

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: P331370-935

Luminaire Tested: **S122DIP-S675D1080U935-4F0-1E-UDD-D1**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P331370-935
REPORT IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-1807-864-8,
Test Lab: INNOVATION CENTER
Issue Date: 3/3/2020
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: NEO-RAY
Catalog Number: S122DIP-S675D1080U935-4F0-1E-UDD-D1
Description: DEFINE 2 DIRECT-INDIRECT PENDANT LED LUMINAIRE
DOWNLIGHT 675 LUMENS PER FOOT, DROP SATIN WHITE DIFFUSER
UPLIGHT 1080 LUMENS PER FOOT, FLUSH SATIN WHITE DIFFUSER
Light Source: -
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 5632.4 lumens
Efficiency: N/A
Efficacy: 99.0 lumens/watt
Spacing Criteria (0/90/45): 1.21 / 1.32 / 1.42
Luminous Opening: Rectangular w/ Sides (W: 0.17' x L: 4' x H: 0.08')
CIE Type: Semi-Indirect

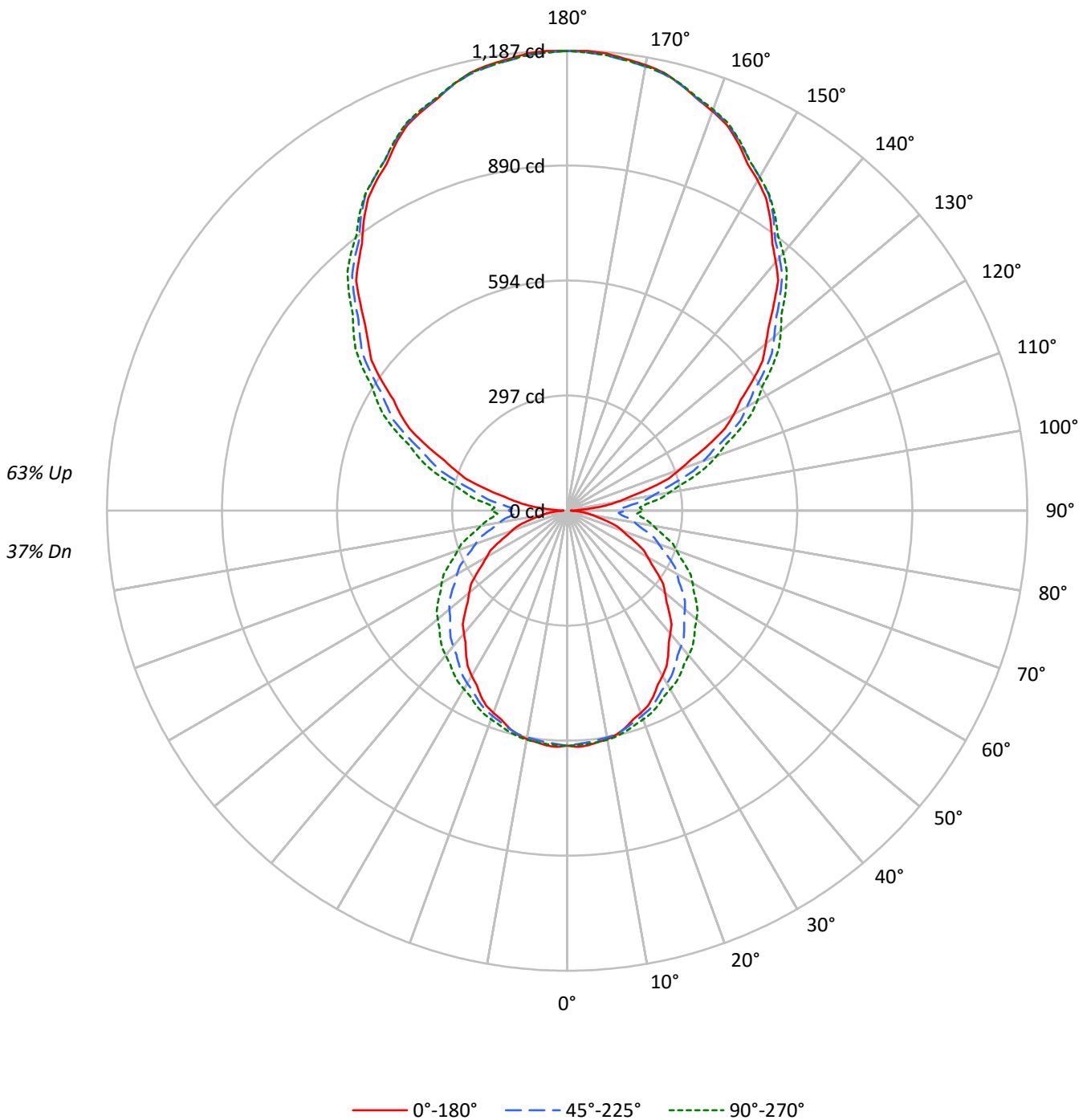
Input Watts (W): 56.9
Input Voltage (V): 120
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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	59	59	59	44	44	44	37
1	94	89	85	81	85	81	77	74	65	62	60	50	49	47	37	36	35	29
2	85	77	71	65	76	70	64	59	56	52	49	43	41	38	32	30	28	23
3	77	67	60	54	69	61	54	49	49	44	40	38	35	32	28	26	24	19
4	70	59	51	45	63	54	47	41	43	38	34	34	30	27	25	22	20	16
5	64	53	44	38	58	48	40	35	39	33	29	30	26	23	22	19	17	14
6	59	47	39	33	53	43	35	30	35	29	25	27	23	20	20	17	15	12
7	55	42	34	29	49	38	31	26	31	26	22	24	21	18	18	15	13	10
8	50	38	30	25	45	35	28	23	28	23	19	22	18	16	17	14	12	9
9	47	35	27	22	42	32	25	20	26	21	17	20	17	14	15	13	11	8
10	44	32	24	20	39	29	23	18	24	19	15	19	15	12	14	11	10	7

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	9792	9792	9792
5°	9839	9426	9390
10°	9778	9148	9044
15°	9643	8853	8681
20°	9473	8536	8331
25°	9305	8231	8014
30°	9067	7919	7694
35°	8828	7615	7468
40°	8576	7358	7243
45°	8334	7127	7051
50°	8078	6920	6861
55°	7810	6696	6668
60°	7480	6465	6465
65°	7135	6192	6222
70°	6751	5899	5960
75°	6257	5612	5720
80°	5488	5319	5476
85°	4743	5064	5286



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	57.5	1.0
10°-20°	164.8	2.9
20°-30°	249.7	4.4
30°-40°	304.2	5.4
40°-50°	327.2	5.8
