

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: P332437-930

Luminaire Tested: **S123RDIW-S775D755U930-4F0-1E-UDD-F1**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P332437-930
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-S775D755U930-4F0-1E-UDD-F1
Description: DEFINE 3 DIRECT-INDIRECT WALL MOUNT LED LUMINAIRE
DOWNLIGHT 775 LUMENS PER FOOT, FLUSH SATIN WHITE DIFFUSER, REGRESSED
HOUSING
UPLIGHT 755 LUMENS PER FOOT, FLUSH SATIN WHITE DIFFUSER
Light Source: -
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 4514.6 lumens
Efficiency: N/A
Efficacy: 100.3 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

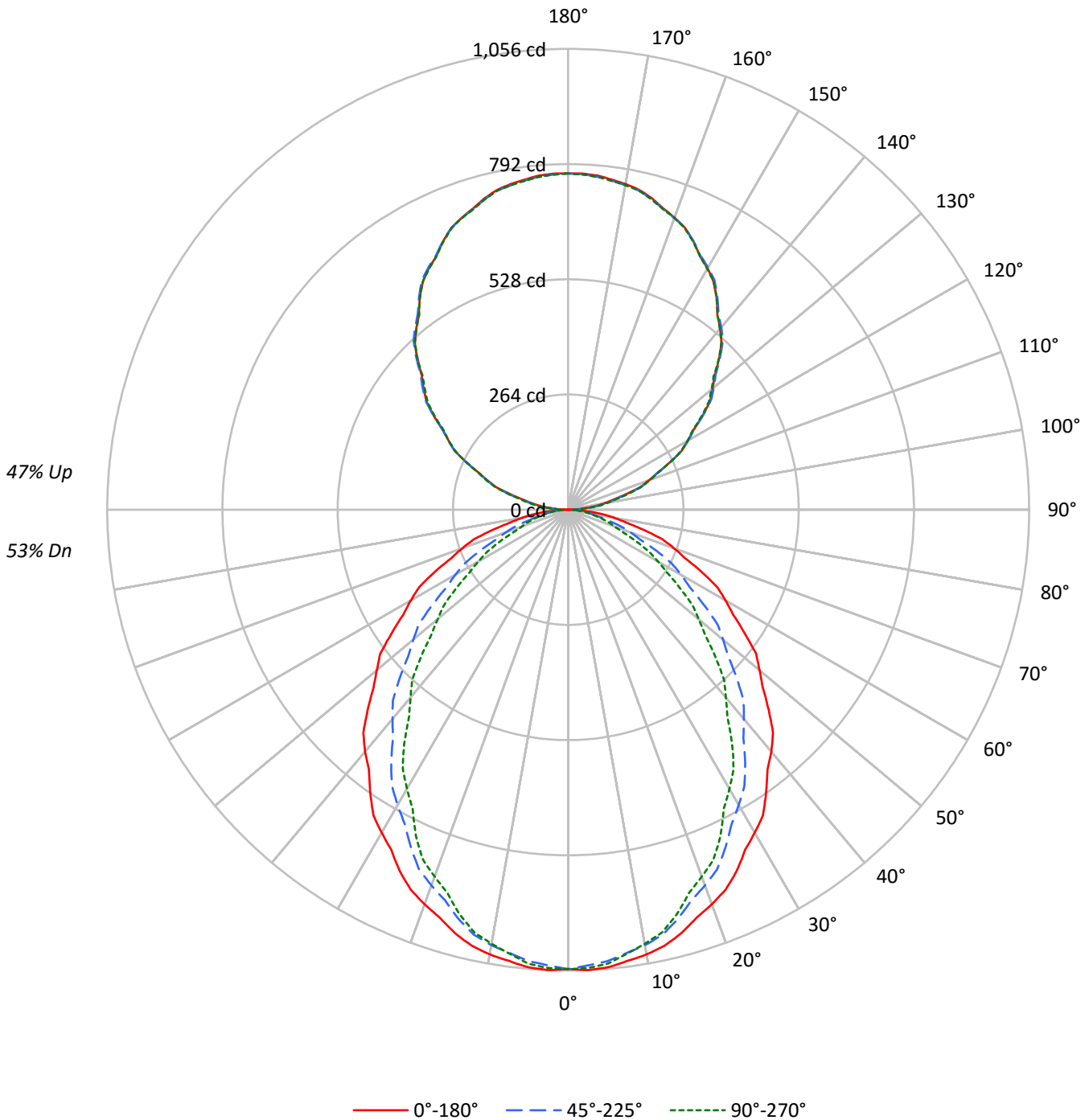
Input Watts (W): 45
Input Voltage (V): 120
Input Current (A_{in}): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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	108	108	108	108	100	100	100	100	85	85	85	71	71	71	59	59	59	53
1	99	95	91	87	91	88	84	82	75	73	70	63	62	60	52	51	50	45
2	90	83	77	72	83	77	72	67	66	62	59	56	53	51	46	45	43	38
3	82	73	66	60	76	68	62	57	59	54	50	50	46	43	41	39	37	33
4	76	65	57	51	70	61	54	48	52	47	43	44	40	37	37	34	32	28
5	70	58	50	44	64	54	47	42	47	41	37	40	36	33	34	31	28	25
6	64	52	44	38	59	49	42	36	42	37	33	36	32	29	31	27	25	22
7	59	47	39	34	55	44	37	32	38	33	29	33	29	25	28	25	22	20
8	55	43	35	30	51	40	33	29	35	30	26	30	26	23	26	22	20	18
9	51	39	32	27	48	37	30	26	32	27	23	28	24	21	24	21	18	16
10	48	36	29	24	45	34	27	23	30	25	21	26	22	19	22	19	16	15

