

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: P331360-940

Luminaire Tested: **SA2XXDIP-C675D925U940-4F0-1E-UDD-D**

Issue Date: 10/7/2019

Test Information

Test Method: LM-79-08
Report Number: P331360-940
REPORT IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-1807-864-2,
Test Lab: INNOVATION CENTER
Issue Date: 10/7/2019
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: NEO-RAY
Catalog Number: SA2XXDIP-C675D925U940-4F0-1E-UDD-D
Description: DEFINE 2 DIRECT-INDIRECT PENDANT LED LUMINAIRE
DOWNLIGHT 675 LUMENS PER FOOT, DROP SATIN WHITE DIFFUSER
UPLIGHT 925 LUMENS PER FOOT, NO LENS
Light Source: -
Ballast/Driver: ELECTRONIC DRIVER

Summary

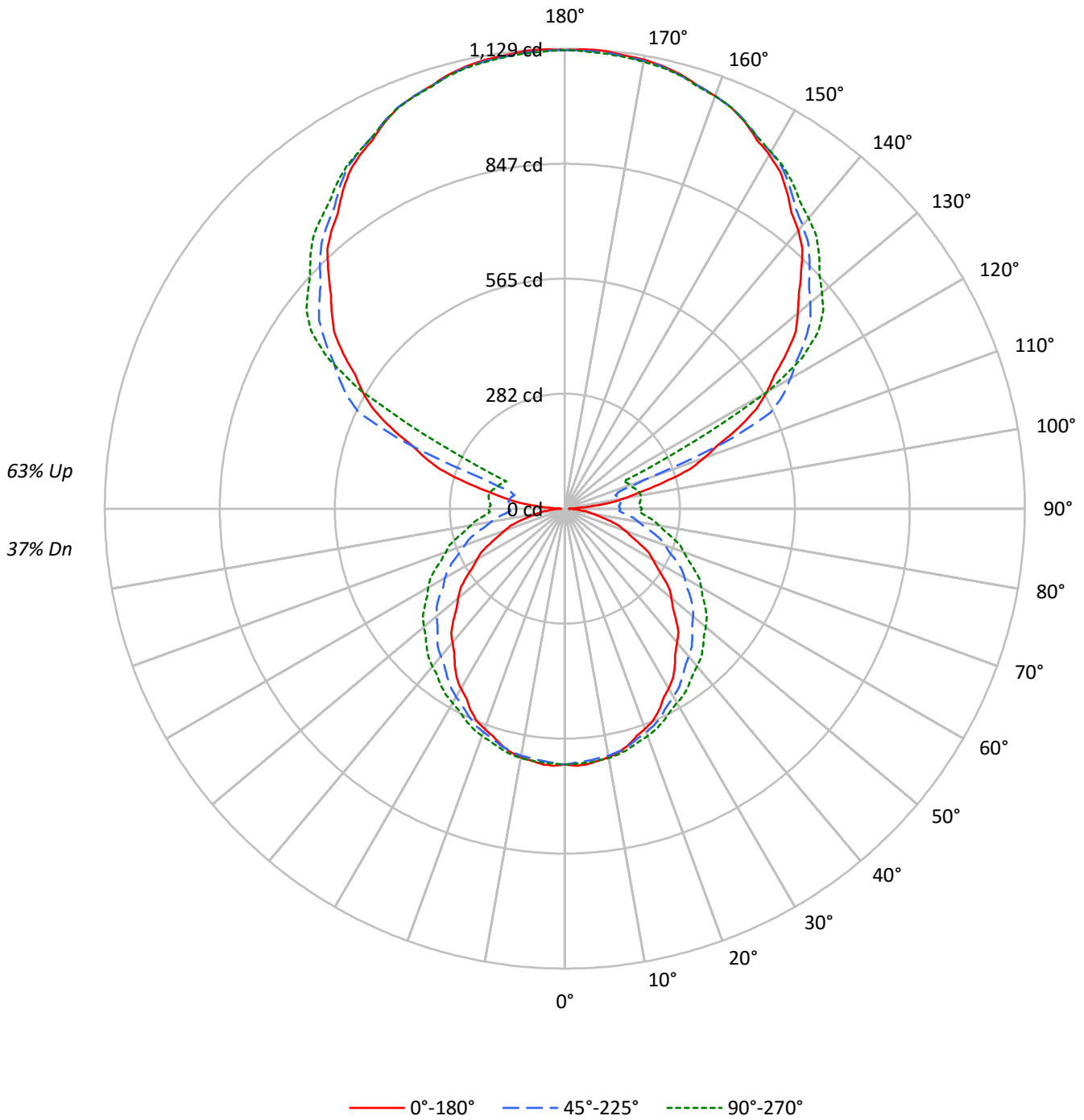
Lumens per Lamp: N/A
Luminaire Lumens: 5697.4 lumens
Efficiency: N/A
Efficacy: 109.6 lumens/watt
Spacing Criteria (0/90/45): 1.21 / 1.32 / 1.42
Luminous Opening: Rectangular w/ Sides (W: 0.17' x L: 4' x H: 0.08')
CIE Type: Semi-Indirect