50°-60°	317.8	5.6
60°-70°	277.5	4.9
70°-80°	213.6	3.8
80°-90°	148.1	2.6
90°-100°	173.9	3.1
100°-110°	305.4	5.4
110°-120°	446.3	7.9
120°-130°	550.9	9.8
130°-140°	599.6	10.6
140°-150°	578.9	10.3
150°-160°	484.0	8.6
160°-170°	321.0	5.7
170°-180°	112.2	2.0
0°-30°	472.0	8.4
0°-40°	776.1	13.8
0°-60°	1421.1	25.2
0°-90°	2060.3	36.6
90°-120°	925.5	16.4
90°-150°	2654.9	47.1
90°-180°	3572.0	63.4
0°-180°	5632.4	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	606	606	606	606	606	
5°	608	605	600	605	605	58
15°	580	582	582	589	589	163
25°	527	534	541	552	555	242
35°	454	469	486	505	512	284
45°	373	397	427	453	463	288
55°	286	318	363	394	406	255
65°	195	239	290	325	338	194
75°	108	158	214	250	263	114
85°	32	86	142	178	192	34
90°	10	74	151	183	196	9
95°	59	110	165	197	207	65
105°	219	249	296	327	338	232
115°	404	420	457	481	489	399
125°	584	594	618	638	646	522
135°	754	765	776	792	797	582
145°	914	921	927	933	934	571
155°	1045	1048	1051	1056	1053	481
165°	1137	1136	1136	1142	1138	321
175°	1183	1180	1178	1184	1179	112
180°	1185	1185	1185	1185	1185	



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CANDELA DISTRIBUTION (FULL):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
0°	606.5	606.5	606.5	606.5	606.5	606.5	606.5	606.5	606.5	606.5	606.5
2.5°	610.0	609.5	609.1	608.6	608.1	607.3	606.2	605.1	604.1	603.0	603.7
5°	608.2	607.6	607.1	606.5	605.9	605.0	603.8	602.7	601.5	600.3	601.5
7.5°	602.8	602.4	602.0	601.6	601.2	600.5	599.7	598.7	597.9	597.0	598.4
10°	598.6	598.1	597.8	597.4	597.0	596.5	595.9	595.4	594.8	594.2	595.7
12.5°	591.5	591.6	591.7	591.8	591.9	591.7	591.2	590.8	590.4	590.0	591.5
15°	580.1	580.5	580.9	581.3	581.7	581.9	581.9	581.9	581.9	581.9	583.6
17.5°	565.3	566.2	567.0	567.8	568.6	569.4	570.0	570.6	571.2	571.9	573.7
20°	555.5	556.5	557.4	558.4	559.4	560.3	561.0	561.9	562.7	563.4	565.6
22.5°	544.9	546.0	547.3	548.4	549.5	550.6	551.7	552.8	553.9	555.0	557.2
25°	527.4	528.7	530.1	531.5	532.9	534.4	536.1	538.0	539.7	541.4	543.8
27.5°	506.3	508.5	510.7	513.0	515.2	517.4	519.4	521.5	523.6	525.6	528.6
30°	492.2	494.7	497.3	499.8	502.4	504.9	507.5	510.0	512.6	515.1	518.1
32.5°	476.7	479.6	482.4	485.3	488.2	491.1	494.1	497.1	500.1	503.1	506.7
