

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: P332004-940

Luminaire Tested: **S123DIP-S1000D365U940-4F0-1E-UDD-D1**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P332004-940
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-S1000D365U940-4F0-1E-UDD-D1
Description: DEFINE 3 DIRECT-INDIRECT PENDANT LED LUMINAIRE
DOWNLIGHT 1000 LUMENS PER FOOT, DROP SATIN WHITE DIFFUSER
UPLIGHT 365 LUMENS PER FOOT, FLUSH SATIN WHITE DIFFUSER
Light Source: -
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 4856.6 lumens
Efficiency: N/A
Efficacy: 111.6 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

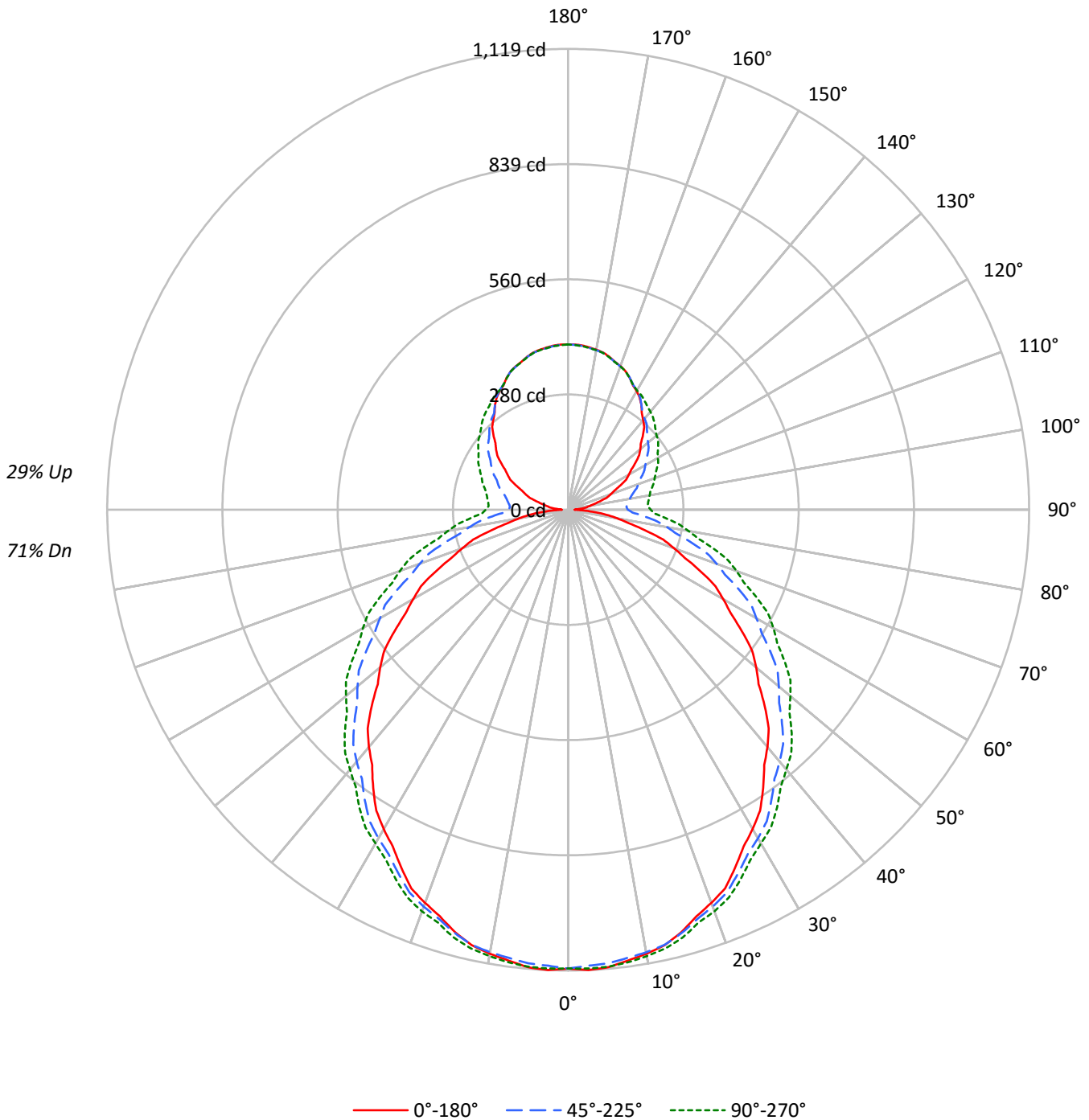
Input Watts (W): 43.5
Input Voltage (V): 120
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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	112	112	112	112	106	106	106	106	95	95	95	85	85	85	75	75	75	71
1	101	96	91	87	95	91	87	83	81	78	75	72	70	67	64	62	60	56
2	91	83	76	70	86	78	72	67	70	65	61	63	59	55	56	53	50	46
3	83	72	64	58	78	69	61	55	61	56	51	55	50	46	49	45	42	38
4	76	64	55	49	71	61	53	47	54	48	43	49	43	39	43	39	36	33
5	70	57	48	41	65	54	46	40	49	42	37	44	38	34	39	34	31	28
6	64	51	42	36	60	49	40	35	44	37	32	39	34	30	35	31	27	24
7	59	46	38	32	56	44	36	30	40	33	28	36	30	26	32	27	24	22
8	55	42	34	28	52	40	32	27	36	30	25	33	27	23	29	25	21	19
9	51	38	30	25	48	37	29	24	33	27	22	30	25	21	27	23	19	17
10	48	35	28	22	45	34	27	22	31	25	20	28	23	19	25	21	17	16

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	11992	11992	11992
5°	12030	11690	11697
10°	11922	11421	11364
15°	11768	11114	11000
20°	11548	10767	10600
25°	11278	10365	10179
30°	10999	10002	9754
35°	10689	9620	9413
40°	10391	9273	9048
45°	10062	8938	8757
50°	9737	8608	8436
55°	9378	8270	8147
60°	9028	7928	7850
65°	8670	7563	7499
70°	8127	7150	7138
75°	7448	6679	6770
80°	6658	6216	6350
85°	5935	5899	6108



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	105.6	2.2
10°-20°	301.1	6.2
20°-30°	450.3	9.3
30°-40°	537.8	11.1
40°-50°	562.6	11.6
50°-60°	528.0	10.9
60°-70°	441.0	9.1
70°-80°	315.5	6.5
80°-90°	189.3	3.9
90°-100°	144.2	3.0
100°-110°	165.0	3.4
110°-120°	191.0	3.9
