

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: P332013-935

Luminaire Tested: **S123DIP-S1000D585U935-4F0-1E-UDD-D1**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P332013-935
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: S123DIP-S1000D585U935-4F0-1E-UDD-D1
Description: DEFINE 3 DIRECT-INDIRECT PENDANT LED LUMINAIRE
DOWNLIGHT 1000 LUMENS PER FOOT, DROP SATIN WHITE DIFFUSER
UPLIGHT 585 LUMENS PER FOOT, FLUSH SATIN WHITE DIFFUSER
Light Source: -
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 5349.0 lumens
Efficiency: N/A
Efficacy: 109.6 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-Direct

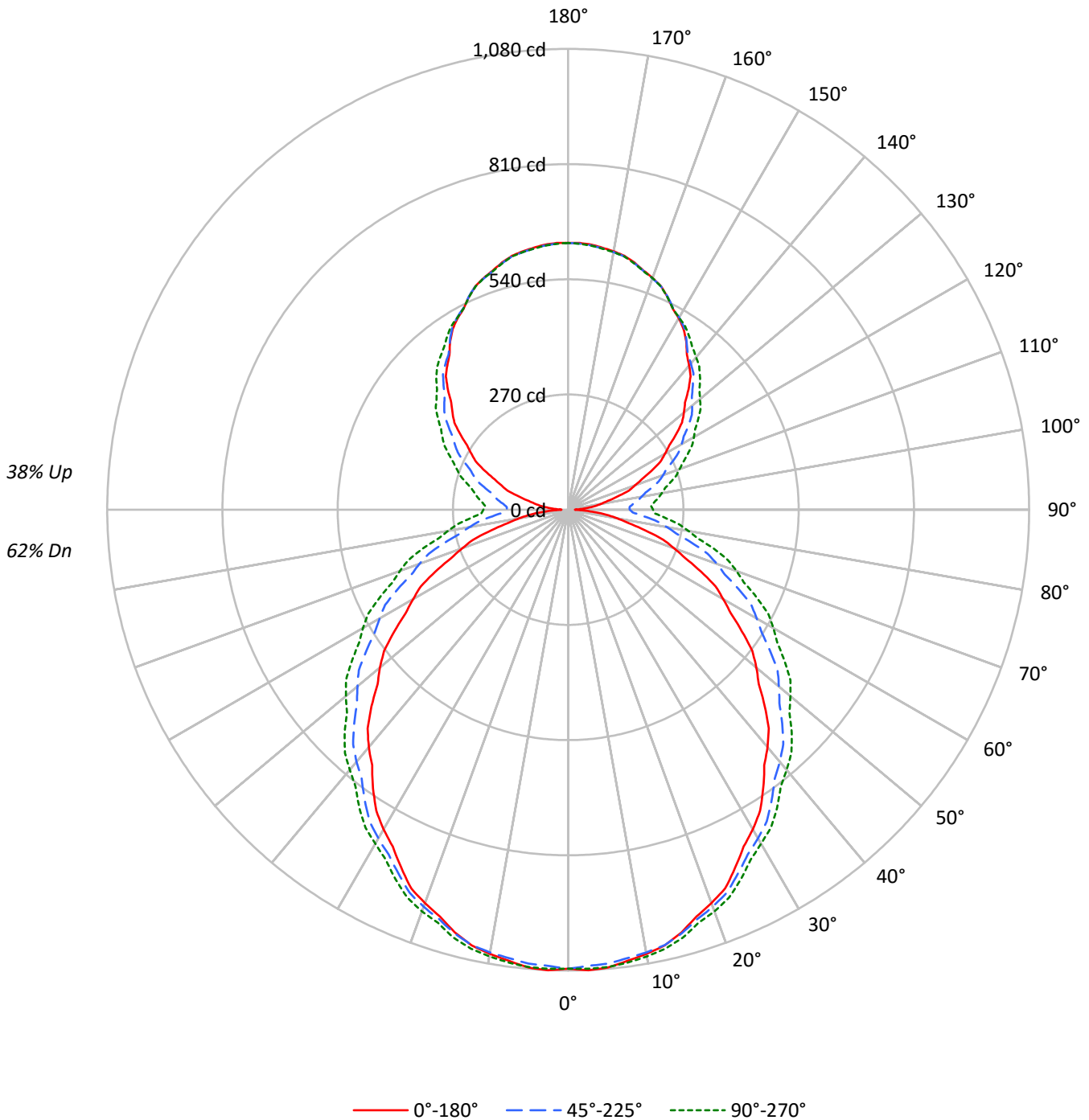
Input Watts (W): 48.8
Input Voltage (V): 120
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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	110	110	110	110	103	103	103	103	90	90	90	78	78	78	67	67	67	62
1	99	94	90	86	93	88	84	81	77	74	71	67	64	62	57	56	54	49
2	90	82	75	69	84	76	70	65	67	62	58	58	54	51	50	47	45	40
3	82	71	63	57	76	67	60	54	58	53	48	51	46	43	44	40	37	34
4	75	63	54	48	69	59	51	45	52	46	41	45	40	36	39	35	32	29
5	68	56	47	41	64	53	45	39	46	40	35	40	35	31	35	31	28	25
6	63	50	42	35	59	47	39	34	42	35	30	36	31	27	31	27	24	21
7	58	45	37	31	54	43	35	30	38	31	27	33	28	24	29	25	21	19
8	54	41	33	27	50	39	31	26	34	28	24	30	25	21	26	22	19	17
9	50	38	30	24	47	35	28	23	32	25	21	28	23	19	24	20	17	15
10	47	34	27	22	44	33	26	21	29	23	19	26	21	17	23	19	16	14

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	11579	11579	11579
5°	11615	11288	11294
10°	11511	11028	10973
15°	11363	10732	10622
20°	11151	10395	10235
25°	10888	10007	9829
30°	10621	9658	9417
35°	10321	9289	9089
40°	10033	8953	8737
45°	9715	8630	8455
50°	9402	8312	8146
55°	9056	7985	7866
60°	8718	7655	7580
65°	8372	7303	7241
70°	7847	6904	6893
75°	7189	6449	6538
80°	6431	6003	6131
85°	5726	5695	5898



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	102.0	1.9
10°-20°	290.7	5.4
20°-30°	434.8	8.1
30°-40°	519.2	9.7
40°-50°	543.3	10.2
50°-60°	509.8	9.5
60°-70°	425.8	8.0
70°-80°	304.6	5.7
80°-90°	183.5	3.4
90°-100°	154.7	2.9
100°-110°	205.7	3.8
110°-120°	263.3	4.9
