

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: P332754

Luminaire Tested: **S124DIW-S575D770U835-4F0-1E-UDD-D1**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P332754
REPORT IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-1807-864-10,
Test Lab: INNOVATION CENTER
Issue Date: 3/3/2020
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: NEO-RAY
Catalog Number: S124DIW-S575D770U835-4F0-1E-UDD-D1
Description: DEFINE 4 DIRECT-INDIRECT WALL MOUNT LED LUMINAIRE
DOWNLIGHT 575 LUMENS PER FOOT, DROP SATIN WHITE DIFFUSER
UPLIGHT 770 LUMENS PER FOOT, FLUSH SATIN WHITE DIFFUSER
Light Source: -
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 5034.1 lumens
Efficiency: N/A
Efficacy: 133.9 lumens/watt
Spacing Criteria (0/90/45): 1.23 / 1.28 / 1.39
Luminous Opening: Rectangular w/ Sides (W: 0.33' x L: 4' x H: 0.08')
CIE Type: General Diffuse

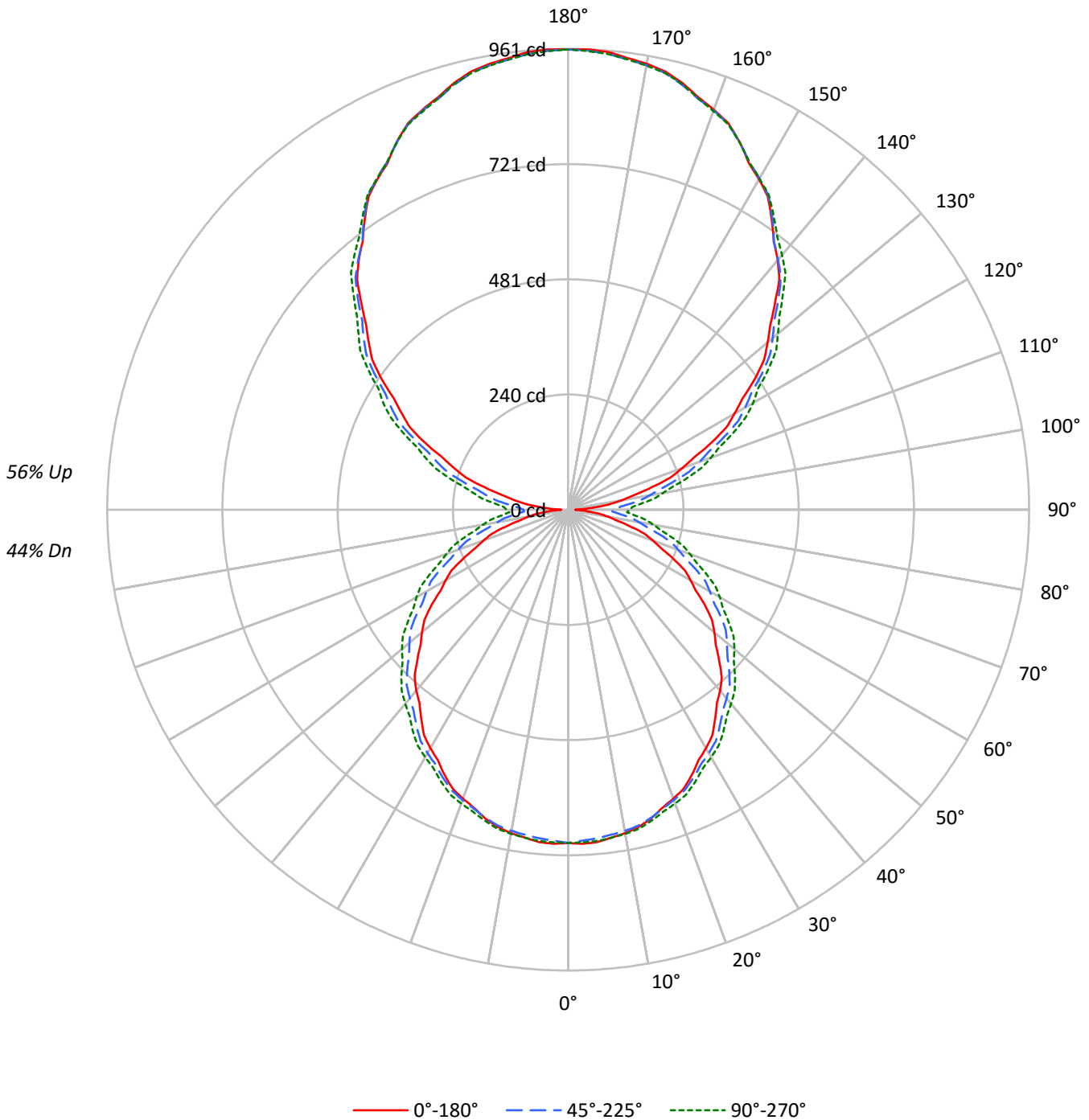
Input Watts (W): 37.6
Input Voltage (V): 120
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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	64	64	64	50	50	50	44
1	95	91	87	83	87	83	79	76	69	66	64	55	53	52	43	42	41	35
2	87	79	72	67	79	72	66	62	60	55	52	48	45	42	37	35	33	28
3	79	69	61	55	71	63	56	51	52	47	43	42	38	35	33	30	28	24
4	72	61	53	46	65	56	49	43	46	41	36	37	33	30	29	26	24	20
5	66	54	46	39	60	49	42	37	41	36	31	33	29	26	26	23	21	17
6	60	48	40	34	55	44	37	32	37	31	27	30	26	23	24	20	18	15
7	56	43	35	30	51	40	33	28	33	28	24	27	23	20	21	18	16	13
8	52	39	31	26	47	36	29	24	30	25	21	25	21	18	20	17	14	12
9	48	36	28	23	44	33	26	22	28	22	19	23	19	16	18	15	13	11
10	45	33	25	21	41	30	24	19	25	20	17	21	17	14	17	14	12	10

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	5610	5610	5610
5°	5628	5483	5498
10°	5593	5393	5388
15°	5543	5289	5260
20°	5467	5175	5135
25°	5382	5046	4997
30°	5290	4919	4856
35°	5185	4787	4732
40°	5102	4663	4603
45°	4978	4549	4492
50°	4873	4416	4375
55°	4765	4291	4237
60°	4596	4132	4112
65°	4410	3962	3958
70°	4186	3768	3778
75°	3872	3553	3616
80°	3526	3347	3457
85°	3082	3163	3364



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	65.8	1.3
10°-20°	188.5	3.7
20°-30°	285.1	5.7