120°-130°	208.1	4.3
130°-140°	211.5	4.4
140°-150°	196.5	4.0
150°-160°	162.8	3.4
160°-170°	108.3	2.2
170°-180°	37.9	0.8
0°-30°	857.0	17.6
0°-40°	1394.8	28.7
0°-60°	2485.4	51.2
0°-90°	3431.2	70.7
90°-120°	500.2	10.3
90°-150°	1116.3	23.0
90°-180°	1425.0	29.3
0°-180°	4856.6	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1114	1114	1114	1114	1114	
5°	1115	1113	1106	1115	1114	106
15°	1062	1065	1064	1076	1075	299
25°	959	970	975	989	990	442
35°	825	844	860	878	884	516
45°	675	704	734	757	767	520
55°	515	555	598	630	641	461
65°	356	403	456	491	505	351
75°	193	250	311	349	365	206
85°	60	120	184	224	238	62
90°	16	79	145	186	200	12
95°	32	82	144	181	194	31
105°	81	112	165	198	211	86
115°	140	157	199	227	237	139
125°	200	202	235	258	267	178
135°	257	258	270	290	296	198
145°	310	309	310	319	323	193
155°	353	353	354	355	353	163
165°	385	384	384	386	384	108
175°	400	399	399	401	399	38
180°	401	401	401	401	401	



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CANDELA DISTRIBUTION (FULL):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
0°	1114.1	1114.1	1114.1	1114.1	1114.1	1114.1	1114.1	1114.1	1114.1	1114.1	1114.1
2.5°	1119.0	1118.4	1117.7	1117.0	1116.4	1115.2	1113.5	1111.8	1110.0	1108.3	1110.0
5°	1115.4	1114.8	1114.3	1113.7	1113.2	1112.1	1110.5	1108.8	1107.2	1105.6	1107.8
7.5°	1104.4	1104.6	1104.7	1104.7	1104.8	1104.1	1102.6	1101.0	1099.4	1097.9	1100.5
10°	1094.8	1095.3	1095.8	1096.4	1096.9	1096.4	1095.1	1093.8	1092.4	1091.1	1093.8
12.5°	1083.1	1083.8	1084.6	1085.3	1086.1	1086.0	1085.1	1084.1	1083.3	1082.4	1084.9
15°	1061.9	1062.7	1063.5	1064.3	1065.1	1065.4	1065.1	1064.9	1064.6	1064.3	1067.1
17.5°	1035.3	1036.9	1038.5	1040.1	1041.7	1042.5	1042.4	1042.2	1042.1	1042.1	1044.5
20°	1015.8	1017.4	1019.0	1020.7	1022.3	1023.4	1024.0	1024.5	1025.0	1025.6	1028.0
22.5°	995.4	997.0	998.7	1000.3	1001.9	1003.1	1003.9	1004.6	1005.4	1006.1	1009.1
25°	958.8	961.4	964.2	966.9	969.6	971.3	972.1	972.9	973.7	974.6	978.0
27.5°	921.9	925.0	928.0	931.1	934.2	936.6	938.3	940.0	941.7	943.5	946.6
30°	895.6	899.2	902.7	906.2	909.7	912.5	914.7	916.9	919.0	921.1	924.4
32.5°	866.6	870.5	874.4	878.3	882.3	885.6	888.5	891.3	894.1	896.9	900.4