120°-130°	304.7	5.7
130°-140°	320.9	6.0
140°-150°	304.4	5.7
150°-160°	253.7	4.7
160°-170°	168.9	3.2
170°-180°	59.1	1.1
0°-30°	827.5	15.5
0°-40°	1346.7	25.2
0°-60°	2399.8	44.9
0°-90°	3313.8	62.0
90°-120°	623.7	11.7
90°-150°	1553.6	29.0
90°-180°	2035.0	38.0
0°-180°	5349.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1076	1076	1076	1076	1076	
5°	1077	1074	1068	1076	1076	102
15°	1025	1029	1028	1039	1038	289
25°	926	937	941	955	956	426
35°	797	815	831	848	853	498
45°	652	680	709	731	741	502
55°	497	536	578	608	619	445
65°	343	389	441	474	488	339
75°	186	242	300	337	353	199
85°	57	116	178	216	230	60
90°	16	78	144	184	199	12
95°	42	92	152	189	202	43
105°	120	150	204	235	248	128
115°	215	232	271	299	309	213
125°	309	312	344	365	372	276
135°	399	401	413	431	437	307
145°	482	482	483	492	495	301
155°	550	551	551	553	550	253
165°	600	598	598	601	598	169
175°	624	622	622	624	621	59
180°	625	625	625	625	625	



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CANDELA DISTRIBUTION (FULL):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
0°	1075.7	1075.7	1075.7	1075.7	1075.7	1075.7	1075.7	1075.7	1075.7	1075.7	1075.7
2.5°	1080.5	1079.9	1079.2	1078.6	1078.0	1076.8	1075.1	1073.5	1071.8	1070.1	1071.8
5°	1076.9	1076.4	1075.9	1075.4	1074.9	1073.8	1072.3	1070.7	1069.1	1067.6	1069.6
7.5°	1066.3	1066.5	1066.6	1066.7	1066.8	1066.1	1064.6	1063.1	1061.5	1060.1	1062.6
10°	1057.0	1057.6	1058.1	1058.6	1059.1	1058.7	1057.4	1056.1	1054.8	1053.5	1056.1
12.5°	1045.8	1046.5	1047.2	1047.9	1048.7	1048.6	1047.8	1046.8	1045.9	1045.1	1047.5
15°	1025.4	1026.1	1026.9	1027.7	1028.5	1028.7	1028.5	1028.2	1027.9	1027.7	1030.4
17.5°	999.6	1001.2	1002.7	1004.3	1005.8	1006.6	1006.5	1006.3	1006.3	1006.2	1008.5
20°	980.9	982.4	984.0	985.5	987.1	988.2	988.7	989.2	989.7	990.2	992.6
22.5°	961.1	962.7	964.3	965.9	967.4	968.5	969.3	970.0	970.8	971.5	974.4
25°	925.7	928.3	931.0	933.6	936.2	937.9	938.7	939.4	940.2	941.0	944.3
27.5°	890.1	893.1	896.0	899.1	902.0	904.3	906.0	907.7	909.3	911.0	914.0
30°	864.8	868.2	871.6	874.9	878.4	881.1	883.2	885.3	887.3	889.4	892.6
32.5°	836.7	840.5	844.3	848.1	851.9	855.1	857.9	860.6	863.3	866.0	869.4