35°	454.4	457.7	461.1	464.3	467.7	471.2	474.9	478.6	482.3	486.0	490.3
37.5°	430.2	434.0	437.8	441.6	445.5	449.8	454.6	459.4	464.2	469.0	473.8
40°	414.0	418.3	422.6	426.9	431.2	435.9	441.3	446.5	451.8	457.0	462.1
42.5°	398.6	402.8	407.1	411.4	415.7	420.9	427.0	433.0	439.0	445.1	450.6
45°	372.6	378.0	383.2	388.5	393.7	399.8	406.7	413.5	420.3	427.1	433.3
47.5°	347.2	352.9	358.7	364.4	370.1	377.0	385.0	393.0	401.1	409.1	415.4
50°	329.6	335.7	341.7	347.8	353.8	361.3	370.1	378.8	387.6	396.4	403.0
52.5°	312.7	319.1	325.5	331.8	338.2	346.0	355.2	364.5	373.8	383.1	389.9
55°	285.7	292.7	299.7	306.8	313.7	322.4	332.5	342.7	352.8	363.0	370.1
57.5°	258.9	266.9	274.8	282.8	290.7	299.8	310.1	320.5	330.9	341.2	348.8
60°	240.0	248.3	256.8	265.2	273.5	283.4	294.5	305.6	316.7	327.9	335.3
62.5°	223.1	231.8	240.5	249.2	258.0	267.9	279.0	290.1	301.3	312.4	320.3
65°	195.1	204.7	214.3	223.9	233.4	243.9	255.5	267.0	278.5	290.1	298.1
67.5°	169.4	179.4	189.5	199.5	209.5	220.3	232.1	243.9	255.7	267.5	275.6
70°	151.2	161.4	171.5	181.7	191.8	202.9	215.1	227.1	239.3	251.4	259.8
72.5°	134.3	144.7	155.2	165.7	176.2	187.5	199.8	212.1	224.4	236.6	244.9
75°	108.1	119.1	130.0	140.9	151.9	163.6	176.1	188.6	201.0	213.6	222.0
77.5°	82.8	94.3	105.7	117.1	128.5	140.7	153.3	166.1	178.7	191.4	199.8
80°	66.0	77.8	89.7	101.7	113.6	125.9	138.6	151.3	163.9	176.7	184.9
82.5°	51.8	63.6	75.3	87.1	98.9	111.2	124.1	136.9	149.7	162.6	170.8
85°	31.7	43.7	55.9	67.9	80.1	92.4	104.9	117.4	129.9	142.4	150.6
87.5°	17.4	29.6	41.8	54.0	66.1	79.0	92.5	105.9	119.4	132.9	140.8
90°	9.8	23.8	37.8	51.7	65.8	81.5	98.8	116.2	133.6	151.0	158.4
92.5°	25.9	38.4	50.9	63.4	75.9	88.8	101.9	115.1	128.3	141.5	149.2
95°	59.1	70.4	81.9	93.2	104.6	116.4	128.6	140.8	152.9	165.1	172.5
97.5°	101.2	111.3	121.4	131.6	141.6	152.7	164.9	176.9	189.1	201.1	208.4
100°	133.2	142.2	151.2	160.1	169.2	179.5	191.1	202.7	214.3	225.9	233.2
102.5°	166.1	174.1	182.1	190.1	198.2	207.9	219.4	230.8	242.3	253.8	261.1
105°	219.4	225.8	232.1	238.4	244.8	253.2	263.8	274.4	285.0	295.6	302.9
107.5°	274.1	279.6	285.1	290.6	296.1	303.7	313.4	323.1	332.9	342.6	349.4
110°	308.6	313.8	319.0	324.3	329.5	336.9	346.5	356.0	365.7	375.2	381.4



