

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: P332664-930

Luminaire Tested: **SA4XXDIP-C1020D1205U930-4F0-1E-UDD-D**

Issue Date: 10/7/2019

Test Information

Test Method: LM-79-08
Report Number: P332664-930
REPORT IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-1807-864-6,
Test Lab: INNOVATION CENTER
Issue Date: 10/7/2019
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: NEO-RAY
Catalog Number: SA4XXDIP-C1020D1205U930-4F0-1E-UDD-D
Description: DEFINE 4 DIRECT-INDIRECT PENDANT LED LUMINAIRE
DOWNLIGHT 1020 LUMENS PER FOOT, DROP SATIN WHITE DIFFUSER
UPLIGHT 1205 LUMENS PER FOOT, NO LENS
Light Source: -
Ballast/Driver: ELECTRONIC DRIVER

Summary

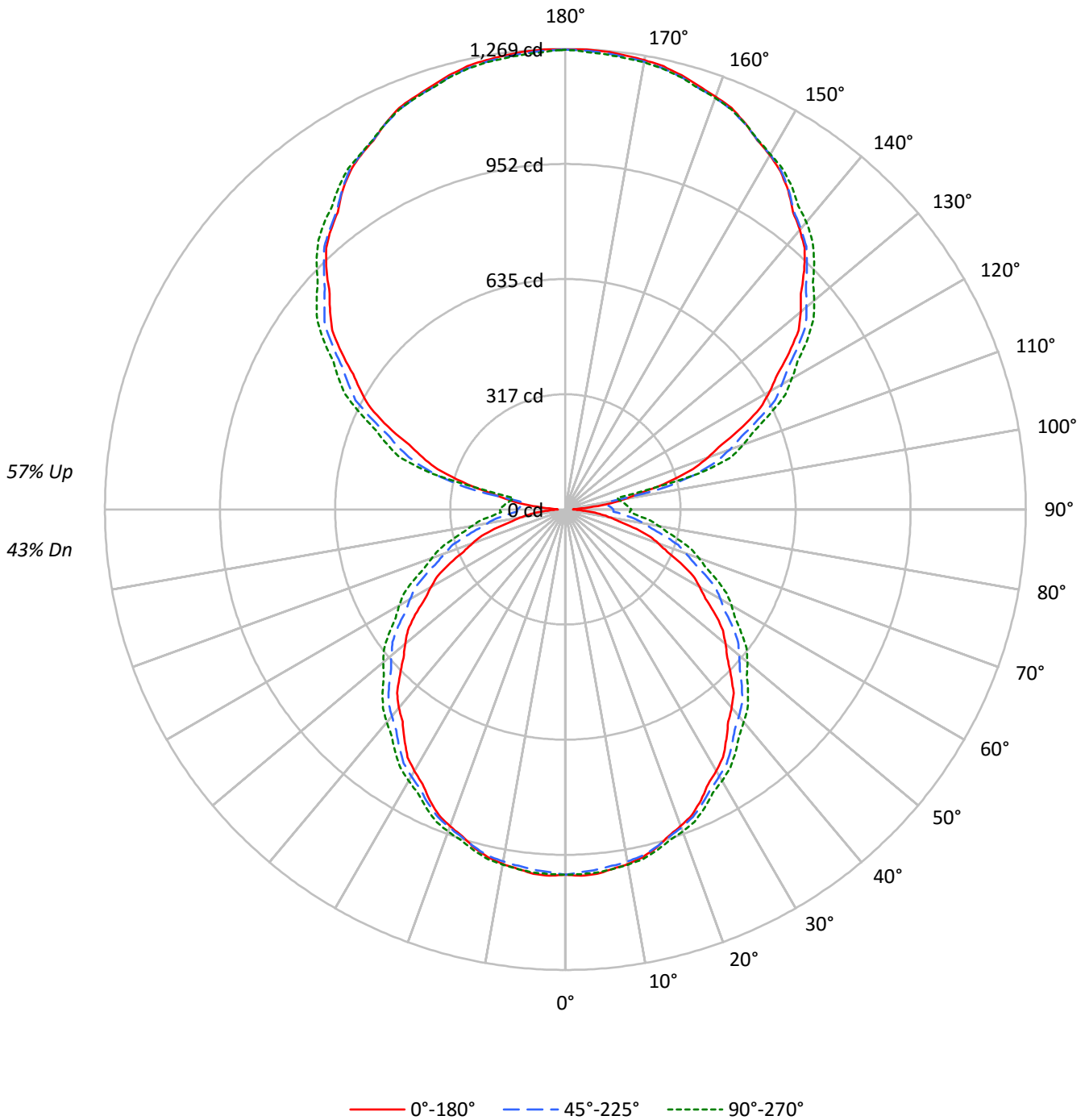
Lumens per Lamp: N/A
Luminaire Lumens: 7353.1 lumens
Efficiency: N/A
Efficacy: 112.4 lumens/watt
Spacing Criteria (0/90/45): 1.23 / 1.28 / 1.39
Luminous Opening: Rectangular w/ Sides (W: 0.33' x L: 4' x H: 0.08')
CIE Type: General Diffuse

