

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: P331410-935

Luminaire Tested: **SA2XXDIP-C865D925U935-4F0-1E-UDD-F4**

Issue Date: 10/7/2019

Test Information

Test Method: LM-79-08
Report Number: P331410-935
REPORT IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-1807-864-16,
Test Lab: INNOVATION CENTER
Issue Date: 10/7/2019
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: NEO-RAY
Catalog Number: SA2XXDIP-C865D925U935-4F0-1E-UDD-F4
Description: DEFINE 2 DIRECT-INDIRECT PENDANT LED LUMINAIRE
DOWNLIGHT 865 LUMENS PER FOOT, FLUSH SATIN WHITE DIFFUSER
UPLIGHT 925 LUMENS PER FOOT, BATWING OPTIC
Light Source: -
Ballast/Driver: ELECTRONIC DRIVER

Summary

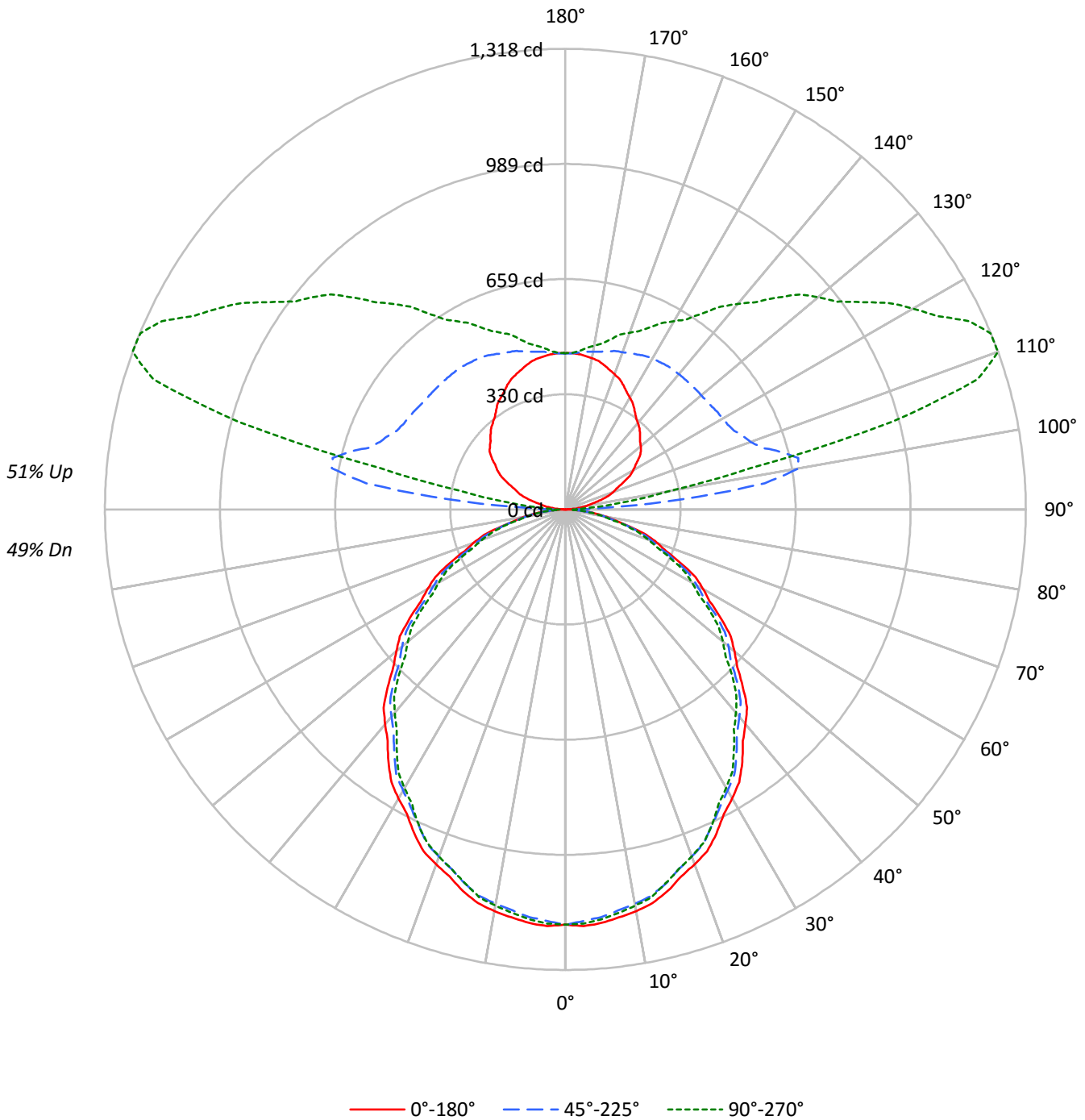
Lumens per Lamp: N/A
Luminaire Lumens: 6136.3 lumens
Efficiency: N/A
Efficacy: 101.4 lumens/watt
Spacing Criteria (0/90/45): 1.2 / 1.16 / 1.3
Luminous Opening: Rectangular (W 0.17' x L: 4' x H: 0')
CIE Type: General Diffuse

