

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: P331950-927

Luminaire Tested: **S123DIP-S560D1195U927-4F0-1E-UDD-D1**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P331950-927
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: S123DIP-S560D1195U927-4F0-1E-UDD-D1
Description: DEFINE 3 DIRECT-INDIRECT PENDANT LED LUMINAIRE
DOWNLIGHT 560 LUMENS PER FOOT, DROP SATIN WHITE DIFFUSER
UPLIGHT 1195 LUMENS PER FOOT, FLUSH SATIN WHITE DIFFUSER
Light Source: -
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 5121.8 lumens
Efficiency: N/A
Efficacy: 103.7 lumens/watt
Spacing Criteria (0/90/45): 1.2 / 1.26 / 1.37
Luminous Opening: Rectangular w/ Sides (W: 0.25' x L: 4' x H: 0.08')
CIE Type: Semi-Indirect

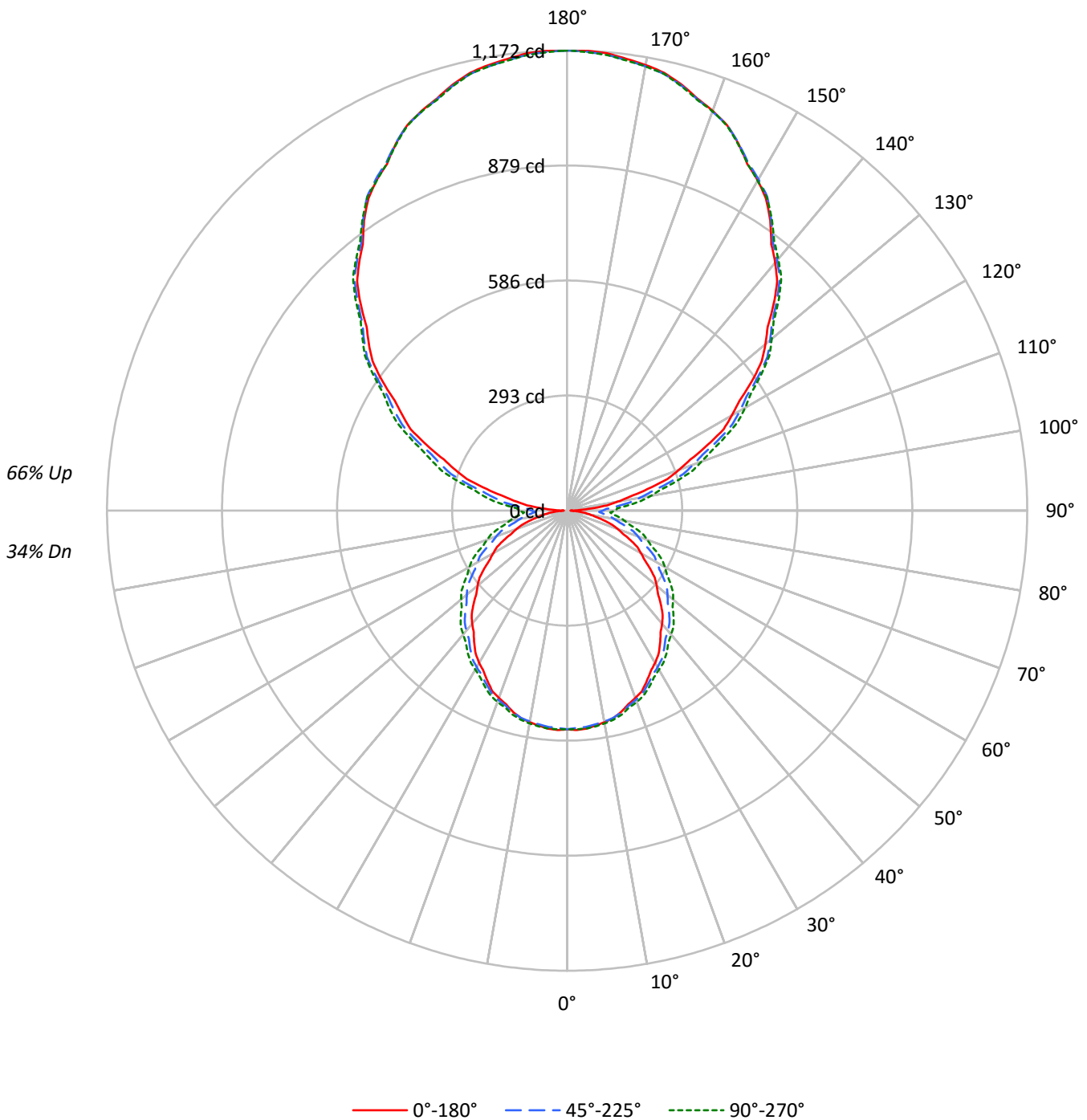
Input Watts (W): 49.4
Input Voltage (V): 120
Input Current (A_{in}): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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	103	103	103	103	93	93	93	93	74	74	74		57	57	57		41	41	41	34
1	93	89	85	81	84	80	77	74	64	61	59		49	47	46		35	34	33	27
2	85	77	71	66	76	70	64	60	56	52	48		42	40	38		30	29	27	22
3	77	68	60	54	69	61	55	50	49	44	40		37	34	32		27	25	23	18
4	70	60	52	46	63	54	47	42	43	38	34		33	30	27		24	21	20	15
5	64	53	45	39	58	48	41	36	38	33	29		30	26	23		21	19	17	13
6	59	47	39	33	53	43	36	31	34	29	25		27	23	20		19	17	15	12
7	55	42	35	29	49	39	32	27	31	26	22		24	20	18		18	15	13	10
8	51	38	31	25	45	35	28	23	28	23	19		22	18	16		16	14	12	9
9	47	35	28	23	42	32	25	21	26	21	17		20	16	14		15	12	10	8
10	44	32	25	20	39	29	23	19	24	19	15		19	15	12		14	11	9	7

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	5997	5997	5997
5°	6015	5845	5849
10°	5961	5711	5682
15°	5884	5558	5501
20°	5774	5383	5300
25°	5639	5182	5090
30°	5500	5002	4877
35°	5344	4810	4707
40°	5195	4636	4524
45°	5031	4469	4378
50°	4868	4304	4219
55°	4689	4134	4074
60°	4513	3964	3925
65°	4335	3780	3750
70°	4066	3576	3568
75°	3724	3338	3386
80°	3326	3109	3176
85°	2963	2948	3053



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	52.8	1.0
10°-20°	150.5	2.9
20°-30°	225.2	4.4
30°-40°	268.9	5.2
40°-50°	281.3	5.5
50°-60°	264.0	5.2
60°-70°	220.5	4.3
70°-80°	157.8	3.1
