

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: P331530-830

Luminaire Tested: **S122DIW-S675D435U830-4F0-1E-UDD-F1**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P331530-830
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-S675D435U830-4F0-1E-UDD-F1
Description: DEFINE 2 DIRECT-INDIRECT WALL MOUNT LED LUMINAIRE
DOWNLIGHT 675 LUMENS PER FOOT, FLUSH SATIN WHITE DIFFUSER
UPLIGHT 435 LUMENS PER FOOT, FLUSH SATIN WHITE DIFFUSER
Light Source: -
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 3962.8 lumens
Efficiency: N/A
Efficacy: 105.1 lumens/watt
Spacing Criteria (0/90/45): 1.2 / 1.16 / 1.3
Luminous Opening: Rectangular (W 0.17' x L: 4' x H: 0')
CIE Type: Semi-Direct

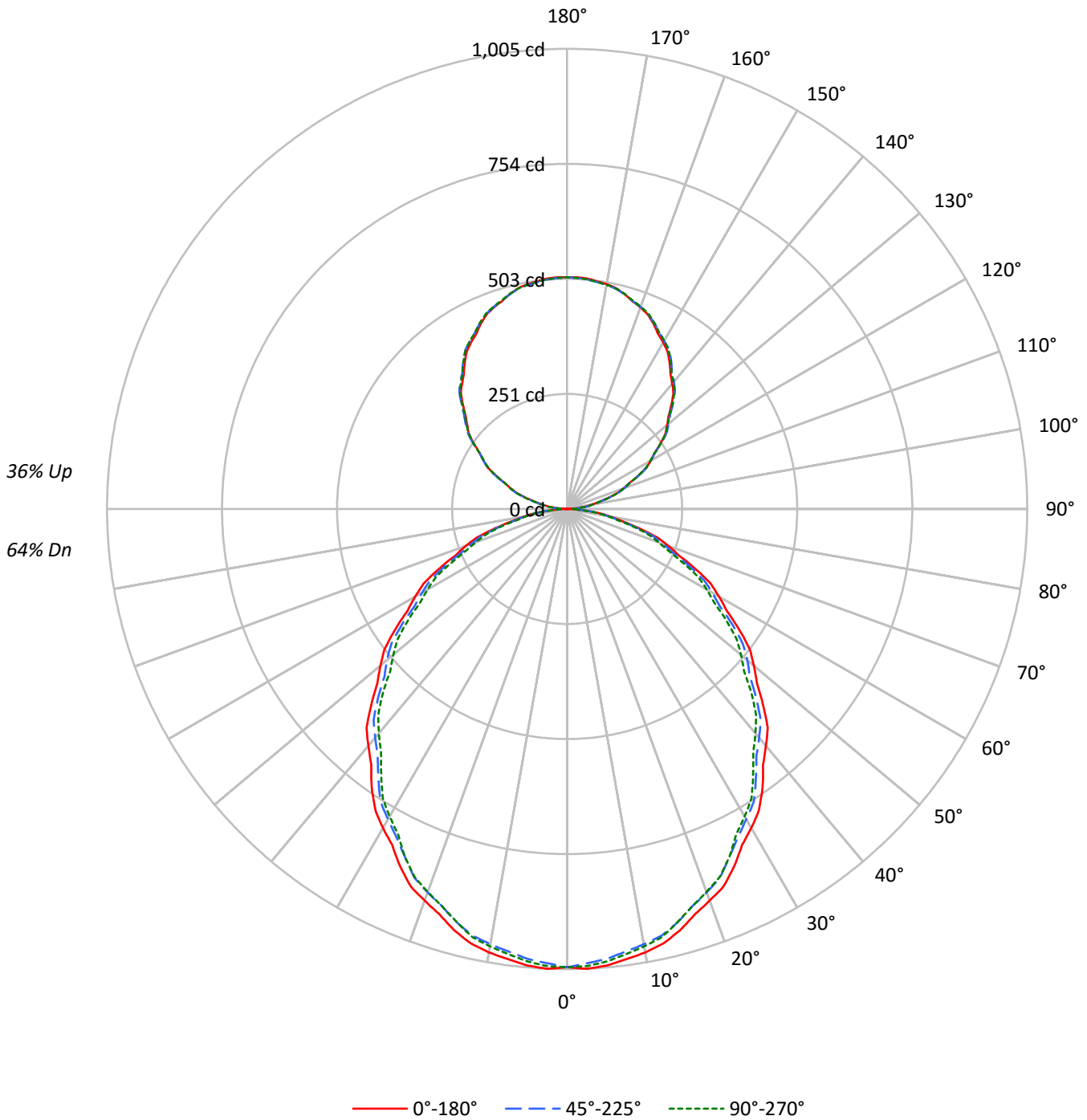
Input Watts (W): 37.7
Input Voltage (V): 120
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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	111	111	111	111	104	104	104	104	91	91	91	80	80	80	69	69	69	64
1	101	97	93	89	95	91	87	84	80	77	75	70	68	67	61	60	58	54
2	92	84	78	73	86	79	74	69	70	66	62	62	58	56	54	51	49	45
3	84	74	67	61	79	70	63	58	62	57	52	55	51	47	48	45	42	38
4	77	66	58	51	72	62	55	49	55	49	45	49	44	40	43	39	36	33
5	71	59	50	44	66	55	48	42	49	43	39	44	39	35	39	35	32	29
6	65	53	44	38	61	50	42	37	45	38	34	40	35	31	35	31	28	25
7	60	48	40	34	56	45	38	32	41	34	30	36	31	27	32	28	25	22
8	56	43	35	30	53	41	34	29	37	31	27	33	28	24	29	25	22	20
9	52	40	32	27	49	38	31	26	34	28	24	30	26	22	27	23	20	18
10	49	37	29	24	46	35	28	23	31	26	22	28	23	20	25	21	18	16