Input Watts (W): 52
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	104	104	104	104	94	94	94	94	76	76	76	60	60	60	45	45	45	37
1	94	89	85	81	85	81	77	74	65	63	60	51	49	47	38	36	35	29
2	85	77	71	65	77	70	64	60	56	52	49	44	41	39	32	31	29	24
3	77	67	60	54	69	61	55	49	49	45	41	38	35	32	28	26	24	19
4	70	59	51	45	63	54	47	41	44	38	34	34	30	27	25	23	20	16
5	64	53	44	38	58	48	41	35	39	33	29	30	26	23	22	20	18	14
6	59	47	39	33	53	43	36	30	35	29	25	27	23	20	20	18	15	12
7	55	42	34	29	49	39	31	26	31	26	22	25	21	18	18	16	14	11
8	51	38	30	25	46	35	28	23	29	23	19	23	19	16	17	14	12	9
9	47	35	27	22	42	32	25	21	26	21	17	21	17	14	16	13	11	8
10	44	32	25	20	40	29	23	18	24	19	15	19	15	13	14	12	10	8

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	10141	10141	10141
5°	10191	9762	9724
10°	10126	9474	9367
15°	9987	9168	8990
20°	9810	8841	8627
25°	9637	8525	8298
30°	9392	8201	7967
35°	9142	7888	7735
40°	8880	7621	7501
45°	8632	7383	7302
50°	8365	7166	7106
55°	8089	6934	6906
60°	7745	6695	6695
65°	7391	6412	6445
70°	6992	6110	6173
75°	6483	5811	5925
80°	5680	5509	5672
85°	4908	5245	5473



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	59.5	1.0
10°-20°	170.7	3.0
20°-30°	258.6	4.5
30°-40°	315.0	5.5
40°-50°	338.9	5.9
50°-60°	329.1	5.8
60°-70°	287.4	5.0
70°-80°	221.2	3.9
80°-90°	151.2	2.7
90°-100°	139.8	2.5
100°-110°	212.4	3.7
110°-120°	417.4	7.3
120°-130°	635.0	11.1
130°-140°	657.6	11.5
140°-150°	602.5	10.6
150°-160°	482.8	8.5
160°-170°	311.1	5.5
170°-180°	107.1	1.9
0°-30°	488.8	8.6
0°-40°	803.8	14.1
0°-60°	1471.8	25.8
0°-90°	2131.7	37.4
90°-120°	769.6	13.5
90°-150°	2664.7	46.8
90°-180°	3566.0	62.6
0°-180°	5697.4	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	628	628	628	628	628	
5°	630	627	622	627	626	60
15°	601	602	603	610	610	169
25°	546	553	561	571	574	251
35°	471	486	503	523	530	294
45°	386	411	442	470	480	298
55°	296	329	376	408	420	264
65°	202	247	300	336	350	201
75°	112	163	221	259	272	118
85°	33	89	148	184	198	35
90°	10	72	136	175	190	9
95°	60	79	136	174	185	71
105°	252	290	128	167	182	270
115°	472	498	557	224	159	464
125°	664	676	719	748	760	592
135°	820	833	850	876	882	634
145°	950	950	963	974	975	594
155°	1046	1040	1049	1053	1047	482
165°	1103	1098	1100	1105	1100	311
175°	1128	1123	1124	1129	1121	107
180°	1126	1126	1126	1126	1126	