35°	825.3	829.6	833.9	838.2	842.6	846.4	850.0	853.5	856.9	860.5	864.5
37.5°	781.6	786.5	791.3	796.1	801.0	805.6	809.9	814.2	818.5	822.9	827.4
40°	752.4	757.3	762.1	767.0	771.9	777.0	782.4	787.8	793.2	798.6	803.2
42.5°	720.4	726.4	732.3	738.2	744.1	749.9	755.5	761.2	766.8	772.4	777.4
45°	674.8	681.3	687.8	694.2	700.7	707.3	714.0	720.8	727.5	734.2	739.4
47.5°	627.0	634.3	641.7	649.0	656.3	663.9	671.5	679.3	687.0	694.7	700.4
50°	595.9	603.4	611.0	618.6	626.1	634.1	642.4	650.8	659.2	667.5	673.7
52.5°	562.8	570.9	578.9	586.8	594.9	603.4	612.7	621.9	631.1	640.3	646.8
55°	514.6	523.5	532.4	541.3	550.2	559.5	569.2	578.9	588.6	598.3	605.6
57.5°	467.5	476.8	486.1	495.3	504.6	514.6	525.2	535.8	546.4	557.1	564.4
60°	434.5	444.2	453.9	463.6	473.3	483.7	494.7	505.9	516.9	528.0	535.5
62.5°	403.4	413.3	423.3	433.2	443.1	454.0	465.7	477.3	489.0	500.8	508.3
65°	355.6	366.1	376.7	387.2	397.7	408.8	420.7	432.6	444.4	456.4	464.4
67.5°	307.0	318.3	329.4	340.5	351.7	363.4	375.4	387.5	399.6	411.7	420.5
70°	273.0	284.6	296.2	307.9	319.5	331.7	344.6	357.7	370.6	383.5	392.2
72.5°	242.0	253.6	265.2	276.8	288.4	300.9	314.2	327.6	341.0	354.4	363.2
75°	193.0	205.6	218.3	231.0	243.7	256.7	270.3	283.7	297.2	310.7	319.6
77.5°	150.3	163.0	175.8	188.6	201.3	214.5	228.2	241.7	255.4	268.9	278.3
80°	120.1	133.4	146.6	159.8	173.0	186.6	200.6	214.7	228.7	242.7	251.9
82.5°	93.9	107.4	120.8	134.2	147.7	161.5	175.8	189.9	204.2	218.5	227.7
85°	59.5	72.9	86.4	100.0	113.4	127.3	141.6	155.9	170.1	184.5	193.7
87.5°	32.4	45.9	59.5	73.0	86.7	100.4	114.3	128.2	142.2	156.1	165.3
90°	16.1	30.1	44.0	57.9	71.8	86.1	100.7	115.4	130.0	144.7	154.2
92.5°	22.5	34.9	47.3	59.7	72.1	85.2	99.3	113.3	127.4	141.5	150.6
95°	31.9	43.0	53.9	65.0	76.0	88.4	102.1	115.9	129.7	143.5	152.1
97.5°	44.9	54.8	64.6	74.5	84.4	95.8	108.8	121.8	134.9	147.9	156.2
100°	53.8	62.9	71.9	81.0	90.0	100.9	113.6	126.4	139.2	151.9	160.0
102.5°	64.1	72.1	80.2	88.2	96.2	106.6	119.2	131.9	144.5	157.2	165.0
105°	80.6	87.2	93.8	100.4	107.1	116.5	128.7	141.0	153.2	165.4	172.9
107.5°	98.5	104.2	109.8	115.3	120.9	129.3	140.6	151.9	163.1	174.3	181.8
110°	109.7	114.7	119.7	124.7	129.7	137.7	148.6	159.5	170.4	181.4	188.7



