

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: P332323-830

Luminaire Tested: **S123RDIP-S775D1025U830-4F0-1E-UDD-F4**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P332323-830
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-S775D1025U830-4F0-1E-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: 6249.3 lumens
Efficiency: N/A
Efficacy: 120.2 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

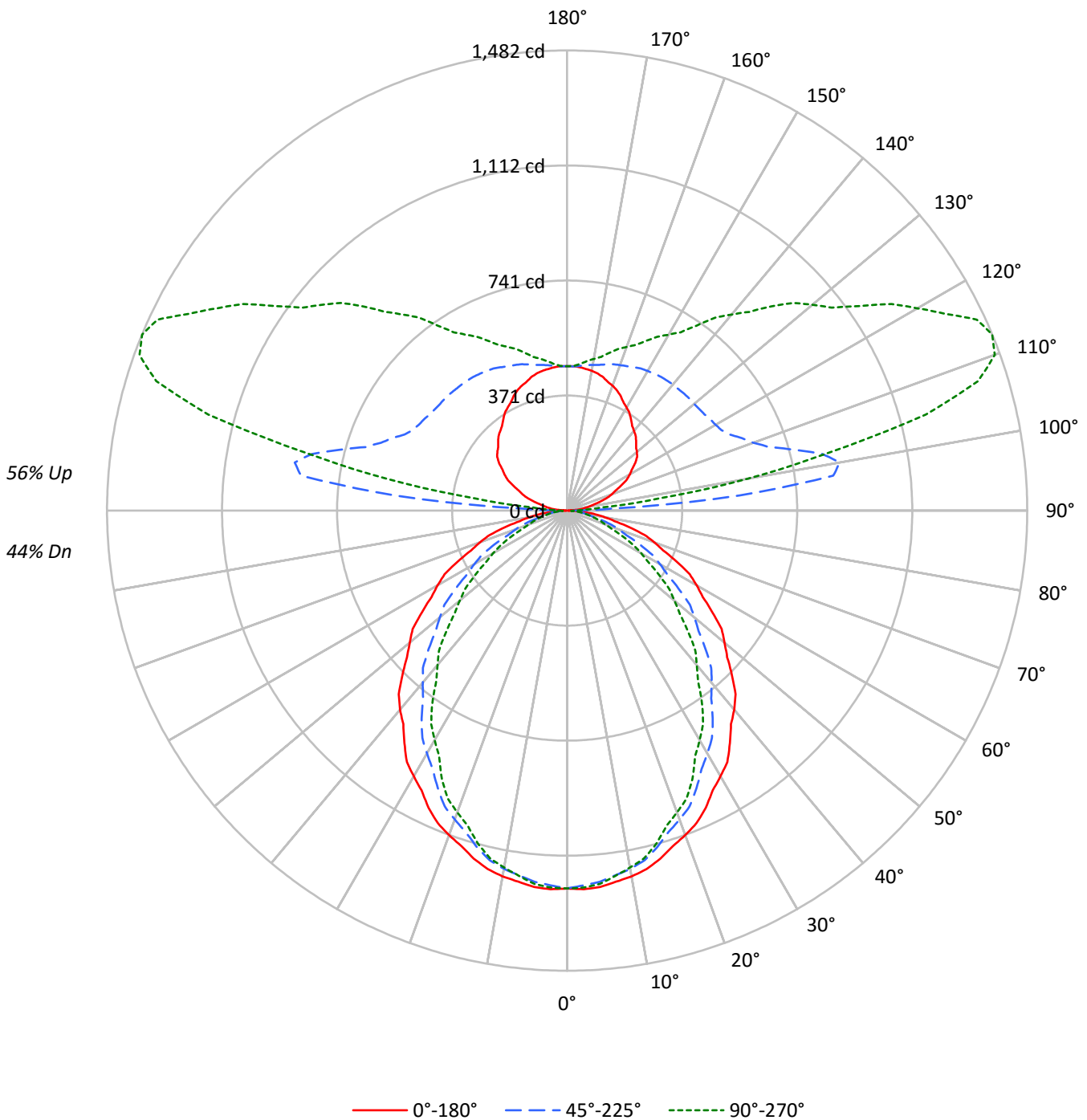
Input Watts (W): 52
Input Voltage (V): 120
Input Current (A_{in}): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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°	13099	13099	13099
5°	13149	12967	13042
10°	13074	12804	12761
15°	12933	12504	12373
20°	12741	12129	11848
25°	12542	11709	11334
30°	12279	11225	10611
35°	12009	10738	9947
40°	11760	10165	9125
45°	11432	9601	8383
50°	11072	8957	7552
55°	10704	8223	6778
60°	10368	7436	5927
65°	9928	6584	5076
70°	9379	5530	4101
75°	8576	4350	3855
80°	7649	3856	3546
85°	6459	3409	3162