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CANDELA DISTRIBUTION (continued):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
112.5°	347.0	351.5	356.2	360.8	365.4	372.2	381.1	390.0	399.0	407.9	413.6
115°	403.6	407.1	410.5	414.0	417.5	423.4	431.8	440.1	448.4	456.8	462.4
117.5°	459.1	462.3	465.5	468.6	471.8	476.8	483.7	490.6	497.5	504.4	509.6
120°	496.7	499.3	501.8	504.4	507.0	511.3	517.3	523.3	529.3	535.4	540.9
122.5°	531.1	533.6	536.0	538.5	540.9	545.2	551.3	557.3	563.4	569.6	574.4
125°	583.8	585.8	587.8	589.9	591.9	595.6	601.2	606.8	612.3	617.9	622.6
127.5°	636.0	638.3	640.7	643.1	645.4	648.7	652.9	657.1	661.4	665.6	669.7
130°	668.8	671.5	674.2	676.9	679.6	682.8	686.5	690.1	693.8	697.4	701.6
132.5°	705.7	707.8	710.0	712.1	714.3	717.0	720.2	723.5	726.8	730.0	733.6
135°	754.0	756.4	758.9	761.3	763.8	766.2	768.5	770.9	773.4	775.8	779.6
137.5°	805.8	807.7	809.7	811.7	813.6	815.3	816.7	818.2	819.7	821.0	824.5
140°	837.0	838.8	840.6	842.4	844.2	845.8	847.4	848.9	850.3	851.9	855.0
142.5°	869.0	870.8	872.6	874.4	876.2	877.5	878.4	879.2	880.0	880.9	883.6
145°	914.1	915.7	917.2	918.8	920.3	921.8	923.1	924.5	925.7	927.1	928.5
147.5°	955.1	957.0	958.8	960.7	962.6	964.0	964.8	965.8	966.6	967.5	968.2
150°	983.1	984.5	985.8	987.1	988.4	989.5	990.5	991.4	992.2	993.2	993.8
152.5°	1007.9	1009.3	1010.6	1011.9	1013.2	1014.4	1015.5	1016.6	1017.7	1018.7	1019.6
155°	1045.2	1045.8	1046.5	1047.1	1047.8	1048.4	1049.1	1049.8	1050.5	1051.1	1052.2
157.5°	1076.9	1077.4	1077.8	1078.2	1078.7	1079.1	1079.5	1080.0	1080.3	1080.7	1082.3
160°	1096.1	1096.6	1097.0	1097.4	1097.9	1098.2	1098.5	1098.7	1098.9	1099.2	1100.4
162.5°	1113.7	1113.8	1113.9	1114.0	1114.1	1114.2	1114.5	1114.7	1114.9	1115.2	1116.6
165°	1137.1	1137.0	1136.7	1136.4	1136.3	1136.2	1136.2	1136.2	1136.2	1136.2	1137.7
167.5°	1156.8	1156.1	1155.4	1154.8	1154.1	1153.7	1153.7	1153.7	1153.6	1153.6	1155.1
170°	1167.2	1166.5	1165.8	1165.1	1164.5	1164.1	1163.8	1163.6	1163.4	1163.1	1164.7
172.5°	1174.3	1173.7	1173.0	1172.3	1171.6	1171.2	1171.0	1170.8	1170.5	1170.4	1171.9
175°	1183.2	1182.5	1181.8	1181.1	1180.5	1179.9	1179.5	1179.1	1178.6	1178.1	1179.7
177.5°	1186.7	1186.2	1185.7	1185.2	1184.6	1184.1	1183.8	1183.4	1183.1	1182.8	1183.8