Input Watts (W): 65.4
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	50	30	10	0	
RCR																						
0	106	106	106	106	96	96	96	96	80	80	80	64	64	64	50	50	50	43				43
1	95	91	87	83	87	83	79	76	68	66	63	55	53	52	43	41	40				35	
2	86	79	72	67	79	72	66	62	59	55	52	48	45	42	37	35	33				28	
3	79	69	61	55	71	63	56	51	52	47	43	42	38	35	32	30	28				23	
4	72	61	53	46	65	56	48	43	46	41	36	37	33	30	29	26	24				20	
5	66	54	46	39	60	49	42	37	41	35	31	33	29	26	26	23	21				17	
6	60	48	40	34	55	44	37	32	37	31	27	30	26	22	23	20	18				15	
7	56	43	35	30	51	40	33	28	33	28	24	27	23	20	21	18	16				13	
8	52	39	31	26	47	36	29	24	30	25	21	25	21	17	19	16	14				12	
9	48	36	28	23	44	33	26	22	28	22	19	23	19	16	18	15	13				10	
10	45	33	25	21	41	30	24	19	25	20	17	21	17	14	17	14	11				9	

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	8127	8127	8127
5°	8151	7942	7965
10°	8102	7812	7807
15°	8029	7662	7620
20°	7920	7496	7438
25°	7797	7310	7239
30°	7663	7125	7034
35°	7511	6935	6855
40°	7390	6755	6667
45°	7210	6588	6507
50°	7059	6397	6337
55°	6902	6217	6138
60°	6657	5986	5956
65°	6389	5740	5734
70°	6066	5458	5474
75°	5612	5146	5239
80°	5110	4847	5007
85°	4474	4583	4872



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	95.3	1.3
10°-20°	273.1	3.7
20°-30°	413.0	5.6
30°-40°	499.7	6.8
40°-50°	528.2	7.2
50°-60°	497.1	6.8
60°-70°	412.5	5.6
70°-80°	289.7	3.9
80°-90°	167.4	2.3
90°-100°	140.6	1.9
100°-110°	348.2	4.7
110°-120°	576.7	7.8
120°-130°	698.0	9.5
130°-140°	729.4	9.9
140°-150°	673.5	9.2
150°-160°	541.2	7.4
160°-170°	349.1	4.7
170°-180°	120.3	1.6
0°-30°	781.4	10.6
0°-40°	1281.1	17.4
0°-60°	2306.5	31.4
0°-90°	3176.1	43.2
90°-120°	1065.5	14.5
90°-150°	3166.4	43.1
90°-180°	4177.0	56.8
0°-180°	7353.1	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1007	1007	1007	1007	1007	
5°	1008	1004	996	1005	1004	96
15°	966	967	964	973	973	272
25°	884	890	894	906	907	407
35°	773	787	798	813	817	484
45°	645	666	688	706	712	498
55°	505	529	562	584	592	450
65°	349	386	424	451	461	346
75°	194	236	283	313	325	206
85°	60	107	158	190	203	64
90°	21	76	132	169	182	14
95°	67	74	119	154	166	79
105°	295	324	370	403	382	310
115°	539	553	587	613	622	531
125°	753	757	782	805	814	672
135°	931	930	941	961	970	717
145°	1072	1073	1073	1081	1087	669
155°	1174	1174	1172	1175	1173	541
165°	1238	1234	1234	1240	1232	350
175°	1267	1261	1262	1269	1259	121
180°	1267	1267	1267	1267	1267	



