

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: P332445-930

Luminaire Tested: **S123RDIW-S775D1320U930-4F0-1E-UDD-F1**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P332445-930
REPORT IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-1807-864-9,
Test Lab: INNOVATION CENTER
Issue Date: 3/3/2020
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: NEO-RAY
Catalog Number: S123RDIW-S775D1320U930-4F0-1E-UDD-F1
Description: DEFINE 3 DIRECT-INDIRECT WALL MOUNT LED LUMINAIRE
DOWNLIGHT 775 LUMENS PER FOOT, FLUSH SATIN WHITE DIFFUSER, REGRESSED
HOUSING
UPLIGHT 1320 LUMENS PER FOOT, FLUSH SATIN WHITE DIFFUSER
Light Source: -
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 6111.4 lumens
Efficiency: N/A
Efficacy: 99.5 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-Indirect

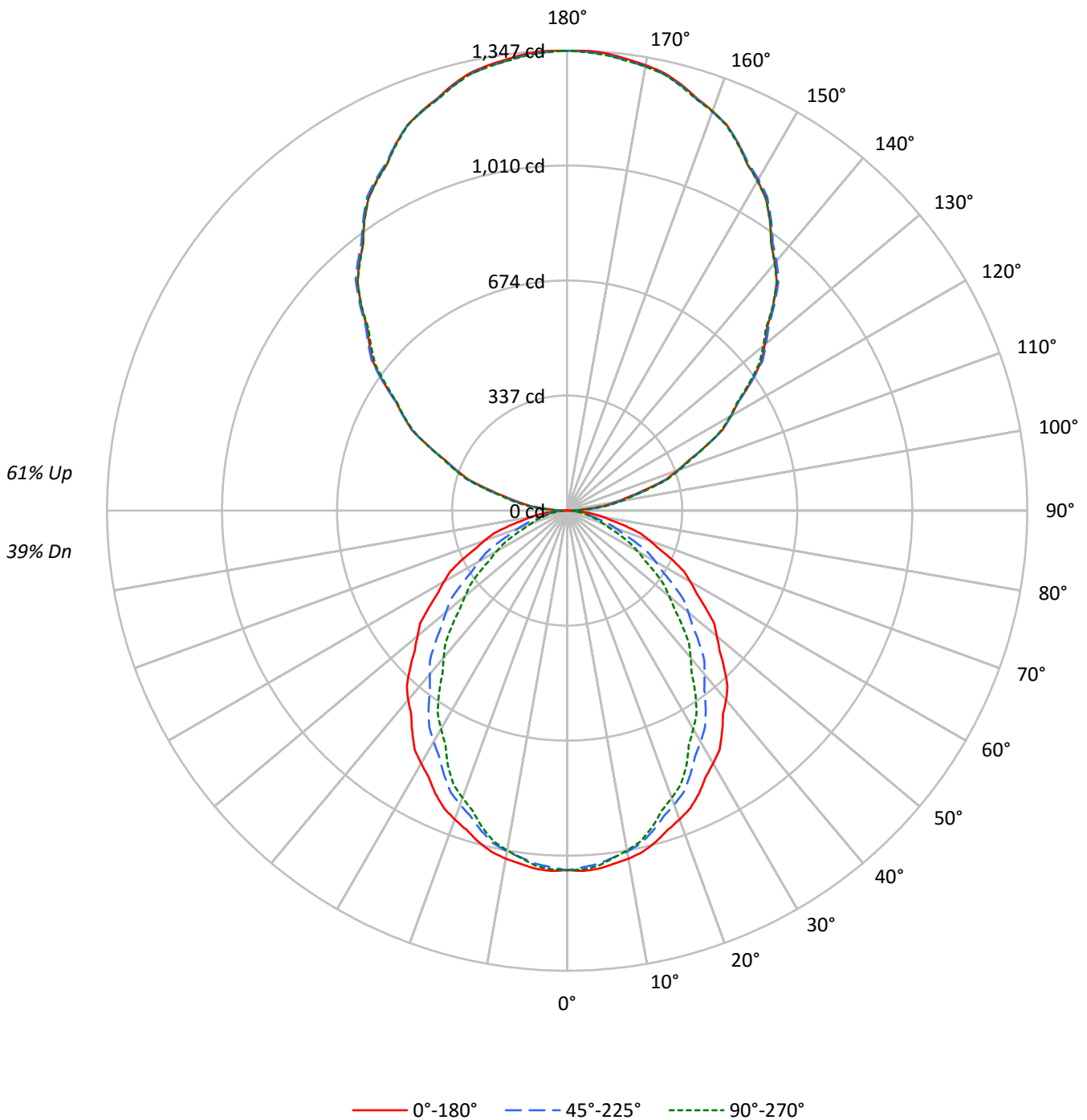
Input Watts (W): 61.4
Input Voltage (V): 120
Input Current (A_{in}): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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	105	105	105	105	95	95	95	95	77	77	77	61	61	61	46	46	46	39
1	96	91	88	84	87	83	80	77	68	66	64	54	52	51	41	40	39	33
2	87	80	74	69	79	73	68	64	60	56	53	48	45	43	36	35	33	28
3	80	71	64	58	72	64	58	53	53	49	45	42	39	37	32	30	29	24
4	73	63	55	49	66	57	51	45	47	42	38	38	34	32	29	27	25	21
5	67	56	48	42	61	51	44	39	42	37	33	34	30	27	26	24	22	18
6	62	50	42	37	56	46	39	34	38	33	29	31	27	24	24	21	19	16
7	57	45	37	32	52	41	35	30	35	29	26	28	24	21	22	19	17	14
8	53	41	33	28	48	38	31	26	31	26	23	26	22	19	20	17	15	13
9	49	37	30	25	45	34	28	24	29	24	20	24	20	17	19	16	14	12
10	46	34	27	23	42	32	25	21	27	22	18	22	18	16	17	15	13	11

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	11330	11330	11330
5°	11373	11217	11282
10°	11309	11075	11038
15°	11188	10816	10702
20°	11021	10493	10247
25°	10849	10128	9804
30°	10621	9708	9178
35°	10387	9289	8604
40°	10172	8792	7893
45°	9889	8304	7252
50°	9577	7748	6532
55°	9259	7112	5863
60°	8968	6433	5126
65°	8588	5695	4391
70°	8113	4784	3547
75°	7419	3764	3335
80°	6614	3335	3068
85°	5582	2952	2742



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	98.8	1.6
10°-20°	275.0	4.5
20°-30°	396.0	6.5
30°-40°	446.1	7.3