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	114.3	1.8
10°-20°	317.9	5.1
20°-30°	457.8	7.3
30°-40°	515.7	8.3
40°-50°	493.3	7.9
50°-60°	404.0	6.5
60°-70°	272.6	4.4
70°-80°	137.1	2.2
80°-90°	39.9	0.6
90°-100°	258.6	4.1
100°-110°	732.4	11.7
110°-120°	720.5	11.5
120°-130°	574.7	9.2
130°-140°	453.1	7.3
140°-150°	338.2	5.4
150°-160°	235.7	3.8
160°-170°	138.5	2.2
170°-180°	45.1	0.7
0°-30°	890.0	14.2
0°-40°	1405.7	22.5
0°-60°	2303.0	36.9
0°-90°	2752.6	44.0
90°-120°	1711.5	27.4
90°-150°	3077.4	49.2
90°-180°	3497.0	56.0
0°-180°	6249.3	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1217	1217	1217	1217	1217	
5°	1217	1212	1200	1208	1207	115
15°	1161	1149	1122	1117	1110	327
25°	1056	1030	986	966	954	485
35°	914	877	817	776	757	572
45°	751	705	631	576	551	579
55°	570	520	438	383	361	511
65°	390	334	258	212	199	386
75°	206	159	105	95	93	220
85°	52	32	28	26	26	59
90°	2	11	24	26	27	5
95°	32	104	558	163	109	35
105°	109	161	756	1323	1197	116
115°	193	240	579	1269	1456	191
125°	268	317	540	978	1148	238
135°	314	375	532	806	930	243
145°	358	411	526	661	727	225
155°	407	439	509	579	603	187
165°	445	458	487	517	526	125
175°	464	464	468	474	473	44
180°	465	465	465	465	465	



