

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: P332076-927

Luminaire Tested: **S123DIP-S1165D1025U927-4F0-1E-UDD-D1**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P332076-927
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-S1165D1025U927-4F0-1E-UDD-D1
Description: DEFINE 3 DIRECT-INDIRECT PENDANT LED LUMINAIRE
DOWNLIGHT 1165 LUMENS PER FOOT, DROP SATIN WHITE DIFFUSER
UPLIGHT 1025 LUMENS PER FOOT, FLUSH SATIN WHITE DIFFUSER
Light Source: -
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 6633.5 lumens
Efficiency: N/A
Efficacy: 99.3 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: General Diffuse

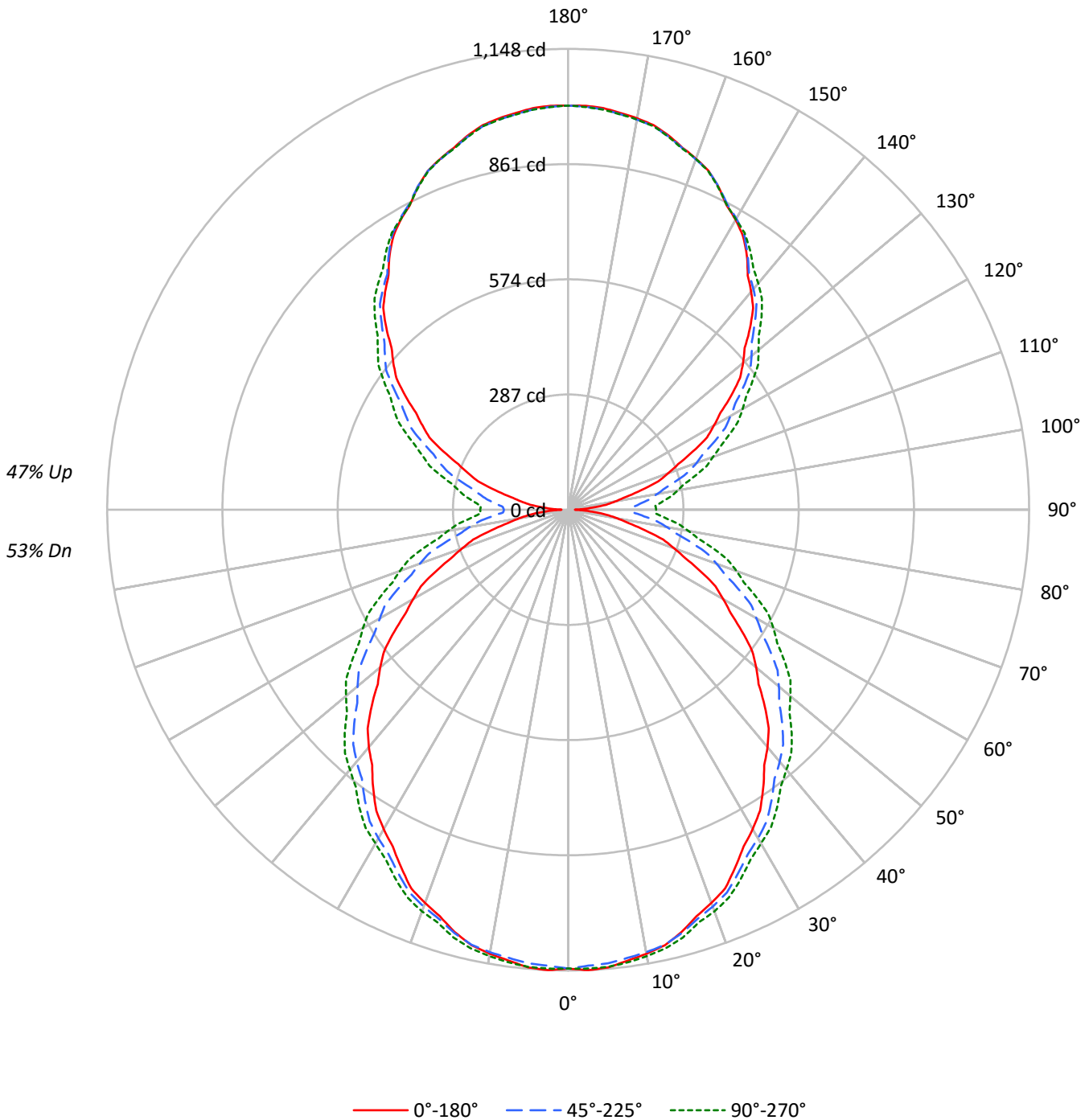
Input Watts (W): 66.8
Input Voltage (V): 120
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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	108	108	108	108	100	100	100	100	85	85	85	71	71	71	59	59	59	53
1	97	93	88	84	90	86	82	78	73	70	68	61	59	57	50	49	48	42
2	88	80	74	68	81	74	68	64	63	59	55	53	50	47	44	41	39	35
3	80	70	62	56	74	65	58	53	55	50	46	47	43	39	38	35	33	29
4	73	62	53	47	67	57	50	44	49	43	39	41	37	33	34	31	28	24
5	67	55	46	40	62	51	44	38	44	38	33	37	32	29	31	27	24	21
6	62	49	41	35	57	46	38	33	39	33	29	33	29	25	28	24	21	18
7	57	44	36	30	53	41	34	29	36	30	25	30	26	22	25	22	19	16
8	53	40	32	27	49	38	30	25	32	27	22	28	23	20	23	19	17	14
9	49	37	29	24	45	34	27	23	30	24	20	25	21	18	21	18	15	13
10	46	34	26	21	43	31	25	20	27	22	18	23	19	16	20	16	14	12

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	12304	12304	12304
5°	12343	11994	12001
10°	12232	11718	11659
15°	12075	11405	11287
20°	11849	11047	10876
25°	11571	10634	10444
30°	11287	10264	10006
35°	10967	9871	9658
40°	10663	9514	9284
45°	10325	9172	8985
50°	9990	8832	8655
55°	9622	8486	8359
60°	9263	8134	8056
65°	8896	7758	7694
70°	8341	7336	7323
75°	7640	6853	6946
80°	6835	6380	6515
85°	6085	6053	6268



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	108.4	1.6
10°-20°	308.9	4.7
20°-30°	462.0	7.0
30°-40°	551.8	8.3
40°-50°	577.3	8.7
50°-60°	541.7	8.2
60°-70°	452.5	6.8
70°-80°	323.7	4.9
80°-90°	196.0	3.0
90°-100°	186.7	2.8
100°-110°	285.3	4.3
110°-120°	393.3	5.9
120°-130°	473.1	7.1