180°	1185.2	1185.2	1185.2	1185.2	1185.2	1185.2	1185.2	1185.2	1185.2	1185.2	1185.2



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CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
0°	606.5	606.5	606.5	606.5	606.5	606.5	606.5	606.5
2.5°	604.5	605.3	606.1	606.3	606.0	605.7	605.4	605.1
5°	602.7	603.8	605.0	605.5	605.3	605.1	604.9	604.7
7.5°	599.8	601.2	602.6	603.2	603.0	602.8	602.6	602.4
10°	597.3	598.8	600.5	601.1	600.9	600.7	600.5	600.3
12.5°	593.1	594.6	596.2	596.8	596.7	596.5	596.3	596.1
15°	585.4	587.1	588.9	589.7	589.5	589.3	589.1	588.9
17.5°	575.5	577.4	579.2	580.1	580.1	580.1	580.1	580.1
20°	567.7	569.9	572.0	573.1	573.1	573.1	573.1	573.1
22.5°	559.3	561.5	563.5	564.8	565.1	565.4	565.8	566.0
25°	546.1	548.5	550.8	552.2	552.8	553.5	554.1	554.7
27.5°	531.6	534.5	537.5	539.2	539.6	540.0	540.4	540.9
30°	521.3	524.4	527.5	529.4	530.0	530.6	531.2	531.8
32.5°	510.3	513.9	517.5	519.8	520.9	521.9	523.0	524.0
35°	494.6	498.9	503.3	506.1	507.5	508.9	510.1	511.5
37.5°	478.5	483.3	488.1	491.2	492.7	494.0	495.5	497.0
40°	467.2	472.3	477.3	480.8	482.5	484.3	486.0	487.8
42.5°	456.2	461.8	467.3	471.0	472.7	474.5	476.2	477.9
45°	439.3	445.3	451.4	455.4	457.4	459.3	461.2	463.2
47.5°	421.7	428.1	434.4	438.6	440.7	442.9	445.1	447.2
50°	409.7	416.3	423.0	427.4	429.6	431.7	433.8	435.9
52.5°	396.7	403.5	410.3	414.8	417.1	419.4	421.7	424.0
55°	377.0	384.1	391.2	395.9	398.5	401.0	403.6	406.0
57.5°	356.4	363.9	371.5	376.6	379.2	381.8	384.4	386.9
60°	342.7	350.1	357.6	362.7	365.3	368.1	370.8	373.6
62.5°	328.1	336.0	344.0	349.2	351.7	354.3	356.9	359.5
65°	306.1	314.1	322.1	327.4	329.9	332.4	335.0	337.5
67.5°	283.7	291.8	299.9	305.3	307.9	310.6	313.2	315.9
70°	268.2	276.6	285.0	290.3	292.7	295.1	297.4	299.7
72.5°	253.1	261.3	269.6	275.1	277.9	280.8	283.5	286.4
75°	230.4	238.8	247.2	252.6	255.2	257.7	260.3	262.8
77.5°	208.2	216.5	224.9	230.4	233.2	235.9	238.6	241.3
80°	193.0	201.3	209.5	215.0	217.7	220.4	223.2	225.9
82.5°	179.0	187.2	195.4	200.8	203.4	206.0	208.5	211.1
85°	158.8	167.0	175.2	180.6	183.4	186.1	188.9	191.6
87.5°	148.6	156.5	164.4	169.6	172.1	174.7	177.2	179.8
90°	165.7	173.1	180.5	185.5	188.0	190.6	193.2	195.7
