

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: P332441-935

Luminaire Tested: **S123RDIW-S775D1030U935-4F0-1E-UDD-F1**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P332441-935
REPORT IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-1807-864-9,
Test Lab: INNOVATION CENTER
Issue Date: 3/3/2020
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: NEO-RAY
Catalog Number: S123RDIW-S775D1030U935-4F0-1E-UDD-F1
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, FLUSH SATIN WHITE DIFFUSER
Light Source: -
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 5591.0 lumens
Efficiency: N/A
Efficacy: 106.3 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

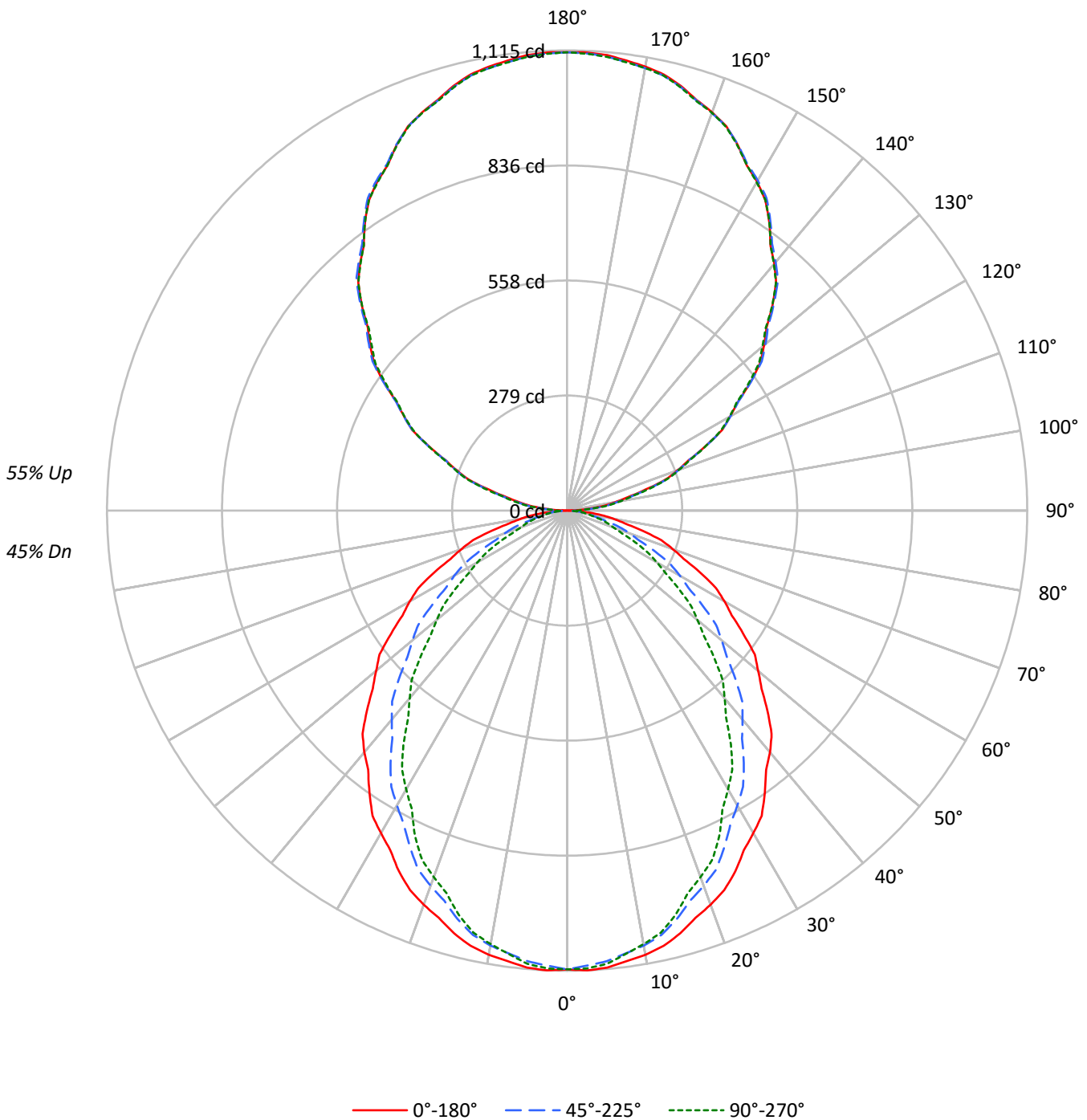
Input Watts (W): 52.6
Input Voltage (V): 120
Input Current (A_{in}): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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	106	106	106	106	97	97	97	97	81	81	81	65	65	65	52	52	52	45
1	97	93	89	86	89	85	82	79	71	69	67	58	56	55	46	45	44	38
2	88	81	75	70	81	75	70	65	63	59	56	51	49	46	41	39	38	33
3	81	72	65	59	74	66	60	55	55	51	47	46	42	40	36	34	32	28
4	74	64	56	50	68	59	52	47	49	44	40	41	37	34	33	30	28	24
5	68	57	49	43	62	52	45	40	44	39	35	37	33	30	30	27	25	21
6	63	51	43	37	57	47	40	35	40	35	31	33	29	26	27	24	22	19
7	58	46	38	33	53	43	36	31	36	31	27	30	26	23	25	22	19	17
8	54	42	34	29	49	39	32	27	33	28	24	28	24	21	23	20	17	15
9	50	38	31	26	46	36	29	24	30	25	22	26	22	19	21	18	16	14
10	47	35	28	23	43	33	26	22	28	23	19	24	20	17	19	17	14	12

