

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: P332309-940

Luminaire Tested: **S123RDIP-S775D585U940-4F0-1E-UDD-F**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P332309-940
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: S123RDIP-S775D585U940-4F0-1E-UDD-F
Description: DEFINE 3 DIRECT-INDIRECT PENDANT LED LUMINAIRE
DOWNLIGHT 775 LUMENS PER FOOT, FLUSH SATIN WHITE DIFFUSER, REGRESSED
HOUSING
UPLIGHT 585 LUMENS PER FOOT, NO LENS
Light Source: -
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 4690.3 lumens
Efficiency: N/A
Efficacy: 116.4 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

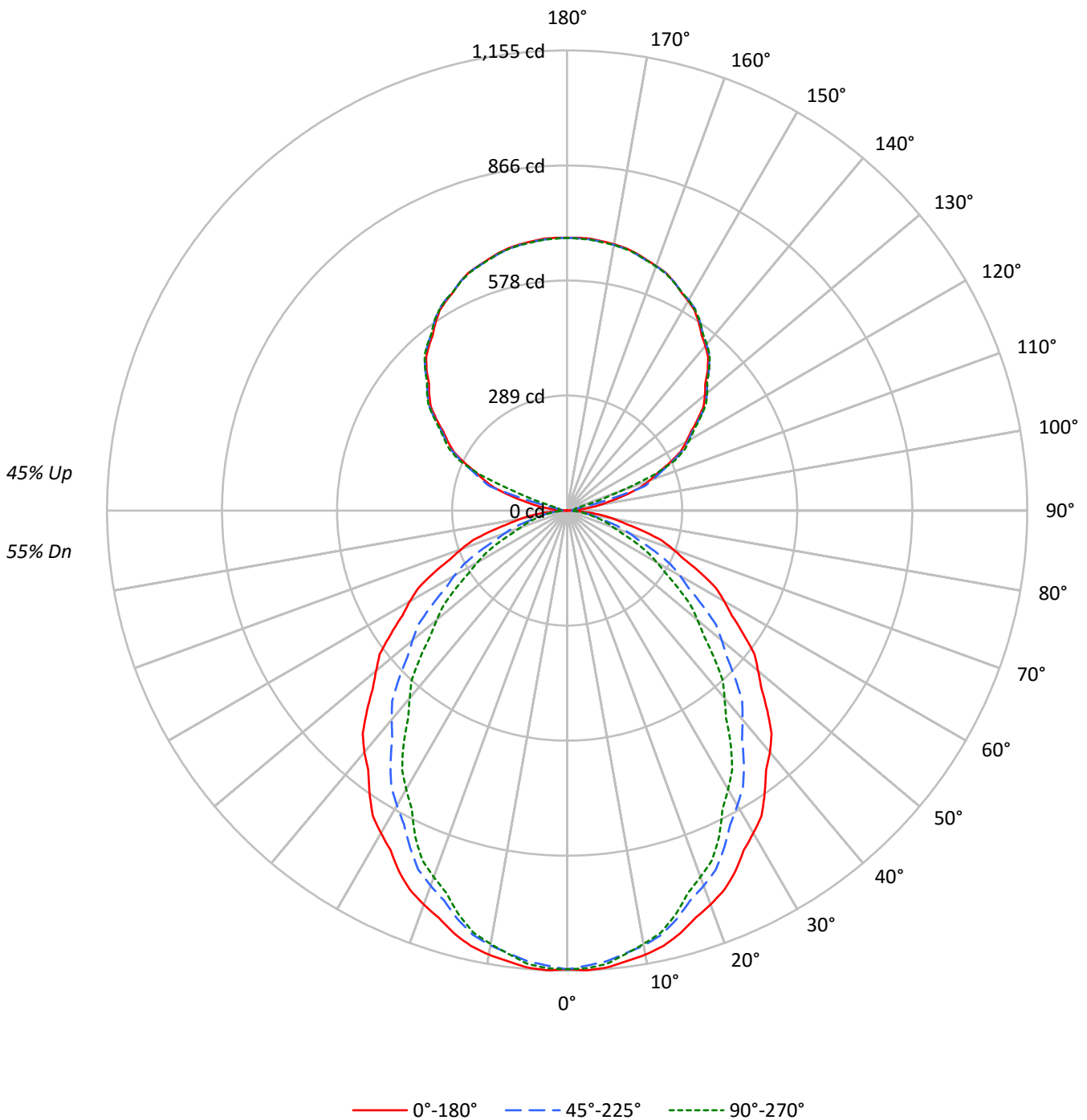
Input Watts (W): 40.3
Input Voltage (V): 120
Input Current (A_{in}): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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	108	108	108	108	101	101	101	101	86	86	86	73	73	73	61	61	61	55
1	99	95	91	88	92	89	85	82	76	74	72	65	63	62	55	53	52	47
2	91	84	77	72	84	78	73	68	67	63	60	58	55	52	49	46	45	40
3	83	74	67	61	77	69	62	57	60	55	51	51	48	44	43	41	38	35
4	76	65	58	52	71	61	54	49	53	48	44	46	42	38	39	36	33	30
5	70	59	50	45	65	55	48	42	48	42	38	41	37	34	35	32	29	26
6	65	53	45	39	60	49	42	37	43	37	33	37	33	30	32	29	26	23
7	60	48	40	34	56	45	38	33	39	34	29	34	30	26	29	26	23	21
8	56	43	36	30	52	41	34	29	36	30	26	31	27	24	27	23	21	19
9	52	40	32	27	48	37	31	26	33	27	24	29	24	21	25	21	19	17
10	49	36	29	25	45	34	28	23	30	25	21	27	22	19	23	20	17	15

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	12392	12392	12392
5°	12440	12268	12338
10°	12369	12114	12073
15°	12237	11830	11705
20°	12054	11475	11208
25°	11866	11077	10723
30°	11616	10618	10038
35°	11361	10159	9410
40°	11126	9617	8633
45°	10816	9082	7931
50°	10474	8473	7145
55°	10128	7781	6412
60°	9810	7035	5608
65°	9393	6230	4804
70°	8875	5231	3877
75°	8114	4117	3647
80°	7234	3651	3353
85°	6113	3223	3001



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	108.1	2.3
10°-20°	300.8	6.4
20°-30°	433.1	9.2
30°-40°	487.9	10.4
40°-50°	466.7	10.0
50°-60°	382.2	8.1
60°-70°	257.9	5.5
70°-80°	129.7	2.8
80°-90°	36.2	0.8
