

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: P332194-927

Luminaire Tested: **S123DIW-S1000D1030U927-4F0-1E-UDD-D**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P332194-927
REPORT IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-1807-864-5,
Test Lab: INNOVATION CENTER
Issue Date: 3/3/2020
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: NEO-RAY
Catalog Number: S123DIW-S1000D1030U927-4F0-1E-UDD-D
Description: DEFINE 3 DIRECT-INDIRECT WALL MOUNT LED LUMINAIRE
DOWNLIGHT 1000 LUMENS PER FOOT, DROP SATIN WHITE DIFFUSER
UPLIGHT 1030 LUMENS PER FOOT, NO LENS
Light Source: -
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 6595.1 lumens
Efficiency: N/A
Efficacy: 107.8 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

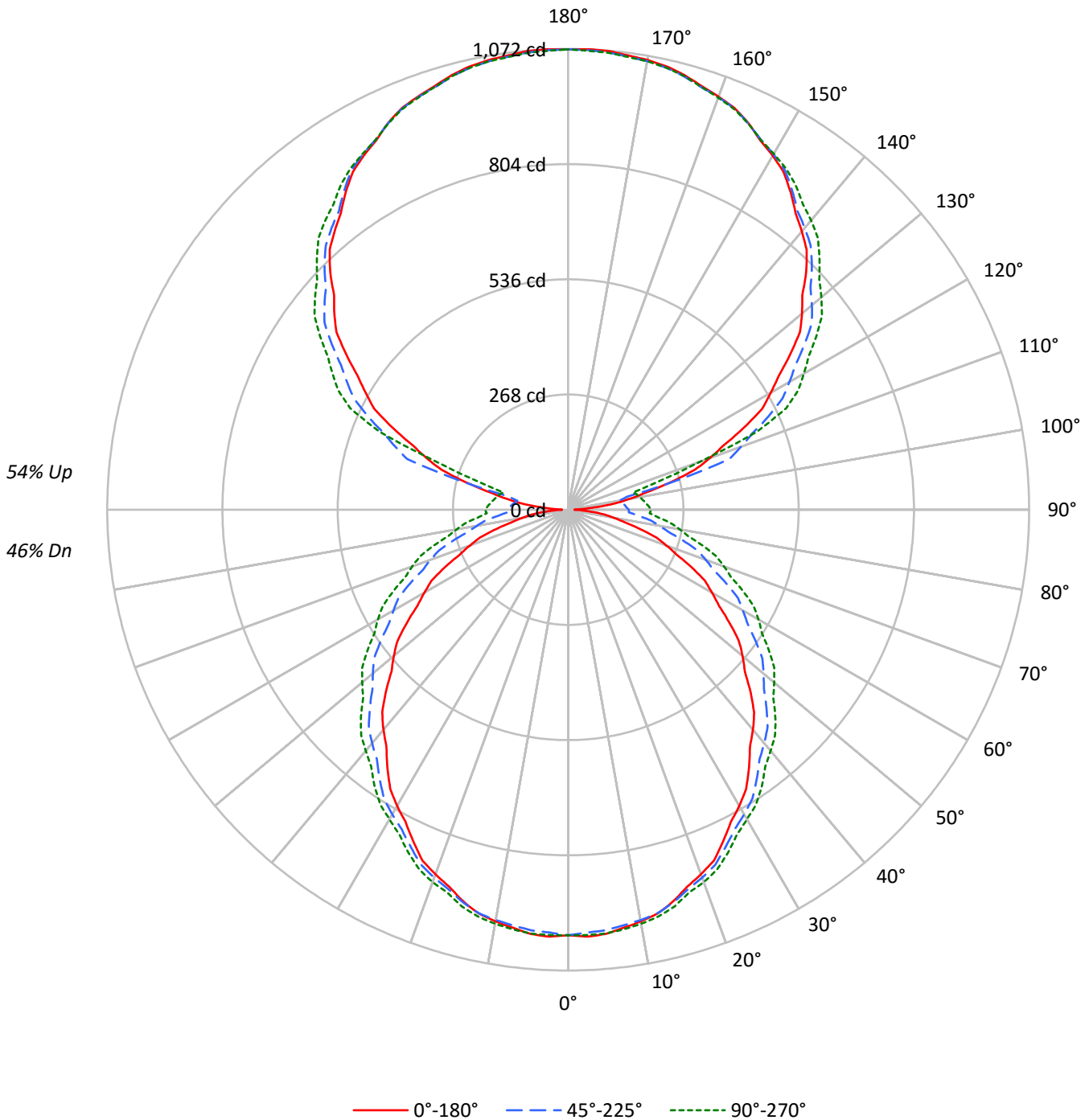
Input Watts (W): 61.2
Input Voltage (V): 120
Input Current (A_{in}): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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	106	106	106	106	98	98	98	98	81	81	81	66	66	66	53	53	53	46
1	96	91	87	83	88	84	80	77	70	67	65	57	55	53	45	44	43	37
2	87	79	73	67	79	73	67	62	61	56	53	49	46	44	39	37	35	30
3	79	69	62	55	72	64	57	52	53	48	44	43	40	37	34	32	29	25
4	72	61	53	47	66	56	49	43	47	41	37	38	34	31	30	28	25	21
5	66	54	46	40	60	50	43	37	42	36	32	34	30	27	27	24	22	18
6	61	49	40	34	56	45	37	32	38	32	28	31	27	23	25	21	19	16
7	56	44	36	30	51	40	33	28	34	28	24	28	24	20	23	19	17	14
8	52	40	32	26	48	37	30	25	31	25	21	26	21	18	21	17	15	13
9	48	36	28	23	44	33	27	22	28	23	19	24	19	16	19	16	13	11
10	45	33	26	21	41	31	24	20	26	21	17	22	18	15	18	14	12	10

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	10654	10654	10654
5°	10687	10385	10392
10°	10592	10146	10095
15°	10455	9874	9773
20°	10260	9565	9418
25°	10019	9208	9043
30°	9772	8886	8665
35°	9496	8547	8362
40°	9231	8238	8039
45°	8938	7941	7779
50°	8650	7648	7494
55°	8332	7348	7238
60°	8020	7044	6974
65°	7702	6718	6661
70°	7222	6352	6341
75°	6614	5933	6016
80°	5915	5522	5642
85°	5267	5241	5428



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	93.8	1.4
10°-20°	267.5	4.1
20°-30°	400.0	6.1
30°-40°	477.7	7.2
40°-50°	499.9	7.6
50°-60°	469.1	7.1
