

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: P331527-927

Luminaire Tested: **S122DIW-S675D435U927-4F0-1E-UDD-D**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P331527-927
REPORT IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-1807-864-2,
Test Lab: INNOVATION CENTER
Issue Date: 3/3/2020
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: NEO-RAY
Catalog Number: S122DIW-S675D435U927-4F0-1E-UDD-D
Description: DEFINE 2 DIRECT-INDIRECT WALL MOUNT LED LUMINAIRE
DOWNLIGHT 675 LUMENS PER FOOT, DROP SATIN WHITE DIFFUSER
UPLIGHT 435 LUMENS PER FOOT, NO LENS
Light Source: -
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 3501.3 lumens
Efficiency: N/A
Efficacy: 92.9 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: General Diffuse

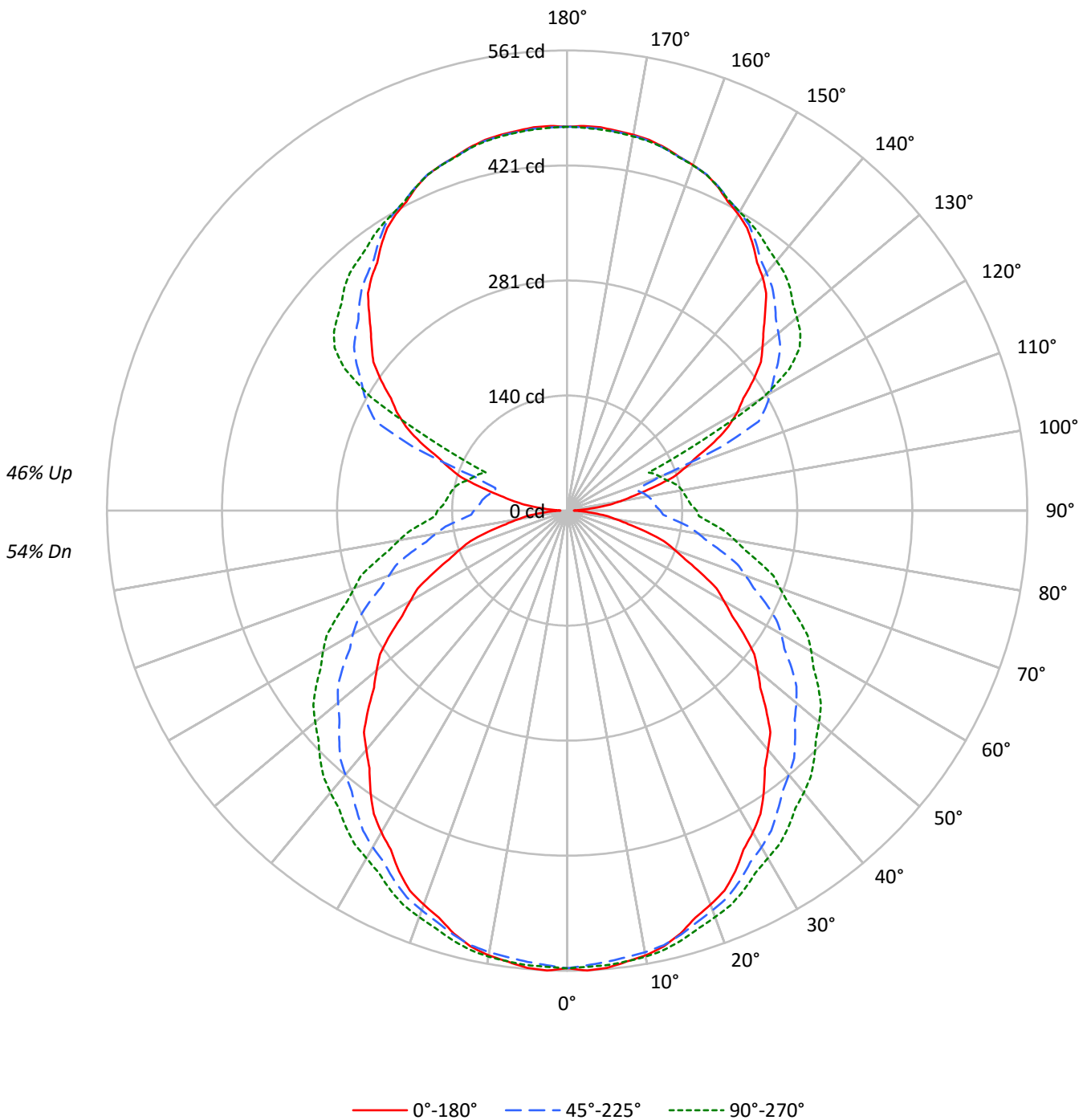
Input Watts (W): 37.7
Input Voltage (V): 120
Input Current (A_{in}): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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Luminous Intensity Polar Plot