80°-90°	97.5	1.9
90°-100°	135.4	2.6
100°-110°	271.9	5.3
110°-120°	417.5	8.2
120°-130°	527.7	10.3
130°-140°	581.9	11.4
140°-150°	566.3	11.1
150°-160°	475.4	9.3
160°-170°	316.5	6.2
170°-180°	110.8	2.2
0°-30°	428.5	8.4
0°-40°	697.4	13.6
0°-60°	1242.7	24.3
0°-90°	1718.5	33.6
90°-120°	824.8	16.1
90°-150°	2500.6	48.8
90°-180°	3403.0	66.4
0°-180°	5121.8	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	557	557	557	557	557	
5°	558	556	553	557	557	53
15°	531	533	532	538	538	149
25°	479	485	487	495	495	221
35°	413	422	430	439	442	258
45°	337	352	367	378	384	260
55°	257	277	299	315	320	230
65°	178	202	228	246	252	176
75°	96	125	155	175	183	103
85°	30	60	92	112	119	31
90°	9	48	91	114	123	9
95°	61	92	128	150	157	66
105°	212	229	263	279	287	227
115°	394	405	424	439	444	390
125°	574	578	593	601	602	512
135°	744	749	755	762	763	573
145°	902	903	906	909	908	563
155°	1032	1032	1033	1036	1030	475
165°	1124	1121	1121	1126	1120	317
175°	1169	1165	1165	1170	1164	111
180°	1172	1172	1172	1172	1172	



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CANDELA DISTRIBUTION (FULL):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
0°	557.1	557.1	557.1	557.1	557.1	557.1	557.1	557.1	557.1	557.1	557.1
2.5°	559.5	559.2	558.9	558.5	558.2	557.6	556.7	555.9	555.0	554.1	555.0
5°	557.7	557.4	557.1	556.9	556.6	556.0	555.2	554.4	553.7	552.8	553.9
7.5°	552.2	552.2	552.3	552.4	552.5	552.1	551.3	550.5	549.7	548.9	550.2
10°	547.4	547.6	547.9	548.2	548.4	548.3	547.6	546.9	546.2	545.6	546.9
12.5°	541.5	541.9	542.3	542.6	543.0	543.0	542.6	542.1	541.6	541.1	542.4
15°	531.0	531.4	531.8	532.2	532.6	532.7	532.6	532.4	532.3	532.2	533.5
17.5°	517.6	518.4	519.3	520.1	520.9	521.3	521.2	521.1	521.1	521.0	522.2
20°	507.9	508.7	509.5	510.3	511.1	511.7	512.0	512.2	512.5	512.8	514.0
22.5°	497.7	498.5	499.3	500.2	501.0	501.5	501.9	502.3	502.7	503.0	504.6
25°	479.4	480.8	482.1	483.5	484.8	485.7	486.1	486.5	486.9	487.3	489.0
27.5°	461.0	462.5	464.1	465.6	467.1	468.3	469.1	470.0	470.9	471.7	473.2
30°	447.8	449.6	451.3	453.1	454.9	456.3	457.3	458.4	459.5	460.6	462.2
32.5°	433.2	435.2	437.2	439.2	441.2	442.8	444.3	445.6	447.0	448.5	450.2