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CANDELA DISTRIBUTION (FULL):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
0°	1006.7	1006.7	1006.7	1006.7	1006.7	1006.7	1006.7	1006.7	1006.7	1006.7	1006.7
2.5°	1010.2	1009.7	1009.0	1008.4	1007.8	1006.7	1005.1	1003.6	1001.9	1000.3	1001.7
5°	1007.7	1007.0	1006.2	1005.5	1004.8	1003.5	1001.8	1000.0	998.3	996.5	998.5
7.5°	999.1	998.7	998.3	997.8	997.4	996.5	995.0	993.5	992.1	990.6	992.9
10°	992.0	991.7	991.5	991.2	991.0	990.2	989.0	987.7	986.4	985.2	987.5
12.5°	982.0	982.0	981.9	981.9	981.9	981.4	980.6	979.7	978.8	978.0	980.1
15°	966.0	966.3	966.5	966.8	967.0	966.8	966.0	965.3	964.5	963.8	966.0
17.5°	944.2	944.9	945.7	946.4	947.2	947.5	947.3	947.2	947.1	946.9	949.2
20°	928.9	929.6	930.3	931.1	931.9	932.4	932.6	932.9	933.1	933.4	935.9
22.5°	911.7	912.6	913.6	914.6	915.5	916.2	916.6	917.1	917.5	918.0	920.6
25°	883.8	885.3	886.7	888.3	889.7	890.9	891.6	892.4	893.2	893.9	896.7
27.5°	852.6	854.8	857.0	859.2	861.4	863.2	864.3	865.4	866.6	867.7	870.3
30°	831.9	833.9	835.9	837.9	839.9	841.8	843.5	845.3	847.0	848.8	851.6
32.5°	809.3	811.8	814.2	816.6	819.0	821.2	823.1	825.1	827.0	829.0	832.1
35°	773.3	776.3	779.3	782.3	785.3	788.1	790.6	793.0	795.6	798.1	801.6
37.5°	736.9	740.5	743.9	747.4	750.8	754.1	757.2	760.3	763.4	766.5	770.1
40°	713.5	716.8	720.1	723.3	726.6	729.9	733.4	736.9	740.5	744.0	747.7
42.5°	686.5	690.2	693.8	697.5	701.1	705.0	709.1	713.2	717.3	721.5	725.6
45°	644.7	649.5	654.3	659.1	663.8	668.5	673.4	678.1	682.8	687.6	691.9
47.5°	604.9	609.8	614.7	619.6	624.5	629.7	635.2	640.7	646.3	651.8	656.2
50°	576.0	581.6	587.0	592.6	598.0	603.6	609.1	614.6	620.1	625.6	630.6
52.5°	547.1	552.7	558.2	563.7	569.2	575.1	581.4	587.7	594.0	600.4	605.4
55°	505.0	510.3	515.5	520.8	526.0	532.4	540.0	547.5	555.0	562.5	567.5
57.5°	457.9	464.4	470.9	477.4	484.0	490.9	498.4	505.9	513.3	520.8	526.8
60°	427.2	433.7	440.3	446.8	453.3	460.6	469.0	477.2	485.4	493.7	499.5
62.5°	397.5	404.6	411.7	418.8	425.9	433.6	441.9	450.1	458.4	466.7	472.5
65°	349.4	357.4	365.5	373.5	381.5	389.8	398.3	406.8	415.3	423.9	430.1
67.5°	303.2	311.8	320.2	328.8	337.3	346.1	355.2	364.4	373.5	382.6	389.0
70°	271.7	280.2	288.7	297.2	305.7	314.8	324.2	333.8	343.3	352.9	359.6
72.5°	241.0	249.7	258.4	267.2	275.9	285.3	295.4	305.5	315.7	325.8	332.3
75°	193.9	203.2	212.4	221.7	231.0	240.8	251.4	261.9	272.4	282.9	289.9
77.5°	149.9	159.7	169.6	179.4	189.2	199.6	210.7	221.7	232.7	243.7	250.8
80°	122.9	132.9	142.9	153.0	163.0	173.5	184.5	195.5	206.5	217.5	225.1
82.5°	95.8	106.2	116.7	127.1	137.5	148.2	159.2	170.2	181.3	192.3	200.0
85°	59.8	70.3	80.8	91.3	101.8	112.8	124.0	135.3	146.5	157.8	165.3
87.5°	33.9	44.6	55.3	66.0	76.6	87.6	99.0	110.3	121.6	132.9	140.4
90°	20.9	33.2	45.6	57.9	70.2	82.6	95.1	107.5	120.0	132.4	141.0
92.5°	29.1	38.2	47.4	56.5	65.6	76.5	88.9	101.3	113.8	126.3	134.6
95°	66.8	67.8	69.0	70.1	71.2	77.0	87.5	97.9	108.4	118.9	126.9
97.5°	123.9	135.5	147.1	158.7	170.2	169.4	156.0	142.8	129.4	116.1	122.8
100°	167.8	178.1	188.3	198.7	209.0	204.5	185.2	165.9	146.7	127.3	130.5
102.5°	217.8	226.2	234.7	243.3	251.8	258.9	264.6	270.4	276.2	282.0	250.0
105°	295.3	301.6	307.9	314.1	320.4	328.6	339.0	349.4	359.6	370.0	378.1
107.5°	369.2	373.9	378.6	383.4	388.1	395.6	405.8	416.0	426.2	436.3	443.4
110°	418.2	422.4	426.6	430.7	434.8	441.9	451.9	461.9	472.0	482.0	488.2