40°-50°	426.7	7.0
50°-60°	349.5	5.7
60°-70°	235.8	3.9
70°-80°	118.6	1.9
80°-90°	35.4	0.6
90°-100°	87.7	1.4
100°-110°	262.5	4.3
110°-120°	446.4	7.3
120°-130°	587.2	9.6
130°-140°	660.0	10.8
140°-150°	648.8	10.6
150°-160°	546.2	8.9
160°-170°	363.6	5.9
170°-180°	127.3	2.1
0°-30°	769.9	12.6
0°-40°	1215.9	19.9
0°-60°	1992.1	32.6
0°-90°	2381.9	39.0
90°-120°	796.6	13.0
90°-150°	2692.5	44.1
90°-180°	3730.0	61.0
0°-180°	6111.4	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1053	1053	1053	1053	1053	
5°	1053	1048	1038	1045	1044	100
15°	1004	994	971	966	960	283
25°	914	891	853	835	826	420
35°	790	759	707	671	655	495
45°	650	610	546	498	476	501
55°	493	450	379	331	312	442
65°	337	289	224	184	172	334
75°	178	137	90	82	80	190
85°	45	27	24	22	22	51
90°	1	12	25	29	32	6
95°	62	70	78	82	82	70
105°	238	240	250	250	252	255
115°	449	452	450	451	450	444
125°	658	661	659	655	650	586
135°	853	859	859	854	852	657
145°	1035	1037	1040	1039	1035	646
155°	1185	1185	1186	1190	1183	545
165°	1291	1288	1288	1294	1287	364
175°	1343	1339	1339	1344	1338	128
180°	1346	1346	1346	1346	1346	



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CANDELA DISTRIBUTION (FULL):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
0°	1052.6	1052.6	1052.6	1052.6	1052.6	1052.6	1052.6	1052.6	1052.6	1052.6	1052.6
2.5°	1056.0	1055.4	1054.8	1054.2	1053.6	1052.4	1050.5	1048.7	1046.9	1045.1	1046.8
5°	1052.6	1051.7	1050.7	1049.8	1048.8	1047.2	1044.9	1042.6	1040.3	1038.1	1039.8
7.5°	1042.8	1041.9	1040.8	1039.8	1038.8	1036.7	1033.8	1030.9	1027.9	1024.9	1025.9
10°	1034.7	1033.3	1032.0	1030.7	1029.3	1027.0	1023.5	1020.2	1016.8	1013.3	1013.5
12.5°	1023.0	1021.6	1020.1	1018.6	1017.2	1014.3	1010.2	1006.0	1001.8	997.6	997.5
15°	1004.0	1001.8	999.7	997.7	995.6	991.9	986.6	981.3	975.9	970.6	969.7
17.5°	979.8	977.5	975.0	972.6	970.1	965.6	958.8	952.0	945.3	938.6	936.5
20°	962.1	959.0	956.0	953.0	950.0	944.9	937.6	930.4	923.2	916.0	913.5
22.5°	942.3	938.8	935.3	931.8	928.3	922.8	915.1	907.4	899.8	892.1	889.0
25°	913.5	908.7	903.9	899.2	894.5	887.7	879.0	870.3	861.5	852.8	848.8
27.5°	878.4	873.2	868.0	862.7	857.5	850.0	840.3	830.6	820.8	811.1	805.6
30°	854.5	848.8	843.2	837.5	831.8	823.6	813.0	802.3	791.7	781.1	774.7