35°	412.6	414.8	416.9	419.1	421.3	423.3	425.0	426.7	428.5	430.2	432.3
37.5°	390.8	393.2	395.6	398.1	400.5	402.8	405.0	407.1	409.2	411.5	413.8
40°	376.2	378.7	381.1	383.5	386.0	388.5	391.2	393.9	396.6	399.3	401.6
42.5°	360.2	363.2	366.1	369.1	372.1	374.9	377.8	380.6	383.4	386.2	388.7
45°	337.4	340.6	343.9	347.1	350.3	353.6	357.0	360.4	363.8	367.1	369.7
47.5°	313.5	317.2	320.8	324.5	328.1	331.9	335.8	339.6	343.5	347.4	350.2
50°	297.9	301.7	305.5	309.3	313.1	317.0	321.2	325.4	329.5	333.7	336.8
52.5°	281.5	285.4	289.5	293.4	297.4	301.7	306.3	310.9	315.5	320.2	323.4
55°	257.3	261.7	266.2	270.6	275.1	279.7	284.6	289.5	294.3	299.1	302.8
57.5°	233.8	238.4	243.0	247.6	252.3	257.3	262.6	267.9	273.2	278.5	282.2
60°	217.2	222.1	227.0	231.8	236.6	241.9	247.4	252.9	258.4	264.0	267.8
62.5°	201.7	206.7	211.7	216.6	221.6	227.0	232.8	238.7	244.5	250.4	254.1
65°	177.8	183.1	188.3	193.6	198.8	204.5	210.4	216.3	222.2	228.1	232.2
67.5°	153.5	159.1	164.7	170.2	175.9	181.6	187.7	193.8	199.8	205.8	210.2
70°	136.6	142.4	148.1	153.9	159.7	165.9	172.3	178.8	185.3	191.8	196.1
72.5°	121.0	126.8	132.6	138.4	144.2	150.4	157.1	163.8	170.5	177.2	181.6
75°	96.5	102.8	109.2	115.5	121.8	128.4	135.1	141.9	148.6	155.3	159.8
77.5°	75.1	81.5	87.9	94.3	100.7	107.3	114.1	120.9	127.7	134.5	139.2
80°	60.0	66.7	73.3	79.9	86.5	93.3	100.3	107.3	114.4	121.4	126.0
82.5°	47.0	53.7	60.4	67.1	73.8	80.7	87.9	95.0	102.1	109.2	113.8
85°	29.7	36.4	43.3	50.0	56.7	63.6	70.8	78.0	85.1	92.2	96.8
87.5°	16.3	23.4	30.6	37.7	44.8	52.1	59.5	66.9	74.3	81.8	86.5
90°	8.8	17.4	26.1	34.8	43.4	52.5	62.0	71.6	81.1	90.6	96.1
92.5°	29.7	37.0	44.4	51.7	59.1	66.9	75.2	83.5	91.7	100.1	105.2
95°	61.0	67.7	74.4	81.0	87.8	95.2	103.5	111.7	119.9	128.2	133.2
97.5°	102.4	108.2	114.0	119.9	125.6	132.3	139.8	147.3	154.8	162.3	167.2
100°	130.6	136.2	141.7	147.3	152.8	159.2	166.4	173.6	180.9	188.1	192.7
102.5°	163.3	167.9	172.5	177.1	181.8	187.8	195.3	202.7	210.2	217.6	222.0
105°	212.0	215.6	219.3	222.9	226.6	232.2	239.8	247.5	255.1	262.8	266.5
107.5°	267.9	270.9	273.9	276.9	279.9	284.6	290.7	297.0	303.2	309.5	313.8
110°	302.8	305.6	308.5	311.2	314.1	318.5	324.2	330.0	335.9	341.7	345.9