30°-40°	344.9	6.9
40°-50°	364.7	7.2
50°-60°	343.2	6.8
60°-70°	284.7	5.7
70°-80°	200.0	4.0
80°-90°	115.9	2.3
90°-100°	130.4	2.6
100°-110°	237.2	4.7
110°-120°	351.6	7.0
120°-130°	438.5	8.7
130°-140°	479.4	9.5
140°-150°	464.8	9.2
150°-160°	389.5	7.7
160°-170°	259.1	5.1
170°-180°	90.7	1.8
0°-30°	539.4	10.7
0°-40°	884.4	17.6
0°-60°	1592.2	31.6
0°-90°	2192.9	43.6
90°-120°	719.2	14.3
90°-150°	2101.9	41.8
90°-180°	2841.0	56.4
0°-180°	5034.1	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	695	695	695	695	695	
5°	696	693	688	694	693	66
15°	667	668	665	672	672	188
25°	610	615	617	625	626	281
35°	534	543	551	561	564	334
45°	445	460	475	487	492	344
55°	349	365	388	403	408	311
65°	241	266	293	311	318	239
75°	134	163	195	216	224	142
85°	41	74	109	131	140	44
90°	15	54	93	119	128	11
95°	55	87	124	146	154	58
105°	180	197	228	249	258	191
115°	328	336	359	374	380	324
125°	474	475	492	505	509	423
135°	609	614	619	630	633	472
145°	739	741	742	746	747	463
155°	846	846	845	848	845	389
165°	921	919	917	921	919	260
175°	958	955	954	958	954	91
180°	960	960	960	960	960	



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CANDELA DISTRIBUTION (FULL):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
0°	694.9	694.9	694.9	694.9	694.9	694.9	694.9	694.9	694.9	694.9	694.9
2.5°	697.4	697.0	696.6	696.1	695.7	695.0	693.9	692.8	691.6	690.5	691.5
5°	695.7	695.2	694.6	694.1	693.6	692.7	691.5	690.3	689.1	687.9	689.3
7.5°	689.8	689.4	689.1	688.8	688.5	687.9	686.9	685.9	684.8	683.8	685.4
10°	684.8	684.6	684.4	684.3	684.1	683.6	682.7	681.8	681.0	680.1	681.7
12.5°	677.9	677.9	677.9	677.8	677.8	677.5	676.9	676.3	675.7	675.1	676.5
15°	666.9	667.1	667.2	667.4	667.6	667.4	666.9	666.4	665.8	665.3	666.9
17.5°	651.8	652.3	652.8	653.3	653.9	654.1	654.0	653.9	653.8	653.7	655.2
20°	641.2	641.7	642.2	642.8	643.3	643.6	643.8	644.0	644.1	644.3	646.0
22.5°	629.4	630.0	630.7	631.3	632.0	632.5	632.8	633.1	633.4	633.7	635.5
25°	610.1	611.1	612.2	613.2	614.2	615.0	615.5	616.0	616.6	617.1	619.0
27.5°	588.6	590.1	591.6	593.2	594.7	595.8	596.6	597.4	598.2	599.0	600.8
30°	574.3	575.7	577.0	578.4	579.8	581.1	582.3	583.5	584.7	586.0	587.9