Input Watts (W): 60.5
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	107	107	107	107	99	99	99	99	83	83	83	69	69	69	56	56	56	49
1	98	93	89	86	90	86	83	80	73	70	68	60	59	57	49	48	47	42
2	89	81	75	70	82	75	70	65	64	60	56	53	50	48	43	41	39	35
3	81	72	64	58	74	66	60	55	56	51	47	47	43	40	38	36	34	29
4	74	63	55	49	68	59	52	46	50	45	40	42	38	35	34	31	29	25
5	68	56	48	42	63	52	45	40	45	39	35	38	33	30	31	28	25	22
6	63	51	43	37	58	47	40	35	40	35	30	34	30	26	28	25	22	19
7	58	46	38	32	53	43	35	30	36	31	27	31	26	23	26	22	20	17
8	54	42	34	28	50	39	32	27	33	28	24	28	24	21	23	20	18	15
9	50	38	30	25	46	35	29	24	31	25	21	26	22	19	22	18	16	14
10	47	35	28	23	43	32	26	22	28	23	19	24	20	17	20	17	15	13

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	19184	19184	19184
5°	19258	18979	19091
10°	19143	18787	18882
15°	18907	18544	18524
20°	18570	18179	18158
25°	18235	17728	17728
30°	17807	17316	17167
35°	17406	16821	16575
40°	16904	16326	16012
45°	16408	15835	15445
50°	15870	15325	14780
55°	15308	14728	14184
60°	14683	14018	13504
65°	14013	13310	12699
70°	13161	12458	11863
75°	11971	11472	11185
80°	10628	10302	9772
85°	8670	8262	7410



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	111.7	1.8
10°-20°	314.4	5.1
20°-30°	462.1	7.5
30°-40°	536.8	8.7
40°-50°	536.2	8.7
50°-60°	467.6	7.6
60°-70°	345.7	5.6
70°-80°	195.8	3.2
80°-90°	56.7	0.9
90°-100°	178.7	2.9
100°-110°	606.3	9.9
110°-120°	644.1	10.5
120°-130°	530.2	8.6
130°-140°	425.8	6.9
140°-150°	321.8	5.2
150°-160°	226.1	3.7
160°-170°	133.1	2.2
170°-180°	43.3	0.7
0°-30°	888.2	14.5
0°-40°	1425.0	23.2
0°-60°	2428.7	39.6
0°-90°	3026.9	49.3
90°-120°	1429.1	23.3
90°-150°	2706.8	44.1
90°-180°	3109.0	50.7
0°-180°	6136.3	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1188	1188	1188	1188	1188	
5°	1188	1183	1171	1180	1178	113
15°	1131	1124	1109	1113	1108	318
25°	1024	1014	995	997	995	471
35°	883	871	853	847	841	551
45°	719	710	694	681	676	554
55°	544	537	523	510	504	486
65°	367	360	348	338	332	363
75°	192	189	184	178	179	205
85°	47	46	45	41	40	54
90°	1	12	29	28	28	4
95°	30	74	337	127	98	32
105°	105	158	637	1138	968	111
115°	185	233	533	1100	1274	183
125°	258	305	512	891	1034	229
135°	302	361	506	748	857	234
145°	345	397	504	625	684	217
155°	393	424	489	553	575	181
165°	428	441	468	497	504	121
175°	446	446	450	456	455	42
180°	447	447	447	447	447	



