

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: P332323-940

Luminaire Tested: **S123RDIP-S775D1025U940-4F0-1E-UDD-F4**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P332323-940
REPORT IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-1807-864-17,
Test Lab: INNOVATION CENTER
Issue Date: 3/3/2020
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: NEO-RAY
Catalog Number: S123RDIP-S775D1025U940-4F0-1E-UDD-F4
Description: DEFINE 3 DIRECT-INDIRECT PENDANT LED LUMINAIRE
DOWNLIGHT 775 LUMENS PER FOOT, FLUSH SATIN WHITE DIFFUSER, REGRESSED
HOUSING
UPLIGHT 1025 LUMENS PER FOOT, BATWING OPTIC
Light Source: -
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 5912.3 lumens
Efficiency: N/A
Efficacy: 113.7 lumens/watt
Spacing Criteria (0/90/45): 1.21 / 1.06 / 1.22
Luminous Opening: Rectangular (W 0.25' x L: 4' x H: 0')
CIE Type: General Diffuse

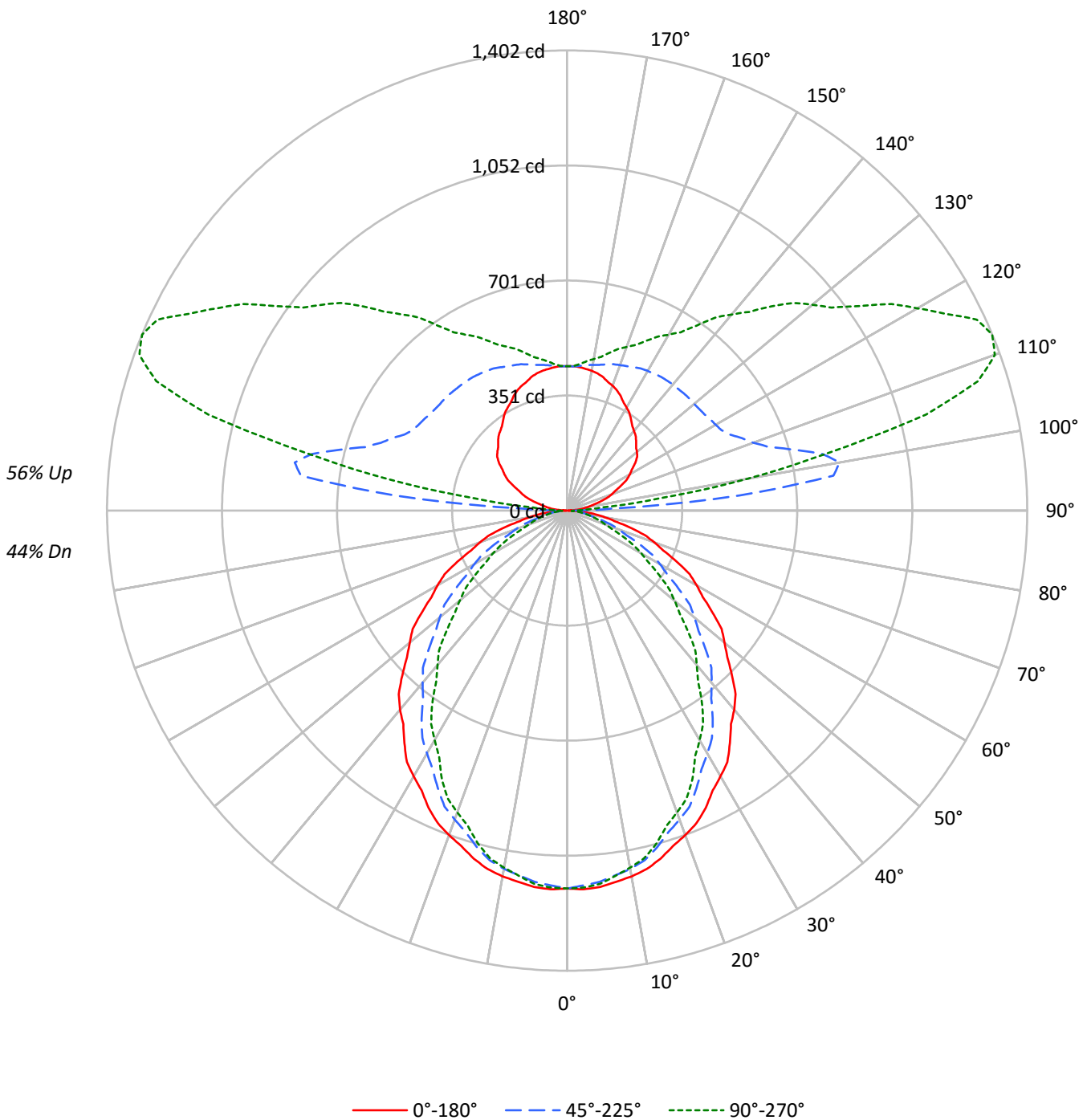
Input Watts (W): 52
Input Voltage (V): 120
Input Current (A_{in}): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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	97	97	97	97	80	80	80		65	65	65		51	51	51	44
1	97	93	89	85	88	85	82	79	71	68	66		57	56	54		45	44	43	38
2	88	81	75	70	81	75	69	65	62	58	55		51	48	46		40	38	37	32
3	81	72	64	59	74	66	60	55	55	50	47		45	42	39		36	34	32	27
4	74	63	56	50	67	58	52	47	49	44	40		40	37	34		32	30	28	24
5	68	57	49	43	62	52	45	40	44	39	35		36	32	29		29	26	24	21
6	63	51	43	37	57	47	40	35	40	34	30		33	29	26		26	24	21	18
7	58	46	38	33	53	42	36	31	36	31	27		30	26	23		24	21	19	16
8	54	42	34	29	49	39	32	27	33	28	24		27	23	20		22	19	17	15
9	50	38	31	26	46	35	29	24	30	25	21		25	21	18		21	18	16	13
10	47	35	28	23	43	32	26	22	28	23	19		23	19	17		19	16	14	12

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	12392	12392	12392
5°	12440	12268	12338
10°	12369	12114	12073
15°	12237	11830	11705
20°	12054	11475	11208
25°	11866	11077	10723
30°	11616	10618	10038
35°	11361	10159	9410
40°	11126	9617	8633
45°	10816	9082	7931
50°	10474	8473	7145
55°	10128	7781	6412
60°	9810	7035	5608
65°	9393	6230	4804
70°	8875	5231	3877
75°	8114	4117	3647
80°	7234	3651	3353
85°	6113	3223	3001



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	108.1	1.8