32.5°	558.7	560.4	562.0	563.7	565.4	566.9	568.2	569.6	570.9	572.3	574.4
35°	533.8	535.9	538.0	540.0	542.1	544.0	545.7	547.5	549.2	550.9	553.4
37.5°	508.8	511.1	513.5	515.9	518.3	520.6	522.7	524.9	527.0	529.1	531.6
40°	492.6	494.8	497.1	499.3	501.6	503.9	506.3	508.7	511.2	513.6	516.2
42.5°	473.9	476.4	478.9	481.5	484.0	486.7	489.5	492.3	495.2	498.0	500.9
45°	445.1	448.4	451.7	455.0	458.2	461.5	464.8	468.1	471.4	474.7	477.6
47.5°	417.6	420.9	424.3	427.7	431.1	434.7	438.5	442.3	446.1	449.9	453.0
50°	397.6	401.4	405.2	409.1	412.9	416.7	420.5	424.3	428.1	431.9	435.3
52.5°	377.7	381.5	385.3	389.1	392.9	397.0	401.4	405.7	410.1	414.4	417.9
55°	348.6	352.2	355.9	359.5	363.1	367.5	372.7	377.9	383.1	388.3	391.8
57.5°	316.1	320.6	325.1	329.6	334.1	338.9	344.0	349.2	354.4	359.5	363.6
60°	294.9	299.4	303.9	308.4	312.9	318.0	323.7	329.4	335.1	340.8	344.8
62.5°	274.4	279.3	284.2	289.1	294.0	299.3	305.0	310.7	316.5	322.2	326.1
65°	241.2	246.8	252.3	257.8	263.4	269.1	274.9	280.8	286.7	292.6	296.9
67.5°	209.3	215.2	221.1	227.0	232.8	238.9	245.2	251.5	257.8	264.1	268.5
70°	187.5	193.4	199.3	205.2	211.1	217.3	223.8	230.4	237.0	243.6	248.2
72.5°	166.4	172.4	178.4	184.4	190.4	196.9	203.9	210.9	217.9	224.9	229.4
75°	133.8	140.2	146.6	153.0	159.4	166.3	173.5	180.8	188.1	195.3	200.2
77.5°	103.5	110.3	117.1	123.8	130.6	137.8	145.4	153.0	160.6	168.2	173.1
80°	84.8	91.7	98.7	105.6	112.5	119.7	127.4	135.0	142.6	150.2	155.4
82.5°	66.1	73.3	80.5	87.7	94.9	102.3	109.9	117.5	125.1	132.8	138.1
85°	41.2	48.5	55.8	63.0	70.3	77.8	85.6	93.4	101.2	108.9	114.1
87.5°	23.5	30.9	38.3	45.7	53.2	60.8	68.6	76.5	84.3	92.1	97.3
90°	14.7	23.4	32.1	40.9	49.6	58.3	67.1	75.9	84.6	93.4	99.4
92.5°	27.7	36.0	44.3	52.6	60.9	69.3	77.6	86.0	94.3	102.7	108.2
95°	54.6	61.8	69.0	76.2	83.4	91.1	99.4	107.6	115.9	124.1	129.3
97.5°	87.0	93.1	99.2	105.3	111.4	118.6	127.0	135.3	143.7	152.1	157.2
100°	112.5	117.6	122.8	127.9	133.1	139.8	148.0	156.2	164.5	172.7	177.7
102.5°	139.8	144.0	148.2	152.4	156.6	162.7	170.6	178.6	186.6	194.5	199.5
105°	179.9	183.6	187.2	190.8	194.4	199.8	206.8	213.9	220.9	228.0	232.8
107.5°	223.6	226.6	229.6	232.7	235.7	240.3	246.4	252.6	258.7	264.9	269.6