130°-140°	508.8	7.7
140°-150°	488.4	7.4
150°-160°	408.5	6.2
160°-170°	271.9	4.1
170°-180°	95.2	1.4
0°-30°	879.3	13.3
0°-40°	1431.1	21.6
0°-60°	2550.1	38.4
0°-90°	3522.3	53.1
90°-120°	865.3	13.0
90°-150°	2335.6	35.2
90°-180°	3111.0	46.9
0°-180°	6633.5	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1143	1143	1143	1143	1143	
5°	1144	1142	1134	1144	1143	108
15°	1090	1093	1092	1104	1103	307
25°	984	996	1000	1015	1016	453
35°	847	866	883	901	906	529
45°	692	722	753	776	787	534
55°	528	569	614	646	658	473
65°	365	414	468	504	518	360
75°	198	257	319	358	375	212
85°	61	124	189	230	244	64
90°	17	86	160	203	219	14
95°	60	115	182	222	236	63
105°	188	221	280	314	328	201
115°	342	361	403	432	443	339
125°	496	500	532	554	561	442
135°	641	645	657	675	681	493
145°	775	776	778	787	789	484
155°	886	886	887	890	885	408
165°	966	963	963	967	962	272
175°	1004	1001	1001	1005	1000	95
180°	1007	1007	1007	1007	1007	



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CANDELA DISTRIBUTION (FULL):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
0°	1143.1	1143.1	1143.1	1143.1	1143.1	1143.1	1143.1	1143.1	1143.1	1143.1	1143.1
2.5°	1148.1	1147.5	1146.8	1146.1	1145.4	1144.2	1142.5	1140.7	1138.9	1137.2	1138.9
5°	1144.4	1143.8	1143.3	1142.7	1142.2	1141.1	1139.4	1137.7	1136.1	1134.4	1136.6
7.5°	1133.1	1133.3	1133.4	1133.5	1133.6	1132.9	1131.2	1129.7	1128.1	1126.4	1129.2
10°	1123.2	1123.8	1124.3	1124.9	1125.5	1125.0	1123.6	1122.2	1120.9	1119.4	1122.2
12.5°	1111.3	1112.0	1112.8	1113.6	1114.4	1114.3	1113.3	1112.4	1111.4	1110.5	1113.0
15°	1089.6	1090.4	1091.2	1092.1	1092.9	1093.2	1092.9	1092.7	1092.3	1092.1	1094.9
17.5°	1062.2	1063.8	1065.5	1067.1	1068.8	1069.6	1069.5	1069.4	1069.3	1069.1	1071.7
20°	1042.3	1043.9	1045.6	1047.3	1048.9	1050.0	1050.6	1051.1	1051.7	1052.3	1054.7
22.5°	1021.4	1023.0	1024.7	1026.4	1028.0	1029.2	1030.0	1030.8	1031.5	1032.3	1035.5
25°	983.7	986.5	989.3	992.0	994.8	996.6	997.4	998.2	999.1	999.9	1003.5
27.5°	945.9	949.0	952.2	955.4	958.5	961.0	962.7	964.5	966.3	968.0	971.1
30°	919.0	922.6	926.1	929.8	933.3	936.3	938.5	940.7	942.9	945.2	948.5
32.5°	889.1	893.1	897.1	901.2	905.2	908.7	911.6	914.5	917.3	920.2	923.8
