

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: P331540-840

Luminaire Tested: **S122DIW-S675D970U840-4F0-1E-UDD-D1**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P331540-840
REPORT IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-1807-864-8,
Test Lab: INNOVATION CENTER
Issue Date: 3/3/2020
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: NEO-RAY
Catalog Number: S122DIW-S675D970U840-4F0-1E-UDD-D1
Description: DEFINE 2 DIRECT-INDIRECT WALL MOUNT LED LUMINAIRE
DOWNLIGHT 675 LUMENS PER FOOT, DROP SATIN WHITE DIFFUSER
UPLIGHT 970 LUMENS PER FOOT, FLUSH SATIN WHITE DIFFUSER
Light Source: -
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 6107.8 lumens
Efficiency: N/A
Efficacy: 116.1 lumens/watt
Spacing Criteria (0/90/45): 1.21 / 1.32 / 1.42
Luminous Opening: Rectangular w/ Sides (W: 0.17' x L: 4' x H: 0.08')
CIE Type: Semi-Indirect

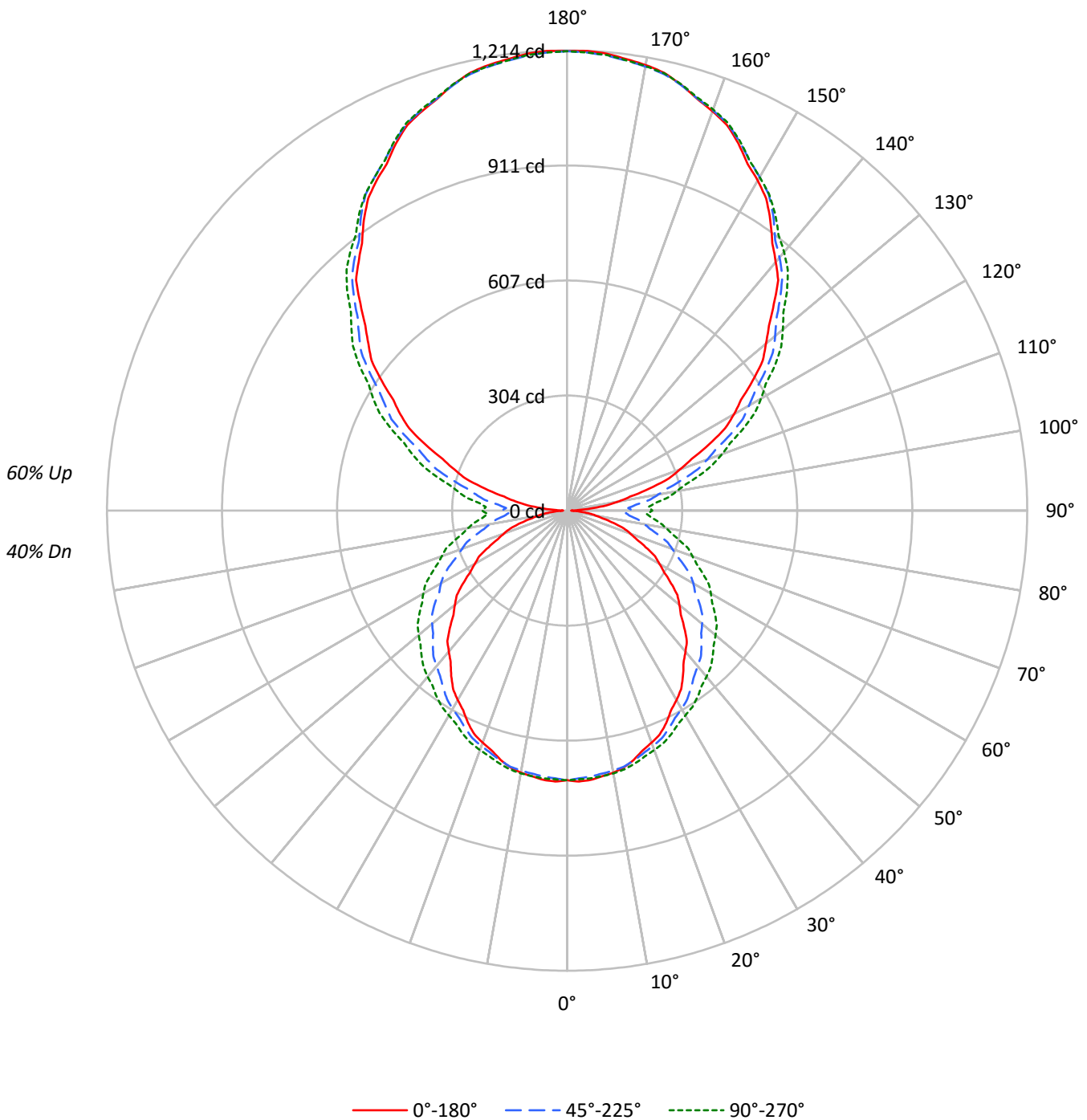
Input Watts (W): 52.6
Input Voltage (V): 120
Input Current (A_{in}): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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Luminous Intensity Polar Plot





