6778
60°	10368	7436	5927
65°	9928	6584	5076
70°	9379	5530	4101
75°	8576	4350	3855
80°	7649	3856	3546
85°	6459	3409	3162



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	114.3	1.7
10°-20°	317.9	4.8
20°-30°	457.8	6.9
30°-40°	515.7	7.8
40°-50°	493.3	7.4
50°-60°	404.0	6.1
60°-70°	272.6	4.1
70°-80°	137.1	2.1
80°-90°	39.8	0.6
90°-100°	46.3	0.7
100°-110°	220.8	3.3
110°-120°	530.4	8.0
120°-130°	675.4	10.2
130°-140°	721.6	10.9
140°-150°	674.8	10.2
150°-160°	544.3	8.2
160°-170°	351.3	5.3
170°-180°	121.1	1.8
0°-30°	890.0	13.4
0°-40°	1405.7	21.2
0°-60°	2303.0	34.7
0°-90°	2752.6	41.5
90°-120°	797.5	12.0
90°-150°	2869.2	43.2
90°-180°	3886.0	58.5
0°-180°	6638.4	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1217	1217	1217	1217	1217	
5°	1217	1212	1200	1208	1207	115
15°	1161	1149	1122	1117	1110	327
25°	1056	1030	986	966	954	485
35°	914	877	817	776	757	572
45°	751	705	631	576	551	579
55°	570	520	438	383	361	511
65°	390	334	258	212	199	386
75°	206	159	105	95	93	220
85°	52	32	28	26	26	59
90°	1	11	23	26	28	5
95°	58	22	29	36	36	71
105°	282	287	207	49	42	299
115°	529	535	543	553	557	522
125°	746	753	757	759	761	666
135°	929	934	938	941	938	715
145°	1072	1078	1080	1082	1082	671
155°	1180	1179	1180	1184	1179	544
165°	1245	1242	1241	1248	1242	352
175°	1274	1270	1270	1276	1270	121
180°	1274	1274	1274	1274	1274	