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CANDELA DISTRIBUTION (FULL):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
0°	628.1	628.1	628.1	628.1	628.1	628.1	628.1	628.1	628.1	628.1	628.1
2.5°	631.8	631.2	630.8	630.3	629.8	629.0	627.9	626.7	625.6	624.5	625.3
5°	629.9	629.3	628.7	628.1	627.5	626.6	625.4	624.2	622.9	621.7	622.9
7.5°	624.3	623.8	623.5	623.0	622.7	622.0	621.1	620.1	619.2	618.3	619.7
10°	619.9	619.5	619.1	618.7	618.3	617.8	617.2	616.6	616.0	615.4	617.0
12.5°	612.6	612.7	612.8	612.9	613.0	612.8	612.3	611.9	611.4	611.0	612.6
15°	600.8	601.2	601.6	602.0	602.4	602.6	602.6	602.6	602.6	602.6	604.4
17.5°	585.5	586.4	587.2	588.1	588.9	589.7	590.3	590.9	591.6	592.3	594.1
20°	575.3	576.3	577.3	578.4	579.3	580.2	581.0	581.9	582.7	583.5	585.8
22.5°	564.4	565.5	566.8	567.9	569.1	570.2	571.4	572.5	573.6	574.8	577.0
25°	546.2	547.6	549.0	550.5	551.9	553.5	555.3	557.1	558.9	560.7	563.2
27.5°	524.3	526.6	529.0	531.3	533.6	535.8	538.0	540.1	542.2	544.4	547.4
30°	509.8	512.4	515.1	517.6	520.3	522.9	525.6	528.2	530.8	533.4	536.6
32.5°	493.7	496.7	499.6	502.6	505.6	508.6	511.8	514.8	517.9	521.0	524.8
35°	470.6	474.0	477.5	480.9	484.4	488.0	491.9	495.7	499.5	503.4	507.8
37.5°	445.5	449.5	453.4	457.4	461.4	465.8	470.8	475.8	480.7	485.7	490.7
40°	428.7	433.2	437.7	442.1	446.6	451.5	457.0	462.4	467.9	473.3	478.6
42.5°	412.8	417.1	421.6	426.1	430.5	435.9	442.2	448.4	454.7	461.0	466.7
45°	385.9	391.5	396.9	402.3	407.8	414.1	421.2	428.3	435.3	442.4	448.7
47.5°	359.5	365.5	371.5	377.4	383.3	390.5	398.8	407.1	415.4	423.7	430.3
50°	341.3	347.7	353.9	360.2	366.4	374.2	383.3	392.4	401.4	410.5	417.4
52.5°	323.9	330.5	337.1	343.7	350.3	358.4	367.9	377.6	387.1	396.7	403.8
55°	295.9	303.1	310.4	317.7	324.9	333.9	344.4	354.9	365.4	375.9	383.3
57.5°	268.1	276.4	284.6	292.8	301.0	310.5	321.2	331.9	342.7	353.4	361.2
60°	248.5	257.2	265.9	274.6	283.3	293.5	305.0	316.5	328.0	339.6	347.2
62.5°	231.0	240.0	249.1	258.1	267.2	277.4	288.9	300.4	312.0	323.5	331.7
65°	202.1	212.0	221.9	231.8	241.7	252.6	264.6	276.5	288.5	300.4	308.7
67.5°	175.5	185.8	196.3	206.6	217.0	228.2	240.4	252.6	264.8	277.1	285.4
70°	156.6	167.1	177.6	188.2	198.7	210.2	222.7	235.2	247.8	260.4	269.0
72.5°	139.1	149.9	160.8	171.7	182.4	194.2	207.0	219.6	232.4	245.0	253.6
75°	112.0	123.3	134.6	146.0	157.3	169.4	182.4	195.3	208.2	221.2	229.9
77.5°	85.8	97.6	109.5	121.3	133.1	145.7	158.8	172.0	185.1	198.2	207.0
80°	68.3	80.6	92.9	105.3	117.6	130.4	143.6	156.7	169.8	183.0	191.5
82.5°	53.7	65.9	78.0	90.2	102.5	115.1	128.5	141.8	155.1	168.4	176.9
85°	32.8	45.3	57.9	70.4	82.9	95.7	108.6	121.5	134.6	147.5	156.0
87.5°	18.0	30.5	42.9	55.4	67.9	80.7	93.9	107.2	120.4	133.6	142.0
90°	9.9	23.6	37.4	51.1	64.8	78.8	93.3	107.6	122.1	136.4	145.4
92.5°	24.8	35.6	46.3	57.1	67.8	79.7	92.9	106.1	119.3	132.5	140.9
95°	60.2	63.8	67.3	70.8	74.4	82.8	96.2	109.7	123.1	136.4	145.1
97.5°	111.5	103.1	94.7	86.3	77.9	81.1	95.6	110.2	124.8	139.4	147.6
100°	150.5	133.2	115.9	98.6	81.3	79.8	94.3	108.6	123.1	137.4	146.4
102.5°	192.8	194.4	196.0	197.6	199.1	192.6	177.8	163.1	148.4	133.7	142.9
105°	252.1	263.4	274.7	286.0	297.3	283.5	244.6	205.7	166.8	128.0	137.1
107.5°	320.8	329.9	339.0	348.0	357.1	337.1	287.9	238.7	189.6	140.4	145.2
110°	364.4	372.3	380.1	388.0	395.8	378.5	336.2	293.7	251.4	208.9	197.3