32.5°	830.6	824.2	817.7	811.3	804.9	796.0	784.7	773.6	762.3	751.1	744.0
35°	790.5	783.7	776.8	770.1	763.2	753.9	742.2	730.3	718.6	706.9	698.7
37.5°	749.9	742.2	734.7	727.1	719.5	709.5	696.9	684.4	671.8	659.3	650.0
40°	723.9	715.6	707.2	698.9	690.6	679.6	666.2	652.7	639.2	625.7	615.9
42.5°	694.6	686.2	677.8	669.5	661.2	650.0	636.1	622.2	608.3	594.4	583.6
45°	649.6	641.2	632.6	624.0	615.5	604.0	589.3	574.7	560.1	545.5	534.7
47.5°	604.8	595.4	586.0	576.7	567.3	555.3	540.7	526.0	511.4	496.8	485.1
50°	571.9	563.0	554.2	545.2	536.3	524.2	508.8	493.4	478.1	462.7	450.9
52.5°	542.6	533.0	523.3	513.6	503.9	491.5	476.2	461.1	445.8	430.6	418.4
55°	493.4	484.1	474.8	465.5	456.2	443.5	427.4	411.3	395.2	379.0	368.0
57.5°	448.0	437.9	427.8	417.6	407.5	394.4	378.1	361.9	345.7	329.5	319.1
60°	416.6	406.2	395.7	385.3	374.9	361.7	346.0	330.3	314.5	298.8	288.5
62.5°	385.1	374.7	364.3	353.8	343.5	330.4	314.6	298.9	283.2	267.3	257.7
65°	337.2	326.8	316.3	305.9	295.5	282.8	268.1	253.2	238.5	223.6	214.3
67.5°	289.3	278.7	268.2	257.6	247.0	234.6	220.5	206.3	192.1	177.9	171.0
70°	257.8	247.6	237.3	227.1	216.9	205.0	191.8	178.6	165.3	152.0	145.3
72.5°	226.4	216.3	206.2	196.1	186.1	175.0	162.9	150.8	138.8	126.7	121.2
75°	178.4	169.3	160.2	151.1	142.0	132.2	121.8	111.4	100.9	90.5	88.6
77.5°	134.7	126.5	118.2	110.0	101.7	94.3	87.6	80.9	74.2	67.4	66.4
80°	106.7	98.9	91.2	83.4	75.6	69.7	65.7	61.7	57.8	53.8	53.2
82.5°	80.1	73.4	66.6	59.9	53.2	48.9	47.0	45.2	43.4	41.5	40.9
85°	45.2	41.1	36.9	32.7	28.5	26.2	25.6	25.0	24.5	23.9	23.6
87.5°	16.6	15.4	14.2	13.0	11.8	11.5	12.1	12.7	13.4	13.9	14.0
90°	1.1	3.4	5.8	8.1	10.4	13.1	16.2	19.2	22.3	25.4	26.3
92.5°	25.6	27.1	28.8	30.4	32.0	33.7	35.4	37.1	38.9	40.6	41.3
95°	62.4	64.0	65.7	67.3	69.0	70.8	72.6	74.5	76.4	78.3	79.2
97.5°	110.8	112.0	113.2	114.5	115.7	117.0	118.4	119.7	121.1	122.5	123.5
100°	143.8	145.2	146.6	148.1	149.4	150.7	151.9	153.1	154.3	155.5	156.1
102.5°	181.9	182.7	183.6	184.4	185.2	186.5	188.0	189.6	191.1	192.7	193.4
105°	237.9	238.4	238.9	239.3	239.8	241.1	243.2	245.3	247.4	249.6	249.6
107.5°	303.0	303.4	303.6	303.9	304.2	304.8	305.6	306.5	307.3	308.1	308.9
110°	343.6	344.1	344.6	345.0	345.5	346.0	346.5	347.0	347.4	347.9	348.9