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CANDELA DISTRIBUTION (continued):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
112.5°	465.9	470.1	474.3	478.6	482.8	489.4	498.4	507.4	516.3	525.3	530.8
115°	539.2	542.1	544.9	547.8	550.7	556.0	563.9	571.7	579.5	587.3	593.2
117.5°	606.2	608.4	610.6	612.8	615.0	620.0	627.9	635.9	643.8	651.8	656.9
120°	650.8	652.4	654.0	655.6	657.1	661.5	668.5	675.6	682.7	689.7	695.1
122.5°	693.2	693.9	694.6	695.2	695.9	699.8	706.9	714.0	721.2	728.4	733.6
125°	752.9	753.5	754.1	754.7	755.3	758.5	764.3	770.2	776.0	781.9	787.3
127.5°	810.2	810.2	810.2	810.2	810.1	813.0	818.8	824.5	830.3	836.1	840.5
130°	846.5	846.4	846.4	846.4	846.4	848.6	853.3	857.9	862.6	867.2	872.0
132.5°	880.6	880.8	880.8	881.0	881.1	883.2	887.2	891.2	895.2	899.2	903.8
135°	930.7	930.4	930.3	930.0	929.8	931.0	933.6	936.2	938.8	941.3	945.8
137.5°	975.9	975.8	975.6	975.4	975.3	976.1	977.9	979.7	981.4	983.2	987.3
140°	1005.5	1005.7	1005.8	1006.0	1006.2	1006.6	1007.3	1008.0	1008.6	1009.3	1013.2
142.5°	1031.1	1031.8	1032.5	1033.2	1034.0	1034.4	1034.5	1034.5	1034.6	1034.8	1038.0
145°	1071.6	1072.0	1072.4	1072.8	1073.2	1073.3	1073.3	1073.3	1073.3	1073.3	1075.1
147.5°	1104.0	1105.0	1105.9	1106.8	1107.7	1108.1	1107.9	1107.7	1107.4	1107.3	1107.6
150°	1127.5	1128.1	1128.7	1129.3	1129.8	1130.1	1129.8	1129.7	1129.4	1129.2	1129.2
152.5°	1146.3	1147.0	1147.5	1148.2	1148.8	1148.9	1148.6	1148.2	1147.8	1147.5	1147.8
155°	1173.8	1173.9	1174.2	1174.4	1174.6	1174.4	1173.8	1173.1	1172.5	1171.8	1172.7
157.5°	1197.0	1196.9	1196.8	1196.7	1196.5	1196.1	1195.4	1194.7	1194.0	1193.3	1194.3
160°	1210.7	1210.1	1209.4	1208.8	1208.2	1207.8	1207.5	1207.3	1207.1	1206.9	1208.2
162.5°	1222.8	1222.1	1221.2	1220.4	1219.6	1219.1	1218.9	1218.7	1218.5	1218.3	1219.5
165°	1238.2	1237.1	1236.1	1235.0	1234.0	1233.5	1233.5	1233.5	1233.5	1233.5	1235.1
167.5°	1250.3	1249.2	1248.1	1247.0	1245.9	1245.3	1245.2	1245.0	1245.0	1244.8	1246.7
170°	1257.1	1255.9	1254.6	1253.4	1252.1	1251.6	1251.7	1252.0	1252.1	1252.4	1254.1
172.5°	1261.7	1260.4	1259.1	1257.8	1256.6	1256.1	1256.3	1256.5	1256.7	1256.9	1258.6
175°	1266.6	1265.3	1264.0	1262.8	1261.5	1261.0	1261.2	1261.4	1261.7	1261.8	1263.7
177.5°	1268.9	1267.7	1266.5	1265.3	1264.1	1263.7	1264.0	1264.4	1264.8	1265.1	1266.4
180°	1266.6	1266.6	1266.6	1266.6	1266.6	1266.6	1266.6	1266.6	1266.6	1266.6	1266.6