TEST NUMBER: P331527-927

CATALOG NUMBER: S122DIW-S675D435U927-4F0-1E-UDD-D

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	86	86	86	72	72	72	60	60	60	54
1	97	92	87	83	90	85	81	78	73	70	67	61	59	57	50	49	47	42
2	88	79	73	67	81	74	68	62	63	58	54	53	49	46	43	41	39	34
3	80	69	61	55	73	64	57	51	55	49	45	46	42	38	38	35	32	28
4	73	61	52	46	67	57	49	43	48	42	38	41	36	32	34	30	27	24
5	67	54	45	39	61	50	43	37	43	37	32	36	32	28	30	26	23	20
6	61	48	40	34	56	45	37	32	39	33	28	33	28	24	27	23	20	18
7	57	44	35	29	52	41	33	28	35	29	24	30	25	21	25	21	18	15
8	52	40	31	26	48	37	30	24	32	26	22	27	22	19	23	19	16	14
9	49	36	28	23	45	34	27	22	29	23	19	25	20	17	21	17	14	12
10	46	33	26	21	42	31	24	19	27	21	17	23	18	15	19	16	13	11

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	9009	9009	9009
5°	9053	8672	8638
10°	8996	8417	8321
15°	8873	8146	7988
20°	8716	7854	7665
25°	8561	7573	7372
30°	8343	7286	7079
35°	8122	7007	6870
40°	7890	6771	6665
45°	7670	6558	6488
50°	7431	6366	6313
55°	7184	6161	6135
60°	6882	5948	5948
65°	6564	5697	5724
70°	6211	5427	5485
75°	5759	5163	5263
80°	5048	4895	5040
85°	4369	4658	4864



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	52.9	1.5
10°-20°	151.6	4.3
20°-30°	229.8	6.6
30°-40°	279.8	8.0
40°-50°	301.1	8.6
50°-60°	292.4	8.4
60°-70°	255.3	7.3
70°-80°	196.5	5.6
80°-90°	133.1	3.8
90°-100°	106.5	3.0
100°-110°	123.6	3.5
110°-120°	196.8	5.6
120°-130°	277.0	7.9
130°-140°	278.9	8.0
140°-150°	251.4	7.2
150°-160°	200.7	5.7
160°-170°	129.3	3.7
170°-180°	44.5	1.3
0°-30°	434.3	12.4
0°-40°	714.1	20.4
0°-60°	1307.5	37.3
0°-90°	1892.4	54.0
90°-120°	426.9	12.2
90°-150°	1234.3	35.3
90°-180°	1609.0	46.0
0°-180°	3501.3	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	558	558	558	558	558	
5°	560	557	552	557	556	53
15°	534	535	535	542	542	150
25°	485	491	498	507	510	223
35°	418	432	447	464	471	261
45°	343	365	393	417	426	265
55°	263	293	334	362	374	235
65°	180	220	267	299	310	178
75°	100	145	196	230	242	105
85°	29	79	131	164	176	31
90°	8	59	114	146	158	6
95°	28	57	106	137	148	32
105°	107	136	90	121	132	115
115°	198	214	258	131	110	195
125°	277	283	314	337	346	247
135°	341	347	358	378	384	264
145°	395	395	400	408	410	247
155°	435	432	436	438	436	200
165°	458	457	457	460	457	129
175°	469	467	467	469	466	45
180°	468	468	468	468	468	