10°-20°	300.8	5.1
20°-30°	433.1	7.3
30°-40°	487.9	8.3
40°-50°	466.7	7.9
50°-60°	382.2	6.5
60°-70°	257.9	4.4
70°-80°	129.7	2.2
80°-90°	37.7	0.6
90°-100°	244.7	4.1
100°-110°	692.9	11.7
110°-120°	681.6	11.5
120°-130°	543.7	9.2
130°-140°	428.7	7.3
140°-150°	319.9	5.4
150°-160°	223.0	3.8
160°-170°	131.0	2.2
170°-180°	42.6	0.7
0°-30°	842.0	14.2
0°-40°	1329.9	22.5
0°-60°	2178.8	36.9
0°-90°	2604.2	44.0
90°-120°	1619.2	27.4
90°-150°	2911.5	49.2
90°-180°	3308.0	56.0
0°-180°	5912.3	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1151	1151	1151	1151	1151	
5°	1151	1146	1135	1143	1142	109
15°	1098	1087	1062	1057	1050	309
25°	999	975	933	914	903	459
35°	865	830	773	734	716	541
45°	710	667	597	545	521	548
55°	540	492	415	362	342	484
65°	369	316	245	201	189	365
75°	195	150	99	90	88	208
85°	50	30	26	24	24	56
90°	2	11	22	25	26	5
95°	30	98	528	154	103	33
105°	103	153	716	1251	1132	110
115°	182	227	547	1200	1377	181
125°	254	300	511	926	1086	225
135°	297	355	504	762	880	230
145°	339	389	498	625	688	213
155°	385	416	482	547	570	177
165°	421	433	461	489	498	119
175°	439	439	442	449	448	42
180°	440	440	440	440	440	



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CANDELA DISTRIBUTION (FULL):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
0°	1151.3	1151.3	1151.3	1151.3	1151.3	1151.3	1151.3	1151.3	1151.3	1151.3	1151.3
2.5°	1154.9	1154.3	1153.6	1153.0	1152.4	1151.0	1149.0	1147.0	1145.0	1143.0	1144.9
5°	1151.3	1150.2	1149.1	1148.2	1147.1	1145.3	1142.8	1140.3	1137.8	1135.4	1137.2
7.5°	1140.6	1139.5	1138.4	1137.2	1136.1	1133.9	1130.7	1127.5	1124.3	1121.0	1122.0
10°	1131.7	1130.2	1128.7	1127.3	1125.8	1123.2	1119.5	1115.8	1112.1	1108.3	1108.5
12.5°	1118.9	1117.3	1115.7	1114.1	1112.5	1109.4	1104.8	1100.3	1095.6	1091.1	1091.0
15°	1098.1	1095.7	1093.4	1091.2	1088.9	1084.9	1079.1	1073.3	1067.4	1061.6	1060.6
17.5°	1071.7	1069.1	1066.4	1063.7	1061.0	1056.1	1048.7	1041.3	1033.8	1026.5	1024.3
20°	1052.3	1048.9	1045.6	1042.3	1039.0	1033.4	1025.5	1017.6	1009.8	1001.8	999.2
22.5°	1030.6	1026.8	1023.0	1019.1	1015.3	1009.2	1000.9	992.5	984.1	975.7	972.3
25°	999.1	993.9	988.6	983.5	978.3	970.9	961.4	951.8	942.3	932.7	928.4