92.5°	157.0	164.7	172.5	177.5	179.9	182.4	184.7	187.1
95°	179.9	187.4	194.8	199.4	201.3	203.2	205.2	207.1
97.5°	215.6	222.8	230.1	234.8	237.0	239.3	241.6	243.8
100°	240.4	247.6	254.9	259.4	261.3	263.2	265.2	267.1
102.5°	268.3	275.5	282.8	287.4	289.3	291.2	293.2	295.1
105°	310.2	317.5	324.8	329.4	331.6	333.7	335.9	338.0
107.5°	356.1	362.8	369.5	373.5	374.6	375.7	376.9	378.0
110°	387.7	394.0	400.2	404.1	405.5	407.0	408.5	410.0



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CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
112.5°	419.3	425.1	430.8	434.5	436.1	437.7	439.5	441.1
115°	468.0	473.7	479.3	482.9	484.4	485.9	487.3	488.8
117.5°	514.9	520.1	525.4	528.7	530.0	531.3	532.6	534.0
120°	546.3	551.8	557.2	560.7	562.2	563.7	565.2	566.6
122.5°	579.1	583.9	588.7	591.8	593.1	594.4	595.8	597.1
125°	627.2	631.8	636.4	639.5	641.0	642.6	644.0	645.6
127.5°	673.7	677.8	681.8	684.3	685.4	686.4	687.3	688.4
130°	705.9	710.2	714.4	716.9	717.6	718.2	718.8	719.5
132.5°	737.1	740.6	744.2	746.4	747.3	748.1	749.0	749.8
135°	783.5	787.4	791.3	793.7	794.5	795.5	796.3	797.3
137.5°	827.9	831.3	834.7	836.6	837.1	837.6	838.0	838.4
140°	858.1	861.3	864.4	866.1	866.3	866.6	866.9	867.2
142.5°	886.2	888.9	891.6	892.9	893.1	893.2	893.4	893.5
145°	929.9	931.3	932.7	933.4	933.5	933.6	933.7	933.8
147.5°	968.8	969.5	970.1	970.3	969.8	969.5	969.1	968.7
150°	994.5	995.1	995.8	995.8	995.1	994.5	993.8	993.2
152.5°	1020.5	1021.2	1022.1	1022.1	1021.2	1020.5	1019.6	1018.7
155°	1053.3	1054.5	1055.6	1055.8	1055.2	1054.5	1053.8	1053.1
157.5°	1083.7	1085.3	1086.8	1087.0	1085.9	1084.9	1083.8	1082.7
160°	1101.8	1103.1	1104.5	1104.7	1103.8	1102.9	1102.0	1101.1
162.5°	1118.2	1119.6	1121.2	1121.4	1120.3	1119.3	1118.2	1117.1
165°	1139.3	1140.8	1142.4	1142.5	1141.5	1140.4	1139.3	1138.2
167.5°	1156.7	1158.2	1159.8	1159.9	1158.8	1157.6	1156.5	1155.4
170°	1166.2	1167.8	1169.3	1169.5	1168.1	1166.8	1165.4	1164.2
172.5°	1173.5	1175.0	1176.6	1176.6	1175.4	1174.0	1172.7	1171.3
175°	1181.3	1182.8	1184.4	1184.5	1183.2	1181.8	1180.5	1179.1
177.5°	1184.9	1185.9	1187.0	1187.0	1185.9	1184.9	1183.8	1182.8
180°	1185.2	1185.2	1185.2	1185.2	1185.2	1185.2	1185.2	1185.2

(END OF REPORT)