

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: P332303-830

Luminaire Tested: **S123RDIP-S775D365U830-4F0-1E-UDD-F**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P332303-830
REPORT IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-1807-864-5,
Test Lab: INNOVATION CENTER
Issue Date: 3/3/2020
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: NEO-RAY
Catalog Number: S123RDIP-S775D365U830-4F0-1E-UDD-F
Description: DEFINE 3 DIRECT-INDIRECT PENDANT LED LUMINAIRE
DOWNLIGHT 775 LUMENS PER FOOT, FLUSH SATIN WHITE DIFFUSER, REGRESSED
HOUSING
UPLIGHT 365 LUMENS PER FOOT, NO LENS
Light Source: -
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 4117.4 lumens
Efficiency: N/A
Efficacy: 117.6 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: Semi-Direct

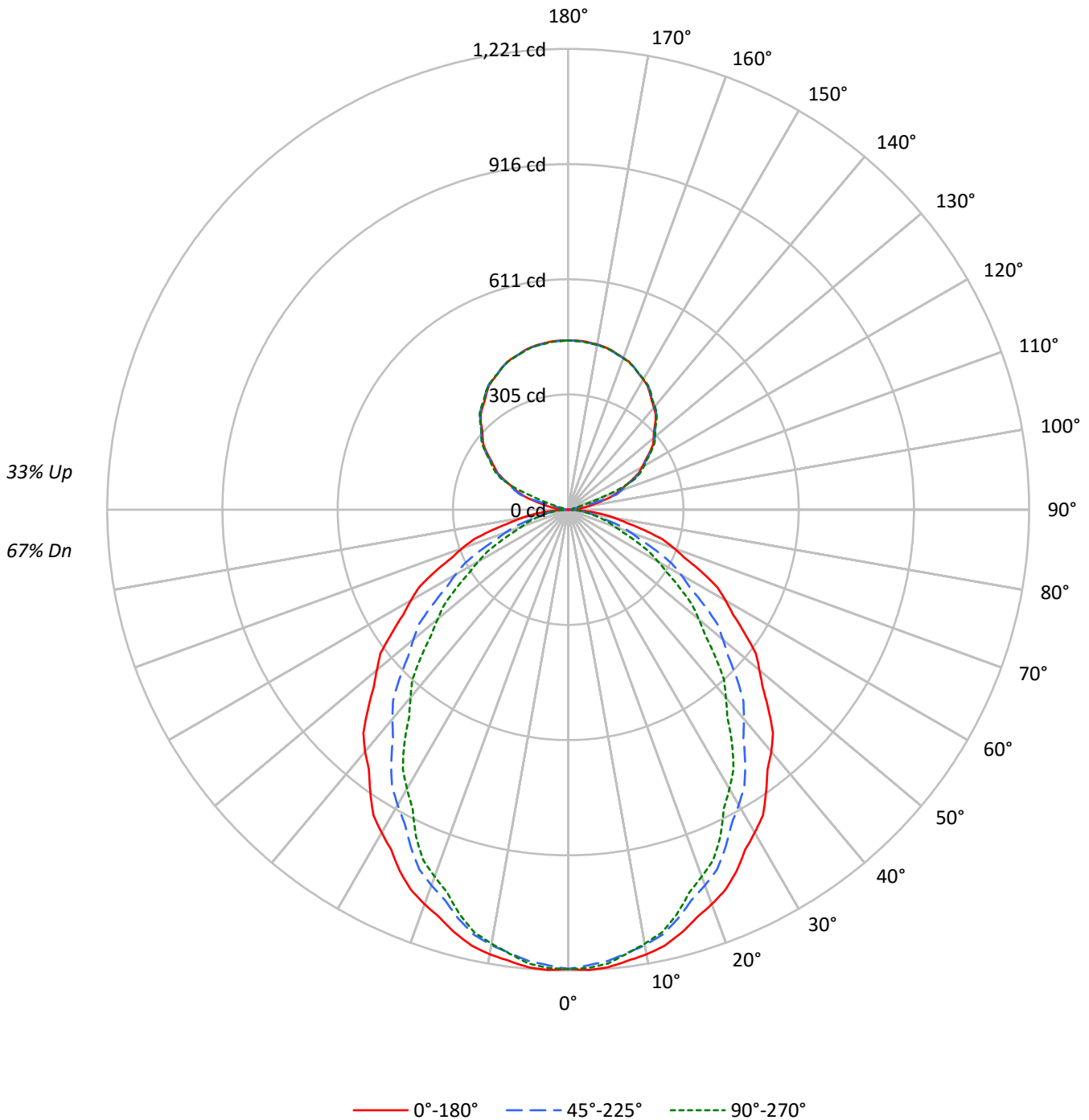
Input Watts (W): 35
Input Voltage (V): 120
Input Current (A_{in}): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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	111	111	111	111	105	105	105	105	93	93	93	82	82	82	72	72	72	67
1	102	98	94	90	96	92	89	86	82	79	77	73	71	69	64	63	61	57
2	93	86	80	75	88	81	76	71	72	68	65	64	61	58	57	54	52	49
3	85	76	69	63	80	72	65	60	64	59	55	57	53	50	51	48	45	42
4	78	67	60	53	74	64	57	51	57	52	47	51	47	43	46	42	39	36
5	72	60	52	46	68	57	50	44	52	46	41	46	41	38	41	37	34	32
6	67	54	46	40	63	52	44	39	47	41	36	42	37	33	38	34	30	28
7	62	49	41	36	58	47	40	34	43	36	32	38	33	30	34	30	27	25
8	57	45	37	32	54	43	36	31	39	33	29	35	30	27	32	28	25	22
9	54	41	34	29	51	39	32	28	36	30	26	33	28	24	29	25	22	20
10	50	38	31	26	47	36	30	25	33	27	23	30	25	22	27	23	20	18