60°-70°	391.8	5.9
70°-80°	280.3	4.3
80°-90°	170.2	2.6
90°-100°	143.8	2.2
100°-110°	262.7	4.0
110°-120°	497.2	7.5
120°-130°	597.0	9.1
130°-140°	619.7	9.4
140°-150°	570.0	8.6
150°-160°	457.5	6.9
160°-170°	295.2	4.5
170°-180°	101.8	1.5
0°-30°	761.3	11.5
0°-40°	1239.1	18.8
0°-60°	2208.0	33.5
0°-90°	3050.2	46.2
90°-120°	903.7	13.7
90°-150°	2690.4	40.8
90°-180°	3545.0	53.8
0°-180°	6595.1	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	990	990	990	990	990	
5°	991	988	982	990	990	94
15°	943	946	946	956	955	266
25°	852	862	866	879	880	392
35°	733	750	764	780	785	458
45°	599	625	652	672	681	462
55°	457	493	532	560	569	409
65°	316	358	405	436	448	312
75°	171	222	276	310	325	183
85°	53	107	164	199	211	55
90°	15	76	141	179	193	12
95°	60	73	131	169	181	69
105°	246	277	255	151	156	260
115°	450	469	514	546	560	444
125°	630	638	671	694	704	563
135°	783	787	802	822	826	602
145°	902	906	908	918	922	564
155°	992	991	991	995	991	457
165°	1046	1044	1043	1049	1044	295
175°	1071	1067	1068	1073	1067	102
180°	1071	1071	1071	1071	1071	



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CANDELA DISTRIBUTION (FULL):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
0°	989.8	989.8	989.8	989.8	989.8	989.8	989.8	989.8	989.8	989.8	989.8
2.5°	994.1	993.6	992.9	992.4	991.8	990.7	989.2	987.7	986.1	984.6	986.1
5°	990.9	990.4	989.9	989.4	989.0	988.0	986.6	985.1	983.7	982.2	984.1
7.5°	981.1	981.3	981.4	981.4	981.5	980.9	979.5	978.1	976.7	975.3	977.7
10°	972.6	973.0	973.5	974.0	974.5	974.1	972.9	971.7	970.5	969.3	971.7
12.5°	962.2	962.8	963.5	964.2	964.9	964.8	964.0	963.1	962.3	961.6	963.8
15°	943.4	944.1	944.8	945.5	946.3	946.5	946.3	946.0	945.8	945.5	948.0
17.5°	919.7	921.1	922.6	924.0	925.4	926.1	926.1	925.9	925.8	925.7	927.9
20°	902.5	903.9	905.3	906.7	908.2	909.2	909.7	910.1	910.6	911.1	913.2
22.5°	884.3	885.7	887.2	888.7	890.1	891.1	891.8	892.5	893.2	893.8	896.5
25°	851.8	854.1	856.6	859.0	861.3	862.9	863.6	864.4	865.1	865.8	868.9
27.5°	819.0	821.7	824.4	827.2	829.9	832.0	833.6	835.1	836.6	838.2	840.9
30°	795.7	798.8	801.9	805.0	808.2	810.6	812.6	814.5	816.4	818.3	821.3
32.5°	769.8	773.3	776.8	780.3	783.8	786.8	789.3	791.8	794.3	796.8	799.9