35°	796.9	801.0	805.2	809.3	813.6	817.3	820.7	824.1	827.4	830.9	834.7
37.5°	754.7	759.4	764.1	768.7	773.4	777.8	782.0	786.2	790.3	794.5	798.9
40°	726.5	731.2	735.9	740.6	745.3	750.3	755.4	760.7	765.9	771.1	775.5
42.5°	695.6	701.4	707.1	712.8	718.5	724.1	729.5	734.9	740.4	745.8	750.6
45°	651.5	657.8	664.1	670.3	676.6	682.9	689.4	695.9	702.5	708.9	713.9
47.5°	605.4	612.4	619.6	626.6	633.7	641.0	648.4	655.9	663.3	670.8	676.3
50°	575.4	582.6	590.0	597.3	604.5	612.3	620.3	628.4	636.5	644.5	650.5
52.5°	543.5	551.2	559.0	566.6	574.4	582.6	591.6	600.5	609.3	618.3	624.5
55°	496.9	505.5	514.0	522.6	531.2	540.2	549.6	559.0	568.3	577.7	584.8
57.5°	451.4	460.4	469.3	478.3	487.2	496.9	507.1	517.4	527.6	537.9	544.9
60°	419.6	428.9	438.2	447.6	457.0	467.0	477.7	488.4	499.1	509.8	517.0
62.5°	389.5	399.1	408.7	418.3	427.8	438.3	449.6	460.9	472.2	483.5	490.8
65°	343.4	353.5	363.7	373.8	384.0	394.8	406.2	417.7	429.1	440.7	448.4
67.5°	296.4	307.3	318.1	328.8	339.6	350.9	362.5	374.2	385.8	397.5	406.0
70°	263.6	274.8	286.0	297.3	308.5	320.3	332.8	345.3	357.8	370.3	378.7
72.5°	233.7	244.9	256.1	267.3	278.4	290.5	303.4	316.3	329.2	342.2	350.7
75°	186.3	198.5	210.8	223.1	235.3	247.9	261.0	274.0	287.0	300.0	308.6
77.5°	145.1	157.4	169.8	182.1	194.4	207.2	220.3	233.4	246.6	259.7	268.7
80°	116.0	128.8	141.5	154.3	167.0	180.2	193.7	207.3	220.8	234.4	243.2
82.5°	90.7	103.7	116.7	129.6	142.6	155.9	169.7	183.4	197.2	210.9	219.8
85°	57.4	70.4	83.4	96.5	109.5	123.0	136.7	150.5	164.3	178.1	187.0
87.5°	31.3	44.4	57.6	70.9	84.0	97.4	111.0	124.5	138.1	151.6	160.6
90°	15.8	29.6	43.4	57.3	71.1	85.4	100.1	114.8	129.5	144.2	153.5
92.5°	26.2	38.4	50.7	62.9	75.2	88.3	102.1	116.0	129.9	143.8	152.7
95°	41.8	52.8	63.7	74.6	85.6	97.8	111.4	125.1	138.7	152.4	160.8
97.5°	62.9	72.7	82.4	92.1	101.9	113.1	126.0	138.8	151.6	164.5	172.7
100°	77.3	86.4	95.3	104.3	113.3	124.1	136.6	149.1	161.6	174.2	182.0
102.5°	94.1	101.9	109.9	117.8	125.6	135.9	148.4	160.8	173.3	185.8	193.5
105°	119.9	126.3	132.9	139.3	145.8	155.1	167.3	179.4	191.6	203.8	211.1
107.5°	148.7	154.2	159.6	165.1	170.5	178.7	189.8	200.8	211.8	222.8	230.1