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CANDELA DISTRIBUTION (continued):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
112.5°	406.1	412.9	419.6	426.4	433.2	434.8	431.3	427.8	424.4	420.8	361.3
115°	471.9	477.2	482.5	487.9	493.1	502.6	516.2	529.9	543.5	557.1	479.4
117.5°	529.8	534.7	539.6	544.5	549.4	557.6	569.1	580.7	592.2	603.7	589.4
120°	572.8	576.3	579.9	583.4	586.9	594.3	605.6	617.1	628.4	639.7	647.6
122.5°	609.3	612.5	615.6	618.8	622.1	629.2	640.3	651.5	662.6	673.8	680.6
125°	663.9	666.3	668.6	671.0	673.3	679.5	689.4	699.3	709.2	719.1	725.9
127.5°	714.3	716.7	719.1	721.5	723.9	729.0	736.7	744.6	752.3	760.1	767.0
130°	746.2	748.9	751.5	754.3	757.0	761.4	767.7	773.9	780.2	786.4	793.2
132.5°	778.7	781.0	783.3	785.5	787.8	791.6	796.8	802.1	807.4	812.6	819.0
135°	820.2	823.0	826.0	828.8	831.8	835.1	838.7	842.3	846.0	849.6	855.7
137.5°	863.0	865.0	867.0	869.0	870.9	873.3	876.1	878.8	881.5	884.3	889.7
140°	891.1	892.2	893.5	894.7	896.0	897.9	900.3	902.7	905.0	907.4	912.3
142.5°	914.5	915.6	916.7	917.8	918.9	920.6	923.0	925.3	927.7	930.1	934.2
145°	950.4	950.2	950.0	949.9	949.7	951.1	954.2	957.3	960.4	963.4	965.9
147.5°	982.5	981.8	981.1	980.4	979.7	980.9	983.9	987.0	990.1	993.1	994.2
150°	1003.4	1002.1	1000.8	999.5	998.3	999.1	1002.0	1004.9	1007.8	1010.7	1011.7
152.5°	1020.9	1019.5	1018.1	1016.7	1015.3	1015.9	1018.7	1021.5	1024.2	1027.0	1028.1
155°	1046.5	1044.9	1043.2	1041.6	1040.0	1040.3	1042.4	1044.6	1046.8	1048.9	1050.0
157.5°	1066.5	1065.1	1063.8	1062.4	1061.0	1061.1	1062.7	1064.2	1065.7	1067.2	1068.4
160°	1078.3	1077.2	1076.1	1075.0	1073.9	1073.9	1075.0	1076.1	1077.2	1078.3	1079.3
162.5°	1088.7	1087.6	1086.5	1085.4	1084.3	1084.2	1085.2	1086.1	1087.1	1088.1	1089.2
165°	1102.7	1101.6	1100.5	1099.4	1098.3	1098.1	1098.6	1099.1	1099.7	1100.3	1101.5
167.5°	1113.1	1112.1	1111.0	1109.8	1108.8	1108.5	1109.0	1109.5	1110.0	1110.5	1111.8
170°	1119.0	1117.8	1116.8	1115.7	1114.6	1114.3	1114.6	1115.0	1115.4	1115.7	1117.0
172.5°	1122.8	1121.8	1120.7	1119.6	1118.6	1118.2	1118.6	1118.9	1119.3	1119.6	1120.9
175°	1127.9	1126.7	1125.4	1124.1	1122.8	1122.4	1122.8	1123.1	1123.5	1123.8	1125.2
177.5°	1128.7	1127.7	1126.8	1125.7	1124.7	1124.3	1124.4	1124.5	1124.7	1124.8	1125.9
180°	1125.5	1125.5	1125.5	1125.5	1125.5	1125.5	1125.5	1125.5	1125.5	1125.5	1125.5