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CANDELA DISTRIBUTION (continued):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
112.5°	386.0	386.2	386.5	386.8	387.1	387.3	387.3	387.4	387.6	387.7	388.8
115°	449.4	450.1	450.8	451.5	452.2	452.3	451.8	451.4	450.9	450.5	450.7
117.5°	513.3	513.7	514.2	514.7	515.2	515.1	514.5	513.9	513.2	512.7	512.6
120°	553.0	554.4	555.9	557.3	558.6	558.8	557.6	556.4	555.3	554.1	553.8
122.5°	594.5	595.5	596.6	597.6	598.6	598.8	598.2	597.6	597.0	596.4	595.7
125°	657.7	658.4	659.1	659.8	660.6	660.6	660.1	659.7	659.3	658.8	657.9
127.5°	716.1	717.6	719.1	720.6	722.1	722.6	722.1	721.5	721.1	720.6	719.2
130°	755.0	756.8	758.8	760.7	762.5	763.1	762.4	761.7	761.0	760.3	759.4
132.5°	793.9	795.8	797.7	799.6	801.4	802.1	801.6	801.1	800.5	800.1	798.9
135°	853.4	854.8	856.1	857.5	859.0	859.6	859.3	859.1	858.8	858.6	857.7
137.5°	908.3	909.5	910.7	911.8	913.1	914.0	914.5	915.2	915.7	916.4	915.3
140°	946.4	947.5	948.8	949.9	951.1	951.8	952.0	952.3	952.5	952.8	952.5
142.5°	981.0	982.3	983.4	984.6	985.8	986.6	987.0	987.4	987.8	988.3	988.1
145°	1035.2	1035.7	1036.2	1036.7	1037.1	1037.7	1038.4	1039.1	1039.8	1040.5	1040.2
147.5°	1082.6	1083.5	1084.3	1085.2	1086.0	1086.7	1087.4	1088.0	1088.7	1089.3	1089.3
150°	1115.6	1116.1	1116.6	1117.0	1117.4	1117.9	1118.4	1118.8	1119.3	1119.8	1119.8
152.5°	1142.6	1143.3	1143.9	1144.6	1145.3	1145.7	1146.1	1146.3	1146.6	1146.9	1147.3
155°	1185.4	1185.4	1185.4	1185.4	1185.4	1185.5	1185.7	1185.9	1186.2	1186.4	1187.4
157.5°	1221.7	1221.5	1221.2	1220.9	1220.6	1220.6	1220.7	1220.9	1221.2	1221.3	1222.3
160°	1244.6	1244.1	1243.7	1243.2	1242.7	1242.4	1242.4	1242.4	1242.4	1242.4	1243.7
162.5°	1264.9	1264.2	1263.6	1262.9	1262.2	1262.0	1262.2	1262.4	1262.6	1262.7	1264.0
165°	1291.1	1290.4	1289.7	1289.0	1288.3	1287.9	1287.9	1287.9	1287.9	1287.9	1289.3
167.5°	1312.1	1311.1	1310.2	1309.2	1308.3	1307.9	1308.1	1308.3	1308.5	1308.6	1310.1
170°	1323.9	1323.0	1322.0	1321.1	1320.1	1319.6	1319.6	1319.6	1319.6	1319.6	1321.3
172.5°	1333.2	1332.3	1331.3	1330.4	1329.4	1328.9	1328.9	1328.9	1328.9	1328.9	1330.4
175°	1343.0	1342.0	1341.1	1340.1	1339.1	1338.7	1338.7	1338.7	1338.7	1338.7	1340.1