110°	166.6	171.5	176.4	181.3	186.2	194.1	204.7	215.3	225.9	236.6	243.7



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CANDELA DISTRIBUTION (continued):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
112.5°	186.3	190.3	194.2	198.2	202.2	209.2	219.3	229.3	239.4	249.4	256.5
115°	214.6	218.0	221.4	225.0	228.4	234.7	243.8	253.0	262.2	271.3	277.7
117.5°	244.0	246.2	248.3	250.5	252.6	258.0	266.5	274.9	283.4	292.0	298.2
120°	261.6	263.5	265.4	267.4	269.3	274.4	282.4	290.5	298.5	306.5	312.5
122.5°	280.8	282.0	283.1	284.3	285.4	289.9	297.8	305.7	313.7	321.5	327.0
125°	309.0	309.3	309.6	310.0	310.3	314.1	321.5	328.8	336.1	343.5	348.5
127.5°	336.1	336.6	337.0	337.4	337.9	341.0	347.1	353.1	359.1	365.2	369.6
130°	354.1	354.8	355.4	356.0	356.6	359.4	364.2	369.1	374.0	378.9	383.4
132.5°	371.3	372.1	373.0	373.8	374.6	376.9	380.9	384.8	388.7	392.7	396.9
135°	398.6	399.1	399.4	399.8	400.3	401.8	404.6	407.3	410.1	412.8	417.1
137.5°	424.0	424.3	424.6	425.0	425.3	426.5	428.3	430.2	432.1	434.0	437.6
140°	440.7	441.3	441.8	442.4	442.9	443.6	444.5	445.4	446.3	447.2	451.0
142.5°	456.8	457.2	457.5	457.8	458.1	458.5	458.8	459.3	459.6	459.9	463.3
145°	482.0	481.9	481.9	481.8	481.8	481.9	482.2	482.6	482.9	483.3	485.3
147.5°	502.8	503.2	503.6	503.9	504.4	504.7	505.1	505.3	505.7	505.9	506.5
150°	518.1	518.3	518.6	518.8	519.0	519.2	519.4	519.6	519.9	520.0	520.0
152.5°	530.7	531.0	531.3	531.6	531.9	532.1	532.3	532.4	532.5	532.6	532.8
155°	550.5	550.5	550.5	550.5	550.5	550.6	550.7	550.8	551.0	551.0	551.5
157.5°	567.4	567.3	567.1	567.1	566.9	566.9	567.0	567.1	567.1	567.2	567.7
160°	578.0	577.8	577.6	577.4	577.1	577.0	577.0	577.0	577.0	577.0	577.6
162.5°	587.5	587.1	586.9	586.5	586.3	586.2	586.3	586.3	586.4	586.5	587.0
165°	599.6	599.3	599.0	598.7	598.3	598.1	598.1	598.1	598.1	598.1	598.8
167.5°	609.3	608.9	608.5	608.0	607.6	607.4	607.5	607.6	607.7	607.8	608.5
170°	614.8	614.4	614.0	613.5	613.1	612.9	612.9	612.9	612.9	612.9	613.6
172.5°	619.1	618.7	618.3	617.9	617.4	617.3	617.3	617.3	617.3	617.3	617.9
175°	623.7	623.3	622.8	622.4	622.0	621.7	621.7	621.7	621.7	621.7	622.4
177.5°	625.6	625.3	624.9	624.5	624.1	624.0	624.0	624.0	624.0	624.0	624.5