90°-100°	24.9	0.5
100°-110°	118.6	2.5
110°-120°	284.9	6.1
120°-130°	362.8	7.7
130°-140°	387.7	8.3
140°-150°	362.5	7.7
150°-160°	292.4	6.2
160°-170°	188.7	4.0
170°-180°	65.0	1.4
0°-30°	842.0	18.0
0°-40°	1329.9	28.4
0°-60°	2178.8	46.5
0°-90°	2602.7	55.5
90°-120°	428.4	9.1
90°-150°	1541.4	32.9
90°-180°	2088.0	44.5
0°-180°	4690.3	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1151	1151	1151	1151	1151	
5°	1151	1146	1135	1143	1142	109
15°	1098	1087	1062	1057	1050	309
25°	999	975	933	914	903	459
35°	865	830	773	734	716	541
45°	710	667	597	545	521	548
55°	540	492	415	362	342	484
65°	369	316	245	201	189	365
75°	195	150	99	90	88	208
85°	50	30	26	24	24	56
90°	0	6	12	14	15	4
95°	31	12	16	19	19	38
105°	152	154	111	26	22	161
115°	284	287	292	297	299	281
125°	401	405	407	408	409	358
135°	499	502	504	505	504	384
145°	576	579	580	581	581	360
155°	634	633	634	636	633	292
165°	669	667	667	670	667	189
175°	685	682	682	686	682	65
180°	685	685	685	685	685	



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CANDELA DISTRIBUTION (FULL):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
0°	1151.3	1151.3	1151.3	1151.3	1151.3	1151.3	1151.3	1151.3	1151.3	1151.3	1151.3
2.5°	1154.9	1154.3	1153.6	1153.0	1152.4	1151.0	1149.0	1147.0	1145.0	1143.0	1144.9
5°	1151.3	1150.2	1149.1	1148.2	1147.1	1145.3	1142.8	1140.3	1137.8	1135.4	1137.2
7.5°	1140.6	1139.5	1138.4	1137.2	1136.1	1133.9	1130.7	1127.5	1124.3	1121.0	1122.0
10°	1131.7	1130.2	1128.7	1127.3	1125.8	1123.2	1119.5	1115.8	1112.1	1108.3	1108.5
12.5°	1118.9	1117.3	1115.7	1114.1	1112.5	1109.4	1104.8	1100.3	1095.6	1091.1	1091.0
15°	1098.1	1095.7	1093.4	1091.2	1088.9	1084.9	1079.1	1073.3	1067.4	1061.6	1060.6
17.5°	1071.7	1069.1	1066.4	1063.7	1061.0	1056.1	1048.7	1041.3	1033.8	1026.5	1024.3
20°	1052.3	1048.9	1045.6	1042.3	1039.0	1033.4	1025.5	1017.6	1009.8	1001.8	999.2
22.5°	1030.6	1026.8	1023.0	1019.1	1015.3	1009.2	1000.9	992.5	984.1	975.7	972.3
25°	999.1	993.9	988.6	983.5	978.3	970.9	961.4	951.8	942.3	932.7	928.4
27.5°	960.7	955.0	949.3	943.6	937.9	929.7	919.1	908.5	897.8	887.2	881.1
30°	934.6	928.4	922.2	916.0	909.7	900.8	889.2	877.5	865.9	854.3	847.3