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	2.2
10°-20°	275.0	6.1
20°-30°	396.0	8.8
30°-40°	446.1	9.9
40°-50°	426.7	9.5
50°-60°	349.5	7.7
60°-70°	235.8	5.2
70°-80°	118.6	2.6
80°-90°	33.7	0.7
90°-100°	50.2	1.1
100°-110°	150.2	3.3
110°-120°	255.5	5.7
120°-130°	336.1	7.4
130°-140°	377.7	8.4
140°-150°	371.3	8.2
150°-160°	312.6	6.9
160°-170°	208.1	4.6
170°-180°	72.9	1.6
0°-30°	769.9	17.1
0°-40°	1215.9	26.9
0°-60°	1992.1	44.1
0°-90°	2380.2	52.7
90°-120°	455.9	10.1
90°-150°	1540.9	34.1
90°-180°	2134.0	47.3
0°-180°	4514.6	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	7	14	17	18	4
95°	36	40	45	47	47	40
105°	136	138	143	143	144	146
115°	257	259	258	258	258	254
125°	376	378	377	375	372	336
135°	488	492	491	489	488	376
145°	592	594	596	595	592	370
155°	678	678	679	681	677	312
165°	739	737	737	740	736	208
175°	768	766	766	769	766	73
180°	770	770	770	770	770	



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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	15.1	13.7	12.3	10.9	10.4	10.8	11.1	11.4	11.8	11.7
90°	0.6	2.0	3.3	4.6	6.0	7.5	9.3	11.0	12.8	14.5	15.1
92.5°	14.7	15.6	16.5	17.4	18.3	19.2	20.2	21.3	22.3	23.2	23.6
95°	35.7	36.6	37.6	38.6	39.5	40.4	41.6	42.6	43.7	44.8	45.3
97.5°	63.4	64.1	64.8	65.6	66.2	66.9	67.8	68.5	69.3	70.1	70.7
100°	82.3	83.1	83.9	84.7	85.5	86.3	86.9	87.6	88.3	88.9	89.4
102.5°	104.1	104.6	105.1	105.5	106.0	106.7	107.6	108.5	109.3	110.2	110.6
105°	136.2	136.4	136.7	137.0	137.2	137.9	139.2	140.4	141.6	142.8	142.8
107.5°	173.4	173.6	173.7	173.9	174.1	174.4	174.9	175.4	175.9	176.3	176.8
110°	196.7	197.0	197.2	197.5	197.7	198.0	198.3	198.5	198.9	199.1	199.7



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CANDELA DISTRIBUTION (continued):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
112.5°	220.9	221.0	221.2	221.4	221.5	221.6	221.7	221.8	221.8	221.8	222.5
115°	257.2	257.6	258.0	258.4	258.8	258.9	258.6	258.4	258.0	257.8	258.0
117.5°	293.8	294.0	294.2	294.6	294.8	294.8	294.4	294.1	293.8	293.3	293.3
120°	316.5	317.3	318.1	318.9	319.8	319.8	319.1	318.5	317.8	317.1	317.0
122.5°	340.2	340.8	341.4	342.0	342.6	342.7	342.3	342.0	341.7	341.3	341.0
125°	376.4	376.8	377.2	377.6	378.1	378.1	377.8	377.6	377.2	377.0	376.5
127.5°	409.8	410.7	411.6	412.4	413.3	413.5	413.3	412.9	412.6	412.4	411.6
130°	432.1	433.2	434.2	435.3	436.3	436.8	436.3	435.9	435.5	435.1	434.6
132.5°	454.4	455.4	456.5	457.5	458.7	459.0	458.8	458.4	458.1	457.9	457.2
135°	488.4	489.2	490.0	490.8	491.5	492.0	491.8	491.6	491.5	491.4	490.8
137.5°	519.8	520.5	521.1	521.9	522.5	523.0	523.3	523.7	524.1	524.4	523.8
140°	541.6	542.3	543.0	543.6	544.3	544.7	544.9	544.9	545.1	545.3	545.1
142.5°	561.5	562.1	562.8	563.5	564.1	564.6	564.8	565.1	565.3	565.6	565.4
145°	592.5	592.7	593.0	593.2	593.5	593.9	594.3	594.7	595.1	595.5	595.3
147.5°	619.5	620.0	620.5	621.0	621.5	621.9	622.3	622.6	623.1	623.5	623.5
150°	638.5	638.7	639.0	639.3	639.5	639.8	640.0	640.3	640.6	640.8	640.8
152.5°	654.0	654.3	654.7	655.1	655.4	655.7	655.8	656.0	656.2	656.3	656.6
155°	678.4	678.4	678.4	678.4	678.4	678.4	678.6	678.7	678.8	679.0	679.6
157.5°	699.2	699.0	698.9	698.7	698.5	698.5	698.6	698.7	698.9	699.0	699.5
160°	712.2	712.0	711.8	711.4	711.2	711.0	711.0	711.0	711.0	711.0	711.8
162.5°	723.9	723.5	723.1	722.8	722.4	722.3	722.4	722.4	722.6	722.7	723.3
165°	738.9	738.5	738.1	737.7	737.3	737.0	737.0	737.0	737.0	737.0	737.8
167.5°	750.9	750.3	749.8	749.3	748.7	748.5	748.6	748.7	748.9	748.9	749.7
170°	757.7	757.1	756.6	756.0	755.5	755.2	755.2	755.2	755.2	755.2	756.2
172.5°	763.0	762.5	761.9	761.3	760.8	760.5	760.5	760.5	760.5	760.5	761.4
175°	768.5	768.0	767.4	767.0	766.4	766.1	766.1	766.1	766.1	766.1	767.0
177.5°	770.9	770.4	770.0	769.6	769.2	768.9	768.9	768.9	768.9	768.9	769.6
180°	770.4	770.4	770.4	770.4	770.4	770.4	770.4	770.4	770.4	770.4	770.4