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CANDELA DISTRIBUTION (FULL):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
0°	1188.2	1188.2	1188.2	1188.2	1188.2	1188.2	1188.2	1188.2	1188.2	1188.2	1188.2
2.5°	1193.7	1192.7	1191.6	1190.7	1189.6	1188.0	1185.8	1183.5	1181.3	1179.1	1181.1
5°	1188.2	1187.1	1186.2	1185.2	1184.1	1182.2	1179.5	1176.6	1173.9	1171.0	1173.1
7.5°	1177.7	1176.1	1174.6	1172.9	1171.4	1169.2	1166.3	1163.5	1160.6	1157.8	1159.9
10°	1167.6	1165.9	1164.1	1162.3	1160.5	1158.1	1155.0	1152.0	1149.0	1145.9	1148.0
12.5°	1153.9	1152.4	1150.8	1149.2	1147.6	1145.3	1142.3	1139.2	1136.2	1133.2	1134.5
15°	1131.1	1129.5	1128.0	1126.5	1125.0	1122.6	1119.3	1115.9	1112.7	1109.4	1110.3
17.5°	1101.8	1100.3	1098.8	1097.3	1095.7	1093.3	1089.9	1086.6	1083.2	1079.9	1081.1
20°	1080.8	1079.3	1077.8	1076.2	1074.7	1072.2	1068.6	1065.1	1061.5	1058.0	1058.7
22.5°	1059.8	1057.7	1055.5	1053.3	1051.3	1048.5	1045.2	1041.8	1038.5	1035.1	1035.3
25°	1023.6	1021.7	1019.6	1017.6	1015.5	1012.4	1008.1	1003.8	999.4	995.1	995.7
27.5°	982.6	980.8	978.9	977.1	975.3	972.6	969.2	965.8	962.4	959.0	958.3
30°	955.1	953.1	951.1	949.1	947.0	944.1	940.3	936.5	932.6	928.8	928.1
32.5°	925.9	924.3	922.6	921.0	919.4	916.5	912.6	908.5	904.6	900.5	899.1
35°	883.1	880.6	878.0	875.6	873.0	869.7	865.6	861.6	857.5	853.4	852.0
37.5°	834.9	832.7	830.4	828.2	826.0	822.9	818.8	814.8	810.6	806.6	804.7
40°	802.0	800.0	798.0	795.9	793.9	790.8	786.8	782.7	778.7	774.6	772.3
42.5°	770.1	768.0	765.9	764.0	761.9	758.9	754.8	750.8	746.7	742.6	740.1
45°	718.6	716.9	715.1	713.3	711.5	708.7	704.9	701.1	697.3	693.5	690.7
47.5°	667.4	665.8	664.1	662.5	660.7	657.9	653.9	650.0	646.0	642.0	639.1
50°	631.8	630.5	629.3	628.0	626.7	624.3	620.8	617.2	613.6	610.1	606.6
52.5°	597.1	595.4	593.7	592.0	590.4	587.9	584.5	581.2	577.8	574.5	571.5
55°	543.8	542.3	540.8	539.2	537.7	535.5	532.4	529.3	526.3	523.2	520.2
57.5°	490.3	489.1	487.9	486.7	485.5	483.2	479.8	476.5	473.1	469.8	466.8
60°	454.7	453.7	452.7	451.7	450.6	448.4	444.8	441.3	437.7	434.1	431.4
62.5°	420.0	418.4	416.7	415.1	413.5	411.3	408.5	405.8	403.0	400.4	397.8
65°	366.8	365.2	363.7	362.1	360.7	358.6	356.1	353.5	351.0	348.4	346.2
67.5°	312.6	311.3	310.1	308.9	307.7	306.0	303.7	301.4	299.1	296.8	295.1
70°	278.8	277.8	276.7	275.7	274.7	273.0	270.8	268.5	266.2	263.9	262.2
72.5°	244.0	243.1	242.0	241.0	240.0	238.8	237.3	235.8	234.3	232.8	231.1
75°	191.9	191.4	190.9	190.5	189.9	189.0	187.8	186.5	185.2	183.9	182.4
77.5°	145.3	144.5	143.6	142.8	141.9	141.2	140.7	140.2	139.7	139.1	138.4
80°	114.3	114.0	113.7	113.5	113.2	112.9	112.4	111.8	111.3	110.8	110.0
82.5°	85.0	85.0	84.9	84.8	84.8	84.6	84.3	84.0	83.7	83.4	82.4
85°	46.8	46.6	46.3	46.1	45.8	45.5	45.3	45.0	44.8	44.6	43.8
87.5°	16.6	16.7	17.0	17.0	16.9	17.0	17.5	18.3	18.9	18.6	17.8
90°	0.9	3.4	6.9	8.6	10.3	12.9	17.2	23.2	28.3	29.2	28.3
92.5°	10.5	15.2	21.4	25.1	30.9	39.0	58.5	85.8	110.1	111.7	94.4
95°	30.0	33.5	42.1	49.9	63.6	84.2	123.7	198.5	298.2	336.8	294.7
97.5°	49.0	53.6	62.8	74.4	90.2	113.6	163.2	267.4	433.1	575.1	603.2
100°	66.1	68.7	76.5	90.2	107.5	131.5	177.0	281.9	467.4	678.8	802.6
102.5°	82.0	83.9	91.6	105.4	123.2	147.3	189.4	282.6	454.4	682.3	876.8
105°	104.9	108.3	114.3	127.2	146.1	170.1	210.5	287.0	428.8	636.7	865.3
107.5°	129.6	132.3	138.2	150.1	168.8	193.0	232.2	298.9	416.0	588.0	789.9
110°	146.1	149.6	154.6	165.8	183.9	208.8	246.6	308.5	413.4	564.6	742.4