110°	252.6	255.4	258.1	260.9	263.6	268.0	273.8	279.7	285.6	291.5	295.2



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CANDELA DISTRIBUTION (continued):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
112.5°	282.9	285.1	287.3	289.5	291.7	295.6	301.0	306.5	312.0	317.5	321.3
115°	328.3	329.8	331.4	332.9	334.5	337.9	343.1	348.3	353.5	358.7	362.3
117.5°	371.7	372.8	373.9	374.9	376.0	379.0	383.9	388.8	393.8	398.7	401.7
120°	400.2	401.4	402.6	403.8	404.9	407.8	412.3	416.8	421.3	425.9	428.5
122.5°	430.5	430.9	431.2	431.6	432.0	434.4	438.9	443.4	447.9	452.4	455.3
125°	474.4	474.2	474.1	473.9	473.7	475.7	479.9	484.0	488.2	492.3	495.3
127.5°	514.8	515.1	515.4	515.7	516.1	517.7	520.8	523.9	526.9	530.0	532.8
130°	542.6	543.0	543.3	543.6	543.9	545.5	548.2	551.0	553.8	556.5	559.3
132.5°	571.7	571.9	572.1	572.3	572.5	573.6	575.7	577.8	579.9	582.0	584.6
135°	609.4	610.4	611.4	612.4	613.4	614.5	615.7	616.9	618.1	619.3	621.7
137.5°	651.3	651.6	651.8	652.1	652.4	653.0	653.8	654.7	655.5	656.4	658.5
140°	679.2	679.3	679.5	679.6	679.8	680.0	680.1	680.3	680.5	680.7	682.7
142.5°	704.1	704.4	704.7	705.0	705.3	705.3	705.1	704.8	704.6	704.4	706.3
145°	739.3	739.7	740.2	740.7	741.2	741.5	741.7	741.9	742.0	742.2	743.1
147.5°	774.3	774.9	775.5	776.1	776.8	777.0	776.9	776.7	776.6	776.5	776.5
150°	795.7	796.1	796.6	797.1	797.6	797.9	797.9	797.9	797.9	797.9	797.9
152.5°	815.2	815.6	815.9	816.3	816.7	816.9	817.0	817.2	817.3	817.4	817.8
155°	846.1	846.1	846.1	846.1	846.1	846.0	845.8	845.7	845.5	845.4	846.0
157.5°	872.2	871.9	871.6	871.3	871.0	870.9	870.8	870.8	870.8	870.7	871.2
160°	887.7	887.5	887.3	887.2	887.0	886.8	886.7	886.5	886.3	886.2	886.7
162.5°	901.9	901.5	901.0	900.6	900.2	899.9	899.7	899.6	899.4	899.2	900.1
165°	921.1	920.6	920.1	919.6	919.1	918.7	918.3	918.0	917.7	917.3	918.3
167.5°	935.7	935.1	934.4	933.7	933.0	932.6	932.7	932.7	932.7	932.8	933.8
170°	944.1	943.2	942.4	941.6	940.8	940.4	940.6	940.8	940.9	941.1	942.1
172.5°	950.0	949.3	948.6	947.9	947.2	946.9	946.9	947.0	947.0	947.0	948.2
175°	958.2	957.3	956.5	955.7	954.9	954.4	954.2	954.0	953.9	953.7	954.9