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CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
0°	1006.7	1006.7	1006.7	1006.7	1006.7	1006.7	1006.7	1006.7
2.5°	1003.1	1004.5	1005.9	1006.5	1006.3	1006.1	1005.9	1005.8
5°	1000.5	1002.5	1004.5	1005.3	1005.1	1004.9	1004.6	1004.4
7.5°	995.2	997.4	999.6	1000.6	1000.4	1000.1	999.9	999.6
10°	989.7	992.0	994.3	995.2	995.0	994.7	994.5	994.3
12.5°	982.1	984.1	986.2	987.2	987.2	987.1	987.1	987.0
15°	968.3	970.5	972.8	973.8	973.5	973.3	973.1	972.8
17.5°	951.5	953.8	956.1	957.2	956.9	956.8	956.5	956.3
20°	938.3	940.9	943.4	944.6	944.6	944.6	944.6	944.6
22.5°	923.0	925.5	928.1	929.5	929.9	930.3	930.7	931.1
25°	899.4	902.1	904.9	906.4	906.7	906.9	907.2	907.4
27.5°	872.9	875.4	878.0	879.4	879.7	880.0	880.3	880.6
30°	854.4	857.0	859.8	861.4	861.9	862.4	863.0	863.5
32.5°	835.3	838.5	841.6	843.4	843.9	844.4	844.9	845.5
35°	805.1	808.6	812.1	814.2	815.0	815.7	816.5	817.3
37.5°	773.6	777.2	780.7	782.9	783.7	784.6	785.3	786.1
40°	751.5	755.2	759.0	761.4	762.4	763.4	764.4	765.4
42.5°	729.8	733.9	738.1	740.5	741.4	742.2	743.0	743.7
45°	696.1	700.4	704.7	707.4	708.7	709.9	711.2	712.4
47.5°	660.6	665.0	669.4	672.4	673.8	675.4	676.9	678.4
50°	635.6	640.7	645.6	648.9	650.4	651.9	653.4	654.9
52.5°	610.4	615.4	620.4	623.6	625.2	626.6	628.2	629.7
55°	572.5	577.6	582.5	585.8	587.3	588.8	590.3	591.8
57.5°	532.7	538.7	544.6	548.3	549.7	551.1	552.5	553.9
60°	505.2	511.0	516.7	520.7	522.7	524.6	526.7	528.6
62.5°	478.2	484.0	489.8	493.6	495.6	497.6	499.6	501.7
65°	436.3	442.6	448.9	453.1	455.0	457.1	459.0	461.1
67.5°	395.3	401.7	408.1	412.2	414.2	416.1	418.1	420.0
70°	366.3	373.1	379.8	384.2	385.9	387.7	389.4	391.2
72.5°	338.9	345.4	352.0	356.3	358.2	360.2	362.2	364.1
75°	296.9	303.9	311.0	315.6	317.9	320.2	322.4	324.7
77.5°	258.0	265.1	272.1	277.0	279.3	281.8	284.1	286.6
80°	232.6	240.1	247.6	252.3	254.4	256.4	258.4	260.4
82.5°	207.7	215.5	223.1	228.1	230.3	232.5	234.7	236.9
85°	172.8	180.3	187.8	192.9	195.4	197.9	200.4	202.9
87.5°	147.9	155.5	163.0	167.9	170.2	172.4	174.7	177.0
90°	149.5	158.0	166.6	172.0	174.5	176.8	179.3	181.7
92.5°	142.9	151.2	159.6	164.8	166.9	168.9	171.0	173.2
95°	134.9	143.0	151.0	156.3	158.7	161.2	163.6	166.2
97.5°	129.5	136.2	142.8	147.4	149.8	152.1	154.5	156.9
100°	133.7	136.9	140.1	142.7	144.6	146.6	148.5	150.5
102.5°	217.9	185.9	153.8	138.8	140.8	142.8	144.8	146.8
105°	386.3	394.4	402.6	403.9	398.3	392.7	387.2	381.6
107.5°	450.5	457.6	464.7	469.6	472.1	474.7	477.4	480.0
110°	494.4	500.6	506.8	511.2	513.8	516.4	519.1	521.7