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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°	11.7	11.7	11.6	11.5	11.4	11.3	11.3	11.2
90°	15.6	16.1	16.7	17.0	17.4	17.6	17.9	18.2
92.5°	24.1	24.5	24.9	25.1	24.9	24.8	24.6	24.5
95°	45.8	46.4	47.0	47.2	47.2	47.2	47.2	47.2
97.5°	71.3	71.9	72.6	72.8	72.8	72.7	72.6	72.6
100°	89.8	90.2	90.6	90.9	91.2	91.5	91.7	92.0
102.5°	111.0	111.5	111.9	112.0	112.0	111.9	111.9	111.9
105°	142.8	142.8	142.8	142.9	143.2	143.5	143.7	144.1
107.5°	177.2	177.7	178.1	178.2	178.1	177.9	177.7	177.6
110°	200.2	200.7	201.2	201.4	201.1	200.8	200.6	200.3



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CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
112.5°	223.1	223.8	224.5	224.7	224.7	224.6	224.5	224.5
115°	258.0	258.2	258.4	258.4	258.2	258.0	258.0	257.8
117.5°	293.3	293.3	293.3	293.1	292.7	292.3	292.0	291.6
120°	316.8	316.7	316.6	316.3	316.1	315.8	315.5	315.3
122.5°	340.6	340.2	339.9	339.6	339.2	338.8	338.4	338.0
125°	375.9	375.4	374.9	374.3	373.8	373.2	372.7	372.2
127.5°	410.8	410.1	409.4	408.6	408.1	407.4	406.8	406.2
130°	434.1	433.5	432.9	432.2	431.3	430.3	429.4	428.4
132.5°	456.6	455.9	455.3	454.6	453.9	453.1	452.4	451.7
135°	490.3	489.8	489.3	488.9	488.5	488.3	488.0	487.7
137.5°	523.3	522.7	522.2	521.6	521.1	520.6	520.1	519.6
140°	544.9	544.9	544.7	544.1	543.2	542.3	541.4	540.4
142.5°	565.3	565.2	565.0	564.6	563.9	563.1	562.4	561.7
145°	595.2	595.1	594.9	594.6	594.0	593.5	593.0	592.5
147.5°	623.5	623.5	623.5	623.1	622.2	621.4	620.6	619.8
150°	640.8	640.8	640.8	640.4	639.6	638.9	638.1	637.2
152.5°	656.8	657.0	657.2	657.0	656.2	655.6	654.8	654.2
155°	680.0	680.6	681.1	680.9	680.0	679.1	678.1	677.2
157.5°	700.1	700.7	701.2	701.1	700.3	699.6	698.9	698.1
160°	712.4	713.1	713.7	713.8	713.3	712.7	712.2	711.7
162.5°	724.0	724.7	725.4	725.3	724.4	723.6	722.7	721.8
165°	738.7	739.5	740.3	740.2	739.3	738.3	737.4	736.5
167.5°	750.6	751.5	752.3	752.3	751.5	750.6	749.7	748.9
170°	757.1	758.1	759.0	759.0	758.1	757.1	756.2	755.2
172.5°	762.2	763.0	763.9	763.9	762.9	762.0	761.0	760.1
175°	767.8	768.5	769.3	769.3	768.3	767.4	766.5	765.5
177.5°	770.2	770.9	771.5	771.4	770.7	769.9	769.2	768.4
180°	770.4	770.4	770.4	770.4	770.4	770.4	770.4	770.4

(END OF REPORT)