27.5°	960.7	955.0	949.3	943.6	937.9	929.7	919.1	908.5	897.8	887.2	881.1
30°	934.6	928.4	922.2	916.0	909.7	900.8	889.2	877.5	865.9	854.3	847.3
32.5°	908.5	901.4	894.4	887.3	880.3	870.6	858.3	846.1	833.7	821.4	813.8
35°	864.6	857.1	849.6	842.2	834.7	824.6	811.7	798.8	786.0	773.1	764.2
37.5°	820.2	811.8	803.5	795.2	786.9	776.0	762.2	748.5	734.8	721.0	710.9
40°	791.8	782.7	773.5	764.4	755.3	743.3	728.6	713.9	699.1	684.4	673.6
42.5°	759.6	750.6	741.4	732.3	723.2	711.0	695.7	680.5	665.3	650.1	638.3
45°	710.5	701.2	691.9	682.5	673.2	660.6	644.5	628.6	612.6	596.6	584.8
47.5°	661.5	651.2	641.0	630.7	620.5	607.3	591.4	575.3	559.4	543.4	530.6
50°	625.5	615.8	606.1	596.3	586.6	573.3	556.5	539.7	522.9	506.0	493.2
52.5°	593.4	582.9	572.3	561.7	551.2	537.5	520.8	504.3	487.6	470.9	457.6
55°	539.7	529.5	519.3	509.2	499.0	485.1	467.4	449.9	432.2	414.6	402.5
57.5°	490.0	478.9	467.9	456.7	445.7	431.3	413.6	395.8	378.1	360.4	349.0
60°	455.7	444.3	432.8	421.4	410.0	395.7	378.4	361.2	344.0	326.8	315.6
62.5°	421.2	409.8	398.4	387.0	375.7	361.3	344.1	326.9	309.7	292.4	281.9
65°	368.8	357.4	346.0	334.6	323.2	309.3	293.2	277.0	260.8	244.6	234.4
67.5°	316.4	304.8	293.3	281.7	270.2	256.6	241.1	225.6	210.1	194.6	187.0
70°	282.0	270.8	259.6	248.3	237.2	224.3	209.7	195.3	180.7	166.2	158.9
72.5°	247.6	236.6	225.5	214.5	203.5	191.4	178.2	165.0	151.8	138.6	132.6
75°	195.1	185.2	175.2	165.2	155.3	144.6	133.2	121.8	110.4	99.0	96.9
77.5°	147.3	138.3	129.3	120.3	111.3	103.2	95.8	88.5	81.1	73.7	72.7
80°	116.7	108.2	99.7	91.2	82.7	76.2	71.9	67.5	63.2	58.9	58.2
82.5°	87.6	80.3	72.9	65.5	58.2	53.5	51.5	49.4	47.4	45.4	44.8
85°	49.5	44.9	40.4	35.8	31.2	28.6	28.0	27.4	26.8	26.1	25.8
87.5°	18.3	16.9	15.3	14.1	12.6	12.0	12.6	13.1	13.6	14.2	13.8
90°	1.8	3.6	5.4	8.0	9.8	11.6	14.3	16.9	19.6	22.3	21.4
92.5°	11.1	16.4	23.9	30.8	38.3	51.5	74.7	113.1	150.6	136.9	103.3
95°	30.2	32.9	42.7	57.9	81.0	115.7	191.4	324.0	469.9	527.8	428.1
97.5°	51.6	52.5	60.2	73.3	96.1	133.7	206.0	355.5	598.9	818.0	875.1
100°	65.9	66.8	73.0	85.4	106.8	141.5	203.8	335.6	569.6	842.9	1018.2
102.5°	80.8	82.4	87.9	99.7	119.0	150.8	206.7	318.4	526.9	796.7	1025.4
105°	103.3	105.9	111.3	122.0	138.8	166.5	214.5	306.2	474.4	715.6	971.1