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CANDELA DISTRIBUTION (FULL):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
0°	1216.9	1216.9	1216.9	1216.9	1216.9	1216.9	1216.9	1216.9	1216.9	1216.9	1216.9
2.5°	1220.8	1220.1	1219.4	1218.7	1218.0	1216.6	1214.5	1212.4	1210.3	1208.2	1210.1
5°	1216.9	1215.8	1214.7	1213.6	1212.5	1210.6	1208.0	1205.3	1202.7	1200.1	1202.0
7.5°	1205.6	1204.5	1203.2	1202.0	1200.9	1198.5	1195.1	1191.8	1188.4	1184.9	1186.0
10°	1196.2	1194.6	1193.1	1191.6	1190.0	1187.2	1183.3	1179.4	1175.4	1171.5	1171.7
12.5°	1182.7	1181.0	1179.3	1177.6	1175.9	1172.6	1167.8	1163.0	1158.1	1153.3	1153.2
15°	1160.6	1158.2	1155.7	1153.4	1150.9	1146.7	1140.6	1134.4	1128.2	1122.1	1121.1
17.5°	1132.7	1130.0	1127.2	1124.4	1121.5	1116.3	1108.4	1100.6	1092.8	1085.1	1082.7
20°	1112.3	1108.7	1105.2	1101.7	1098.3	1092.3	1083.9	1075.6	1067.3	1058.9	1056.1
22.5°	1089.4	1085.3	1081.3	1077.2	1073.2	1066.8	1057.9	1049.0	1040.2	1031.3	1027.7
25°	1056.0	1050.6	1045.0	1039.5	1034.1	1026.2	1016.2	1006.1	996.0	985.9	981.3
27.5°	1015.5	1009.5	1003.4	997.4	991.4	982.7	971.5	960.3	949.0	937.7	931.3
30°	987.9	981.3	974.8	968.2	961.6	952.2	939.9	927.6	915.3	903.1	895.6
32.5°	960.3	952.8	945.4	937.9	930.5	920.2	907.2	894.3	881.3	868.3	860.2
35°	913.9	906.0	898.1	890.2	882.3	871.6	858.0	844.3	830.8	817.2	807.8
37.5°	867.0	858.1	849.3	840.6	831.8	820.2	805.7	791.2	776.7	762.1	751.4
40°	836.9	827.3	817.6	807.9	798.3	785.7	770.2	754.6	739.0	723.4	712.0
42.5°	803.0	793.3	783.6	774.0	764.4	751.5	735.4	719.3	703.2	687.1	674.7
45°	751.0	741.2	731.3	721.4	711.5	698.2	681.3	664.4	647.5	630.7	618.1
47.5°	699.2	688.3	677.5	666.7	655.8	642.0	625.1	608.1	591.3	574.4	560.8
50°	661.2	650.9	640.6	630.3	620.0	606.0	588.2	570.4	552.7	534.9	521.3
52.5°	627.3	616.1	604.9	593.7	582.6	568.2	550.5	533.0	515.4	497.8	483.7
55°	570.4	559.7	548.9	538.2	527.4	512.7	494.1	475.5	456.9	438.2	425.5
57.5°	517.9	506.2	494.6	482.8	471.1	455.9	437.2	418.4	399.6	381.0	368.9
60°	481.6	469.6	457.5	445.4	433.4	418.2	400.0	381.8	363.6	345.4	333.6
62.5°	445.3	433.2	421.1	409.1	397.1	381.9	363.7	345.5	327.3	309.1	297.9
65°	389.8	377.8	365.7	353.6	341.6	327.0	309.9	292.8	275.7	258.5	247.8
67.5°	334.4	322.2	310.0	297.7	285.6	271.3	254.9	238.5	222.1	205.7	197.7
70°	298.0	286.3	274.4	262.5	250.7	237.0	221.7	206.4	191.1	175.7	168.0
72.5°	261.7	250.1	238.4	226.7	215.1	202.3	188.3	174.4	160.4	146.5	140.2
75°	206.2	195.8	185.2	174.7	164.2	152.9	140.8	128.8	116.7	104.6	102.5
77.5°	155.7	146.2	136.7	127.1	117.6	109.1	101.2	93.5	85.8	77.9	76.8
80°	123.4	114.3	105.4	96.4	87.4	80.6	76.0	71.4	66.8	62.2	61.5
82.5°	92.6	84.8	77.0	69.3	61.5	56.6	54.4	52.2	50.1	48.0	47.3
85°	52.3	47.5	42.7	37.8	33.0	30.3	29.6	28.9	28.3	27.6	27.2
87.5°	19.1	17.6	16.1	14.6	13.1	12.6	13.2	13.8	14.2	14.8	14.8
90°	0.9	3.0	5.2	7.3	9.3	11.8	14.5	17.2	20.0	22.7	23.6
92.5°	17.6	17.1	16.4	15.8	15.3	16.0	18.1	20.1	22.1	24.2	25.5
95°	57.8	49.1	40.5	31.9	23.3	20.1	22.4	24.7	27.1	29.3	30.8
97.5°	116.0	112.2	108.3	104.4	100.6	91.0	76.0	60.8	45.6	30.4	32.1
100°	159.9	164.2	168.4	172.6	176.8	162.5	129.7	96.9	64.1	31.2	32.9
102.5°	210.0	213.0	216.0	219.0	222.1	205.7	169.8	134.0	98.1	62.3	57.1
105°	282.1	284.5	286.7	289.1	291.3	283.0	264.1	245.2	226.3	207.4	170.1
107.5°	358.3	360.1	361.9	363.8	365.6	368.1	371.1	374.0	377.0	380.0	352.7
110°	409.0	410.7	412.4	414.1	415.7	417.7	420.0	422.4	424.6	427.0	420.0