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	2.8
10°-20°	317.9	7.7
20°-30°	457.8	11.1
30°-40°	515.7	12.5
40°-50°	493.3	12.0
50°-60°	404.0	9.8
60°-70°	272.6	6.6
70°-80°	137.1	3.3
80°-90°	37.5	0.9
90°-100°	16.3	0.4
100°-110°	77.7	1.9
110°-120°	186.6	4.5
120°-130°	237.6	5.8
130°-140°	253.9	6.2
140°-150°	237.4	5.8
150°-160°	191.5	4.7
160°-170°	123.6	3.0
170°-180°	42.6	1.0
0°-30°	890.0	21.6
0°-40°	1405.7	34.1
0°-60°	2303.0	55.9
0°-90°	2750.3	66.8
90°-120°	280.6	6.8
90°-150°	1009.4	24.5
90°-180°	1367.0	33.2
0°-180°	4117.4	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°	0	4	8	9	10	4
95°	20	8	10	12	13	25
105°	99	101	73	17	15	105
115°	186	188	191	194	196	184
125°	262	265	266	267	268	234
135°	327	329	330	331	330	251
145°	377	379	380	381	381	236
155°	415	415	415	416	415	191
165°	438	437	437	439	437	124
175°	448	447	447	449	447	43
180°	448	448	448	448	448	



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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°	19.0	17.2	15.5	13.7	11.9	11.1	11.3	11.5	11.7	11.9	11.8
90°	0.4	1.0	1.8	2.5	3.3	4.1	5.1	6.0	7.1	8.0	8.3
92.5°	6.2	6.0	5.7	5.6	5.4	5.7	6.3	7.1	7.8	8.5	9.0
95°	20.4	17.2	14.2	11.2	8.2	7.1	7.9	8.7	9.5	10.4	10.8
97.5°	40.8	39.5	38.1	36.8	35.3	32.0	26.7	21.4	16.0	10.7	11.3
100°	56.3	57.8	59.3	60.7	62.2	57.2	45.6	34.1	22.5	11.0	11.6
102.5°	73.9	74.9	76.0	77.1	78.1	72.4	59.8	47.1	34.5	22.0	20.1
105°	99.2	100.1	100.9	101.7	102.5	99.6	92.9	86.2	79.6	73.0	59.9
107.5°	126.0	126.7	127.3	128.0	128.7	129.5	130.5	131.6	132.6	133.7	124.0
110°	143.9	144.5	145.1	145.6	146.3	146.9	147.8	148.5	149.4	150.2	147.8



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CANDELA DISTRIBUTION (continued):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
112.5°	160.9	161.5	162.0	162.5	163.1	163.7	164.6	165.4	166.2	167.0	167.0
115°	186.2	186.6	187.1	187.5	187.9	188.5	189.2	189.8	190.5	191.1	191.9
117.5°	210.7	211.2	211.7	212.3	212.8	213.3	213.6	214.0	214.3	214.6	215.2
120°	225.8	226.5	227.2	227.8	228.5	228.9	229.1	229.4	229.6	229.8	230.5
122.5°	241.3	241.9	242.3	242.9	243.5	243.8	244.1	244.4	244.7	245.0	245.4
125°	262.5	263.1	263.6	264.2	264.9	265.2	265.6	265.9	266.2	266.5	266.6
127.5°	283.0	283.6	284.2	284.7	285.3	285.8	286.2	286.5	286.9	287.2	287.5
130°	295.8	296.3	296.9	297.6	298.1	298.6	298.9	299.2	299.4	299.7	300.0
132.5°	308.0	308.6	309.2	309.8	310.4	310.8	311.0	311.3	311.5	311.8	312.1
135°	326.8	327.2	327.6	328.1	328.5	328.9	329.1	329.5	329.8	330.1	330.3
137.5°	342.7	343.3	343.8	344.4	345.0	345.3	345.5	345.6	345.8	346.0	346.4
140°	353.4	353.8	354.3	354.7	355.2	355.5	355.7	355.9	356.2	356.4	356.7
142.5°	363.3	363.7	364.1	364.6	365.0	365.3	365.6	365.8	366.0	366.3	366.5
145°	377.0	377.6	378.1	378.6	379.1	379.5	379.6	379.8	379.8	380.0	380.2
147.5°	390.0	390.4	390.7	391.1	391.3	391.6	391.8	391.9	392.1	392.2	392.4
150°	398.0	398.2	398.4	398.7	398.9	399.1	399.3	399.4	399.5	399.6	399.8
152.5°	405.2	405.3	405.4	405.5	405.6	405.8	405.8	405.9	406.0	406.0	406.3
155°	415.4	415.2	415.0	414.9	414.7	414.7	414.8	414.8	414.9	415.0	415.4
157.5°	423.2	423.2	423.2	423.1	423.1	423.1	423.0	422.9	422.8	422.8	423.2
160°	428.0	427.9	427.8	427.7	427.7	427.6	427.5	427.4	427.4	427.3	427.7
162.5°	432.5	432.3	432.2	432.0	431.8	431.6	431.5	431.5	431.4	431.3	431.8
165°	438.0	437.7	437.5	437.3	437.1	437.0	436.9	436.8	436.7	436.7	437.2
167.5°	442.2	442.0	441.7	441.4	441.0	440.9	440.9	440.9	440.9	440.9	441.5
170°	444.6	444.3	444.0	443.7	443.5	443.3	443.3	443.3	443.3	443.3	443.9
172.5°	446.2	445.9	445.5	445.2	444.8	444.7	444.7	444.8	444.9	444.9	445.5
175°	448.3	447.9	447.5	447.2	446.9	446.7	446.8	446.9	446.9	447.0	447.5
177.5°	448.8	448.6	448.3	448.0	447.6	447.5	447.6	447.6	447.7	447.8	448.3
180°	448.3	448.3	448.3	448.3	448.3	448.3	448.3	448.3	448.3	448.3	448.3