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CANDELA DISTRIBUTION (FULL):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
0°	558.0	558.0	558.0	558.0	558.0	558.0	558.0	558.0	558.0	558.0	558.0
2.5°	561.3	560.8	560.4	559.9	559.5	558.8	557.8	556.7	555.8	554.8	555.5
5°	559.6	559.0	558.6	558.0	557.5	556.7	555.6	554.5	553.4	552.3	553.4
7.5°	554.6	554.2	553.9	553.5	553.2	552.5	551.8	550.9	550.1	549.3	550.6
10°	550.7	550.3	550.0	549.6	549.3	548.8	548.3	547.8	547.2	546.7	548.1
12.5°	544.2	544.3	544.4	544.5	544.5	544.4	544.0	543.6	543.2	542.8	544.2
15°	533.8	534.1	534.5	534.8	535.2	535.4	535.4	535.4	535.4	535.4	536.9
17.5°	520.1	520.9	521.7	522.4	523.2	523.9	524.4	525.0	525.5	526.2	527.8
20°	511.1	512.0	512.9	513.8	514.7	515.5	516.2	517.0	517.7	518.4	520.4
22.5°	501.4	502.4	503.5	504.5	505.6	506.6	507.6	508.6	509.6	510.6	512.6
25°	485.2	486.5	487.7	489.0	490.3	491.7	493.3	495.0	496.5	498.1	500.3
27.5°	465.8	467.9	469.9	472.0	474.0	476.0	477.9	479.8	481.7	483.6	486.3
30°	452.9	455.2	457.6	459.9	462.2	464.5	466.9	469.2	471.6	473.9	476.7
32.5°	438.6	441.2	443.9	446.5	449.2	451.9	454.6	457.3	460.1	462.9	466.2
35°	418.1	421.1	424.2	427.2	430.3	433.6	437.0	440.4	443.8	447.2	451.1
37.5°	395.8	399.3	402.8	406.3	409.9	413.8	418.3	422.7	427.1	431.5	435.9
40°	380.9	384.8	388.8	392.8	396.7	401.1	406.0	410.8	415.7	420.5	425.2
42.5°	366.7	370.6	374.5	378.5	382.5	387.2	392.8	398.4	403.9	409.6	414.6
45°	342.9	347.8	352.6	357.4	362.3	367.9	374.1	380.5	386.7	393.0	398.6
47.5°	319.4	324.7	330.0	335.3	340.6	346.9	354.3	361.6	369.0	376.4	382.2
50°	303.2	308.9	314.4	320.0	325.5	332.4	340.5	348.6	356.6	364.7	370.8
52.5°	287.7	293.6	299.4	305.3	311.2	318.4	326.9	335.4	343.9	352.4	358.7
55°	262.8	269.3	275.8	282.3	288.7	296.6	305.9	315.3	324.6	334.0	340.5
57.5°	238.2	245.6	252.9	260.2	267.4	275.8	285.3	294.9	304.4	313.9	320.9
60°	220.8	228.5	236.2	244.0	251.7	260.7	270.9	281.1	291.4	301.7	308.5
62.5°	205.3	213.3	221.3	229.3	237.3	246.4	256.7	266.9	277.2	287.4	294.7
65°	179.5	188.3	197.2	206.0	214.8	224.4	235.0	245.7	256.3	266.9	274.3
67.5°	155.9	165.1	174.4	183.5	192.7	202.7	213.6	224.4	235.3	246.1	253.6
70°	139.1	148.5	157.8	167.2	176.5	186.7	197.9	209.0	220.1	231.3	239.0
72.5°	123.6	133.2	142.8	152.5	162.1	172.5	183.9	195.1	206.4	217.7	225.3
75°	99.5	109.6	119.6	129.7	139.7	150.5	162.0	173.5	185.0	196.5	204.2
77.5°	76.2	86.7	97.3	107.7	118.3	129.4	141.1	152.8	164.5	176.1	183.9
80°	60.7	71.6	82.5	93.6	104.5	115.8	127.5	139.2	150.8	162.6	170.1
82.5°	47.7	58.5	69.3	80.2	91.0	102.3	114.2	126.0	137.8	149.6	157.2
85°	29.2	40.2	51.4	62.5	73.7	85.0	96.5	108.0	119.5	131.0	138.6
87.5°	15.9	26.8	37.7	48.6	59.4	70.7	82.3	94.0	105.5	117.2	124.5
90°	8.4	19.6	30.9	42.1	53.4	65.1	77.2	89.3	101.4	113.5	121.0
92.5°	14.3	23.9	33.5	43.2	52.8	63.3	74.7	86.0	97.4	108.8	116.1
95°	28.4	34.5	40.4	46.3	52.4	61.0	72.2	83.6	94.9	106.2	113.4
97.5°	49.4	49.8	50.4	50.9	51.4	57.4	69.0	80.6	92.1	103.7	110.7
100°	65.6	61.9	58.3	54.6	50.9	54.8	66.1	77.5	88.8	100.1	107.4
102.5°	82.8	86.7	90.6	94.5	98.4	99.9	98.9	98.0	97.1	96.2	103.5
105°	106.9	114.5	121.9	129.4	136.9	135.0	123.8	112.6	101.4	90.2	97.4
107.5°	135.5	141.5	147.4	153.4	159.4	154.6	138.9	123.2	107.5	91.8	97.0
110°	153.2	158.4	163.6	168.7	174.0	170.1	157.1	144.2	131.3	118.3	116.5