177.5°	960.8	960.2	959.5	958.9	958.2	957.9	957.9	957.9	957.9	957.9	958.8
180°	959.6	959.6	959.6	959.6	959.6	959.6	959.6	959.6	959.6	959.6	959.6



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CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
0°	694.9	694.9	694.9	694.9	694.9	694.9	694.9	694.9
2.5°	692.5	693.4	694.4	694.8	694.7	694.5	694.4	694.3
5°	690.7	692.0	693.4	694.0	693.9	693.7	693.5	693.3
7.5°	687.0	688.5	690.1	690.8	690.6	690.4	690.2	690.1
10°	683.2	684.8	686.3	687.0	686.9	686.7	686.5	686.3
12.5°	678.0	679.4	680.8	681.5	681.5	681.4	681.4	681.4
15°	668.4	670.0	671.5	672.2	672.1	671.9	671.7	671.5
17.5°	656.8	658.4	660.0	660.7	660.6	660.5	660.3	660.2
20°	647.8	649.5	651.2	652.1	652.1	652.1	652.1	652.1
22.5°	637.2	638.9	640.6	641.7	641.9	642.2	642.5	642.8
25°	620.9	622.8	624.7	625.7	625.9	626.1	626.2	626.4
27.5°	602.6	604.3	606.1	607.1	607.3	607.5	607.7	607.9
30°	589.8	591.7	593.6	594.7	595.0	595.4	595.7	596.1
32.5°	576.6	578.8	581.0	582.2	582.6	582.9	583.3	583.6
35°	555.8	558.2	560.6	562.1	562.6	563.1	563.6	564.2
37.5°	534.1	536.5	539.0	540.5	541.0	541.6	542.1	542.7
40°	518.8	521.4	524.0	525.6	526.3	527.0	527.7	528.4
42.5°	503.8	506.6	509.5	511.2	511.8	512.3	512.9	513.4
45°	480.6	483.5	486.4	488.3	489.2	490.1	490.9	491.8
47.5°	456.0	459.1	462.1	464.1	465.2	466.2	467.3	468.3
50°	438.8	442.3	445.7	448.0	449.0	450.0	451.1	452.1
52.5°	421.4	424.8	428.3	430.5	431.6	432.6	433.6	434.7
55°	395.2	398.7	402.1	404.4	405.4	406.5	407.5	408.5
57.5°	367.7	371.9	376.0	378.5	379.5	380.4	381.4	382.4
60°	348.8	352.8	356.7	359.4	360.8	362.2	363.6	365.0
62.5°	330.1	334.1	338.1	340.7	342.1	343.5	344.9	346.3
65°	301.2	305.6	309.9	312.7	314.1	315.5	316.9	318.3
67.5°	272.9	277.3	281.7	284.5	285.9	287.2	288.6	289.9
70°	252.9	257.6	262.2	265.2	266.4	267.6	268.8	270.0
72.5°	233.9	238.5	243.0	245.9	247.3	248.6	250.0	251.3
75°	205.0	209.8	214.7	217.9	219.4	221.0	222.6	224.1
77.5°	178.1	183.0	187.9	191.2	192.8	194.5	196.1	197.8
80°	160.6	165.7	170.9	174.2	175.6	177.0	178.4	179.8
82.5°	143.4	148.7	154.1	157.5	159.0	160.5	162.0	163.6
85°	119.3	124.5	129.7	133.2	134.9	136.6	138.3	140.1
87.5°	102.6	107.8	113.0	116.4	118.0	119.6	121.1	122.7