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CANDELA DISTRIBUTION (FULL):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
0°	1216.9	1216.9	1216.9	1216.9	1216.9	1216.9	1216.9	1216.9	1216.9	1216.9	1216.9
2.5°	1220.8	1220.1	1219.4	1218.7	1218.0	1216.6	1214.5	1212.4	1210.3	1208.2	1210.1
5°	1216.9	1215.8	1214.7	1213.6	1212.5	1210.6	1208.0	1205.3	1202.7	1200.1	1202.0
7.5°	1205.6	1204.5	1203.2	1202.0	1200.9	1198.5	1195.1	1191.8	1188.4	1184.9	1186.0
10°	1196.2	1194.6	1193.1	1191.6	1190.0	1187.2	1183.3	1179.4	1175.4	1171.5	1171.7
12.5°	1182.7	1181.0	1179.3	1177.6	1175.9	1172.6	1167.8	1163.0	1158.1	1153.3	1153.2
15°	1160.6	1158.2	1155.7	1153.4	1150.9	1146.7	1140.6	1134.4	1128.2	1122.1	1121.1
17.5°	1132.7	1130.0	1127.2	1124.4	1121.5	1116.3	1108.4	1100.6	1092.8	1085.1	1082.7
20°	1112.3	1108.7	1105.2	1101.7	1098.3	1092.3	1083.9	1075.6	1067.3	1058.9	1056.1
22.5°	1089.4	1085.3	1081.3	1077.2	1073.2	1066.8	1057.9	1049.0	1040.2	1031.3	1027.7
25°	1056.0	1050.6	1045.0	1039.5	1034.1	1026.2	1016.2	1006.1	996.0	985.9	981.3
27.5°	1015.5	1009.5	1003.4	997.4	991.4	982.7	971.5	960.3	949.0	937.7	931.3
30°	987.9	981.3	974.8	968.2	961.6	952.2	939.9	927.6	915.3	903.1	895.6
32.5°	960.3	952.8	945.4	937.9	930.5	920.2	907.2	894.3	881.3	868.3	860.2
35°	913.9	906.0	898.1	890.2	882.3	871.6	858.0	844.3	830.8	817.2	807.8
37.5°	867.0	858.1	849.3	840.6	831.8	820.2	805.7	791.2	776.7	762.1	751.4
40°	836.9	827.3	817.6	807.9	798.3	785.7	770.2	754.6	739.0	723.4	712.0
42.5°	803.0	793.3	783.6	774.0	764.4	751.5	735.4	719.3	703.2	687.1	674.7
45°	751.0	741.2	731.3	721.4	711.5	698.2	681.3	664.4	647.5	630.7	618.1
47.5°	699.2	688.3	677.5	666.7	655.8	642.0	625.1	608.1	591.3	574.4	560.8
50°	661.2	650.9	640.6	630.3	620.0	606.0	588.2	570.4	552.7	534.9	521.3
52.5°	627.3	616.1	604.9	593.7	582.6	568.2	550.5	533.0	515.4	497.8	483.7
55°	570.4	559.7	548.9	538.2	527.4	512.7	494.1	475.5	456.9	438.2	425.5
57.5°	517.9	506.2	494.6	482.8	471.1	455.9	437.2	418.4	399.6	381.0	368.9
60°	481.6	469.6	457.5	445.4	433.4	418.2	400.0	381.8	363.6	345.4	333.6
62.5°	445.3	433.2	421.1	409.1	397.1	381.9	363.7	345.5	327.3	309.1	297.9
65°	389.8	377.8	365.7	353.6	341.6	327.0	309.9	292.8	275.7	258.5	247.8
67.5°	334.4	322.2	310.0	297.7	285.6	271.3	254.9	238.5	222.1	205.7	197.7
70°	298.0	286.3	274.4	262.5	250.7	237.0	221.7	206.4	191.1	175.7	168.0
72.5°	261.7	250.1	238.4	226.7	215.1	202.3	188.3	174.4	160.4	146.5	140.2
75°	206.2	195.8	185.2	174.7	164.2	152.9	140.8	128.8	116.7	104.6	102.5
77.5°	155.7	146.2	136.7	127.1	117.6	109.1	101.2	93.5	85.8	77.9	76.8
80°	123.4	114.3	105.4	96.4	87.4	80.6	76.0	71.4	66.8	62.2	61.5
82.5°	92.6	84.8	77.0	69.3	61.5	56.6	54.4	52.2	50.1	48.0	47.3
85°	52.3	47.5	42.7	37.8	33.0	30.3	29.6	28.9	28.3	27.6	27.2
87.5°	19.3	17.8	16.2	14.9	13.3	12.7	13.3	13.9	14.4	15.0	14.6
90°	1.9	3.8	5.7	8.5	10.4	12.3	15.1	17.9	20.7	23.6	22.6
92.5°	11.7	17.3	25.3	32.5	40.4	54.4	79.0	119.5	159.2	144.7	109.1
95°	32.0	34.8	45.1	61.2	85.6	122.3	202.3	342.4	496.7	557.9	452.5
97.5°	54.6	55.5	63.6	77.5	101.6	141.3	217.7	375.8	633.0	864.6	925.0
100°	69.7	70.6	77.2	90.3	112.9	149.6	215.5	354.7	602.1	891.0	1076.3
102.5°	85.4	87.1	92.9	105.4	125.7	159.4	218.5	336.6	556.9	842.1	1083.8
105°	109.1	112.0	117.6	128.9	146.8	176.0	226.8	323.7	501.4	756.4	1026.4
107.5°	134.3	137.1	142.6	153.7	170.5	197.6	242.1	322.7	466.1	680.8	926.0
110°	152.4	155.2	159.9	170.3	186.2	212.6	255.0	326.5	452.5	637.9	862.7