32.5°	908.5	901.4	894.4	887.3	880.3	870.6	858.3	846.1	833.7	821.4	813.8
35°	864.6	857.1	849.6	842.2	834.7	824.6	811.7	798.8	786.0	773.1	764.2
37.5°	820.2	811.8	803.5	795.2	786.9	776.0	762.2	748.5	734.8	721.0	710.9
40°	791.8	782.7	773.5	764.4	755.3	743.3	728.6	713.9	699.1	684.4	673.6
42.5°	759.6	750.6	741.4	732.3	723.2	711.0	695.7	680.5	665.3	650.1	638.3
45°	710.5	701.2	691.9	682.5	673.2	660.6	644.5	628.6	612.6	596.6	584.8
47.5°	661.5	651.2	641.0	630.7	620.5	607.3	591.4	575.3	559.4	543.4	530.6
50°	625.5	615.8	606.1	596.3	586.6	573.3	556.5	539.7	522.9	506.0	493.2
52.5°	593.4	582.9	572.3	561.7	551.2	537.5	520.8	504.3	487.6	470.9	457.6
55°	539.7	529.5	519.3	509.2	499.0	485.1	467.4	449.9	432.2	414.6	402.5
57.5°	490.0	478.9	467.9	456.7	445.7	431.3	413.6	395.8	378.1	360.4	349.0
60°	455.7	444.3	432.8	421.4	410.0	395.7	378.4	361.2	344.0	326.8	315.6
62.5°	421.2	409.8	398.4	387.0	375.7	361.3	344.1	326.9	309.7	292.4	281.9
65°	368.8	357.4	346.0	334.6	323.2	309.3	293.2	277.0	260.8	244.6	234.4
67.5°	316.4	304.8	293.3	281.7	270.2	256.6	241.1	225.6	210.1	194.6	187.0
70°	282.0	270.8	259.6	248.3	237.2	224.3	209.7	195.3	180.7	166.2	158.9
72.5°	247.6	236.6	225.5	214.5	203.5	191.4	178.2	165.0	151.8	138.6	132.6
75°	195.1	185.2	175.2	165.2	155.3	144.6	133.2	121.8	110.4	99.0	96.9
77.5°	147.3	138.3	129.3	120.3	111.3	103.2	95.8	88.5	81.1	73.7	72.7
80°	116.7	108.2	99.7	91.2	82.7	76.2	71.9	67.5	63.2	58.9	58.2
82.5°	87.6	80.3	72.9	65.5	58.2	53.5	51.5	49.4	47.4	45.4	44.8
85°	49.5	44.9	40.4	35.8	31.2	28.6	28.0	27.4	26.8	26.1	25.8
87.5°	18.0	16.4	14.8	13.2	11.6	11.0	11.2	11.6	11.9	12.1	12.0
90°	0.5	1.6	2.8	3.9	5.0	6.3	7.8	9.3	10.7	12.2	12.7
92.5°	9.5	9.2	8.8	8.5	8.2	8.6	9.7	10.8	11.9	13.0	13.7
95°	31.0	26.4	21.8	17.1	12.5	10.8	12.0	13.3	14.5	15.8	16.6
97.5°	62.3	60.3	58.2	56.1	54.0	49.0	40.8	32.6	24.5	16.4	17.3
100°	86.0	88.2	90.5	92.7	95.0	87.3	69.6	52.1	34.4	16.8	17.7
102.5°	112.8	114.4	116.1	117.7	119.3	110.5	91.2	72.0	52.7	33.4	30.7
105°	151.6	152.8	154.1	155.2	156.5	152.0	141.9	131.7	121.5	111.4	91.4
107.5°	192.4	193.4	194.5	195.5	196.4	197.7	199.3	200.9	202.5	204.1	189.5