177.5°	1347.0	1346.2	1345.4	1344.7	1343.9	1343.5	1343.5	1343.5	1343.5	1343.5	1344.7
180°	1346.1	1346.1	1346.1	1346.1	1346.1	1346.1	1346.1	1346.1	1346.1	1346.1	1346.1



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CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
0°	1052.6	1052.6	1052.6	1052.6	1052.6	1052.6	1052.6	1052.6
2.5°	1048.4	1050.1	1051.7	1052.5	1052.1	1051.8	1051.5	1051.2
5°	1041.5	1043.2	1044.9	1045.5	1045.2	1044.8	1044.4	1044.1
7.5°	1026.9	1027.8	1028.7	1028.9	1028.3	1027.6	1027.0	1026.3
10°	1013.7	1013.9	1014.1	1013.7	1012.8	1011.8	1010.9	1009.9
12.5°	997.4	997.3	997.2	996.5	995.5	994.3	993.3	992.1
15°	968.7	967.8	966.9	965.7	964.4	963.0	961.7	960.4
17.5°	934.5	932.5	930.5	928.5	926.5	924.5	922.6	920.6
20°	911.1	908.6	906.1	903.8	901.5	899.2	896.9	894.6
22.5°	886.0	882.9	879.8	877.2	875.1	872.9	870.8	868.7
25°	844.9	840.9	836.9	833.9	831.8	829.6	827.6	825.5
27.5°	800.1	794.6	789.0	784.6	781.5	778.3	775.1	771.9
30°	768.3	761.7	755.3	750.6	747.5	744.5	741.4	738.4
32.5°	736.9	729.9	722.8	717.7	714.5	711.3	708.2	705.0
35°	690.6	682.4	674.3	668.5	665.0	661.6	658.2	654.8
37.5°	640.7	631.4	622.2	615.5	611.2	607.0	602.8	598.6
40°	606.0	596.1	586.3	579.2	574.8	570.5	566.1	561.7
42.5°	572.7	562.0	551.2	543.9	540.0	536.1	532.1	528.2
45°	523.9	513.1	502.2	494.6	490.0	485.4	480.9	476.4
47.5°	473.3	461.5	449.8	441.9	437.8	433.7	429.7	425.7
50°	439.2	427.4	415.6	407.6	403.2	398.8	394.5	390.1
52.5°	406.2	394.0	381.7	373.7	369.7	365.8	361.9	358.0
55°	357.0	346.0	335.0	327.6	323.8	320.0	316.3	312.4
57.5°	308.8	298.3	288.0	281.1	277.9	274.7	271.4	268.2
60°	278.3	268.1	257.8	251.1	247.9	244.6	241.4	238.1
62.5°	248.1	238.5	228.9	222.3	218.9	215.6	212.2	208.8
65°	205.0	195.8	186.5	180.8	178.7	176.6	174.6	172.4
67.5°	164.0	157.1	150.1	145.5	143.3	141.0	138.8	136.6
70°	138.7	132.0	125.4	121.1	119.0	116.8	114.8	112.7
72.5°	115.9	110.4	105.0	101.8	100.9	100.1	99.2	98.3
75°	86.7	84.8	82.9	81.8	81.4	81.0	80.6	80.2
77.5°	65.4	64.3	63.3	62.6	62.3	61.9	61.5	61.1
80°	52.7	52.1	51.5	51.0	50.6	50.3	49.9	49.5
82.5°	40.4	39.8	39.2	38.9	38.8	38.7	38.6	38.6
85°	23.2	22.7	22.4	22.2	22.2	22.2	22.2	22.2
87.5°	14.0	14.0	14.1	14.1	14.0	13.9	13.9	13.9
90°	27.2	28.2	29.1	29.8	30.3	30.8	31.2	31.7