90°	105.4	111.4	117.4	121.2	123.0	124.7	126.4	128.1
92.5°	113.6	119.1	124.6	128.1	129.7	131.3	132.8	134.4
95°	134.4	139.6	144.8	148.1	149.7	151.2	152.8	154.3
97.5°	162.3	167.5	172.6	175.9	177.4	178.9	180.4	181.8
100°	182.7	187.7	192.7	195.8	197.0	198.2	199.4	200.6
102.5°	204.5	209.5	214.5	217.7	219.2	220.7	222.2	223.6
105°	237.6	242.5	247.3	250.6	252.5	254.4	256.3	258.1
107.5°	274.3	279.0	283.8	286.7	287.9	289.2	290.4	291.6
110°	298.8	302.4	306.1	308.9	310.7	312.6	314.5	316.4



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CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
112.5°	325.0	328.8	332.6	335.2	336.7	338.2	339.7	341.1
115°	366.0	369.6	373.2	375.6	376.6	377.7	378.7	379.8
117.5°	404.8	407.8	410.8	412.9	413.9	415.0	416.0	417.1
120°	431.1	433.8	436.4	438.6	440.3	442.0	443.7	445.4
122.5°	458.2	461.1	464.0	465.8	466.5	467.1	467.8	468.4
125°	498.2	501.2	504.2	506.0	506.7	507.4	508.1	508.8
127.5°	535.5	538.3	541.1	542.9	543.9	544.8	545.7	546.6
130°	562.1	564.9	567.7	569.3	569.6	570.0	570.4	570.8
132.5°	587.3	589.9	592.5	594.2	595.0	595.8	596.6	597.3
135°	624.2	626.6	629.1	630.5	631.1	631.6	632.2	632.7
137.5°	660.6	662.7	664.8	666.3	667.3	668.2	669.2	670.2
140°	684.8	686.9	689.0	690.4	691.1	691.8	692.5	693.2
142.5°	708.2	710.2	712.1	713.4	714.1	714.8	715.5	716.2
145°	743.9	744.8	745.7	746.2	746.4	746.6	746.8	747.0
147.5°	776.5	776.5	776.5	776.7	777.1	777.5	777.9	778.3
150°	797.9	797.9	797.9	797.8	797.6	797.4	797.3	797.1
152.5°	818.2	818.6	819.0	819.0	818.6	818.2	817.7	817.3
155°	846.7	847.3	848.0	848.0	847.3	846.7	846.0	845.4
157.5°	871.7	872.2	872.7	872.7	872.1	871.6	871.0	870.4
160°	887.2	887.7	888.2	888.0	887.2	886.3	885.5	884.7
162.5°	901.0	901.9	902.8	902.8	902.0	901.2	900.4	899.5
165°	919.3	920.3	921.3	921.5	920.8	920.1	919.5	918.8
167.5°	934.8	935.7	936.7	936.7	935.7	934.7	933.7	932.6
170°	943.1	944.1	945.1	945.0	943.8	942.7	941.5	940.4
172.5°	949.3	950.4	951.5	951.5	950.3	949.2	948.0	946.9
175°	956.0	957.2	958.3	958.3	957.2	956.0	954.9	953.7
177.5°	959.7	960.6	961.6	961.5	960.4	959.4	958.3	957.3
180°	959.6	959.6	959.6	959.6	959.6	959.6	959.6	959.6

(END OF REPORT)