107.5°	127.1	129.7	134.9	145.4	161.3	186.9	229.1	305.3	441.0	644.1	876.0
110°	144.2	146.9	151.3	161.1	176.2	201.2	241.2	308.9	428.1	603.5	816.2



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CANDELA DISTRIBUTION (continued):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
112.5°	159.9	162.6	167.0	176.7	191.9	216.2	253.3	316.0	421.0	576.4	764.2
115°	182.4	186.0	191.4	200.3	215.4	239.4	273.2	327.5	418.3	547.4	701.4
117.5°	205.1	209.2	213.7	221.8	238.7	261.0	294.4	342.9	419.9	530.3	663.4
120°	220.7	223.4	227.8	236.7	253.7	275.9	308.0	354.3	422.8	522.5	643.5
122.5°	234.3	236.9	241.4	251.0	267.2	290.9	322.2	365.0	427.8	517.5	627.1
125°	253.7	255.5	260.8	270.5	287.5	311.6	342.7	381.8	435.2	511.0	606.2
127.5°	268.5	271.1	277.7	287.7	306.4	330.4	360.5	395.7	443.8	507.7	587.6
130°	277.7	280.4	288.4	299.1	317.7	341.8	371.1	405.0	449.5	505.6	577.7
132.5°	284.8	288.2	296.9	309.8	328.4	351.8	380.4	413.6	453.8	504.9	568.4
135°	297.3	300.9	310.7	324.0	342.7	366.7	394.3	424.5	460.2	503.8	556.3
137.5°	309.1	312.8	322.4	336.6	355.2	377.4	403.9	432.7	464.4	501.9	545.8
140°	316.9	321.3	330.2	344.5	362.3	384.5	410.4	437.0	467.3	501.1	539.4
142.5°	325.4	329.1	338.8	351.6	369.3	390.2	415.4	441.3	469.4	499.7	533.7
145°	339.1	341.8	349.8	363.2	378.3	398.8	421.9	445.9	470.8	497.6	526.0
147.5°	353.0	354.6	362.5	374.0	388.6	406.1	427.2	448.8	470.8	494.2	518.5
150°	362.3	363.2	370.2	381.8	394.3	410.4	430.8	449.5	470.8	491.3	513.5
152.5°	371.5	371.7	378.8	389.0	400.0	415.4	432.9	450.9	468.7	487.8	507.9
155°	385.4	385.4	390.7	399.7	409.5	421.9	437.0	451.3	466.4	481.5	499.4
157.5°	396.5	397.2	401.4	409.3	417.6	427.2	439.3	452.2	463.4	476.0	489.7
160°	405.0	405.0	408.6	415.6	421.9	430.8	441.5	452.2	462.0	471.7	483.3
162.5°	411.4	411.4	414.3	419.9	425.4	432.9	442.2	451.5	459.1	467.4	476.9
165°	421.0	420.1	421.9	426.3	429.9	436.1	443.3	449.5	454.9	461.1	468.1
167.5°	428.3	427.2	428.1	431.5	434.0	437.9	443.1	448.1	450.6	454.7	459.9
170°	432.6	430.8	431.7	434.4	436.1	437.9	442.4	445.9	447.7	450.4	454.9
172.5°	435.4	434.4	434.5	436.5	437.6	438.6	442.4	445.2	445.6	446.8	449.9
175°	438.8	437.9	437.0	438.8	438.8	439.7	441.5	443.3	442.4	442.4	444.2