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CANDELA DISTRIBUTION (continued):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
112.5°	170.6	175.0	179.4	183.8	188.2	191.9	195.0	198.0	201.0	204.0	182.3
115°	197.9	201.2	204.5	207.7	211.0	217.5	227.5	237.5	247.5	257.5	228.0
117.5°	221.6	224.3	227.0	229.7	232.4	238.2	247.0	255.7	264.5	273.3	270.2
120°	239.5	241.3	243.1	245.0	246.8	252.0	260.5	269.1	277.7	286.2	292.2
122.5°	254.6	256.1	257.5	259.0	260.5	265.4	273.6	281.9	290.1	298.3	303.7
125°	276.9	277.9	278.8	279.8	280.8	284.9	292.1	299.2	306.4	313.6	319.0
127.5°	297.8	298.7	299.6	300.6	301.4	304.8	310.5	316.2	321.9	327.6	332.8
130°	311.1	312.1	313.1	314.2	315.2	318.0	322.6	327.2	331.8	336.4	341.5
132.5°	324.6	325.5	326.3	327.2	328.0	330.3	334.1	337.8	341.5	345.2	350.1
135°	341.4	342.6	343.8	345.1	346.3	348.1	350.5	353.0	355.5	358.0	362.5
137.5°	359.3	360.0	360.8	361.6	362.5	363.6	365.2	366.8	368.4	369.9	373.9
140°	370.9	371.3	371.8	372.2	372.6	373.4	374.5	375.7	376.9	378.1	381.7
142.5°	380.6	381.0	381.4	381.8	382.1	382.8	383.8	384.8	385.9	386.8	389.8
145°	395.1	395.1	395.0	394.9	394.8	395.5	396.7	398.0	399.3	400.5	402.2
147.5°	408.4	408.2	407.9	407.7	407.3	407.8	409.1	410.4	411.6	412.9	413.4
150°	417.2	416.6	416.1	415.6	415.0	415.3	416.6	417.8	419.0	420.2	420.6
152.5°	424.5	423.9	423.3	422.7	422.1	422.4	423.5	424.7	425.8	427.0	427.4
155°	435.1	434.4	433.7	433.1	432.4	432.5	433.4	434.3	435.2	436.1	436.6
157.5°	443.4	442.8	442.3	441.7	441.2	441.2	441.8	442.4	443.1	443.7	444.2
160°	448.3	447.8	447.4	446.9	446.5	446.5	446.9	447.4	447.8	448.3	448.8
162.5°	452.7	452.2	451.7	451.3	450.8	450.8	451.1	451.5	451.9	452.3	452.9
165°	458.4	458.0	457.6	457.1	456.6	456.5	456.8	457.0	457.2	457.4	458.0
167.5°	462.8	462.3	461.9	461.4	461.0	460.9	461.1	461.3	461.5	461.7	462.2
170°	465.2	464.8	464.3	463.9	463.4	463.3	463.4	463.6	463.7	463.9	464.4
172.5°	466.8	466.4	466.0	465.5	465.0	464.9	465.0	465.2	465.3	465.5	466.0
175°	469.0	468.4	467.9	467.4	466.8	466.7	466.8	467.0	467.1	467.2	467.8
177.5°	469.3	468.9	468.4	468.0	467.6	467.4	467.5	467.5	467.6	467.6	468.1
180°	467.9	467.9	467.9	467.9	467.9	467.9	467.9	467.9	467.9	467.9	467.9