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CANDELA DISTRIBUTION (continued):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
112.5°	169.0	171.8	176.5	186.8	202.8	228.5	267.8	334.0	445.0	609.3	807.8
115°	192.8	196.6	202.3	211.7	227.7	253.1	288.8	346.2	442.1	578.6	741.4
117.5°	216.8	221.1	225.8	234.4	252.3	275.9	311.2	362.4	443.8	560.5	701.3
120°	233.3	236.1	240.8	250.2	268.2	291.6	325.6	374.5	446.9	552.2	680.2
122.5°	247.6	250.4	255.1	265.3	282.5	307.5	340.5	385.8	452.1	547.0	662.9
125°	268.2	270.0	275.7	286.0	303.9	329.3	362.2	403.6	460.1	540.1	640.7
127.5°	283.8	286.5	293.5	304.1	323.9	349.2	381.1	418.3	469.1	536.7	621.1
130°	293.5	296.3	304.8	316.1	335.8	361.3	392.3	428.1	475.1	534.4	610.6
132.5°	301.0	304.6	313.9	327.4	347.1	371.8	402.1	437.2	479.7	533.7	600.8
135°	314.2	318.0	328.4	342.4	362.2	387.6	416.8	448.7	486.4	532.5	588.1
137.5°	326.7	330.6	340.7	355.8	375.4	398.9	427.0	457.4	490.9	530.5	576.9
140°	335.0	339.6	349.0	364.1	383.0	406.4	433.8	461.9	493.9	529.7	570.1
142.5°	343.9	347.9	358.1	371.6	390.4	412.5	439.0	466.5	496.2	528.2	564.1
145°	358.4	361.3	369.8	383.9	399.8	421.5	445.9	471.4	497.7	525.9	556.0
147.5°	373.2	374.8	383.1	395.3	410.8	429.2	451.6	474.4	497.7	522.4	548.1
150°	383.0	383.9	391.3	403.6	416.8	433.8	455.3	475.1	497.7	519.3	542.8
152.5°	392.7	392.9	400.4	411.1	422.8	439.0	457.6	476.6	495.4	515.6	536.9
155°	407.4	407.4	413.0	422.4	432.8	445.9	461.9	477.0	492.9	509.0	527.8
157.5°	419.1	419.8	424.3	432.6	441.4	451.6	464.4	478.0	489.8	503.1	517.6
160°	428.1	428.1	431.9	439.3	445.9	455.3	466.7	478.0	488.3	498.6	510.9
162.5°	434.9	434.9	437.9	443.8	449.7	457.6	467.4	477.2	485.3	494.1	504.1
165°	445.0	444.0	445.9	450.6	454.4	461.0	468.5	475.1	480.8	487.4	494.8
167.5°	452.7	451.6	452.5	456.1	458.7	462.9	468.3	473.6	476.3	480.6	486.1
170°	457.2	455.3	456.3	459.1	461.0	462.9	467.6	471.4	473.3	476.1	480.8
172.5°	460.2	459.1	459.3	461.4	462.5	463.6	467.6	470.6	471.0	472.3	475.5
175°	463.8	462.9	461.9	463.8	463.8	464.8	466.7	468.5	467.6	467.6	469.5
177.5°	465.5	464.8	464.0	464.8	464.8	464.8	465.5	467.0	465.5	464.8	465.5
180°	464.8	464.8	464.8	464.8	464.8	464.8	464.8	464.8	464.8	464.8	464.8



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CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
0°	1216.9	1216.9	1216.9	1216.9	1216.9	1216.9	1216.9	1216.9
2.5°	1212.0	1214.0	1215.9	1216.7	1216.4	1216.0	1215.6	1215.3
5°	1204.0	1206.0	1208.0	1208.7	1208.3	1207.9	1207.4	1207.0
7.5°	1187.1	1188.2	1189.3	1189.5	1188.7	1188.0	1187.2	1186.5
10°	1172.0	1172.1	1172.3	1172.0	1170.8	1169.7	1168.7	1167.5
12.5°	1153.0	1152.9	1152.8	1152.1	1150.8	1149.5	1148.3	1147.0
15°	1119.9	1118.8	1117.8	1116.4	1114.9	1113.3	1111.8	1110.3
17.5°	1080.3	1078.1	1075.7	1073.5	1071.1	1068.8	1066.6	1064.3
20°	1053.3	1050.4	1047.5	1044.8	1042.2	1039.5	1036.9	1034.3
22.5°	1024.3	1020.7	1017.1	1014.1	1011.6	1009.2	1006.7	1004.3
25°	976.8	972.1	967.5	964.0	961.6	959.1	956.8	954.3
27.5°	924.9	918.6	912.2	907.1	903.4	899.8	896.1	892.4
30°	888.2	880.6	873.2	867.7	864.2	860.7	857.1	853.7
32.5°	852.0	843.9	835.7	829.7	826.0	822.4	818.7	815.0
35°	798.3	788.9	779.5	772.8	768.8	764.9	760.9	757.0
37.5°	740.6	730.0	719.3	711.5	706.6	701.7	696.9	692.0
40°	700.6	689.2	677.8	669.6	664.5	659.5	654.4	649.4
42.5°	662.1	649.7	637.3	628.8	624.2	619.7	615.2	610.7
45°	605.7	593.1	580.6	571.7	566.5	561.2	556.0	550.7
47.5°	547.1	533.6	520.0	510.9	506.1	501.4	496.8	492.1
50°	507.7	494.1	480.5	471.2	466.2	461.1	456.1	451.0
52.5°	469.6	455.4	441.3	432.0	427.4	422.9	418.4	413.9
55°	412.7	400.0	387.3	378.7	374.4	369.9	365.6	361.2
57.5°	356.9	344.9	332.9	325.0	321.3	317.5	313.8	310.1
60°	321.7	309.9	298.0	290.3	286.5	282.8	279.1	275.3
62.5°	286.8	275.7	264.6	257.0	253.1	249.2	245.3	241.4
65°	237.0	226.3	215.6	209.0	206.6	204.2	201.8	199.3
67.5°	189.6	181.6	173.5	168.2	165.7	163.1	160.5	157.9
70°	160.3	152.6	145.0	140.0	137.5	135.1	132.7	130.3
72.5°	133.9	127.6	121.4	117.7	116.7	115.7	114.7	113.7
75°	100.2	98.0	95.9	94.5	94.1	93.7	93.2	92.7
77.5°	75.6	74.4	73.2	72.4	72.0	71.5	71.1	70.7
80°	60.9	60.2	59.6	59.0	58.5	58.2	57.7	57.2
82.5°	46.7	46.0	45.3	45.0	44.9	44.8	44.7	44.6
85°	26.8	26.3	25.9	25.6	25.6	25.6	25.6	25.6
87.5°	14.6	14.6	14.6	14.8	14.5	14.5	14.5	14.1
90°	23.6	24.5	25.4	27.2	26.3	27.2	28.2	27.2
92.5°	79.2	62.9	55.5	50.6	48.9	46.1	47.0	45.3
95°	338.7	229.6	179.7	145.8	128.0	119.5	112.9	109.1
97.5°	844.3	676.3	554.9	442.3	373.0	330.6	305.2	297.1
100°	1109.3	1033.0	922.9	789.4	694.4	625.7	589.0	589.9
102.5°	1197.3	1194.9	1130.7	1046.0	972.0	917.7	887.0	865.3
105°	1223.0	1317.2	1335.0	1310.6	1267.2	1231.5	1201.5	1196.7
107.5°	1149.0	1301.7	1384.1	1417.7	1418.4	1406.4	1396.2	1387.5
110°	1078.2	1251.3	1369.8	1435.7	1462.1	1469.6	1467.7	1465.8