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COEFFICIENT OF UTILIZATION - ZONAL CAVITY METHOD:

RF	20				20				20			20			20			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	78	78	78	61	61	61	47	47	47	40
1	94	89	85	81	85	81	78	74	66	63	61	52	50	49	39	38	37	31
2	85	77	71	65	77	70	65	60	57	53	50	45	42	40	34	32	30	25
3	78	68	60	54	70	62	55	50	50	45	41	39	36	33	30	27	25	21
4	71	60	51	45	64	54	47	42	44	39	35	35	31	28	26	24	21	17
5	65	53	44	38	58	48	41	35	39	34	30	31	27	24	23	21	18	15
6	59	47	39	33	54	43	36	30	35	30	26	28	24	21	21	18	16	13
7	55	42	34	29	50	39	32	27	32	26	22	25	21	18	19	16	14	11
8	51	38	31	25	46	35	28	23	29	24	20	23	19	16	18	15	13	10
9	47	35	27	22	43	32	25	21	26	21	17	21	17	14	16	13	11	9
10	44	32	25	20	40	29	23	18	24	19	16	20	16	13	15	12	10	8

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	11485	11485	11485
5°	11541	11055	11013
10°	11469	10729	10608
15°	11310	10384	10181
20°	11112	10013	9772
25°	10913	9655	9399
30°	10635	9288	9023
35°	10355	8933	8760
40°	10057	8630	8496
45°	9777	8361	8270
50°	9476	8116	8048
55°	9160	7855	7822
60°	8770	7583	7583
65°	8367	7262	7299
70°	7917	6920	6990
75°	7339	6581	6708
80°	6436	6238	6424
85°	5566	5939	6199



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	67.4	1.1
10°-20°	193.3	3.2
20°-30°	292.9	4.8
30°-40°	356.7	5.8
40°-50°	383.8	6.3
50°-60°	372.7	6.1
60°-70°	325.4	5.3
70°-80°	250.5	4.1
80°-90°	173.0	2.8
90°-100°	192.6	3.2
100°-110°	323.1	5.3
110°-120°	463.6	7.6
120°-130°	567.4	9.3
130°-140°	614.9	10.1
140°-150°	592.4	9.7
150°-160°	494.9	8.1
160°-170°	328.3	5.4
170°-180°	114.7	1.9
0°-30°	553.6	9.1
0°-40°	910.3	14.9
0°-60°	1666.8	27.3
0°-90°	2415.8	39.6
90°-120°	979.4	16.0
90°-150°	2754.0	45.1
90°-180°	3692.0	60.4
0°-180°	6107.8	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	711	711	711	711	711	
5°	713	710	704	710	709	68
15°	680	682	682	691	691	192
25°	618	626	635	647	651	284
35°	533	551	570	592	600	333
45°	437	465	501	532	543	337
55°	335	373	426	462	476	299
65°	229	280	340	381	396	227
75°	127	185	250	293	308	134
85°	37	101	167	209	225	40
90°	11	84	172	210	224	10
95°	61	120	184	222	234	67
105°	225	259	314	350	363	238
115°	413	432	475	504	513	408
125°	597	608	636	660	670	534
135°	771	783	795	815	821	596
145°	935	942	948	955	956	584
155°	1069	1072	1075	1080	1077	492
165°	1163	1162	1162	1168	1164	328
175°	1210	1207	1205	1211	1206	115
180°	1212	1212	1212	1212	1212	