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CANDELA DISTRIBUTION (continued):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
112.5°	339.6	341.8	344.0	346.3	348.6	352.3	357.6	362.8	368.1	373.4	377.7
115°	394.2	396.4	398.7	400.9	403.1	406.5	410.9	415.3	419.8	424.3	427.7
117.5°	449.7	451.1	452.5	453.9	455.3	458.0	462.1	466.1	470.1	474.1	477.3
120°	483.8	485.7	487.6	489.5	491.4	494.1	497.5	500.9	504.4	507.8	510.7
122.5°	519.9	521.2	522.4	523.6	524.9	527.4	531.1	534.8	538.4	542.2	544.6
125°	574.3	575.0	575.5	576.2	576.8	578.8	582.3	585.8	589.3	592.9	594.8
127.5°	625.1	626.3	627.5	628.7	629.9	631.8	634.6	637.4	640.2	642.9	644.4
130°	659.0	660.5	662.0	663.5	665.0	666.8	668.9	671.0	673.0	675.1	676.8
132.5°	692.4	694.0	695.6	697.2	698.9	700.4	702.2	703.9	705.6	707.3	708.8
135°	744.0	745.0	746.2	747.3	748.4	749.6	750.8	752.1	753.4	754.6	756.3
137.5°	791.7	792.7	793.5	794.5	795.4	796.5	797.9	799.2	800.7	802.0	803.3
140°	824.3	825.4	826.4	827.4	828.5	829.3	829.9	830.5	831.2	831.7	833.5
142.5°	854.6	855.5	856.4	857.3	858.3	858.9	859.4	859.8	860.2	860.7	862.3
145°	901.7	902.0	902.2	902.5	902.8	903.2	903.9	904.4	905.1	905.7	906.6
147.5°	942.3	943.1	943.8	944.5	945.3	945.9	946.5	947.1	947.6	948.2	948.6
150°	971.1	971.5	971.8	972.2	972.7	973.1	973.5	973.9	974.3	974.7	974.7
152.5°	994.6	995.2	995.8	996.3	996.9	997.3	997.5	997.8	998.1	998.3	998.6
155°	1031.8	1031.8	1031.8	1031.8	1031.8	1031.9	1032.1	1032.3	1032.5	1032.7	1033.6
157.5°	1063.4	1063.2	1063.0	1062.7	1062.5	1062.4	1062.6	1062.8	1063.0	1063.1	1064.0
160°	1083.3	1082.9	1082.5	1082.1	1081.7	1081.5	1081.5	1081.5	1081.5	1081.5	1082.5
162.5°	1101.0	1100.4	1099.9	1099.3	1098.8	1098.5	1098.7	1098.8	1099.0	1099.2	1100.2
165°	1123.9	1123.2	1122.6	1122.0	1121.4	1121.1	1121.1	1121.1	1121.1	1121.1	1122.3
167.5°	1142.1	1141.2	1140.4	1139.6	1138.8	1138.4	1138.6	1138.8	1138.9	1139.1	1140.3
170°	1152.4	1151.5	1150.7	1149.9	1149.1	1148.7	1148.7	1148.7	1148.7	1148.7	1150.1
172.5°	1160.5	1159.7	1158.8	1158.0	1157.2	1156.8	1156.8	1156.8	1156.8	1156.8	1158.1
175°	1168.9	1168.2	1167.3	1166.5	1165.7	1165.2	1165.2	1165.2	1165.2	1165.2	1166.5
177.5°	1172.4	1171.8	1171.2	1170.4	1169.8	1169.5	1169.5	1169.5	1169.5	1169.5	1170.4