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	11965	11965	11965
5°	12011	11846	11914
10°	11943	11696	11657
15°	11814	11422	11303
20°	11639	11080	10822
25°	11457	10696	10354
30°	11216	10253	9692
35°	10970	9809	9087
40°	10742	9285	8335
45°	10443	8770	7658
50°	10114	8182	6899
55°	9779	7512	6191
60°	9472	6794	5414
65°	9070	6016	4638
70°	8567	5051	3745
75°	7835	3976	3523
80°	6986	3521	3242
85°	5903	3112	2890



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	104.4	1.9
10°-20°	290.4	5.2
20°-30°	418.2	7.5
30°-40°	471.1	8.4
40°-50°	450.7	8.1
50°-60°	369.0	6.6
60°-70°	249.0	4.5
70°-80°	125.3	2.2
80°-90°	36.4	0.7
90°-100°	72.4	1.3
100°-110°	216.5	3.9
110°-120°	368.3	6.6
120°-130°	484.4	8.7
130°-140°	544.4	9.7
140°-150°	535.2	9.6
150°-160°	450.5	8.1
160°-170°	299.9	5.4
170°-180°	105.0	1.9
0°-30°	813.0	14.5
0°-40°	1284.1	23.0
0°-60°	2103.8	37.6
0°-90°	2514.4	45.0
90°-120°	657.1	11.8
90°-150°	2221.1	39.7
90°-180°	3077.0	55.0
0°-180°	5591.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1112	1112	1112	1112	1112	
5°	1112	1107	1096	1104	1103	105
15°	1060	1049	1025	1020	1014	299
25°	965	941	901	882	872	443
35°	835	801	746	709	692	522
45°	686	644	576	526	503	529
55°	521	475	400	350	330	467
65°	356	305	236	194	182	352
75°	188	145	96	87	85	201
85°	48	29	25	24	23	54
90°	1	10	21	24	26	6
95°	52	58	65	68	68	58
105°	196	198	206	206	208	210
115°	371	373	372	372	372	367
125°	543	545	544	540	536	484
135°	704	709	708	705	703	542
145°	854	856	858	857	854	533
155°	978	978	979	982	976	450
165°	1065	1063	1062	1067	1062	300
175°	1108	1104	1104	1109	1104	105
180°	1110	1110	1110	1110	1110	