110°	219.7	220.6	221.5	222.4	223.3	224.4	225.6	226.9	228.1	229.3	225.6



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CANDELA DISTRIBUTION (continued):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
112.5°	245.8	246.6	247.4	248.2	249.0	250.0	251.3	252.5	253.8	255.0	255.1
115°	284.3	285.0	285.6	286.3	287.0	287.8	288.9	289.9	290.9	291.9	293.1
117.5°	321.6	322.4	323.3	324.1	324.9	325.7	326.2	326.7	327.3	327.7	328.7
120°	344.8	345.8	346.9	347.9	348.9	349.6	349.9	350.3	350.6	350.9	351.9
122.5°	368.5	369.3	370.1	371.0	371.8	372.4	372.8	373.3	373.7	374.2	374.8
125°	400.7	401.7	402.6	403.5	404.4	405.1	405.6	406.0	406.4	406.9	407.1
127.5°	432.1	433.0	433.9	434.8	435.7	436.4	436.9	437.6	438.1	438.6	439.0
130°	451.7	452.5	453.4	454.3	455.2	455.9	456.4	456.8	457.3	457.7	458.2
132.5°	470.4	471.3	472.2	473.1	473.9	474.6	474.9	475.3	475.6	476.1	476.5
135°	498.9	499.6	500.2	501.0	501.7	502.2	502.7	503.1	503.5	504.0	504.4
137.5°	523.3	524.2	525.0	525.9	526.7	527.4	527.5	527.8	528.1	528.3	528.9
140°	539.6	540.3	541.0	541.6	542.3	542.9	543.1	543.5	543.9	544.2	544.7
142.5°	554.6	555.4	556.1	556.7	557.4	557.9	558.2	558.6	558.9	559.3	559.6
145°	575.7	576.5	577.3	578.1	578.9	579.4	579.6	579.9	580.1	580.3	580.5
147.5°	595.6	596.1	596.6	597.1	597.6	598.0	598.2	598.4	598.7	599.0	599.1
150°	607.8	608.1	608.4	608.8	609.1	609.4	609.7	609.8	610.1	610.3	610.6
152.5°	618.8	618.9	619.0	619.2	619.4	619.6	619.6	619.8	619.9	620.1	620.5
155°	634.2	634.0	633.7	633.6	633.3	633.3	633.4	633.5	633.6	633.7	634.3
157.5°	646.2	646.2	646.1	646.1	646.1	646.0	646.0	645.9	645.7	645.6	646.3
160°	653.5	653.4	653.4	653.2	653.1	653.0	652.8	652.7	652.6	652.6	653.2
162.5°	660.5	660.1	659.9	659.6	659.2	659.1	659.0	658.9	658.7	658.6	659.4
165°	668.8	668.4	668.2	667.8	667.4	667.2	667.1	667.0	666.9	666.7	667.7
167.5°	675.3	674.8	674.4	674.0	673.5	673.2	673.2	673.2	673.2	673.2	674.2
170°	678.9	678.5	678.1	677.6	677.2	676.9	676.9	676.9	676.9	676.9	677.9
172.5°	681.4	680.9	680.3	679.8	679.2	679.0	679.1	679.2	679.3	679.4	680.3
175°	684.6	684.0	683.4	682.9	682.3	682.1	682.2	682.3	682.4	682.5	683.3