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CANDELA DISTRIBUTION (continued):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
112.5°	457.4	458.9	460.4	462.0	463.5	465.4	467.7	470.0	472.4	474.7	474.8
115°	529.2	530.5	531.7	533.0	534.2	535.8	537.7	539.6	541.5	543.4	545.5
117.5°	598.7	600.2	601.8	603.3	604.9	606.1	607.2	608.1	609.1	610.0	611.7
120°	641.9	643.8	645.6	647.5	649.4	650.7	651.3	652.0	652.6	653.2	654.9
122.5°	685.8	687.3	688.9	690.4	692.0	693.1	694.0	694.7	695.6	696.4	697.6
125°	746.0	747.7	749.3	751.0	752.7	754.0	754.8	755.6	756.5	757.3	757.8
127.5°	804.3	806.0	807.7	809.4	811.1	812.4	813.4	814.5	815.4	816.4	817.1
130°	840.7	842.4	844.0	845.7	847.4	848.7	849.5	850.4	851.2	852.1	852.9
132.5°	875.5	877.2	878.8	880.5	882.2	883.4	884.1	884.8	885.4	886.1	886.9
135°	928.7	930.0	931.2	932.5	933.8	934.8	935.7	936.5	937.4	938.2	938.8
137.5°	974.1	975.7	977.3	978.9	980.5	981.6	982.0	982.5	983.0	983.4	984.4
140°	1004.5	1005.7	1007.0	1008.2	1009.5	1010.4	1011.1	1011.7	1012.3	1013.0	1013.8
142.5°	1032.5	1033.7	1035.0	1036.2	1037.6	1038.5	1039.1	1039.7	1040.4	1040.9	1041.7
145°	1071.7	1073.1	1074.6	1076.1	1077.5	1078.5	1078.9	1079.3	1079.8	1080.2	1080.6
147.5°	1108.6	1109.6	1110.5	1111.4	1112.5	1113.1	1113.5	1114.0	1114.4	1114.8	1115.2
150°	1131.3	1131.9	1132.6	1133.2	1133.8	1134.3	1134.7	1135.2	1135.6	1136.0	1136.4
152.5°	1151.8	1152.1	1152.4	1152.6	1152.9	1153.2	1153.5	1153.7	1154.0	1154.2	1155.0
155°	1180.5	1180.1	1179.7	1179.3	1178.8	1178.7	1178.9	1179.1	1179.4	1179.6	1180.6
157.5°	1202.9	1202.9	1202.8	1202.8	1202.7	1202.6	1202.4	1202.1	1201.9	1201.7	1203.0
160°	1216.5	1216.3	1216.1	1215.9	1215.7	1215.4	1215.2	1215.0	1214.8	1214.7	1215.9
162.5°	1229.4	1228.8	1228.3	1227.8	1227.2	1226.8	1226.6	1226.4	1226.2	1226.0	1227.4
165°	1244.9	1244.3	1243.7	1243.0	1242.4	1242.0	1241.7	1241.5	1241.3	1241.1	1242.8
167.5°	1257.0	1256.2	1255.4	1254.5	1253.7	1253.2	1253.2	1253.2	1253.2	1253.2	1254.9
170°	1263.9	1263.0	1262.2	1261.3	1260.5	1260.1	1260.1	1260.1	1260.1	1260.1	1261.7
172.5°	1268.4	1267.3	1266.4	1265.4	1264.3	1263.9	1264.0	1264.2	1264.4	1264.6	1266.3
175°	1274.2	1273.2	1272.1	1271.1	1270.1	1269.6	1269.8	1270.1	1270.3	1270.5	1272.0
177.5°	1275.7	1274.9	1274.1	1273.3	1272.4	1272.1	1272.2	1272.4	1272.5	1272.7	1274.1
180°	1274.2	1274.2	1274.2	1274.2	1274.2	1274.2	1274.2	1274.2	1274.2	1274.2	1274.2



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CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
0°	1216.9	1216.9	1216.9	1216.9	1216.9	1216.9	1216.9	1216.9
2.5°	1212.0	1214.0	1215.9	1216.7	1216.4	1216.0	1215.6	1215.3
5°	1204.0	1206.0	1208.0	1208.7	1208.3	1207.9	1207.4	1207.0
7.5°	1187.1	1188.2	1189.3	1189.5	1188.7	1188.0	1187.2	1186.5
10°	1172.0	1172.1	1172.3	1172.0	1170.8	1169.7	1168.7	1167.5
12.5°	1153.0	1152.9	1152.8	1152.1	1150.8	1149.5	1148.3	1147.0
15°	1119.9	1118.8	1117.8	1116.4	1114.9	1113.3	1111.8	1110.3
17.5°	1080.3	1078.1	1075.7	1073.5	1071.1	1068.8	1066.6	1064.3
20°	1053.3	1050.4	1047.5	1044.8	1042.2	1039.5	1036.9	1034.3
22.5°	1024.3	1020.7	1017.1	1014.1	1011.6	1009.2	1006.7	1004.3
25°	976.8	972.1	967.5	964.0	961.6	959.1	956.8	954.3
27.5°	924.9	918.6	912.2	907.1	903.4	899.8	896.1	892.4
30°	888.2	880.6	873.2	867.7	864.2	860.7	857.1	853.7
32.5°	852.0	843.9	835.7	829.7	826.0	822.4	818.7	815.0
35°	798.3	788.9	779.5	772.8	768.8	764.9	760.9	757.0
37.5°	740.6	730.0	719.3	711.5	706.6	701.7	696.9	692.0
40°	700.6	689.2	677.8	669.6	664.5	659.5	654.4	649.4
42.5°	662.1	649.7	637.3	628.8	624.2	619.7	615.2	610.7
45°	605.7	593.1	580.6	571.7	566.5	561.2	556.0	550.7
47.5°	547.1	533.6	520.0	510.9	506.1	501.4	496.8	492.1
50°	507.7	494.1	480.5	471.2	466.2	461.1	456.1	451.0
52.5°	469.6	455.4	441.3	432.0	427.4	422.9	418.4	413.9
55°	412.7	400.0	387.3	378.7	374.4	369.9	365.6	361.2
57.5°	356.9	344.9	332.9	325.0	321.3	317.5	313.8	310.1
60°	321.7	309.9	298.0	290.3	286.5	282.8	279.1	275.3
62.5°	286.8	275.7	264.6	257.0	253.1	249.2	245.3	241.4
65°	237.0	226.3	215.6	209.0	206.6	204.2	201.8	199.3
67.5°	189.6	181.6	173.5	168.2	165.7	163.1	160.5	157.9
70°	160.3	152.6	145.0	140.0	137.5	135.1	132.7	130.3
72.5°	133.9	127.6	121.4	117.7	116.7	115.7	114.7	113.7
75°	100.2	98.0	95.9	94.5	94.1	93.7	93.2	92.7
77.5°	75.6	74.4	73.2	72.4	72.0	71.5	71.1	70.7
80°	60.9	60.2	59.6	59.0	58.5	58.2	57.7	57.2
82.5°	46.7	46.0	45.3	45.0	44.9	44.8	44.7	44.6
85°	26.8	26.3	25.9	25.6	25.6	25.6	25.6	25.6
87.5°	14.8	14.8	14.8	14.7	14.6	14.5	14.4	14.3
90°	24.4	25.3	26.1	26.7	27.1	27.5	28.0	28.4
92.5°	27.0	28.3	29.6	30.4	30.6	30.9	31.2	31.4
95°	32.3	33.7	35.3	36.0	36.0	36.0	36.0	36.0
97.5°	33.8	35.5	37.2	38.2	38.4	38.5	38.8	39.0
100°	34.6	36.3	38.0	38.9	39.1	39.3	39.6	39.8
102.5°	51.8	46.7	41.4	39.0	39.4	39.8	40.2	40.5
105°	132.9	95.6	58.3	40.0	40.4	40.8	41.2	41.7
107.5°	325.4	298.1	270.8	243.1	215.0	187.0	158.9	130.8
110°	413.1	406.1	399.2	380.7	350.6	320.5	290.4	260.3