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CANDELA DISTRIBUTION (continued):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
112.5°	161.2	164.6	170.5	181.0	198.3	223.9	260.4	318.8	414.0	549.4	709.5
115°	184.8	189.1	194.2	204.5	221.7	244.9	281.9	334.2	417.6	532.8	668.6
117.5°	209.1	212.6	217.7	226.9	243.3	267.4	301.6	350.8	423.8	524.7	642.7
120°	224.3	227.7	232.9	240.6	257.8	281.9	315.4	361.8	427.9	519.9	629.0
122.5°	238.8	241.4	246.6	255.0	272.2	297.0	328.4	371.3	432.7	517.1	617.3
125°	257.8	260.4	265.5	275.9	293.0	317.1	348.0	386.7	440.0	512.1	600.6
127.5°	272.9	276.4	283.5	294.9	311.4	336.1	366.3	401.0	447.4	509.2	585.2
130°	281.9	285.2	293.9	305.9	323.1	347.2	377.2	409.9	452.9	507.8	574.9
132.5°	290.1	294.2	303.5	316.2	334.1	358.2	386.8	418.8	458.3	507.1	566.6
135°	302.5	305.9	316.2	329.1	348.9	372.9	400.5	430.5	464.9	506.1	555.1
137.5°	314.2	318.3	328.6	342.3	362.0	384.3	411.5	439.5	470.7	505.9	547.0
140°	323.1	326.6	336.8	350.6	369.5	391.8	417.6	444.3	473.5	505.2	542.3
142.5°	332.0	334.8	344.4	358.2	376.3	397.4	422.4	448.4	475.5	505.2	537.4
145°	345.4	348.9	357.5	370.4	387.5	406.5	429.6	453.7	477.8	503.5	531.1
147.5°	359.9	362.5	370.7	382.5	396.8	413.7	435.5	456.7	478.5	500.5	524.5
150°	369.5	372.0	378.9	390.1	403.0	418.4	438.2	458.0	477.8	498.4	519.0
152.5°	379.1	380.3	387.2	397.0	409.2	423.3	441.0	458.7	476.4	495.0	514.2
155°	392.7	393.6	398.7	408.2	417.6	430.5	445.1	459.7	474.3	489.0	505.2
157.5°	404.1	404.9	409.1	417.2	424.8	435.7	448.1	459.7	470.4	482.8	496.9
160°	411.6	412.5	415.9	422.8	429.6	439.1	449.4	459.7	468.3	478.6	490.7
162.5°	419.1	418.6	422.1	427.6	433.8	441.2	450.1	459.0	466.2	475.2	485.2
165°	427.9	427.1	428.8	433.9	438.2	443.4	451.2	457.2	462.3	468.3	476.0
167.5°	435.1	434.1	435.7	438.9	442.0	445.3	451.0	456.0	458.3	462.3	467.1
170°	440.0	438.2	439.1	441.7	443.4	446.0	450.3	454.6	456.3	458.8	462.3
172.5°	442.7	441.7	441.2	443.8	444.8	446.7	449.6	452.5	453.6	454.8	457.5
175°	446.0	445.1	444.3	446.0	446.0	446.9	448.6	450.3	449.4	450.3	451.2
177.5°	447.5	446.2	445.5	446.9	446.9	446.9	447.5	448.9	447.5	446.9	447.5
180°	446.9	446.9	446.9	446.9	446.9	446.9	446.9	446.9	446.9	446.9	446.9