177.5°	685.4	684.9	684.5	684.0	683.6	683.4	683.5	683.6	683.7	683.8	684.5
180°	684.6	684.6	684.6	684.6	684.6	684.6	684.6	684.6	684.6	684.6	684.6



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CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
0°	1151.3	1151.3	1151.3	1151.3	1151.3	1151.3	1151.3	1151.3
2.5°	1146.7	1148.5	1150.3	1151.1	1150.8	1150.4	1150.0	1149.8
5°	1139.1	1140.9	1142.8	1143.5	1143.2	1142.7	1142.3	1141.9
7.5°	1123.1	1124.1	1125.2	1125.3	1124.6	1123.9	1123.2	1122.5
10°	1108.8	1108.9	1109.1	1108.8	1107.7	1106.6	1105.6	1104.6
12.5°	1090.8	1090.7	1090.7	1089.9	1088.8	1087.5	1086.4	1085.1
15°	1059.5	1058.5	1057.5	1056.2	1054.8	1053.3	1051.9	1050.4
17.5°	1022.1	1019.9	1017.7	1015.6	1013.3	1011.2	1009.1	1006.9
20°	996.5	993.7	991.0	988.5	986.0	983.5	981.0	978.5
22.5°	969.0	965.6	962.2	959.4	957.1	954.8	952.4	950.1
25°	924.1	919.7	915.3	912.0	909.7	907.4	905.2	902.9
27.5°	875.0	869.1	863.0	858.2	854.7	851.2	847.7	844.3
30°	840.3	833.1	826.1	820.9	817.6	814.3	810.9	807.6
32.5°	806.0	798.3	790.6	785.0	781.5	778.0	774.5	771.1
35°	755.3	746.4	737.4	731.1	727.4	723.6	719.9	716.1
37.5°	700.7	690.6	680.5	673.2	668.5	663.9	659.3	654.7
40°	662.8	652.0	641.2	633.5	628.7	623.9	619.1	614.4
42.5°	626.4	614.7	602.9	594.9	590.6	586.3	582.0	577.7
45°	573.0	561.2	549.3	540.9	535.9	530.9	526.0	521.0
47.5°	517.6	504.8	492.0	483.3	478.8	474.4	470.0	465.6
50°	480.4	467.4	454.6	445.8	441.0	436.2	431.5	426.7
52.5°	444.3	430.9	417.5	408.7	404.4	400.1	395.8	391.6
55°	390.5	378.4	366.4	358.3	354.2	350.0	345.9	341.7
57.5°	337.7	326.3	315.0	307.5	304.0	300.4	296.9	293.4
60°	304.3	293.2	282.0	274.6	271.1	267.5	264.0	260.5
62.5°	271.3	260.8	250.3	243.2	239.4	235.8	232.1	228.4
65°	224.3	214.1	203.9	197.7	195.5	193.1	190.9	188.6
67.5°	179.4	171.8	164.2	159.2	156.8	154.3	151.9	149.4
70°	151.7	144.4	137.1	132.4	130.1	127.8	125.6	123.2
72.5°	126.7	120.7	114.9	111.4	110.4	109.5	108.5	107.5
75°	94.8	92.7	90.7	89.4	89.0	88.6	88.2	87.7
77.5°	71.5	70.4	69.3	68.5	68.1	67.7	67.2	66.9
80°	57.6	57.0	56.4	55.8	55.4	55.0	54.6	54.1
82.5°	44.1	43.5	42.9	42.5	42.4	42.4	42.3	42.2
85°	25.3	24.9	24.5	24.3	24.3	24.3	24.3	24.3