TEST NUMBER: P332440-830

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CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
112.5°	474.9	475.0	475.1	472.0	465.7	459.4	453.0	446.7
115°	547.6	549.7	551.9	553.3	554.1	555.0	555.8	556.7
117.5°	613.4	615.1	616.8	617.7	617.8	618.0	618.2	618.4
120°	656.6	658.3	660.0	660.8	660.8	660.8	660.8	660.8
122.5°	698.7	699.9	701.1	701.8	701.9	702.1	702.3	702.5
125°	758.2	758.7	759.0	759.5	759.9	760.3	760.7	761.1
127.5°	817.7	818.4	819.2	819.3	818.8	818.4	818.0	817.6
130°	853.8	854.5	855.4	855.6	855.2	854.8	854.3	853.9
132.5°	887.8	888.6	889.5	889.6	889.0	888.4	887.9	887.2
135°	939.4	940.1	940.7	940.7	940.1	939.4	938.8	938.2
137.5°	985.4	986.5	987.5	987.8	987.3	986.9	986.5	986.1
140°	1014.6	1015.5	1016.3	1016.5	1016.2	1015.7	1015.3	1014.8
142.5°	1042.4	1043.0	1043.7	1043.7	1043.1	1042.5	1042.0	1041.3
145°	1081.0	1081.5	1081.9	1082.0	1082.0	1082.0	1082.0	1082.0
147.5°	1115.7	1116.1	1116.5	1116.3	1115.3	1114.3	1113.3	1112.4
150°	1136.9	1137.3	1137.7	1137.6	1137.0	1136.3	1135.8	1135.1
152.5°	1155.7	1156.5	1157.3	1157.2	1156.1	1155.2	1154.2	1153.3
155°	1181.7	1182.7	1183.8	1183.6	1182.4	1181.2	1179.9	1178.6
157.5°	1204.3	1205.5	1206.7	1206.5	1204.9	1203.3	1201.6	1200.0
160°	1217.1	1218.4	1219.7	1219.6	1218.0	1216.6	1215.1	1213.6
162.5°	1228.8	1230.3	1231.7	1231.7	1230.5	1229.2	1227.9	1226.5
165°	1244.4	1246.1	1247.8	1247.9	1246.5	1245.0	1243.5	1242.1
167.5°	1256.6	1258.3	1260.0	1260.0	1258.3	1256.6	1254.9	1253.2
170°	1263.4	1265.1	1266.8	1266.8	1265.1	1263.4	1261.7	1260.1
172.5°	1268.0	1269.6	1271.3	1271.2	1269.4	1267.5	1265.6	1263.9
175°	1273.4	1274.9	1276.4	1276.3	1274.6	1272.9	1271.2	1269.5
177.5°	1275.4	1276.8	1278.1	1278.0	1276.3	1274.6	1272.9	1271.2
180°	1274.2	1274.2	1274.2	1274.2	1274.2	1274.2	1274.2	1274.2

(END OF REPORT)