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CANDELA DISTRIBUTION (FULL):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
0°	1111.6	1111.6	1111.6	1111.6	1111.6	1111.6	1111.6	1111.6	1111.6	1111.6	1111.6
2.5°	1115.2	1114.6	1113.9	1113.3	1112.7	1111.4	1109.4	1107.5	1105.6	1103.6	1105.4
5°	1111.6	1110.6	1109.6	1108.6	1107.6	1105.9	1103.5	1101.0	1098.6	1096.3	1098.0
7.5°	1101.3	1100.3	1099.2	1098.0	1097.0	1094.8	1091.7	1088.6	1085.5	1082.4	1083.4
10°	1092.7	1091.2	1089.9	1088.5	1087.0	1084.5	1080.9	1077.4	1073.8	1070.1	1070.3
12.5°	1080.4	1078.8	1077.3	1075.7	1074.2	1071.2	1066.8	1062.4	1057.9	1053.5	1053.4
15°	1060.2	1058.0	1055.8	1053.6	1051.4	1047.5	1041.9	1036.3	1030.6	1025.0	1024.1
17.5°	1034.7	1032.3	1029.7	1027.1	1024.5	1019.7	1012.5	1005.4	998.2	991.2	989.0
20°	1016.1	1012.8	1009.6	1006.4	1003.2	997.8	990.2	982.6	975.0	967.3	964.8
22.5°	995.1	991.4	987.7	984.0	980.3	974.5	966.4	958.3	950.2	942.1	938.8
25°	964.7	959.7	954.6	949.6	944.6	937.5	928.2	919.0	909.8	900.6	896.4
27.5°	927.6	922.1	916.6	911.1	905.6	897.7	887.4	877.2	866.9	856.6	850.8
30°	902.4	896.4	890.4	884.4	878.4	869.8	858.6	847.3	836.1	824.9	818.1
32.5°	877.2	870.4	863.6	856.8	850.0	840.6	828.7	816.9	805.0	793.2	785.7
35°	834.8	827.6	820.4	813.2	806.0	796.2	783.8	771.3	758.9	746.5	737.9
37.5°	791.9	783.9	775.8	767.8	759.8	749.2	736.0	722.7	709.5	696.2	686.4
40°	764.5	755.7	746.8	738.0	729.3	717.7	703.5	689.3	675.0	660.8	650.4
42.5°	733.5	724.7	715.8	707.1	698.3	686.5	671.8	657.0	642.4	627.7	616.3
45°	686.0	677.1	668.0	659.0	650.0	637.8	622.3	606.9	591.5	576.1	564.6
47.5°	638.7	628.8	618.9	609.0	599.1	586.4	571.0	555.5	540.1	524.7	512.3
50°	604.0	594.6	585.2	575.8	566.4	553.5	537.4	521.1	504.9	488.6	476.2
52.5°	573.0	562.8	552.6	542.3	532.2	519.0	502.9	486.9	470.8	454.7	441.9
55°	521.1	511.3	501.4	491.6	481.8	468.4	451.3	434.4	417.3	400.3	388.7
57.5°	473.1	462.4	451.8	441.0	430.3	416.5	399.3	382.2	365.1	348.0	337.0
60°	440.0	429.0	417.9	406.9	395.9	382.0	365.4	348.8	332.2	315.6	304.7
62.5°	406.7	395.7	384.7	373.7	362.7	348.9	332.3	315.6	299.0	282.3	272.2
65°	356.1	345.1	334.1	323.0	312.0	298.7	283.1	267.4	251.8	236.2	226.4
67.5°	305.5	294.3	283.2	272.0	260.9	247.8	232.8	217.8	202.9	187.9	180.6
70°	272.2	261.5	250.6	239.8	229.0	216.5	202.5	188.6	174.5	160.5	153.4
72.5°	239.1	228.4	217.7	207.1	196.5	184.8	172.0	159.3	146.5	133.8	128.0
75°	188.4	178.8	169.2	159.5	150.0	139.7	128.6	117.6	106.6	95.6	93.6
77.5°	142.2	133.5	124.8	116.1	107.5	99.6	92.5	85.4	78.4	71.2	70.2
80°	112.7	104.4	96.3	88.1	79.8	73.6	69.4	65.2	61.0	56.8	56.2
82.5°	84.6	77.5	70.3	63.3	56.2	51.7	49.7	47.7	45.8	43.8	43.2
85°	47.8	43.4	39.0	34.5	30.1	27.6	27.0	26.4	25.8	25.2	24.9
87.5°	17.5	16.1	14.7	13.3	12.0	11.5	12.1	12.6	13.1	13.6	13.5
90°	0.9	2.8	4.7	6.7	8.6	10.8	13.3	15.9	18.4	20.9	21.7
92.5°	21.1	22.4	23.8	25.1	26.3	27.7	29.2	30.7	32.0	33.5	34.1
95°	51.5	52.8	54.2	55.5	56.9	58.4	59.9	61.5	63.0	64.6	65.3
97.5°	91.4	92.4	93.4	94.5	95.5	96.5	97.6	98.8	99.9	101.0	101.9
100°	118.6	119.8	121.0	122.1	123.3	124.3	125.4	126.3	127.3	128.2	128.8
102.5°	150.1	150.8	151.4	152.1	152.8	153.8	155.1	156.4	157.6	158.9	159.5
105°	196.3	196.7	197.1	197.4	197.9	198.9	200.6	202.3	204.1	205.9	205.9
107.5°	250.0	250.2	250.5	250.7	250.9	251.4	252.1	252.8	253.5	254.2	254.8
110°	283.5	283.9	284.3	284.6	285.1	285.4	285.9	286.2	286.6	287.0	287.7