35°	733.2	737.0	740.8	744.7	748.5	751.9	755.1	758.2	761.3	764.5	768.0
37.5°	694.3	698.7	703.0	707.3	711.6	715.7	719.5	723.3	727.1	731.0	735.1
40°	668.4	672.8	677.1	681.4	685.7	690.3	695.1	699.9	704.6	709.5	713.5
42.5°	640.0	645.3	650.5	655.8	661.1	666.2	671.2	676.2	681.2	686.2	690.6
45°	599.4	605.2	611.0	616.7	622.5	628.4	634.3	640.3	646.3	652.3	656.9
47.5°	557.0	563.5	570.1	576.6	583.0	589.8	596.6	603.5	610.3	617.2	622.3
50°	529.4	536.1	542.8	549.5	556.2	563.3	570.7	578.1	585.6	593.0	598.5
52.5°	500.0	507.2	514.3	521.3	528.5	536.1	544.3	552.5	560.6	568.9	574.6
55°	457.2	465.1	472.9	480.9	488.8	497.0	505.6	514.3	522.9	531.6	538.1
57.5°	415.3	423.6	431.8	440.1	448.3	457.2	466.6	476.0	485.4	494.9	501.4
60°	386.0	394.6	403.2	411.9	420.5	429.7	439.5	449.4	459.2	469.1	475.7
62.5°	358.4	367.2	376.0	384.8	393.6	403.3	413.7	424.1	434.4	444.9	451.5
65°	315.9	325.3	334.6	344.0	353.3	363.2	373.8	384.3	394.8	405.4	412.6
67.5°	272.7	282.7	292.6	302.5	312.4	322.8	333.5	344.3	355.0	365.8	373.6
70°	242.6	252.9	263.2	273.5	283.8	294.7	306.2	317.7	329.2	340.7	348.4
72.5°	215.0	225.3	235.6	245.9	256.2	267.3	279.2	291.0	302.9	314.8	322.7
75°	171.4	182.7	193.9	205.3	216.5	228.1	240.1	252.1	264.0	276.0	283.9
77.5°	133.5	144.8	156.2	167.5	178.9	190.6	202.7	214.8	226.9	238.9	247.2
80°	106.7	118.5	130.2	142.0	153.7	165.8	178.2	190.8	203.2	215.6	223.8
82.5°	83.4	95.4	107.3	119.2	131.2	143.5	156.1	168.7	181.4	194.1	202.2
85°	52.8	64.8	76.8	88.8	100.8	113.1	125.8	138.5	151.1	163.9	172.1
87.5°	28.8	41.1	53.4	65.7	78.0	90.5	103.1	115.8	128.5	141.2	149.5
90°	14.8	28.4	41.8	55.4	68.8	82.9	97.4	111.9	126.4	140.9	149.8
92.5°	28.0	38.0	48.2	58.2	68.4	80.2	94.0	107.8	121.5	135.3	144.4
95°	60.4	62.5	64.6	66.7	68.8	76.7	90.4	104.0	117.7	131.4	140.1
97.5°	108.1	113.3	118.5	123.7	128.8	130.6	129.1	127.6	126.1	124.6	133.2
100°	144.2	155.3	166.6	177.8	189.0	186.3	169.8	153.2	136.7	120.1	128.4
102.5°	185.3	194.8	204.2	213.7	223.1	218.2	198.9	179.6	160.3	141.0	143.4
105°	245.7	253.4	261.1	268.8	276.6	277.6	272.0	266.3	260.7	255.1	230.5
107.5°	308.4	314.9	321.3	327.7	334.2	343.6	355.8	368.1	380.4	392.7	376.2
110°	350.2	355.9	361.6	367.4	373.1	381.8	393.2	404.8	416.3	427.9	428.3