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CANDELA DISTRIBUTION (FULL):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
0°	711.3	711.3	711.3	711.3	711.3	711.3	711.3	711.3	711.3	711.3	711.3
2.5°	715.5	714.9	714.4	713.8	713.3	712.4	711.0	709.7	708.5	707.2	708.1
5°	713.4	712.7	712.1	711.3	710.6	709.6	708.2	706.9	705.5	704.1	705.5
7.5°	707.0	706.5	706.1	705.6	705.2	704.4	703.4	702.3	701.3	700.2	701.9
10°	702.1	701.6	701.1	700.6	700.2	699.6	698.9	698.3	697.6	696.9	698.7
12.5°	693.8	693.9	694.0	694.1	694.2	694.0	693.5	693.0	692.5	692.0	693.8
15°	680.4	680.9	681.4	681.8	682.3	682.5	682.5	682.5	682.5	682.5	684.5
17.5°	663.1	664.1	665.0	666.0	666.9	667.8	668.5	669.2	669.9	670.8	672.9
20°	651.6	652.7	653.8	655.0	656.1	657.1	658.0	659.0	659.9	660.9	663.4
22.5°	639.1	640.5	641.9	643.2	644.5	645.8	647.1	648.3	649.6	651.0	653.5
25°	618.5	620.2	621.8	623.4	625.0	626.8	628.8	631.0	633.0	635.0	637.8
27.5°	593.8	596.4	599.1	601.7	604.3	606.8	609.3	611.7	614.1	616.5	620.0
30°	577.3	580.3	583.3	586.2	589.3	592.2	595.2	598.1	601.2	604.1	607.7
32.5°	559.2	562.5	565.8	569.2	572.6	576.0	579.6	583.0	586.5	590.1	594.3
35°	533.0	536.8	540.8	544.6	548.6	552.7	557.0	561.4	565.7	570.1	575.1
37.5°	504.5	509.1	513.5	518.0	522.5	527.6	533.2	538.9	544.4	550.1	555.7
40°	485.5	490.6	495.6	500.7	505.7	511.3	517.6	523.7	529.9	536.0	542.0
42.5°	467.5	472.4	477.5	482.5	487.6	493.6	500.8	507.9	514.9	522.1	528.6
45°	437.1	443.3	449.5	455.7	461.8	469.0	477.0	485.0	493.0	501.0	508.2
47.5°	407.2	413.9	420.7	427.4	434.1	442.2	451.6	461.0	470.4	479.8	487.3
50°	386.6	393.7	400.8	407.9	415.0	423.7	434.0	444.3	454.6	464.9	472.7
52.5°	366.8	374.3	381.7	389.2	396.7	405.9	416.7	427.6	438.4	449.3	457.3
55°	335.1	343.3	351.5	359.8	368.0	378.1	390.0	401.9	413.8	425.8	434.0
57.5°	303.7	313.1	322.3	331.6	340.9	351.6	363.8	375.9	388.1	400.2	409.1
60°	281.4	291.2	301.1	311.0	320.8	332.3	345.4	358.4	371.4	384.6	393.2
62.5°	261.7	271.9	282.1	292.3	302.6	314.2	327.2	340.2	353.4	366.4	375.7
65°	228.8	240.0	251.4	262.6	273.8	286.1	299.6	313.2	326.7	340.2	349.6
67.5°	198.7	210.5	222.3	234.0	245.7	258.4	272.3	286.1	299.9	313.8	323.3
70°	177.3	189.2	201.2	213.1	225.0	238.0	252.3	266.4	280.6	294.9	304.7
72.5°	157.5	169.8	182.1	194.4	206.6	219.9	234.4	248.7	263.2	277.5	287.2
75°	126.8	139.7	152.5	165.3	178.1	191.9	206.5	221.2	235.8	250.5	260.3
77.5°	97.1	110.6	124.0	137.3	150.8	165.0	179.9	194.8	209.6	224.5	234.4
80°	77.4	91.3	105.2	119.3	133.2	147.6	162.6	177.4	192.3	207.2	216.8
82.5°	60.8	74.6	88.4	102.2	116.0	130.4	145.5	160.6	175.6	190.8	200.4
85°	37.2	51.3	65.5	79.7	93.9	108.4	123.0	137.6	152.4	167.0	176.6
87.5°	20.4	34.6	48.8	63.0	77.3	92.1	107.8	123.5	139.2	154.8	164.0
90°	11.3	27.4	43.3	59.4	75.4	93.2	112.9	132.6	152.2	171.9	180.6
92.5°	27.7	42.1	56.5	70.8	85.1	100.0	115.3	130.6	145.9	161.2	170.3
95°	61.4	74.4	87.6	100.6	113.6	127.2	141.4	155.6	169.9	184.0	192.7
97.5°	104.4	115.9	127.5	139.2	150.7	163.5	177.5	191.7	205.7	219.7	228.2
100°	137.1	147.4	157.7	168.0	178.3	190.2	203.7	217.2	230.8	244.3	252.8
102.5°	170.7	179.9	189.0	198.2	207.4	218.7	232.1	245.4	258.7	272.1	280.5
105°	225.1	232.4	239.7	247.0	254.4	264.2	276.6	288.9	301.3	313.7	322.1
107.5°	280.9	287.2	293.6	299.8	306.2	315.1	326.5	337.9	349.2	360.6	368.5
110°	316.1	322.0	328.0	334.0	339.9	348.5	359.7	370.9	382.1	393.3	400.7