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CANDELA DISTRIBUTION (continued):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
112.5°	318.4	318.7	318.8	319.1	319.3	319.4	319.5	319.6	319.7	319.8	320.7
115°	370.7	371.3	371.9	372.5	373.1	373.2	372.7	372.4	372.0	371.6	371.8
117.5°	423.4	423.8	424.2	424.6	425.0	424.9	424.4	423.9	423.4	422.9	422.8
120°	456.2	457.4	458.6	459.7	460.9	461.0	459.9	459.0	458.1	457.1	456.8
122.5°	490.4	491.3	492.1	492.9	493.8	494.0	493.5	493.0	492.5	492.0	491.5
125°	542.6	543.1	543.7	544.3	544.9	545.0	544.6	544.2	543.8	543.5	542.7
127.5°	590.7	591.9	593.2	594.4	595.6	596.1	595.6	595.2	594.8	594.3	593.3
130°	622.8	624.4	625.9	627.5	629.0	629.5	629.0	628.4	627.8	627.2	626.4
132.5°	654.9	656.4	658.0	659.6	661.2	661.7	661.2	660.8	660.4	660.0	659.0
135°	704.0	705.1	706.3	707.4	708.6	709.0	708.9	708.7	708.5	708.3	707.5
137.5°	749.3	750.3	751.2	752.2	753.2	753.9	754.4	754.9	755.4	756.0	755.1
140°	780.7	781.7	782.6	783.6	784.5	785.1	785.3	785.6	785.7	785.9	785.7
142.5°	809.3	810.3	811.2	812.2	813.2	813.8	814.2	814.5	814.9	815.3	815.0
145°	853.9	854.4	854.7	855.1	855.5	856.0	856.6	857.2	857.7	858.3	858.2
147.5°	893.0	893.7	894.4	895.2	895.9	896.5	897.0	897.6	898.1	898.6	898.6
150°	920.2	920.7	921.0	921.4	921.8	922.2	922.6	923.0	923.3	923.8	923.8
152.5°	942.6	943.1	943.7	944.3	944.8	945.1	945.4	945.6	945.9	946.1	946.4
155°	977.8	977.8	977.8	977.8	977.8	977.9	978.1	978.4	978.5	978.7	979.5
157.5°	1007.9	1007.6	1007.4	1007.1	1006.9	1006.9	1007.0	1007.2	1007.4	1007.5	1008.3
160°	1026.7	1026.3	1025.9	1025.5	1025.1	1024.9	1024.9	1024.9	1024.9	1024.9	1025.9
162.5°	1043.4	1042.9	1042.3	1041.8	1041.3	1041.0	1041.2	1041.4	1041.6	1041.7	1042.7
165°	1065.1	1064.5	1063.9	1063.3	1062.7	1062.5	1062.5	1062.5	1062.5	1062.5	1063.6
167.5°	1082.4	1081.6	1080.8	1080.0	1079.3	1078.9	1079.1	1079.3	1079.4	1079.5	1080.7
170°	1092.1	1091.3	1090.5	1089.8	1089.0	1088.6	1088.6	1088.6	1088.6	1088.6	1089.9
172.5°	1099.8	1099.0	1098.2	1097.4	1096.7	1096.3	1096.3	1096.3	1096.3	1096.3	1097.5
175°	1107.8	1107.1	1106.3	1105.5	1104.7	1104.3	1104.3	1104.3	1104.3	1104.3	1105.5
177.5°	1111.1	1110.5	1109.9	1109.2	1108.6	1108.4	1108.4	1108.4	1108.4	1108.4	1109.2
180°	1110.4	1110.4	1110.4	1110.4	1110.4	1110.4	1110.4	1110.4	1110.4	1110.4	1110.4