35°	846.8	851.2	855.6	860.1	864.5	868.5	872.1	875.7	879.2	882.9	887.0
37.5°	801.9	806.9	811.9	816.9	821.9	826.6	831.0	835.4	839.9	844.3	849.0
40°	772.1	777.1	782.0	787.0	791.9	797.3	802.8	808.3	813.8	819.4	824.1
42.5°	739.2	745.3	751.4	757.4	763.5	769.4	775.2	780.9	786.7	792.5	797.6
45°	692.4	699.0	705.6	712.3	718.9	725.7	732.6	739.5	746.5	753.4	758.6
47.5°	643.3	650.8	658.3	665.9	673.4	681.1	689.0	697.0	704.9	712.8	718.7
50°	611.4	619.2	626.9	634.6	642.4	650.5	659.2	667.7	676.3	684.8	691.3
52.5°	577.6	585.7	593.9	602.1	610.3	619.2	628.6	638.0	647.5	657.0	663.6
55°	528.0	537.1	546.2	555.4	564.5	574.0	584.0	594.0	604.0	613.9	621.4
57.5°	479.7	489.2	498.7	508.2	517.8	528.0	538.8	549.8	560.6	571.6	579.1
60°	445.8	455.7	465.7	475.7	485.6	496.3	507.6	519.0	530.4	541.7	549.5
62.5°	413.9	424.1	434.3	444.5	454.6	465.7	477.8	489.7	501.8	513.8	521.5
65°	364.9	375.7	386.4	397.2	408.1	419.5	431.7	443.9	456.1	468.2	476.5
67.5°	315.1	326.5	337.9	349.4	360.8	372.8	385.2	397.6	410.0	422.4	431.4
70°	280.2	292.1	304.0	315.8	327.8	340.4	353.6	366.9	380.2	393.5	402.3
72.5°	248.3	260.2	272.1	284.0	295.9	308.7	322.4	336.1	349.9	363.6	372.7
75°	198.0	211.0	224.0	237.0	250.0	263.4	277.3	291.1	304.9	318.8	327.9
77.5°	154.2	167.3	180.4	193.5	206.6	220.1	234.1	248.0	262.0	275.9	285.6
80°	123.3	136.8	150.4	164.0	177.5	191.5	205.9	220.3	234.6	249.1	258.5
82.5°	96.4	110.2	124.0	137.8	151.5	165.7	180.3	195.0	209.5	224.1	233.5
85°	61.0	74.9	88.7	102.5	116.4	130.6	145.3	159.9	174.6	189.3	198.7
87.5°	33.3	47.5	61.6	75.7	89.8	104.2	118.7	133.3	147.9	162.5	172.0
90°	17.0	32.3	47.6	62.9	78.3	94.1	110.5	126.9	143.3	159.7	169.8
92.5°	34.3	47.8	61.2	74.6	88.0	102.3	117.6	132.7	147.9	163.1	172.9
95°	60.4	72.4	84.4	96.4	108.4	121.9	136.9	151.9	166.8	181.8	191.1
97.5°	95.1	105.8	116.4	127.1	137.7	150.0	164.0	177.9	191.9	205.9	214.9
100°	118.7	128.7	138.6	148.5	158.4	170.2	183.8	197.3	211.0	224.6	233.1
102.5°	146.2	154.8	163.4	172.1	180.6	191.8	205.4	219.1	232.7	246.4	254.8
105°	187.9	194.9	201.8	208.9	215.9	226.1	239.6	253.0	266.6	280.0	287.8
107.5°	235.1	241.0	246.8	252.7	258.5	267.4	279.3	291.3	303.2	315.1	323.1
110°	264.4	269.8	275.1	280.4	285.8	294.1	305.6	317.0	328.4	339.8	347.8