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CANDELA DISTRIBUTION (continued):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
112.5°	390.9	395.8	400.6	405.4	410.2	418.2	429.4	440.5	451.6	462.8	468.9
115°	450.2	454.1	458.0	462.0	465.9	473.0	483.2	493.5	503.7	513.9	521.4
117.5°	508.3	511.4	514.5	517.6	520.7	526.6	535.6	544.5	553.4	562.3	569.4
120°	543.8	546.6	549.4	552.2	554.9	560.5	569.0	577.4	585.9	594.3	601.2
122.5°	580.7	582.7	584.6	586.5	588.4	593.5	601.7	609.9	618.1	626.3	632.6
125°	630.3	631.6	633.0	634.5	635.9	640.4	648.1	655.7	663.4	671.1	676.4
127.5°	679.2	680.4	681.6	682.8	684.0	687.9	694.4	701.0	707.7	714.2	719.5
130°	709.8	711.0	712.2	713.3	714.5	717.8	723.3	728.8	734.4	739.8	745.0
132.5°	738.2	739.6	740.9	742.3	743.7	746.6	751.0	755.3	759.8	764.1	769.2
135°	782.7	783.5	784.3	785.2	786.0	788.1	791.4	794.8	798.1	801.5	806.3
137.5°	820.7	821.8	823.0	824.1	825.3	826.8	828.7	830.5	832.4	834.3	838.9
140°	845.3	846.4	847.4	848.5	849.5	850.7	851.9	853.2	854.4	855.7	860.0
142.5°	868.9	869.7	870.6	871.5	872.4	873.1	873.8	874.4	875.1	875.8	879.6
145°	901.7	902.8	903.8	904.8	905.8	906.4	906.8	907.1	907.5	907.8	910.1
147.5°	931.8	932.6	933.3	934.1	935.0	935.6	935.9	936.3	936.6	937.0	937.9
150°	950.9	951.3	951.9	952.4	952.9	953.4	953.7	954.1	954.4	954.8	955.1
152.5°	968.0	968.3	968.5	968.8	969.0	969.2	969.5	969.6	969.9	970.1	970.7
155°	992.2	991.8	991.5	991.2	990.8	990.7	990.9	991.0	991.3	991.4	992.3
157.5°	1011.0	1011.0	1010.9	1010.9	1010.8	1010.7	1010.6	1010.3	1010.2	1010.0	1011.1
160°	1022.5	1022.2	1022.1	1021.9	1021.8	1021.5	1021.4	1021.2	1021.0	1020.9	1021.9
162.5°	1033.2	1032.8	1032.4	1031.9	1031.4	1031.1	1030.9	1030.8	1030.5	1030.4	1031.6
165°	1046.3	1045.8	1045.3	1044.7	1044.2	1043.9	1043.6	1043.5	1043.3	1043.1	1044.6
167.5°	1056.5	1055.8	1055.1	1054.4	1053.7	1053.3	1053.3	1053.3	1053.3	1053.3	1054.7
170°	1062.2	1061.5	1060.8	1060.1	1059.4	1059.1	1059.1	1059.1	1059.1	1059.1	1060.4
172.5°	1066.0	1065.2	1064.4	1063.5	1062.6	1062.3	1062.4	1062.6	1062.7	1062.9	1064.3
175°	1071.0	1070.1	1069.2	1068.3	1067.5	1067.1	1067.2	1067.5	1067.6	1067.8	1069.1
177.5°	1072.2	1071.5	1070.9	1070.2	1069.4	1069.1	1069.3	1069.4	1069.5	1069.7	1070.9