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CANDELA DISTRIBUTION (continued):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
112.5°	355.4	360.6	365.8	371.0	376.2	384.1	394.6	405.1	415.6	426.1	432.8
115°	413.2	417.2	421.0	425.0	428.8	435.7	445.6	455.3	465.2	475.0	481.7
117.5°	469.9	473.4	476.9	480.3	483.8	489.7	497.9	506.1	514.4	522.7	529.0
120°	508.4	511.1	513.8	516.5	519.3	524.3	531.7	539.1	546.4	553.7	560.2
122.5°	543.6	546.1	548.7	551.2	553.8	558.7	566.0	573.4	580.8	588.0	593.8
125°	597.3	599.4	601.5	603.5	605.5	609.9	616.5	623.2	629.9	636.5	642.0
127.5°	650.8	653.1	655.5	657.8	660.2	663.9	669.0	674.1	679.2	684.3	689.1
130°	684.3	687.0	689.7	692.5	695.2	698.7	703.1	707.4	711.9	716.2	721.2
132.5°	722.0	724.1	726.3	728.5	730.6	733.7	737.5	741.2	745.1	748.8	753.2
135°	771.2	773.8	776.3	778.7	781.2	783.9	786.6	789.3	792.1	794.9	799.4
137.5°	824.3	826.2	828.2	830.2	832.2	834.0	835.7	837.2	838.8	840.4	844.4
140°	856.2	858.0	859.8	861.6	863.4	865.2	866.7	868.3	869.9	871.5	875.1
142.5°	888.9	890.7	892.5	894.3	896.2	897.5	898.4	899.2	900.1	900.9	904.0
145°	934.8	936.4	938.1	939.7	941.3	942.7	944.1	945.4	946.8	948.2	949.8
147.5°	976.8	978.8	980.7	982.5	984.4	985.8	986.7	987.6	988.6	989.5	990.2
150°	1005.4	1006.8	1008.1	1009.6	1010.9	1012.1	1013.0	1013.9	1014.8	1015.7	1016.3
152.5°	1030.9	1032.2	1033.6	1034.9	1036.3	1037.5	1038.6	1039.7	1040.8	1041.9	1042.7
155°	1068.8	1069.5	1070.3	1071.0	1071.6	1072.3	1073.0	1073.7	1074.3	1075.0	1076.1
157.5°	1101.4	1101.9	1102.3	1102.8	1103.2	1103.7	1104.1	1104.5	1104.9	1105.3	1106.8
160°	1121.1	1121.5	1122.0	1122.4	1122.9	1123.2	1123.5	1123.7	1123.9	1124.1	1125.5
162.5°	1139.0	1139.1	1139.2	1139.3	1139.4	1139.5	1139.8	1140.0	1140.2	1140.4	1142.1
165°	1163.0	1162.8	1162.6	1162.3	1162.1	1162.0	1162.0	1162.0	1162.0	1162.0	1163.6
167.5°	1183.1	1182.3	1181.6	1180.9	1180.3	1179.9	1179.9	1179.8	1179.8	1179.7	1181.3
170°	1193.7	1193.0	1192.3	1191.6	1190.9	1190.5	1190.2	1190.0	1189.8	1189.6	1191.1
172.5°	1201.0	1200.3	1199.6	1199.0	1198.3	1197.8	1197.6	1197.4	1197.2	1196.9	1198.5
175°	1210.0	1209.3	1208.7	1208.0	1207.3	1206.7	1206.3	1205.8	1205.4	1204.9	1206.5
177.5°	1213.8	1213.2	1212.6	1212.0	1211.5	1211.0	1210.7	1210.3	1210.0	1209.6	1210.7
180°	1212.0	1212.0	1212.0	1212.0	1212.0	1212.0	1212.0	1212.0	1212.0	1212.0	1212.0