92.5°	42.1	42.9	43.6	43.9	43.5	43.3	43.0	42.7
95°	80.1	81.0	82.0	82.5	82.5	82.5	82.5	82.5
97.5°	124.6	125.7	126.8	127.3	127.2	127.1	127.0	126.9
100°	156.9	157.5	158.2	158.8	159.3	159.8	160.3	160.7
102.5°	194.0	194.8	195.5	195.8	195.7	195.6	195.5	195.4
105°	249.6	249.6	249.6	249.8	250.3	250.7	251.2	251.7
107.5°	309.7	310.4	311.1	311.4	311.1	310.8	310.5	310.2
110°	349.8	350.7	351.6	351.9	351.4	351.0	350.5	350.0



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CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
112.5°	389.9	391.0	392.2	392.6	392.6	392.5	392.4	392.3
115°	450.9	451.2	451.4	451.4	451.2	450.9	450.7	450.5
117.5°	512.6	512.5	512.4	512.1	511.4	510.8	510.1	509.5
120°	553.6	553.4	553.2	552.8	552.4	551.9	551.4	550.9
122.5°	595.2	594.5	593.9	593.3	592.6	592.0	591.3	590.7
125°	656.9	656.0	655.0	654.1	653.1	652.2	651.3	650.3
127.5°	717.9	716.6	715.3	714.0	713.0	711.9	710.9	709.7
130°	758.4	757.5	756.5	755.2	753.6	752.0	750.3	748.7
132.5°	797.8	796.6	795.6	794.3	793.0	791.8	790.5	789.3
135°	856.7	855.8	854.8	854.2	853.7	853.2	852.7	852.3
137.5°	914.4	913.4	912.4	911.5	910.6	909.7	908.8	907.9
140°	952.3	952.0	951.8	950.9	949.3	947.5	945.9	944.3
142.5°	987.8	987.6	987.3	986.6	985.3	984.1	982.8	981.5
145°	1040.0	1039.8	1039.6	1039.0	1038.0	1037.1	1036.2	1035.2
147.5°	1089.3	1089.3	1089.3	1088.7	1087.3	1085.8	1084.4	1083.0
150°	1119.8	1119.8	1119.8	1119.1	1117.7	1116.3	1114.8	1113.5
152.5°	1147.6	1148.0	1148.3	1147.9	1146.7	1145.5	1144.3	1143.0
155°	1188.3	1189.3	1190.2	1189.8	1188.2	1186.6	1184.9	1183.2
157.5°	1223.3	1224.3	1225.3	1225.1	1223.8	1222.5	1221.2	1219.9
160°	1244.8	1246.0	1247.2	1247.3	1246.3	1245.5	1244.5	1243.5
162.5°	1265.1	1266.3	1267.5	1267.3	1265.8	1264.3	1262.8	1261.3
165°	1290.8	1292.2	1293.6	1293.5	1291.8	1290.2	1288.5	1286.9
167.5°	1311.6	1313.0	1314.5	1314.5	1313.0	1311.6	1310.1	1308.6
170°	1323.0	1324.6	1326.2	1326.2	1324.6	1323.0	1321.3	1319.6
172.5°	1331.9	1333.3	1334.8	1334.7	1333.1	1331.4	1329.8	1328.1
175°	1341.5	1343.0	1344.3	1344.2	1342.6	1340.9	1339.3	1337.7
177.5°	1345.8	1347.0	1348.1	1348.0	1346.6	1345.3	1344.0	1342.7
180°	1346.1	1346.1	1346.1	1346.1	1346.1	1346.1	1346.1	1346.1

(END OF REPORT)