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CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
0°	558.0	558.0	558.0	558.0	558.0	558.0	558.0	558.0
2.5°	556.2	556.9	557.6	557.9	557.5	557.3	557.0	556.7
5°	554.5	555.6	556.7	557.1	556.9	556.7	556.6	556.3
7.5°	551.8	553.2	554.4	555.0	554.8	554.6	554.4	554.3
10°	549.5	551.0	552.5	553.0	552.9	552.7	552.5	552.3
12.5°	545.7	547.1	548.6	549.1	549.0	548.8	548.7	548.4
15°	538.6	540.2	541.9	542.6	542.4	542.2	542.0	541.9
17.5°	529.5	531.2	532.9	533.8	533.8	533.8	533.8	533.8
20°	522.4	524.3	526.2	527.3	527.3	527.3	527.3	527.3
22.5°	514.6	516.6	518.5	519.7	519.9	520.2	520.5	520.8
25°	502.5	504.6	506.8	508.1	508.7	509.2	509.8	510.3
27.5°	489.1	491.8	494.6	496.1	496.5	496.9	497.3	497.6
30°	479.7	482.5	485.4	487.1	487.7	488.2	488.7	489.3
32.5°	469.5	472.9	476.1	478.2	479.3	480.2	481.2	482.1
35°	455.1	459.1	463.0	465.6	466.9	468.2	469.4	470.6
37.5°	440.3	444.7	449.1	451.9	453.3	454.6	455.9	457.2
40°	429.8	434.5	439.2	442.4	443.9	445.6	447.2	448.9
42.5°	419.7	424.8	429.9	433.3	434.9	436.6	438.2	439.7
45°	404.2	409.7	415.3	419.0	420.8	422.6	424.4	426.2
47.5°	388.0	393.9	399.7	403.5	405.5	407.5	409.5	411.5
50°	376.9	383.0	389.2	393.2	395.2	397.2	399.1	401.1
52.5°	365.0	371.2	377.5	381.7	383.7	385.9	388.0	390.1
55°	346.9	353.4	359.9	364.2	366.6	368.9	371.3	373.6
57.5°	327.9	334.9	341.8	346.5	348.9	351.3	353.6	356.0
60°	315.3	322.1	329.0	333.7	336.1	338.7	341.2	343.7
62.5°	301.9	309.2	316.5	321.3	323.6	326.0	328.4	330.7
65°	281.6	289.0	296.4	301.2	303.6	305.9	308.2	310.5
67.5°	261.0	268.5	275.9	280.9	283.3	285.7	288.2	290.7
70°	246.8	254.4	262.2	267.1	269.3	271.5	273.6	275.8
72.5°	232.9	240.4	248.0	253.1	255.7	258.3	260.9	263.5
75°	212.0	219.7	227.4	232.4	234.8	237.1	239.5	241.8
77.5°	191.5	199.2	206.9	212.0	214.5	217.1	219.5	222.0
80°	177.6	185.2	192.7	197.8	200.3	202.8	205.3	207.9
82.5°	164.7	172.2	179.8	184.7	187.1	189.5	191.9	194.2
85°	146.1	153.7	161.2	166.2	168.7	171.3	173.8	176.3
87.5°	132.0	139.3	146.8	151.6	154.0	156.3	158.7	161.0
90°	128.7	136.2	143.8	148.7	151.0	153.4	155.7	158.0
92.5°	123.3	130.5	137.8	142.5	144.7	146.9	149.2	151.5
95°	120.6	127.9	135.0	139.7	141.7	143.9	145.9	148.0
97.5°	117.6	124.6	131.5	136.1	138.3	140.5	142.8	145.0
100°	114.7	121.9	129.2	133.9	136.0	138.2	140.2	142.4
102.5°	110.7	118.0	125.3	130.1	132.3	134.4	136.7	138.8
105°	104.4	111.5	118.7	123.3	125.6	127.9	130.2	132.5
107.5°	102.2	107.4	112.6	116.4	118.7	120.9	123.2	125.5
110°	114.7	113.0	111.2	111.5	113.8	116.0	118.3	120.6