180°	1071.0	1071.0	1071.0	1071.0	1071.0	1071.0	1071.0	1071.0	1071.0	1071.0	1071.0



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CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
0°	989.8	989.8	989.8	989.8	989.8	989.8	989.8	989.8
2.5°	987.7	989.2	990.7	991.4	991.2	991.0	990.9	990.6
5°	986.0	988.0	989.9	990.7	990.5	990.2	990.0	989.8
7.5°	980.1	982.5	984.9	986.0	985.7	985.4	985.1	984.8
10°	974.1	976.4	978.9	979.9	979.4	978.9	978.4	977.9
12.5°	965.9	968.1	970.3	971.2	970.7	970.3	969.8	969.3
15°	950.4	952.8	955.1	956.2	956.0	955.8	955.5	955.3
17.5°	930.0	932.2	934.4	935.3	934.9	934.6	934.3	933.9
20°	915.4	917.5	919.7	920.9	921.1	921.4	921.6	921.9
22.5°	899.3	902.0	904.8	906.0	905.9	905.8	905.6	905.5
25°	872.0	875.1	878.2	879.8	879.8	879.8	879.8	879.8
27.5°	843.5	846.2	848.9	850.3	850.6	850.7	851.0	851.1
30°	824.1	827.0	829.8	831.3	831.3	831.3	831.3	831.3
32.5°	803.0	806.0	809.1	810.9	811.4	812.0	812.6	813.2
35°	771.6	775.2	778.8	781.1	782.0	783.0	783.9	784.9
37.5°	739.2	743.2	747.3	749.7	750.5	751.2	752.0	752.8
40°	717.6	721.7	725.7	728.3	729.2	730.2	731.1	732.1
42.5°	695.1	699.5	704.0	706.9	708.2	709.6	710.9	712.3
45°	661.4	666.0	670.5	673.8	675.7	677.6	679.5	681.4
47.5°	627.4	632.6	637.6	641.0	642.5	644.0	645.4	646.9
50°	604.0	609.5	615.1	618.6	620.4	622.0	623.7	625.3
52.5°	580.3	586.0	591.7	595.6	597.6	599.7	601.7	603.8
55°	544.5	551.0	557.5	561.6	563.6	565.5	567.4	569.3
57.5°	507.9	514.4	520.9	525.4	527.6	529.8	532.1	534.3
60°	482.4	489.2	495.8	500.5	503.2	505.8	508.4	511.0
62.5°	458.3	465.0	471.7	476.3	478.7	481.2	483.6	486.1
65°	419.8	427.0	434.1	438.9	441.3	443.7	446.2	448.5
67.5°	381.4	389.3	397.1	402.1	404.1	406.2	408.1	410.1
70°	356.0	363.7	371.4	376.4	378.8	381.2	383.6	386.0
72.5°	330.6	338.4	346.3	351.4	353.8	356.2	358.6	361.0
75°	291.8	299.8	307.6	313.1	315.9	318.8	321.6	324.6
77.5°	255.6	264.0	272.3	277.6	279.7	281.9	284.2	286.4
80°	232.0	240.1	248.2	253.5	255.9	258.3	260.7	263.1
82.5°	210.4	218.5	226.6	232.0	234.3	236.7	239.1	241.5
85°	180.1	188.3	196.5	201.8	204.1	206.5	208.9	211.4
87.5°	157.7	166.0	174.4	179.7	182.2	184.7	187.1	189.6
90°	158.7	167.5	176.3	182.1	184.9	187.7	190.4	193.1