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CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
0°	1111.6	1111.6	1111.6	1111.6	1111.6	1111.6	1111.6	1111.6
2.5°	1107.2	1109.0	1110.7	1111.5	1111.1	1110.8	1110.4	1110.2
5°	1099.8	1101.6	1103.5	1104.1	1103.8	1103.4	1102.9	1102.6
7.5°	1084.4	1085.4	1086.4	1086.6	1085.9	1085.2	1084.5	1083.8
10°	1070.6	1070.7	1070.9	1070.6	1069.5	1068.5	1067.6	1066.5
12.5°	1053.3	1053.2	1053.1	1052.4	1051.3	1050.1	1049.0	1047.8
15°	1023.0	1022.0	1021.1	1019.9	1018.5	1017.0	1015.6	1014.3
17.5°	986.9	984.8	982.7	980.6	978.4	976.4	974.3	972.2
20°	962.2	959.5	956.9	954.4	952.0	949.6	947.2	944.8
22.5°	935.6	932.4	929.1	926.3	924.1	921.9	919.6	917.4
25°	892.3	888.0	883.8	880.6	878.4	876.2	874.0	871.8
27.5°	844.9	839.1	833.3	828.6	825.3	821.9	818.6	815.2
30°	811.3	804.4	797.6	792.6	789.5	786.3	783.0	779.8
32.5°	778.3	770.9	763.4	757.9	754.6	751.2	747.9	744.5
35°	729.3	720.7	712.0	705.9	702.3	698.7	695.1	691.5
37.5°	676.6	666.8	657.0	650.0	645.5	641.0	636.6	632.1
40°	640.0	629.6	619.1	611.7	607.0	602.4	597.8	593.2
42.5°	604.9	593.5	582.1	574.4	570.2	566.1	562.0	557.8
45°	553.3	541.8	530.4	522.3	517.5	512.6	507.9	503.1
47.5°	499.8	487.4	475.0	466.7	462.4	458.1	453.8	449.5
50°	463.8	451.3	438.9	430.4	425.9	421.2	416.6	412.0
52.5°	429.0	416.0	403.1	394.6	390.5	386.3	382.2	378.1
55°	377.0	365.4	353.8	345.9	342.0	337.9	334.0	329.9
57.5°	326.1	315.0	304.1	296.9	293.5	290.1	286.6	283.3
60°	293.9	283.1	272.2	265.2	261.7	258.3	254.9	251.5
62.5°	262.0	251.8	241.7	234.8	231.2	227.6	224.1	220.5
65°	216.5	206.7	196.9	190.9	188.7	186.5	184.3	182.1
67.5°	173.2	165.9	158.5	153.7	151.4	149.0	146.6	144.2
70°	146.5	139.4	132.4	127.9	125.6	123.4	121.2	119.0
72.5°	122.3	116.6	110.9	107.5	106.6	105.7	104.8	103.8
75°	91.5	89.5	87.6	86.4	85.9	85.6	85.2	84.7
77.5°	69.1	67.9	66.9	66.1	65.8	65.3	64.9	64.6
80°	55.6	55.0	54.4	53.9	53.5	53.1	52.7	52.3
82.5°	42.6	42.0	41.4	41.1	41.0	40.9	40.8	40.7
85°	24.5	24.0	23.7	23.4	23.4	23.4	23.4	23.4
87.5°	13.5	13.5	13.5	13.5	13.4	13.3	13.3	13.2
90°	22.5	23.2	24.0	24.6	25.0	25.4	25.7	26.2
92.5°	34.7	35.4	36.0	36.2	35.9	35.7	35.5	35.2
95°	66.1	66.9	67.7	68.0	68.0	68.0	68.0	68.0
97.5°	102.8	103.7	104.6	105.0	104.9	104.9	104.8	104.7
100°	129.4	130.0	130.5	131.0	131.4	131.8	132.2	132.6
102.5°	160.1	160.7	161.3	161.5	161.4	161.4	161.3	161.2
105°	205.9	205.9	205.9	206.0	206.5	206.8	207.2	207.6
107.5°	255.5	256.1	256.7	256.8	256.7	256.4	256.1	255.9
110°	288.5	289.3	290.1	290.2	289.9	289.5	289.1	288.7