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CANDELA DISTRIBUTION (continued):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
112.5°	122.3	126.4	130.5	134.6	138.6	145.8	156.2	166.6	177.0	187.3	194.5
115°	140.0	143.5	146.9	150.3	153.8	160.3	169.9	179.4	189.0	198.6	205.1
117.5°	158.8	161.0	163.1	165.2	167.3	172.9	181.8	190.7	199.7	208.6	215.0
120°	169.7	171.5	173.2	175.0	176.7	181.9	190.5	199.0	207.6	216.1	222.2
122.5°	182.0	183.1	184.0	185.0	186.0	190.7	199.0	207.2	215.5	223.8	229.6
125°	199.7	199.8	200.1	200.3	200.5	204.5	212.1	219.8	227.5	235.1	240.6
127.5°	217.0	217.2	217.4	217.6	217.8	221.0	227.3	233.6	240.0	246.3	251.2
130°	228.6	228.9	229.3	229.5	229.8	232.6	237.7	242.9	248.1	253.2	258.2
132.5°	239.2	239.8	240.3	240.8	241.3	243.6	247.8	251.9	256.1	260.3	264.8
135°	256.7	256.9	257.0	257.2	257.3	258.9	261.7	264.7	267.5	270.5	275.0
137.5°	272.9	273.0	273.1	273.3	273.4	274.4	276.3	278.1	280.0	281.8	285.8
140°	283.2	283.6	283.9	284.3	284.6	285.3	286.1	287.0	287.9	288.7	292.7
142.5°	293.6	293.7	293.8	294.0	294.1	294.4	294.6	294.9	295.2	295.5	299.0
145°	309.7	309.6	309.4	309.3	309.2	309.2	309.4	309.7	309.9	310.0	312.2
147.5°	322.6	322.9	323.2	323.4	323.6	323.9	324.0	324.2	324.4	324.7	325.3
150°	332.4	332.6	332.7	332.9	333.1	333.1	333.3	333.4	333.6	333.7	333.7
152.5°	340.5	340.7	340.9	341.1	341.3	341.4	341.5	341.6	341.7	341.8	341.9
155°	353.3	353.3	353.3	353.3	353.3	353.3	353.4	353.4	353.5	353.6	353.8
157.5°	364.1	364.0	363.9	363.8	363.7	363.7	363.8	363.8	363.9	364.0	364.3
160°	370.9	370.8	370.6	370.5	370.3	370.2	370.2	370.2	370.2	370.2	370.6
162.5°	376.9	376.7	376.6	376.4	376.1	376.1	376.1	376.2	376.3	376.3	376.7
165°	384.8	384.6	384.3	384.1	383.9	383.8	383.8	383.8	383.8	383.8	384.2
167.5°	391.0	390.7	390.5	390.1	389.9	389.8	389.9	389.9	389.9	390.0	390.4
170°	394.5	394.2	394.0	393.7	393.4	393.2	393.2	393.2	393.2	393.2	393.8
172.5°	397.3	397.0	396.7	396.5	396.2	396.0	396.0	396.0	396.0	396.0	396.5
175°	400.2	399.9	399.7	399.4	399.1	399.0	399.0	399.0	399.0	399.0	399.4
177.5°	401.4	401.2	400.9	400.7	400.5	400.4	400.4	400.4	400.4	400.4	400.7