180°	625.2	625.2	625.2	625.2	625.2	625.2	625.2	625.2	625.2	625.2	625.2



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CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
0°	1075.7	1075.7	1075.7	1075.7	1075.7	1075.7	1075.7	1075.7
2.5°	1073.5	1075.1	1076.8	1077.5	1077.3	1077.1	1076.9	1076.7
5°	1071.7	1073.8	1075.9	1076.8	1076.5	1076.2	1076.0	1075.7
7.5°	1065.2	1067.9	1070.5	1071.6	1071.3	1071.0	1070.7	1070.4
10°	1058.7	1061.3	1063.9	1065.0	1064.5	1063.9	1063.4	1062.9
12.5°	1049.8	1052.2	1054.6	1055.6	1055.1	1054.6	1054.0	1053.5
15°	1032.9	1035.5	1038.1	1039.3	1039.1	1038.8	1038.5	1038.3
17.5°	1010.8	1013.2	1015.5	1016.5	1016.2	1015.8	1015.5	1015.0
20°	994.9	997.2	999.6	1000.9	1001.2	1001.4	1001.7	1001.9
22.5°	977.4	980.3	983.3	984.7	984.6	984.5	984.3	984.1
25°	947.8	951.1	954.5	956.2	956.2	956.2	956.2	956.2
27.5°	916.8	919.7	922.6	924.2	924.5	924.6	924.9	925.1
30°	895.7	898.8	901.9	903.5	903.5	903.5	903.5	903.5
32.5°	872.7	876.0	879.3	881.3	881.9	882.5	883.2	883.8
35°	838.6	842.6	846.4	848.9	850.0	851.0	852.0	853.1
37.5°	803.4	807.8	812.3	814.9	815.7	816.5	817.3	818.2
40°	779.9	784.4	788.8	791.5	792.6	793.6	794.6	795.7
42.5°	755.4	760.3	765.2	768.3	769.7	771.2	772.7	774.1
45°	718.8	723.8	728.8	732.3	734.3	736.4	738.6	740.6
47.5°	681.9	687.5	693.0	696.6	698.3	699.9	701.5	703.1
50°	656.5	662.5	668.5	672.4	674.2	676.1	677.9	679.7
52.5°	630.7	636.9	643.1	647.3	649.5	651.8	654.0	656.3
55°	591.8	598.8	605.9	610.4	612.5	614.6	616.6	618.7
57.5°	552.1	559.1	566.2	571.0	573.4	575.8	578.3	580.7
60°	524.3	531.7	538.9	544.0	546.9	549.7	552.6	555.4
62.5°	498.1	505.4	512.6	517.6	520.3	523.0	525.6	528.3
65°	456.2	464.1	471.8	477.1	479.7	482.2	484.9	487.5
67.5°	414.6	423.1	431.6	437.0	439.2	441.4	443.6	445.7
70°	386.9	395.3	403.6	409.1	411.7	414.3	416.9	419.6
72.5°	359.3	367.8	376.3	381.9	384.5	387.1	389.8	392.4
75°	317.2	325.8	334.3	340.3	343.4	346.5	349.6	352.8
77.5°	277.8	286.9	295.9	301.7	304.0	306.4	308.8	311.3
80°	252.1	261.0	269.8	275.5	278.1	280.7	283.4	285.9
82.5°	228.7	237.5	246.3	252.1	254.7	257.3	259.8	262.5
85°	195.8	204.7	213.5	219.3	221.9	224.5	227.0	229.7
87.5°	169.5	178.5	187.4	193.2	195.9	198.5	201.1	203.8