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CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
0°	711.3	711.3	711.3	711.3	711.3	711.3	711.3	711.3
2.5°	709.0	709.9	710.8	711.1	710.7	710.4	710.0	709.7
5°	706.9	708.2	709.6	710.2	709.9	709.7	709.5	709.2
7.5°	703.5	705.2	706.8	707.5	707.3	707.0	706.8	706.6
10°	700.5	702.4	704.3	705.0	704.8	704.6	704.4	704.1
12.5°	695.6	697.4	699.3	700.0	699.8	699.6	699.4	699.1
15°	686.6	688.6	690.7	691.7	691.5	691.2	690.9	690.7
17.5°	675.0	677.2	679.3	680.4	680.4	680.4	680.4	680.4
20°	665.9	668.4	670.9	672.2	672.2	672.2	672.2	672.2
22.5°	656.0	658.5	661.0	662.5	662.8	663.2	663.6	663.9
25°	640.6	643.3	646.0	647.7	648.4	649.1	649.8	650.6
27.5°	623.5	626.9	630.5	632.4	632.9	633.4	633.9	634.4
30°	611.5	615.1	618.7	621.0	621.7	622.4	623.0	623.7
32.5°	598.5	602.8	606.9	609.7	611.0	612.2	613.4	614.6
35°	580.2	585.2	590.3	593.6	595.2	596.8	598.3	600.0
37.5°	561.3	566.8	572.5	576.1	577.8	579.5	581.2	582.9
40°	548.0	553.9	559.9	563.9	565.9	568.0	570.1	572.2
42.5°	535.0	541.6	548.1	552.4	554.4	556.5	558.6	560.6
45°	515.2	522.3	529.5	534.1	536.4	538.8	541.0	543.3
47.5°	494.6	502.1	509.5	514.4	516.9	519.5	522.0	524.5
50°	480.5	488.3	496.1	501.3	503.8	506.3	508.8	511.3
52.5°	465.2	473.2	481.2	486.6	489.2	491.9	494.6	497.4
55°	442.2	450.5	458.8	464.3	467.4	470.3	473.3	476.3
57.5°	418.0	426.9	435.8	441.7	444.7	447.8	450.8	453.8
60°	401.9	410.6	419.4	425.4	428.5	431.7	434.9	438.2
62.5°	384.9	394.2	403.4	409.6	412.5	415.6	418.6	421.6
65°	359.0	368.4	377.8	384.0	387.0	389.9	392.9	395.9
67.5°	332.8	342.2	351.7	358.1	361.1	364.3	367.4	370.5
70°	314.6	324.4	334.3	340.5	343.3	346.1	348.8	351.5
72.5°	296.9	306.5	316.2	322.7	326.0	329.3	332.5	335.9
75°	270.2	280.0	289.9	296.3	299.3	302.3	305.3	308.2
77.5°	244.2	254.0	263.8	270.2	273.5	276.7	279.8	283.1
80°	226.4	236.1	245.7	252.2	255.3	258.5	261.8	265.0
82.5°	210.0	219.5	229.2	235.5	238.5	241.6	244.6	247.6
85°	186.2	195.9	205.5	211.9	215.1	218.3	221.6	224.7
87.5°	173.3	182.6	191.8	197.9	200.9	203.9	206.8	209.8
90°	189.3	198.0	206.7	212.6	215.5	218.5	221.5	224.5
92.5°	179.4	188.4	197.4	203.4	206.2	209.0	211.8	214.6
95°	201.5	210.2	218.8	224.3	226.6	228.9	231.3	233.5
97.5°	236.7	245.2	253.7	259.2	261.9	264.6	267.2	269.8
100°	261.2	269.6	278.1	283.6	285.8	288.1	290.4	292.7
102.5°	288.9	297.4	305.9	311.3	313.6	315.9	318.2	320.4
105°	330.6	339.1	347.6	353.0	355.6	358.1	360.6	363.1
107.5°	376.5	384.4	392.2	396.9	398.3	399.8	401.3	402.7
110°	408.0	415.4	422.7	427.3	429.1	430.9	432.8	434.6