180°	401.2	401.2	401.2	401.2	401.2	401.2	401.2	401.2	401.2	401.2	401.2



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CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
0°	1114.1	1114.1	1114.1	1114.1	1114.1	1114.1	1114.1	1114.1
2.5°	1111.8	1113.5	1115.2	1116.0	1115.7	1115.5	1115.4	1115.1
5°	1109.9	1112.1	1114.3	1115.2	1114.9	1114.6	1114.4	1114.1
7.5°	1103.2	1106.0	1108.7	1109.8	1109.6	1109.2	1108.8	1108.6
10°	1096.4	1099.1	1101.9	1103.0	1102.4	1101.9	1101.4	1100.8
12.5°	1087.3	1089.8	1092.3	1093.2	1092.7	1092.2	1091.6	1091.1
15°	1069.8	1072.5	1075.1	1076.4	1076.1	1075.8	1075.6	1075.3
17.5°	1046.9	1049.4	1051.8	1052.8	1052.4	1052.0	1051.7	1051.2
20°	1030.4	1032.8	1035.3	1036.6	1036.9	1037.1	1037.4	1037.7
22.5°	1012.3	1015.3	1018.4	1019.8	1019.7	1019.6	1019.4	1019.2
25°	981.6	985.1	988.6	990.3	990.3	990.3	990.3	990.3
27.5°	949.5	952.5	955.6	957.2	957.4	957.6	957.9	958.1
30°	927.6	930.9	934.1	935.8	935.8	935.8	935.8	935.8
32.5°	903.8	907.2	910.7	912.8	913.4	914.0	914.7	915.3
35°	868.5	872.6	876.6	879.2	880.3	881.4	882.4	883.5
37.5°	832.1	836.6	841.2	843.9	844.8	845.6	846.5	847.4
40°	807.7	812.3	816.9	819.7	820.8	821.9	823.0	824.0
42.5°	782.4	787.4	792.5	795.7	797.2	798.7	800.2	801.7
45°	744.5	749.7	754.7	758.4	760.5	762.7	764.9	767.0
47.5°	706.2	712.0	717.7	721.5	723.2	724.9	726.5	728.2
50°	679.9	686.1	692.3	696.3	698.3	700.2	702.0	703.9
52.5°	653.2	659.6	666.0	670.4	672.7	675.0	677.3	679.7
55°	612.9	620.2	627.5	632.1	634.4	636.5	638.6	640.8
57.5°	571.8	579.1	586.4	591.4	593.9	596.4	599.0	601.5
60°	543.1	550.6	558.1	563.4	566.4	569.4	572.3	575.2
62.5°	515.9	523.4	530.9	536.1	538.9	541.6	544.4	547.2
65°	472.5	480.6	488.7	494.1	496.8	499.4	502.2	504.9
67.5°	429.4	438.2	447.0	452.6	454.9	457.2	459.4	461.6
70°	400.7	409.4	418.0	423.7	426.4	429.1	431.8	434.5
72.5°	372.1	380.9	389.8	395.6	398.2	400.9	403.7	406.4
75°	328.5	337.4	346.3	352.4	355.6	358.8	362.0	365.3
77.5°	287.8	297.1	306.5	312.5	314.9	317.4	319.9	322.4
80°	261.1	270.3	279.4	285.3	288.0	290.7	293.5	296.1
82.5°	236.8	245.9	255.1	261.1	263.8	266.4	269.1	271.9
85°	202.8	212.0	221.1	227.1	229.8	232.5	235.1	237.9
87.5°	174.6	183.8	193.1	199.0	201.7	204.5	207.1	209.9