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CANDELA DISTRIBUTION (continued):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
112.5°	296.1	300.4	304.7	309.0	313.3	320.8	331.5	342.2	352.9	363.6	371.5
115°	342.3	346.2	350.0	353.9	357.7	364.4	374.1	383.7	393.2	402.8	409.7
117.5°	389.8	392.2	394.6	397.0	399.4	405.0	413.9	422.9	431.7	440.6	447.2
120°	418.6	421.0	423.4	425.9	428.3	433.6	441.9	450.1	458.4	466.7	472.9
122.5°	449.6	451.1	452.5	454.0	455.5	460.4	468.6	476.8	485.1	493.3	499.0
125°	495.6	496.1	496.6	497.2	497.7	501.8	509.5	517.1	524.8	532.5	537.6
127.5°	539.2	540.1	540.9	541.8	542.6	546.2	552.5	558.7	565.0	571.2	575.7
130°	568.3	569.5	570.6	571.7	572.8	575.9	580.9	586.0	591.0	596.0	600.5
132.5°	596.4	597.8	599.1	600.5	601.8	604.5	608.6	612.6	616.6	620.7	624.9
135°	640.6	641.4	642.2	642.9	643.7	645.5	648.4	651.3	654.2	657.0	661.3
137.5°	681.5	682.1	682.8	683.5	684.1	685.6	687.7	689.9	692.1	694.3	697.9
140°	709.0	709.9	710.7	711.6	712.5	713.4	714.5	715.4	716.4	717.5	721.4
142.5°	734.9	735.5	736.3	736.9	737.5	738.1	738.6	739.1	739.6	740.1	743.5
145°	775.4	775.5	775.5	775.6	775.7	776.0	776.5	777.1	777.6	778.1	780.1
147.5°	809.6	810.2	810.9	811.5	812.1	812.7	813.2	813.7	814.1	814.7	815.3
150°	834.2	834.6	835.0	835.3	835.7	836.0	836.4	836.7	837.1	837.4	837.4
152.5°	854.5	855.0	855.5	856.0	856.4	856.8	857.1	857.2	857.5	857.7	857.9
155°	886.5	886.5	886.5	886.5	886.5	886.5	886.7	886.8	887.1	887.2	888.0
157.5°	913.6	913.5	913.2	913.0	912.8	912.8	912.9	913.1	913.2	913.3	914.1
160°	930.7	930.3	930.0	929.7	929.3	929.2	929.2	929.2	929.2	929.2	930.0
162.5°	945.9	945.4	944.9	944.4	944.0	943.8	943.9	944.0	944.2	944.4	945.2
165°	965.5	965.0	964.5	963.9	963.5	963.1	963.1	963.1	963.1	963.1	964.2
167.5°	981.2	980.5	979.8	979.1	978.3	978.1	978.3	978.3	978.5	978.7	979.8
170°	990.1	989.4	988.6	987.9	987.2	986.9	986.9	986.9	986.9	986.9	988.1
172.5°	997.0	996.3	995.6	994.9	994.2	993.8	993.8	993.8	993.8	993.8	994.9
175°	1004.2	1003.5	1002.8	1002.2	1001.5	1001.1	1001.1	1001.1	1001.1	1001.1	1002.2
177.5°	1007.3	1006.7	1006.2	1005.6	1005.0	1004.7	1004.7	1004.7	1004.7	1004.7	1005.6