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CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
0°	628.1	628.1	628.1	628.1	628.1	628.1	628.1	628.1
2.5°	626.1	626.9	627.7	627.9	627.6	627.3	627.0	626.7
5°	624.2	625.4	626.6	627.1	626.9	626.7	626.5	626.2
7.5°	621.2	622.7	624.1	624.7	624.6	624.3	624.1	623.9
10°	618.6	620.2	621.9	622.5	622.3	622.1	622.0	621.7
12.5°	614.2	615.8	617.5	618.1	618.0	617.8	617.6	617.3
15°	606.3	608.1	609.9	610.7	610.6	610.3	610.1	609.9
17.5°	596.0	598.0	599.9	600.8	600.8	600.8	600.8	600.8
20°	588.0	590.2	592.4	593.5	593.5	593.5	593.5	593.5
22.5°	579.3	581.5	583.6	585.0	585.2	585.6	585.9	586.2
25°	565.6	568.0	570.4	571.9	572.6	573.2	573.8	574.4
27.5°	550.5	553.6	556.7	558.4	558.8	559.3	559.7	560.2
30°	539.9	543.1	546.4	548.3	548.9	549.6	550.1	550.7
32.5°	528.5	532.3	535.9	538.3	539.5	540.6	541.6	542.7
35°	512.3	516.7	521.2	524.1	525.6	527.0	528.3	529.8
37.5°	495.6	500.5	505.5	508.7	510.2	511.7	513.2	514.7
40°	483.8	489.1	494.4	497.9	499.7	501.6	503.4	505.2
42.5°	472.4	478.2	483.9	487.8	489.5	491.4	493.2	495.0
45°	455.0	461.2	467.5	471.6	473.7	475.7	477.7	479.7
47.5°	436.8	443.4	449.9	454.2	456.5	458.7	460.9	463.2
50°	424.3	431.1	438.1	442.6	444.9	447.1	449.2	451.5
52.5°	410.8	417.9	424.9	429.6	431.9	434.4	436.8	439.2
55°	390.5	397.8	405.1	410.0	412.7	415.3	417.9	420.5
57.5°	369.1	376.9	384.8	390.0	392.7	395.4	398.1	400.7
60°	354.9	362.6	370.3	375.6	378.4	381.2	384.1	386.9
62.5°	339.8	348.0	356.2	361.7	364.3	366.9	369.6	372.3
65°	317.0	325.3	333.6	339.0	341.7	344.3	347.0	349.6
67.5°	293.8	302.2	310.6	316.2	318.9	321.6	324.4	327.2
70°	277.8	286.4	295.2	300.7	303.1	305.6	308.0	310.4
72.5°	262.2	270.6	279.2	284.9	287.8	290.8	293.6	296.6
75°	238.6	247.3	256.0	261.6	264.3	266.9	269.6	272.2
77.5°	215.6	224.3	232.9	238.6	241.5	244.3	247.1	249.9
80°	199.9	208.5	217.0	222.7	225.4	228.3	231.1	234.0
82.5°	185.4	193.9	202.4	207.9	210.6	213.3	216.0	218.6
85°	164.4	173.0	181.5	187.1	189.9	192.8	195.6	198.4
87.5°	150.5	158.9	167.4	172.9	175.6	178.3	180.9	183.5
90°	154.4	163.5	172.5	178.3	181.1	183.9	186.7	189.5
92.5°	149.3	157.7	166.1	171.7	174.2	176.9	179.6	182.2
95°	153.6	162.2	170.9	176.2	178.5	180.7	183.0	185.2
97.5°	155.8	164.0	172.2	177.6	180.2	182.8	185.4	188.1
100°	155.3	164.3	173.2	179.0	181.6	184.1	186.7	189.3
102.5°	152.0	161.3	170.5	176.5	179.1	181.9	184.7	187.3
105°	146.1	155.2	164.3	170.2	173.2	176.1	179.1	182.1
107.5°	149.9	154.7	159.4	163.3	166.3	169.2	172.2	175.1
110°	185.7	174.1	162.5	158.1	161.0	164.1	167.0	170.0