90°	162.8	172.1	181.3	187.4	190.3	193.0	195.9	198.7
92.5°	161.8	170.7	179.8	185.4	187.6	189.9	192.2	194.4
95°	169.4	177.9	186.4	191.9	194.6	197.2	199.8	202.3
97.5°	181.0	189.2	197.5	202.9	205.4	208.0	210.6	213.2
100°	189.9	197.8	205.7	211.0	213.9	216.6	219.5	222.3
102.5°	201.1	208.8	216.5	221.6	224.2	226.7	229.3	231.9
105°	218.3	225.7	233.0	237.9	240.5	243.0	245.6	248.1
107.5°	237.5	244.8	252.1	256.8	259.0	261.1	263.3	265.5
110°	251.0	258.2	265.4	269.9	271.8	273.6	275.5	277.4



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CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
112.5°	263.6	270.7	277.8	282.4	284.6	286.9	289.2	291.4
115°	284.0	290.4	296.8	300.9	302.9	304.9	306.9	308.8
117.5°	304.4	310.6	316.7	320.6	322.4	324.1	325.8	327.5
120°	318.3	324.2	330.1	333.8	335.4	337.0	338.6	340.3
122.5°	332.5	338.0	343.5	347.0	348.5	350.1	351.5	353.1
125°	353.5	358.5	363.6	366.8	368.2	369.5	370.9	372.4
127.5°	374.2	378.8	383.3	386.2	387.4	388.7	390.0	391.2
130°	387.9	392.4	396.9	399.6	400.4	401.2	402.0	402.8
132.5°	401.1	405.3	409.5	412.2	413.4	414.6	415.8	417.0
135°	421.4	425.6	429.8	432.5	433.6	434.7	435.8	436.9
137.5°	441.3	445.0	448.7	450.9	451.9	452.7	453.6	454.4
140°	454.8	458.6	462.4	464.5	465.0	465.6	466.1	466.7
142.5°	466.7	470.1	473.5	475.5	476.2	476.9	477.6	478.4
145°	487.2	489.1	491.1	492.4	493.0	493.6	494.2	494.8
147.5°	507.2	507.8	508.4	508.9	509.2	509.5	509.7	510.1
150°	520.0	520.0	520.0	520.0	519.9	519.8	519.6	519.4
152.5°	533.0	533.2	533.4	533.2	532.8	532.3	531.8	531.3
155°	551.9	552.3	552.8	552.6	551.8	551.0	550.4	549.6
157.5°	568.2	568.6	569.0	568.9	568.3	567.7	567.1	566.5
160°	578.2	578.7	579.2	579.3	578.9	578.4	578.0	577.6
162.5°	587.5	588.1	588.7	588.6	587.9	587.2	586.5	585.8
165°	599.5	600.1	600.8	600.7	599.9	599.2	598.5	597.7
167.5°	609.2	609.8	610.5	610.5	609.8	609.2	608.5	607.8
170°	614.4	615.2	616.0	616.0	615.2	614.4	613.6	612.9
172.5°	618.5	619.2	619.9	619.9	619.1	618.4	617.6	616.8
175°	623.0	623.7	624.4	624.3	623.5	622.8	622.0	621.2
177.5°	625.1	625.6	626.1	626.0	625.4	624.8	624.2	623.6
180°	625.2	625.2	625.2	625.2	625.2	625.2	625.2	625.2

(END OF REPORT)