87.5°	12.0	11.9	11.9	11.8	11.6	11.5	11.4	11.2
90°	13.1	13.6	14.0	14.4	14.6	14.8	15.1	15.2
92.5°	14.4	15.2	15.9	16.3	16.5	16.6	16.8	16.9
95°	17.4	18.1	18.9	19.4	19.4	19.4	19.4	19.4
97.5°	18.2	19.1	20.0	20.5	20.6	20.7	20.9	21.0
100°	18.5	19.5	20.4	20.9	21.0	21.1	21.2	21.4
102.5°	27.8	25.1	22.3	21.0	21.1	21.4	21.6	21.8
105°	71.3	51.4	31.4	21.5	21.7	21.9	22.1	22.4
107.5°	174.8	160.2	145.4	130.6	115.5	100.4	85.3	70.3
110°	221.9	218.2	214.5	204.5	188.3	172.2	156.0	139.8



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CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
112.5°	255.1	255.2	255.3	253.6	250.2	246.7	243.3	240.0
115°	294.2	295.3	296.5	297.2	297.7	298.2	298.6	299.1
117.5°	329.6	330.5	331.4	331.9	332.0	332.1	332.2	332.3
120°	352.8	353.7	354.5	355.0	355.0	355.0	355.0	355.0
122.5°	375.4	376.0	376.7	377.0	377.1	377.2	377.3	377.4
125°	407.3	407.5	407.8	408.0	408.2	408.5	408.7	408.9
127.5°	439.3	439.7	440.1	440.1	439.9	439.7	439.4	439.3
130°	458.6	459.1	459.5	459.7	459.4	459.2	459.0	458.8
132.5°	477.0	477.4	477.9	478.0	477.6	477.2	477.0	476.6
135°	504.7	505.1	505.3	505.3	505.1	504.7	504.4	504.0
137.5°	529.4	529.9	530.5	530.7	530.4	530.2	529.9	529.8
140°	545.1	545.5	546.0	546.1	545.9	545.6	545.5	545.2
142.5°	560.0	560.4	560.7	560.7	560.4	560.1	559.7	559.5
145°	580.8	580.9	581.2	581.3	581.3	581.3	581.3	581.3
147.5°	599.4	599.6	599.9	599.7	599.1	598.6	598.2	597.6
150°	610.7	611.0	611.2	611.2	610.8	610.5	610.1	609.8
152.5°	620.9	621.3	621.7	621.6	621.2	620.6	620.1	619.6
155°	634.8	635.4	636.0	635.9	635.3	634.5	633.9	633.2
157.5°	646.9	647.6	648.4	648.2	647.3	646.5	645.6	644.7
160°	653.9	654.5	655.2	655.1	654.4	653.6	652.8	652.0
162.5°	660.1	660.9	661.7	661.7	661.0	660.3	659.6	659.0
165°	668.6	669.5	670.4	670.5	669.7	668.9	668.1	667.3
167.5°	675.1	676.0	676.9	676.9	676.0	675.1	674.2	673.2
170°	678.8	679.7	680.6	680.6	679.7	678.8	677.9	676.9
172.5°	681.2	682.1	683.0	683.0	682.0	681.0	679.9	678.9
175°	684.1	684.9	685.7	685.6	684.7	683.9	683.0	682.0
177.5°	685.2	685.9	686.6	686.5	685.6	684.7	683.9	683.0
180°	684.6	684.6	684.6	684.6	684.6	684.6	684.6	684.6

(END OF REPORT)