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CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
112.5°	1008.1	1185.1	1317.9	1402.6	1450.8	1474.0	1481.2	1481.6
115°	915.4	1079.1	1217.4	1319.9	1390.5	1431.9	1450.8	1455.5
117.5°	848.3	989.6	1113.7	1217.8	1291.4	1338.8	1365.9	1372.2
120°	812.8	939.9	1052.8	1147.8	1222.1	1274.8	1297.4	1303.1
122.5°	785.0	900.0	1004.7	1092.9	1159.0	1206.4	1231.1	1238.3
125°	748.0	850.6	940.8	1016.1	1076.3	1117.7	1141.2	1147.8
127.5°	715.6	807.0	888.5	957.0	1010.6	1046.0	1067.2	1073.3
130°	695.3	780.0	856.1	920.1	970.0	1003.9	1023.6	1031.1
132.5°	676.5	754.3	825.3	886.3	933.1	967.0	984.5	989.8
135°	651.0	717.8	779.0	832.6	878.7	906.9	923.9	930.5
137.5°	627.9	682.7	735.4	781.8	820.6	849.2	863.5	867.8
140°	614.3	662.3	707.5	748.0	783.7	810.0	825.1	824.2
142.5°	601.5	642.8	681.9	717.1	747.6	770.9	784.5	783.5
145°	586.2	617.2	647.2	674.6	698.0	717.8	725.4	727.3
147.5°	573.5	598.1	622.5	641.9	659.7	673.1	680.2	681.0
150°	564.5	586.2	605.9	623.8	637.9	648.2	653.8	653.8
152.5°	556.2	574.9	592.4	607.2	618.3	627.9	631.3	631.3
155°	543.8	558.8	573.0	584.3	592.8	600.2	602.1	603.0
157.5°	530.7	543.2	554.1	563.0	570.3	576.0	577.5	577.3
160°	523.1	533.5	542.8	549.4	556.0	561.7	561.7	560.7
162.5°	514.1	522.9	531.6	537.4	541.8	546.6	546.6	545.6
165°	502.4	508.0	514.6	519.3	523.1	526.9	525.9	525.9
167.5°	492.2	496.5	500.3	503.7	505.4	508.0	507.1	507.1
170°	485.5	488.3	492.0	493.9	494.8	496.7	495.8	495.8
172.5°	479.5	481.5	484.6	485.7	485.9	487.8	486.1	485.3
175°	471.4	472.3	474.2	474.2	474.2	475.1	474.2	473.3
177.5°	466.3	467.0	467.8	467.8	467.0	467.8	466.3	466.3
180°	464.8	464.8	464.8	464.8	464.8	464.8	464.8	464.8

(END OF REPORT)