180°	1171.7	1171.7	1171.7	1171.7	1171.7	1171.7	1171.7	1171.7	1171.7	1171.7	1171.7



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CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
0°	557.1	557.1	557.1	557.1	557.1	557.1	557.1	557.1
2.5°	555.9	556.7	557.6	558.0	557.9	557.8	557.7	557.5
5°	555.0	556.0	557.1	557.6	557.5	557.3	557.2	557.1
7.5°	551.6	552.9	554.4	554.9	554.8	554.6	554.4	554.3
10°	548.3	549.6	551.0	551.4	551.2	551.0	550.6	550.4
12.5°	543.7	544.9	546.1	546.6	546.4	546.1	545.8	545.6
15°	534.9	536.2	537.6	538.2	538.1	537.9	537.8	537.7
17.5°	523.5	524.7	525.9	526.4	526.2	526.0	525.9	525.6
20°	515.2	516.4	517.6	518.3	518.4	518.6	518.7	518.8
22.5°	506.1	507.7	509.2	509.9	509.8	509.8	509.7	509.6
25°	490.8	492.6	494.3	495.2	495.2	495.2	495.2	495.2
27.5°	474.8	476.3	477.8	478.6	478.7	478.8	479.0	479.0
30°	463.8	465.4	467.1	467.9	467.9	467.9	467.9	467.9
32.5°	451.9	453.6	455.3	456.4	456.7	457.0	457.3	457.6
35°	434.3	436.3	438.3	439.6	440.1	440.7	441.2	441.8
37.5°	416.0	418.3	420.6	422.0	422.4	422.8	423.3	423.7
40°	403.9	406.2	408.4	409.9	410.4	411.0	411.5	412.0
42.5°	391.2	393.7	396.2	397.8	398.6	399.3	400.1	400.8
45°	372.2	374.8	377.4	379.2	380.2	381.4	382.5	383.5
47.5°	353.2	356.0	358.9	360.8	361.6	362.4	363.3	364.1
50°	339.9	343.1	346.2	348.2	349.1	350.1	351.0	352.0
52.5°	326.6	329.8	333.0	335.2	336.4	337.5	338.7	339.8
55°	306.4	310.1	313.7	316.1	317.2	318.2	319.3	320.4
57.5°	285.9	289.5	293.2	295.6	296.9	298.2	299.4	300.7
60°	271.6	275.3	279.1	281.7	283.2	284.6	286.1	287.6
62.5°	257.9	261.7	265.5	268.1	269.4	270.8	272.2	273.5
65°	236.2	240.3	244.4	247.1	248.4	249.8	251.1	252.5
67.5°	214.7	219.1	223.6	226.3	227.4	228.5	229.7	230.8
70°	200.4	204.7	209.1	211.8	213.2	214.5	215.9	217.2
72.5°	186.0	190.4	194.9	197.8	199.2	200.5	201.8	203.2
75°	164.2	168.7	173.2	176.2	177.8	179.4	181.0	182.7
77.5°	143.9	148.5	153.2	156.2	157.5	158.7	159.9	161.2
80°	130.6	135.1	139.7	142.7	144.0	145.4	146.7	148.1
82.5°	118.4	122.9	127.5	130.6	131.9	133.2	134.6	135.9
85°	101.4	106.0	110.6	113.5	114.9	116.2	117.6	118.9
87.5°	91.3	96.0	100.7	103.8	105.3	106.7	108.1	109.6
90°	101.5	106.9	112.3	115.8	117.6	119.4	121.1	122.9