TEST NUMBER: P332441-935

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CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
112.5°	321.7	322.5	323.5	323.9	323.8	323.7	323.7	323.6
115°	372.0	372.2	372.4	372.4	372.2	372.0	371.8	371.6
117.5°	422.8	422.8	422.8	422.4	421.9	421.4	420.8	420.3
120°	456.7	456.5	456.3	456.0	455.6	455.2	454.9	454.4
122.5°	490.9	490.4	490.0	489.4	488.9	488.4	487.8	487.2
125°	541.9	541.1	540.4	539.6	538.8	538.0	537.3	536.5
127.5°	592.2	591.2	590.0	589.0	588.1	587.3	586.3	585.5
130°	625.6	624.8	624.1	623.0	621.6	620.3	619.0	617.6
132.5°	658.1	657.2	656.3	655.3	654.2	653.2	652.1	651.1
135°	706.7	705.9	705.2	704.6	704.2	703.9	703.4	703.1
137.5°	754.3	753.5	752.7	751.9	751.1	750.4	749.7	749.0
140°	785.6	785.3	785.1	784.4	783.0	781.7	780.3	778.9
142.5°	814.9	814.7	814.5	813.8	812.8	811.8	810.7	809.7
145°	858.0	857.7	857.6	857.0	856.3	855.5	854.7	853.9
147.5°	898.6	898.6	898.6	898.0	896.9	895.7	894.6	893.4
150°	923.8	923.8	923.8	923.2	922.0	920.8	919.7	918.5
152.5°	946.7	947.0	947.4	947.0	946.0	944.9	943.9	943.0
155°	980.2	981.0	981.8	981.5	980.2	978.8	977.5	976.1
157.5°	1009.1	1010.0	1010.7	1010.6	1009.5	1008.5	1007.4	1006.3
160°	1026.9	1027.9	1028.8	1028.9	1028.1	1027.3	1026.6	1025.8
162.5°	1043.6	1044.6	1045.6	1045.4	1044.2	1042.9	1041.7	1040.4
165°	1064.8	1065.9	1067.1	1067.0	1065.7	1064.3	1062.9	1061.6
167.5°	1081.9	1083.1	1084.3	1084.3	1083.1	1081.9	1080.7	1079.5
170°	1091.3	1092.7	1094.1	1094.1	1092.7	1091.3	1089.9	1088.6
172.5°	1098.7	1099.9	1101.1	1101.0	1099.7	1098.3	1096.9	1095.6
175°	1106.6	1107.8	1109.0	1108.9	1107.5	1106.1	1104.8	1103.5
177.5°	1110.2	1111.1	1112.1	1112.0	1110.9	1109.8	1108.7	1107.7
180°	1110.4	1110.4	1110.4	1110.4	1110.4	1110.4	1110.4	1110.4

(END OF REPORT)