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CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
112.5°	160.6	138.9	117.2	107.4	109.6	111.9	114.1	116.3
115°	198.5	169.1	139.7	123.2	119.8	116.3	112.9	109.5
117.5°	267.0	264.0	260.9	251.3	235.4	219.4	203.4	187.4
120°	298.1	304.0	309.9	308.8	300.6	292.5	284.2	276.1
122.5°	309.2	314.6	320.0	322.6	322.3	322.0	321.7	321.5
125°	324.4	329.7	335.1	338.7	340.6	342.4	344.3	346.1
127.5°	338.0	343.3	348.5	351.9	353.5	355.1	356.7	358.4
130°	346.7	351.8	357.0	360.2	361.6	363.0	364.3	365.7
132.5°	355.0	359.9	364.8	367.9	369.2	370.6	371.9	373.4
135°	367.0	371.5	376.1	379.0	380.2	381.6	382.9	384.1
137.5°	378.0	382.0	386.0	388.6	389.5	390.5	391.5	392.4
140°	385.2	388.8	392.4	394.5	395.1	395.9	396.6	397.3
142.5°	392.7	395.6	398.5	400.3	400.8	401.4	402.0	402.5
145°	403.8	405.4	406.9	408.1	408.5	409.1	409.6	410.1
147.5°	413.9	414.5	415.0	415.3	415.4	415.6	415.7	415.8
150°	421.1	421.5	422.0	422.1	421.7	421.3	420.9	420.6
152.5°	427.9	428.3	428.8	428.7	428.3	427.8	427.2	426.7
155°	437.0	437.4	437.9	437.8	437.2	436.7	436.0	435.5
157.5°	444.7	445.2	445.8	445.7	445.1	444.5	443.9	443.4
160°	449.2	449.6	450.1	450.0	449.6	449.0	448.5	448.0
162.5°	453.4	453.9	454.4	454.3	453.7	453.0	452.4	451.8
165°	458.5	459.0	459.5	459.5	459.0	458.5	458.0	457.4
167.5°	462.8	463.3	463.8	463.7	463.0	462.4	461.7	461.1
170°	464.9	465.5	466.0	465.9	465.2	464.5	463.9	463.2
172.5°	466.5	467.1	467.6	467.5	466.8	466.2	465.5	464.9
175°	468.3	468.8	469.4	469.3	468.5	467.8	467.0	466.3
177.5°	468.5	468.9	469.4	469.3	468.7	468.2	467.6	467.1
180°	467.9	467.9	467.9	467.9	467.9	467.9	467.9	467.9

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