177.5°	440.4	439.7	439.0	439.7	439.7	439.7	440.4	441.8	440.4	439.7	440.4
180°	439.7	439.7	439.7	439.7	439.7	439.7	439.7	439.7	439.7	439.7	439.7



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CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
0°	1151.3	1151.3	1151.3	1151.3	1151.3	1151.3	1151.3	1151.3
2.5°	1146.7	1148.5	1150.3	1151.1	1150.8	1150.4	1150.0	1149.8
5°	1139.1	1140.9	1142.8	1143.5	1143.2	1142.7	1142.3	1141.9
7.5°	1123.1	1124.1	1125.2	1125.3	1124.6	1123.9	1123.2	1122.5
10°	1108.8	1108.9	1109.1	1108.8	1107.7	1106.6	1105.6	1104.6
12.5°	1090.8	1090.7	1090.7	1089.9	1088.8	1087.5	1086.4	1085.1
15°	1059.5	1058.5	1057.5	1056.2	1054.8	1053.3	1051.9	1050.4
17.5°	1022.1	1019.9	1017.7	1015.6	1013.3	1011.2	1009.1	1006.9
20°	996.5	993.7	991.0	988.5	986.0	983.5	981.0	978.5
22.5°	969.0	965.6	962.2	959.4	957.1	954.8	952.4	950.1
25°	924.1	919.7	915.3	912.0	909.7	907.4	905.2	902.9
27.5°	875.0	869.1	863.0	858.2	854.7	851.2	847.7	844.3
30°	840.3	833.1	826.1	820.9	817.6	814.3	810.9	807.6
32.5°	806.0	798.3	790.6	785.0	781.5	778.0	774.5	771.1
35°	755.3	746.4	737.4	731.1	727.4	723.6	719.9	716.1
37.5°	700.7	690.6	680.5	673.2	668.5	663.9	659.3	654.7
40°	662.8	652.0	641.2	633.5	628.7	623.9	619.1	614.4
42.5°	626.4	614.7	602.9	594.9	590.6	586.3	582.0	577.7
45°	573.0	561.2	549.3	540.9	535.9	530.9	526.0	521.0
47.5°	517.6	504.8	492.0	483.3	478.8	474.4	470.0	465.6
50°	480.4	467.4	454.6	445.8	441.0	436.2	431.5	426.7
52.5°	444.3	430.9	417.5	408.7	404.4	400.1	395.8	391.6
55°	390.5	378.4	366.4	358.3	354.2	350.0	345.9	341.7
57.5°	337.7	326.3	315.0	307.5	304.0	300.4	296.9	293.4
60°	304.3	293.2	282.0	274.6	271.1	267.5	264.0	260.5
62.5°	271.3	260.8	250.3	243.2	239.4	235.8	232.1	228.4
65°	224.3	214.1	203.9	197.7	195.5	193.1	190.9	188.6
67.5°	179.4	171.8	164.2	159.2	156.8	154.3	151.9	149.4
70°	151.7	144.4	137.1	132.4	130.1	127.8	125.6	123.2
72.5°	126.7	120.7	114.9	111.4	110.4	109.5	108.5	107.5
75°	94.8	92.7	90.7	89.4	89.0	88.6	88.2	87.7
77.5°	71.5	70.4	69.3	68.5	68.1	67.7	67.2	66.9
80°	57.6	57.0	56.4	55.8	55.4	55.0	54.6	54.1
82.5°	44.1	43.5	42.9	42.5	42.4	42.4	42.3	42.2
85°	25.3	24.9	24.5	24.3	24.3	24.3	24.3	24.3
87.5°	13.8	13.8	13.8	14.0	13.7	13.7	13.7	13.4