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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°	11.6	11.5	11.4	11.3	11.1	10.9	10.8	10.7
90°	8.6	8.9	9.1	9.4	9.5	9.7	9.8	10.0
92.5°	9.5	10.0	10.5	10.7	10.7	10.8	10.9	11.0
95°	11.4	11.9	12.4	12.6	12.6	12.6	12.6	12.6
97.5°	11.9	12.5	13.1	13.4	13.5	13.6	13.7	13.8
100°	12.2	12.7	13.4	13.7	13.8	13.9	13.9	13.9
102.5°	18.3	16.4	14.6	13.8	13.9	13.9	14.1	14.2
105°	46.8	33.6	20.5	14.0	14.2	14.3	14.5	14.6
107.5°	114.5	104.9	95.3	85.5	75.7	65.8	55.9	46.0
110°	145.3	142.9	140.4	133.9	123.4	112.7	102.2	91.6



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CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
112.5°	167.1	167.1	167.2	166.1	163.8	161.6	159.4	157.1
115°	192.7	193.4	194.2	194.6	194.9	195.3	195.6	195.9
117.5°	215.8	216.4	217.0	217.4	217.4	217.4	217.5	217.5
120°	231.0	231.6	232.1	232.5	232.5	232.5	232.5	232.5
122.5°	245.8	246.3	246.7	246.9	246.9	247.0	247.0	247.1
125°	266.7	266.9	267.0	267.2	267.3	267.5	267.7	267.8
127.5°	287.7	287.9	288.2	288.2	288.0	287.9	287.8	287.7
130°	300.4	300.7	301.0	301.0	300.9	300.8	300.6	300.4
132.5°	312.4	312.6	312.9	313.0	312.7	312.5	312.4	312.2
135°	330.5	330.7	330.9	330.9	330.7	330.5	330.3	330.1
137.5°	346.7	347.0	347.4	347.5	347.3	347.2	347.0	346.9
140°	356.9	357.2	357.6	357.6	357.5	357.3	357.2	357.0
142.5°	366.7	366.9	367.2	367.2	367.0	366.7	366.6	366.4
145°	380.3	380.5	380.6	380.7	380.7	380.7	380.7	380.7
147.5°	392.5	392.7	392.9	392.8	392.4	392.0	391.7	391.3
150°	400.0	400.1	400.3	400.2	400.0	399.8	399.5	399.4
152.5°	406.6	406.9	407.2	407.1	406.8	406.4	406.0	405.8
155°	415.8	416.1	416.5	416.4	416.0	415.6	415.1	414.6
157.5°	423.7	424.1	424.6	424.5	424.0	423.4	422.7	422.2
160°	428.2	428.7	429.1	429.0	428.6	428.0	427.5	427.0
162.5°	432.3	432.8	433.3	433.4	432.9	432.4	432.0	431.5
165°	437.8	438.5	439.0	439.0	438.6	438.0	437.5	437.0
167.5°	442.1	442.7	443.3	443.3	442.7	442.1	441.5	440.9
170°	444.5	445.1	445.6	445.6	445.1	444.5	443.9	443.3
172.5°	446.1	446.7	447.2	447.2	446.6	445.9	445.3	444.6
175°	448.0	448.6	449.0	449.0	448.5	447.8	447.2	446.7
177.5°	448.7	449.2	449.7	449.6	449.0	448.5	447.8	447.2
180°	448.3	448.3	448.3	448.3	448.3	448.3	448.3	448.3

(END OF REPORT)