92.5°	110.3	115.4	120.6	123.7	124.6	125.6	126.6	127.6
95°	138.2	143.1	148.2	151.4	152.7	154.1	155.4	156.8
97.5°	172.2	177.1	182.1	185.2	186.5	187.7	189.0	190.3
100°	197.2	201.7	206.2	209.3	211.1	212.9	214.6	216.3
102.5°	226.4	230.8	235.3	238.1	239.3	240.6	241.9	243.1
105°	270.3	274.1	277.8	280.5	282.2	283.8	285.4	287.0
107.5°	318.0	322.3	326.5	329.2	330.1	331.1	332.0	333.0
110°	350.3	354.7	358.9	361.5	362.1	362.8	363.5	364.2



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CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
112.5°	382.1	386.5	390.9	393.6	394.7	395.9	397.0	398.1
115°	431.1	434.6	438.0	440.2	441.1	442.0	442.8	443.7
117.5°	480.5	483.6	486.8	488.6	489.1	489.6	490.0	490.5
120°	513.6	516.5	519.4	521.1	521.7	522.1	522.7	523.2
122.5°	547.1	549.5	552.0	553.4	553.8	554.2	554.5	554.9
125°	596.8	598.9	600.9	602.0	602.1	602.2	602.4	602.5
127.5°	646.0	647.5	649.0	649.8	649.7	649.7	649.7	649.7
130°	678.6	680.3	682.1	682.7	682.1	681.4	680.8	680.2
132.5°	710.3	711.7	713.2	713.8	713.7	713.4	713.3	713.1
135°	757.9	759.5	761.1	762.0	762.3	762.6	762.9	763.1
137.5°	804.5	805.8	807.1	807.7	807.6	807.5	807.4	807.2
140°	835.4	837.2	839.0	839.6	838.8	838.0	837.3	836.5
142.5°	864.0	865.5	867.1	867.7	867.3	866.9	866.4	866.0
145°	907.4	908.3	909.2	909.5	909.2	908.9	908.6	908.4
147.5°	948.9	949.2	949.5	949.3	948.6	947.8	947.1	946.3
150°	974.7	974.7	974.7	974.2	973.3	972.3	971.4	970.4
152.5°	998.9	999.3	999.6	999.3	998.2	997.2	996.2	995.2
155°	1034.4	1035.1	1036.0	1035.7	1034.3	1032.8	1031.4	1029.9
157.5°	1064.8	1065.6	1066.5	1066.4	1065.2	1064.1	1063.0	1061.8
160°	1083.5	1084.6	1085.6	1085.7	1084.9	1084.0	1083.2	1082.4
162.5°	1101.2	1102.2	1103.3	1103.1	1101.8	1100.5	1099.2	1097.9
165°	1123.6	1124.7	1126.0	1125.8	1124.4	1123.0	1121.6	1120.1
167.5°	1141.6	1142.9	1144.1	1144.1	1142.9	1141.6	1140.3	1139.1
170°	1151.5	1153.0	1154.4	1154.4	1153.0	1151.5	1150.1	1148.7
172.5°	1159.4	1160.6	1161.9	1161.8	1160.3	1158.9	1157.5	1156.0
175°	1167.7	1168.9	1170.1	1170.1	1168.6	1167.2	1165.8	1164.3
177.5°	1171.5	1172.4	1173.4	1173.3	1172.2	1171.0	1169.9	1168.8
180°	1171.7	1171.7	1171.7	1171.7	1171.7	1171.7	1171.7	1171.7

(END OF REPORT)