180°	1006.6	1006.6	1006.6	1006.6	1006.6	1006.6	1006.6	1006.6	1006.6	1006.6	1006.6



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CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
0°	1143.1	1143.1	1143.1	1143.1	1143.1	1143.1	1143.1	1143.1
2.5°	1140.7	1142.5	1144.2	1145.0	1144.8	1144.5	1144.3	1144.1
5°	1138.8	1141.1	1143.3	1144.2	1144.0	1143.7	1143.4	1143.1
7.5°	1131.9	1134.7	1137.5	1138.8	1138.4	1138.0	1137.7	1137.4
10°	1125.0	1127.8	1130.5	1131.6	1131.1	1130.5	1130.0	1129.4
12.5°	1115.6	1118.2	1120.7	1121.7	1121.1	1120.5	1120.0	1119.4
15°	1097.6	1100.3	1103.1	1104.4	1104.1	1103.8	1103.6	1103.3
17.5°	1074.1	1076.7	1079.1	1080.1	1079.8	1079.4	1079.0	1078.6
20°	1057.2	1059.7	1062.2	1063.6	1063.8	1064.1	1064.4	1064.7
22.5°	1038.6	1041.8	1044.9	1046.4	1046.2	1046.1	1045.9	1045.8
25°	1007.1	1010.7	1014.3	1016.1	1016.1	1016.1	1016.1	1016.1
27.5°	974.2	977.3	980.4	982.1	982.3	982.5	982.8	983.0
30°	951.8	955.1	958.4	960.0	960.0	960.0	960.0	960.0
32.5°	927.3	930.9	934.4	936.5	937.2	937.9	938.5	939.1
35°	891.2	895.3	899.4	902.1	903.2	904.4	905.5	906.5
37.5°	853.7	858.4	863.1	865.9	866.8	867.7	868.5	869.4
40°	828.8	833.5	838.2	841.1	842.2	843.3	844.4	845.5
42.5°	802.8	807.9	813.1	816.4	817.9	819.5	821.0	822.6
45°	763.9	769.1	774.4	778.2	780.4	782.6	784.8	787.0
47.5°	724.6	730.6	736.5	740.3	742.0	743.7	745.4	747.1
50°	697.6	704.0	710.3	714.5	716.4	718.4	720.3	722.2
52.5°	670.2	676.8	683.3	687.9	690.2	692.6	695.0	697.4
55°	628.8	636.3	643.8	648.6	650.9	653.1	655.3	657.5
57.5°	586.6	594.1	601.7	606.7	609.3	612.0	614.6	617.1
60°	557.1	564.9	572.7	578.1	581.1	584.2	587.2	590.3
62.5°	529.3	537.0	544.8	550.1	552.9	555.7	558.6	561.3
65°	484.8	493.1	501.5	506.9	509.7	512.5	515.2	518.0
67.5°	440.5	449.6	458.7	464.4	466.8	469.1	471.3	473.7
70°	411.2	420.1	428.9	434.7	437.5	440.3	443.0	445.8
72.5°	381.8	390.9	399.9	405.8	408.6	411.4	414.2	416.9
75°	337.1	346.2	355.3	361.6	364.9	368.2	371.5	374.8
77.5°	295.2	304.8	314.5	320.5	323.1	325.7	328.2	330.7
80°	267.8	277.3	286.7	292.8	295.6	298.3	301.1	303.8
82.5°	243.0	252.4	261.7	267.8	270.6	273.4	276.2	278.9
85°	208.1	217.5	226.9	233.0	235.8	238.5	241.3	244.1
87.5°	181.6	191.1	200.7	206.8	209.7	212.5	215.3	218.2