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CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
0°	1188.2	1188.2	1188.2	1188.2	1188.2	1188.2	1188.2	1188.2
2.5°	1183.1	1185.2	1187.1	1188.0	1187.6	1187.1	1186.8	1186.4
5°	1175.1	1177.2	1179.2	1179.9	1179.5	1179.0	1178.5	1177.9
7.5°	1161.8	1163.9	1166.0	1166.7	1166.1	1165.5	1165.0	1164.4
10°	1150.0	1152.0	1154.1	1154.7	1153.9	1153.1	1152.4	1151.7
12.5°	1136.0	1137.4	1138.8	1139.3	1138.7	1138.2	1137.6	1137.0
15°	1111.4	1112.4	1113.4	1113.3	1112.1	1110.8	1109.5	1108.2
17.5°	1082.2	1083.4	1084.6	1084.5	1083.3	1082.1	1080.9	1079.7
20°	1059.5	1060.2	1061.0	1060.8	1059.9	1058.9	1057.8	1056.8
22.5°	1035.4	1035.5	1035.7	1035.5	1034.8	1034.2	1033.6	1033.0
25°	996.2	996.6	997.1	997.1	996.6	996.2	995.7	995.1
27.5°	957.5	956.7	956.0	955.0	953.7	952.5	951.3	950.1
30°	927.3	926.6	925.8	924.9	923.9	922.9	921.9	920.8
32.5°	897.8	896.4	895.0	893.8	892.9	891.8	890.8	889.8
35°	850.4	848.9	847.4	845.9	844.7	843.4	842.1	840.9
37.5°	802.9	801.0	799.1	797.5	796.3	795.1	793.9	792.6
40°	770.1	767.8	765.5	763.8	762.8	761.8	760.8	759.7
42.5°	737.6	735.1	732.7	730.7	729.3	727.9	726.4	725.0
45°	687.9	685.1	682.3	680.4	679.4	678.4	677.3	676.4
47.5°	636.2	633.3	630.3	628.1	626.6	625.2	623.7	622.2
50°	603.0	599.4	595.9	593.5	592.2	590.9	589.7	588.4
52.5°	568.5	565.6	562.7	560.3	558.7	557.0	555.3	553.6
55°	517.2	514.1	511.1	508.9	507.6	506.4	505.1	503.9
57.5°	463.8	460.8	457.8	455.8	454.9	453.9	453.0	451.9
60°	428.6	425.8	423.0	421.2	420.4	419.7	418.9	418.2
62.5°	395.1	392.5	389.9	388.2	387.2	386.2	385.3	384.4
65°	343.9	341.6	339.3	337.5	336.3	335.0	333.7	332.4
67.5°	293.3	291.4	289.7	288.3	287.3	286.3	285.2	284.2
70°	260.4	258.6	256.8	255.4	254.4	253.4	252.4	251.3
72.5°	229.3	227.5	225.8	224.5	223.6	222.8	222.0	221.2
75°	180.9	179.3	177.9	177.4	177.9	178.4	178.8	179.3
77.5°	137.7	136.9	136.1	135.3	134.7	134.0	133.3	132.5
80°	109.3	108.6	107.8	107.1	106.6	106.2	105.6	105.1
82.5°	81.5	80.5	79.6	79.0	78.9	78.8	78.7	78.6
85°	43.0	42.3	41.5	41.0	40.7	40.5	40.2	40.0
87.5°	17.0	16.1	15.8	15.6	15.4	15.2	15.0	14.8
90°	27.5	25.7	27.5	28.3	28.3	28.3	28.3	28.3
92.5°	74.9	64.3	57.1	51.7	51.1	48.3	49.0	47.6
95°	225.2	172.7	136.6	117.7	106.6	99.7	97.1	98.0
97.5°	525.4	429.8	336.8	274.8	233.8	212.6	200.0	192.9
100°	784.5	678.0	560.3	456.3	385.0	348.0	323.1	307.6
102.5°	954.3	930.3	844.2	734.0	656.5	593.4	562.3	541.4
105°	1044.0	1141.2	1152.4	1123.9	1070.7	1017.4	980.4	968.5
107.5°	979.5	1125.7	1215.0	1256.6	1263.3	1260.4	1253.0	1237.1
110°	923.8	1077.5	1187.6	1258.0	1294.9	1311.3	1319.1	1318.2