90°	163.6	173.1	182.5	188.7	191.5	194.3	197.2	200.0
92.5°	159.8	169.0	178.2	184.0	186.4	188.8	191.2	193.6
95°	160.8	169.4	178.1	183.7	186.4	189.1	191.8	194.5
97.5°	164.6	173.0	181.4	186.8	189.5	192.2	194.8	197.5
100°	168.0	176.0	184.0	189.5	192.3	195.1	198.0	200.8
102.5°	172.8	180.7	188.4	193.7	196.4	199.0	201.7	204.4
105°	180.5	188.1	195.6	200.6	203.2	205.8	208.4	210.9
107.5°	189.2	196.7	204.2	209.0	211.3	213.7	215.9	218.2
110°	195.9	203.2	210.5	215.2	217.2	219.2	221.2	223.3



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CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
112.5°	201.6	208.7	215.9	220.6	223.0	225.3	227.7	230.1
115°	211.7	218.2	224.7	229.1	231.1	233.3	235.3	237.4
117.5°	221.4	227.8	234.3	238.4	240.3	242.2	244.1	246.0
120°	228.4	234.5	240.7	244.6	246.3	248.1	249.9	251.6
122.5°	235.5	241.3	247.1	250.8	252.5	254.2	255.9	257.6
125°	245.9	251.3	256.7	260.2	261.8	263.4	265.0	266.6
127.5°	256.2	261.1	266.1	269.3	270.8	272.3	273.8	275.4
130°	263.0	267.8	272.7	275.6	276.8	277.9	279.0	280.2
132.5°	269.4	274.0	278.6	281.6	283.0	284.5	286.0	287.4
135°	279.6	284.2	288.7	291.6	292.8	294.1	295.2	296.5
137.5°	289.7	293.7	297.7	300.2	301.3	302.4	303.4	304.5
140°	296.8	300.7	304.7	307.1	308.0	308.8	309.7	310.5
142.5°	302.6	306.1	309.7	311.9	312.9	313.9	314.9	315.8
145°	314.2	316.4	318.4	319.9	320.7	321.5	322.3	323.1
147.5°	325.9	326.5	327.3	327.8	328.4	329.0	329.5	330.0
150°	333.7	333.7	333.7	333.8	333.9	334.0	334.1	334.2
152.5°	342.0	342.1	342.2	342.1	341.9	341.6	341.3	341.2
155°	354.1	354.4	354.7	354.5	354.1	353.6	353.1	352.6
157.5°	364.5	364.9	365.2	365.1	364.7	364.4	363.9	363.6
160°	371.0	371.3	371.7	371.7	371.4	371.1	370.9	370.6
162.5°	377.0	377.4	377.7	377.6	377.2	376.7	376.3	375.9
165°	384.7	385.0	385.5	385.5	385.0	384.5	384.0	383.5
167.5°	390.8	391.3	391.7	391.7	391.3	390.8	390.4	390.0
170°	394.2	394.8	395.2	395.2	394.8	394.2	393.8	393.2
172.5°	396.9	397.3	397.8	397.8	397.3	396.8	396.3	395.8
175°	399.8	400.2	400.6	400.6	400.1	399.6	399.1	398.6
177.5°	401.1	401.4	401.7	401.7	401.4	400.9	400.6	400.1
180°	401.2	401.2	401.2	401.2	401.2	401.2	401.2	401.2

(END OF REPORT)