90°	179.9	190.0	200.1	206.8	209.8	213.0	216.1	219.2
92.5°	182.6	192.3	202.1	208.2	210.5	212.8	215.2	217.5
95°	200.3	209.6	219.0	225.0	227.7	230.4	233.2	236.0
97.5°	224.0	233.1	242.1	248.0	250.6	253.3	256.0	258.7
100°	241.7	250.3	258.8	264.6	267.8	270.8	274.0	277.1
102.5°	263.1	271.4	279.7	285.3	288.0	290.7	293.3	296.0
105°	295.5	303.2	311.0	316.3	319.2	322.0	324.8	327.6
107.5°	331.1	339.1	347.1	352.1	354.3	356.6	358.8	361.0
110°	355.7	363.5	371.5	376.4	378.2	380.1	381.9	383.8



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CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
112.5°	379.2	387.1	394.9	400.0	402.3	404.7	407.1	409.4
115°	416.5	423.3	430.2	434.6	436.6	438.6	440.7	442.7
117.5°	453.8	460.3	466.8	471.0	472.6	474.3	475.9	477.6
120°	479.0	485.2	491.4	495.3	496.9	498.4	500.0	501.6
122.5°	504.7	510.4	516.0	519.6	521.1	522.5	523.9	525.4
125°	542.7	547.8	552.9	556.1	557.3	558.6	559.8	561.0
127.5°	580.2	584.7	589.1	592.0	593.0	594.1	595.2	596.3
130°	605.1	609.6	614.2	616.6	617.1	617.5	618.0	618.4
132.5°	629.1	633.3	637.5	640.0	641.0	641.9	642.9	643.8
135°	665.6	669.9	674.1	676.8	677.9	678.9	679.9	681.0
137.5°	701.5	705.1	708.8	711.0	711.7	712.4	713.1	713.8
140°	725.4	729.4	733.3	735.5	735.5	735.7	735.9	736.0
142.5°	747.1	750.7	754.2	756.1	756.6	757.0	757.5	757.9
145°	782.2	784.3	786.2	787.5	787.9	788.3	788.7	789.1
147.5°	815.9	816.7	817.3	817.6	817.5	817.5	817.5	817.4
150°	837.4	837.4	837.4	837.2	836.7	836.1	835.7	835.2
152.5°	858.3	858.5	858.8	858.5	857.7	856.9	856.1	855.3
155°	888.7	889.4	890.0	889.8	888.6	887.3	886.1	884.9
157.5°	914.8	915.5	916.3	916.2	915.2	914.2	913.2	912.2
160°	930.9	931.8	932.6	932.7	932.1	931.4	930.7	929.9
162.5°	946.1	947.0	947.8	947.7	946.6	945.5	944.4	943.3
165°	965.3	966.3	967.3	967.3	966.1	964.8	963.6	962.3
167.5°	980.8	981.9	983.0	983.0	981.9	980.8	979.8	978.7
170°	989.4	990.5	991.8	991.8	990.5	989.4	988.1	986.9
172.5°	996.0	997.1	998.1	998.1	996.9	995.7	994.4	993.2
175°	1003.2	1004.2	1005.4	1005.2	1004.0	1002.7	1001.6	1000.3
177.5°	1006.5	1007.3	1008.1	1008.1	1007.1	1006.1	1005.1	1004.1
180°	1006.6	1006.6	1006.6	1006.6	1006.6	1006.6	1006.6	1006.6

(END OF REPORT)