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CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
112.5°	872.9	1020.5	1138.1	1218.8	1270.2	1297.5	1312.2	1316.8
115°	810.3	942.6	1055.2	1143.8	1204.7	1244.2	1266.6	1274.4
117.5°	763.2	879.4	981.5	1064.5	1126.7	1168.5	1192.1	1198.5
120°	739.9	846.4	937.5	1015.7	1075.8	1116.2	1141.2	1149.8
122.5°	721.3	818.9	905.2	975.9	1029.8	1069.4	1091.7	1098.9
125°	694.3	782.8	858.4	922.9	972.8	1005.4	1026.8	1033.7
127.5°	667.7	747.8	819.1	878.6	922.0	952.6	971.2	976.7
130°	650.5	724.4	792.3	849.0	891.1	920.3	937.5	944.3
132.5°	634.0	702.4	764.7	818.0	859.5	888.7	904.5	910.7
135°	611.0	667.7	724.4	772.5	809.4	837.8	853.3	856.7
137.5°	592.5	640.0	685.0	726.9	760.7	785.1	798.7	803.8
140°	580.9	622.2	661.7	699.5	726.9	749.3	762.2	767.3
142.5°	571.3	606.3	640.3	672.0	698.1	718.4	729.9	730.9
145°	557.7	586.1	612.7	637.6	658.2	672.9	681.4	684.0
147.5°	547.2	569.6	590.3	608.6	625.6	637.2	643.1	644.6
150°	539.7	558.5	576.6	592.0	604.9	615.3	620.4	621.3
152.5°	532.1	549.6	564.9	578.3	588.4	597.4	601.2	601.3
155°	521.6	535.4	548.2	557.7	567.1	573.2	576.6	574.9
157.5°	509.4	520.9	531.8	539.2	545.8	550.8	552.3	552.3
160°	501.8	511.3	520.7	526.8	532.8	537.1	538.0	538.0
162.5°	494.3	502.3	510.4	515.1	521.1	524.0	524.9	524.2
165°	482.9	489.0	495.0	498.4	501.8	505.2	505.2	504.4
167.5°	472.1	476.7	480.9	484.0	485.5	487.4	487.2	486.2
170°	466.6	469.2	472.6	474.3	475.2	477.8	476.9	475.2
172.5°	460.4	462.3	465.0	466.1	466.9	468.1	467.3	466.2
175°	453.7	454.6	455.5	456.3	456.3	457.2	456.3	454.6
177.5°	448.9	448.9	449.6	449.6	449.6	449.6	448.9	447.5
180°	446.9	446.9	446.9	446.9	446.9	446.9	446.9	446.9

(END OF REPORT)