90°	22.3	23.2	24.1	25.8	24.9	25.8	26.7	25.8
92.5°	74.9	59.5	52.5	47.9	46.3	43.6	44.5	42.9
95°	320.4	217.2	170.0	137.9	121.1	113.1	106.8	103.3
97.5°	798.8	639.8	525.0	418.5	352.8	312.8	288.7	281.1
100°	1049.5	977.3	873.2	746.8	656.9	591.9	557.2	558.1
102.5°	1132.7	1130.4	1069.7	989.6	919.6	868.2	839.2	818.7
105°	1157.1	1246.2	1263.0	1239.9	1198.9	1165.1	1136.7	1132.2
107.5°	1087.0	1231.5	1309.5	1341.2	1341.9	1330.5	1320.9	1312.7
110°	1020.0	1183.8	1295.9	1358.3	1383.2	1390.4	1388.6	1386.8



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CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
112.5°	953.8	1121.1	1246.8	1327.0	1372.5	1394.5	1401.3	1401.7
115°	866.0	1020.9	1151.7	1248.8	1315.5	1354.7	1372.5	1377.0
117.5°	802.5	936.2	1053.6	1152.1	1221.7	1266.6	1292.3	1298.2
120°	769.0	889.2	996.0	1085.9	1156.2	1206.0	1227.4	1232.8
122.5°	742.7	851.5	950.5	1033.9	1096.4	1141.3	1164.8	1171.5
125°	707.7	804.7	890.1	961.3	1018.2	1057.4	1079.7	1085.9
127.5°	677.0	763.5	840.6	905.4	956.1	989.6	1009.7	1015.4
130°	657.8	737.9	809.9	870.5	917.7	949.8	968.4	975.5
132.5°	640.0	713.6	780.8	838.5	882.8	914.8	931.4	936.4
135°	615.9	679.1	737.0	787.7	831.3	858.0	874.1	880.3
137.5°	594.1	645.9	695.7	739.7	776.3	803.4	816.9	821.0
140°	581.2	626.6	669.3	707.7	741.5	766.3	780.6	779.7
142.5°	569.1	608.1	645.2	678.4	707.3	729.3	742.2	741.3
145°	554.6	583.9	612.3	638.2	660.4	679.1	686.3	688.0
147.5°	542.6	565.9	588.9	607.3	624.1	636.8	643.5	644.3
150°	534.0	554.6	573.2	590.1	603.5	613.2	618.6	618.6
152.5°	526.2	543.9	560.4	574.4	585.0	594.1	597.3	597.3
155°	514.4	528.7	542.1	552.8	560.8	567.8	569.6	570.5
157.5°	502.0	513.9	524.2	532.6	539.6	544.9	546.4	546.2
160°	494.9	504.7	513.5	519.8	526.0	531.4	531.4	530.5
162.5°	486.3	494.7	502.9	508.5	512.6	517.1	517.1	516.2
165°	475.3	480.6	486.9	491.3	494.9	498.5	497.6	497.6
167.5°	465.7	469.8	473.3	476.5	478.1	480.6	479.7	479.7
170°	459.3	462.0	465.5	467.3	468.1	469.9	469.0	469.0
172.5°	453.6	455.6	458.4	459.5	459.7	461.5	459.9	459.1
175°	445.9	446.8	448.6	448.6	448.6	449.5	448.6	447.7
177.5°	441.1	441.8	442.6	442.6	441.8	442.6	441.1	441.1
180°	439.7	439.7	439.7	439.7	439.7	439.7	439.7	439.7

(END OF REPORT)