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CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
112.5°	536.2	541.7	547.1	551.3	554.1	556.9	559.7	562.6
115°	599.2	605.1	611.0	614.8	616.6	618.3	620.1	621.8
117.5°	662.0	667.2	672.3	675.8	677.7	679.6	681.5	683.5
120°	700.6	706.0	711.4	714.9	716.5	718.1	719.7	721.2
122.5°	738.9	744.2	749.4	752.8	754.2	755.5	756.9	758.3
125°	792.6	798.0	803.4	807.0	808.7	810.4	812.1	813.8
127.5°	844.9	849.2	853.6	856.6	858.1	859.7	861.2	862.7
130°	876.7	881.3	886.1	889.2	890.7	892.2	893.7	895.2
132.5°	908.2	912.8	917.3	920.2	921.5	922.9	924.2	925.5
135°	950.2	954.6	959.1	962.3	964.2	966.1	968.0	970.0
137.5°	991.4	995.6	999.6	1002.2	1003.4	1004.5	1005.7	1006.8
140°	1017.1	1020.9	1024.8	1027.5	1029.0	1030.5	1031.9	1033.4
142.5°	1041.4	1044.7	1048.1	1050.3	1051.3	1052.4	1053.5	1054.6
145°	1076.8	1078.5	1080.2	1081.7	1083.2	1084.6	1086.1	1087.4
147.5°	1108.0	1108.3	1108.7	1109.4	1110.4	1111.4	1112.5	1113.5
150°	1129.2	1129.2	1129.2	1129.4	1129.5	1129.8	1130.0	1130.2
152.5°	1148.1	1148.4	1148.8	1148.8	1148.8	1148.6	1148.5	1148.3
155°	1173.5	1174.4	1175.3	1175.3	1174.7	1174.0	1173.5	1172.8
157.5°	1195.5	1196.5	1197.7	1197.7	1196.5	1195.5	1194.3	1193.3
160°	1209.4	1210.7	1211.9	1211.9	1210.7	1209.4	1208.2	1206.9
162.5°	1220.8	1222.1	1223.4	1223.3	1221.8	1220.4	1219.0	1217.5
165°	1236.8	1238.5	1240.2	1240.1	1238.2	1236.2	1234.4	1232.5
167.5°	1248.5	1250.3	1252.2	1252.1	1250.0	1247.9	1245.8	1243.7
170°	1255.7	1257.4	1259.1	1258.9	1256.8	1254.7	1252.6	1250.5
172.5°	1260.3	1262.0	1263.6	1263.4	1261.1	1258.8	1256.5	1254.3
175°	1265.7	1267.5	1269.4	1269.1	1266.6	1264.0	1261.5	1259.0
177.5°	1267.8	1269.1	1270.5	1270.2	1268.1	1266.1	1264.0	1262.1
180°	1266.6	1266.6	1266.6	1266.6	1266.6	1266.6	1266.6	1266.6

(END OF REPORT)