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CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
112.5°	301.8	242.2	182.6	154.3	157.0	159.9	162.6	165.5
115°	401.6	324.0	246.2	202.0	191.1	180.3	169.5	158.7
117.5°	575.2	560.9	546.6	519.1	478.3	437.6	396.8	356.1
120°	655.4	663.3	671.1	663.9	641.7	619.5	597.3	575.1
122.5°	687.4	694.2	701.1	703.0	700.2	697.3	694.5	691.6
125°	732.5	739.3	746.0	750.6	753.0	755.3	757.7	760.0
127.5°	773.8	780.7	787.6	791.9	793.8	795.8	797.6	799.5
130°	800.0	806.9	813.8	817.9	819.3	820.7	822.2	823.7
132.5°	825.4	831.8	838.2	842.1	843.6	845.0	846.4	847.8
135°	861.7	867.8	873.9	877.5	878.8	880.0	881.3	882.5
137.5°	895.3	900.8	906.2	909.4	910.2	910.9	911.7	912.4
140°	917.1	922.0	926.8	929.5	929.8	930.1	930.4	930.7
142.5°	938.3	942.3	946.4	948.5	948.6	948.8	949.0	949.0
145°	968.4	970.9	973.4	974.6	974.7	974.8	975.0	975.1
147.5°	995.2	996.4	997.5	997.9	997.6	997.4	997.1	996.8
150°	1012.8	1014.0	1015.0	1015.1	1014.2	1013.3	1012.4	1011.5
152.5°	1029.1	1030.2	1031.3	1031.3	1030.0	1028.9	1027.7	1026.4
155°	1051.1	1052.2	1053.3	1053.1	1051.7	1050.2	1048.7	1047.3
157.5°	1069.6	1070.9	1072.1	1072.0	1070.6	1069.2	1067.7	1066.4
160°	1080.4	1081.6	1082.6	1082.5	1081.2	1080.0	1078.7	1077.5
162.5°	1090.5	1091.7	1093.0	1092.8	1091.3	1089.7	1088.2	1086.5
165°	1102.8	1104.0	1105.3	1105.3	1104.0	1102.8	1101.5	1100.3
167.5°	1113.0	1114.3	1115.6	1115.4	1113.7	1112.1	1110.5	1108.8
170°	1118.3	1119.5	1120.8	1120.6	1119.0	1117.3	1115.7	1114.1
172.5°	1122.1	1123.5	1124.7	1124.5	1122.8	1121.2	1119.6	1118.0
175°	1126.4	1127.7	1128.9	1128.6	1126.9	1125.1	1123.2	1121.4
177.5°	1126.9	1127.9	1128.9	1128.7	1127.5	1126.1	1124.8	1123.6
180°	1125.5	1125.5	1125.5	1125.5	1125.5	1125.5	1125.5	1125.5

(END OF REPORT)