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CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
112.5°	439.6	446.4	453.2	457.6	459.6	461.6	463.6	465.6
115°	488.4	495.0	501.7	505.9	507.8	509.6	511.4	513.2
117.5°	535.1	541.4	547.6	551.6	553.2	554.9	556.5	558.2
120°	566.5	573.0	579.4	583.5	585.3	587.2	589.1	590.9
122.5°	599.5	605.1	610.8	614.5	616.1	617.8	619.5	621.1
125°	647.5	653.0	658.5	662.2	664.0	665.8	667.7	669.5
127.5°	694.0	698.9	703.8	706.8	708.1	709.4	710.6	712.0
130°	726.3	731.3	736.4	739.3	740.2	741.1	742.1	743.1
132.5°	757.5	761.8	766.1	768.8	769.9	771.0	772.1	773.3
135°	804.1	808.6	813.1	816.1	817.2	818.4	819.5	820.6
137.5°	848.5	852.5	856.6	858.9	859.5	860.2	860.8	861.5
140°	878.8	882.5	886.2	888.2	888.7	889.2	889.6	890.1
142.5°	907.2	910.3	913.4	915.0	915.3	915.6	915.9	916.3
145°	951.4	953.0	954.6	955.5	955.7	955.9	956.2	956.4
147.5°	990.9	991.6	992.2	992.4	992.1	991.8	991.5	991.2
150°	1017.0	1017.7	1018.4	1018.4	1017.7	1017.0	1016.3	1015.7
152.5°	1043.6	1044.5	1045.3	1045.3	1044.5	1043.6	1042.7	1041.9
155°	1077.3	1078.4	1079.5	1079.7	1079.1	1078.4	1077.7	1077.0
157.5°	1108.4	1109.9	1111.5	1111.7	1110.6	1109.5	1108.4	1107.3
160°	1126.8	1128.2	1129.5	1129.8	1128.9	1128.0	1127.1	1126.2
162.5°	1143.6	1145.1	1146.7	1146.9	1145.8	1144.7	1143.6	1142.6
165°	1165.2	1166.7	1168.3	1168.5	1167.4	1166.3	1165.2	1164.0
167.5°	1183.0	1184.6	1186.1	1186.3	1185.2	1184.0	1182.8	1181.6
170°	1192.8	1194.4	1196.0	1196.1	1194.7	1193.4	1191.9	1190.6
172.5°	1200.1	1201.7	1203.3	1203.5	1202.0	1200.7	1199.3	1198.0
175°	1208.1	1209.7	1211.2	1211.4	1210.0	1208.7	1207.3	1206.0
177.5°	1211.8	1212.8	1214.0	1214.0	1212.8	1211.8	1210.7	1209.6
180°	1212.0	1212.0	1212.0	1212.0	1212.0	1212.0	1212.0	1212.0

(END OF REPORT)