92.5°	153.4	162.6	171.7	177.4	179.8	182.2	184.7	187.0
95°	148.8	157.4	166.0	171.6	174.0	176.4	178.8	181.2
97.5°	141.7	150.3	158.8	164.4	167.0	169.5	172.1	174.7
100°	136.8	145.1	153.5	159.0	161.5	164.1	166.7	169.3
102.5°	145.8	148.1	150.4	153.0	155.7	158.4	161.1	163.9
105°	206.0	181.3	156.8	145.8	148.2	150.8	153.3	155.7
107.5°	359.7	343.1	326.6	307.6	286.1	264.6	243.1	221.7
110°	428.6	429.0	429.4	418.0	394.6	371.2	347.8	324.5



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CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
112.5°	475.1	481.2	487.4	488.8	485.6	482.4	479.1	475.9
115°	528.9	536.4	543.9	549.0	551.6	554.3	556.9	559.5
117.5°	576.6	583.7	590.8	595.3	597.4	599.4	601.4	603.4
120°	608.2	615.1	622.0	626.3	628.0	629.6	631.4	633.0
122.5°	638.9	645.2	651.5	655.5	657.4	659.2	661.0	662.8
125°	681.8	687.2	692.6	696.3	698.3	700.4	702.3	704.4
127.5°	724.8	730.2	735.5	738.8	740.1	741.3	742.6	743.9
130°	750.4	755.6	760.9	764.1	765.1	766.2	767.3	768.3
132.5°	774.3	779.3	784.4	787.5	788.7	789.8	790.9	792.1
135°	811.1	815.9	820.9	823.6	824.3	824.9	825.6	826.2
137.5°	843.6	848.2	852.9	855.6	856.4	857.3	858.1	859.0
140°	864.3	868.5	872.9	875.4	876.3	877.2	878.0	878.8
142.5°	883.4	887.1	890.9	893.1	893.8	894.5	895.2	896.0
145°	912.4	914.7	917.0	918.5	919.5	920.4	921.5	922.4
147.5°	938.8	939.8	940.7	941.2	941.3	941.3	941.4	941.4
150°	955.5	955.8	956.2	956.4	956.3	956.2	956.2	956.2
152.5°	971.4	972.0	972.6	972.6	971.8	971.1	970.4	969.7
155°	993.2	994.0	995.0	994.8	993.8	992.8	991.7	990.6
157.5°	1012.2	1013.2	1014.2	1014.1	1012.7	1011.4	1010.0	1008.6
160°	1022.9	1024.1	1025.1	1025.0	1023.7	1022.5	1021.3	1020.0
162.5°	1032.8	1034.0	1035.2	1035.2	1034.2	1033.1	1032.0	1030.9
165°	1045.9	1047.3	1048.8	1048.8	1047.7	1046.4	1045.1	1043.9
167.5°	1056.1	1057.6	1059.0	1059.0	1057.6	1056.1	1054.7	1053.3
170°	1061.8	1063.3	1064.7	1064.7	1063.3	1061.8	1060.4	1059.1
172.5°	1065.7	1067.1	1068.5	1068.4	1066.9	1065.3	1063.7	1062.2
175°	1070.2	1071.5	1072.8	1072.7	1071.3	1069.8	1068.4	1067.0
177.5°	1072.0	1073.1	1074.2	1074.1	1072.7	1071.3	1069.8	1068.4
180°	1071.0	1071.0	1071.0	1071.0	1071.0	1071.0	1071.0	1071.0

(END OF REPORT)