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	16157	16157	16157
5°	16219	15985	16078
10°	16123	15823	15901
15°	15921	15616	15600
20°	15639	15309	15292
25°	15358	14931	14931
30°	14997	14585	14458
35°	14661	14168	13957
40°	14235	13748	13487
45°	13819	13337	13006
50°	13366	12906	12446
55°	12892	12405	11944
60°	12368	11806	11370
65°	11801	11213	10697
70°	11084	10494	9994
75°	10081	9669	9426
80°	8945	8675	8229
85°	7317	6947	6224



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	94.1	2.4
10°-20°	264.8	6.7
20°-30°	389.2	9.8
30°-40°	452.1	11.4
40°-50°	451.6	11.4
50°-60°	393.8	9.9
60°-70°	291.2	7.3
70°-80°	164.9	4.2
80°-90°	46.4	1.2
90°-100°	32.1	0.8
100°-110°	99.6	2.5
110°-120°	170.2	4.3
120°-130°	223.9	5.6
130°-140°	251.3	6.3
140°-150°	246.4	6.2
150°-160°	206.6	5.2
160°-170°	137.1	3.5
170°-180°	47.9	1.2
0°-30°	748.0	18.9
0°-40°	1200.1	30.3
0°-60°	2045.4	51.6
0°-90°	2547.9	64.3
90°-120°	301.9	7.6
90°-150°	1023.3	25.8
90°-180°	1415.0	35.7
0°-180°	3962.8	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1001	1001	1001	1001	1001	
5°	1001	996	986	993	992	95
15°	952	946	934	938	933	268
25°	862	854	838	840	838	396
35°	744	734	719	713	708	464
45°	605	598	584	574	570	467
55°	458	452	441	430	424	409
65°	309	303	294	285	280	305
75°	162	160	155	150	151	173
85°	40	38	38	35	34	45
90°	0	6	15	14	14	3
95°	22	26	27	27	26	25
105°	92	93	94	95	95	97
115°	171	173	172	172	171	169
125°	248	252	251	250	249	222
135°	322	326	327	327	325	248
145°	390	393	396	396	394	244
155°	446	448	449	451	450	205
165°	486	485	485	488	486	137
175°	505	504	503	506	504	48
180°	506	506	506	506	506	



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CANDELA DISTRIBUTION (FULL):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
0°	1000.7	1000.7	1000.7	1000.7	1000.7	1000.7	1000.7	1000.7	1000.7	1000.7	1000.7
2.5°	1005.3	1004.5	1003.6	1002.8	1001.9	1000.5	998.6	996.7	994.9	993.0	994.7
5°	1000.7	999.8	999.0	998.2	997.3	995.7	993.3	991.0	988.6	986.3	988.0
7.5°	991.8	990.5	989.2	987.9	986.6	984.7	982.3	979.9	977.5	975.1	976.8
10°	983.4	981.8	980.3	978.8	977.4	975.3	972.8	970.3	967.6	965.1	966.8
12.5°	971.9	970.5	969.1	967.8	966.5	964.6	962.0	959.4	956.9	954.3	955.5
15°	952.5	951.3	950.0	948.8	947.4	945.4	942.6	939.8	937.1	934.2	935.2
17.5°	927.9	926.6	925.4	924.1	922.8	920.8	917.9	915.1	912.3	909.5	910.5
20°	910.2	909.0	907.7	906.3	905.1	903.0	899.9	897.0	894.0	891.0	891.6
22.5°	892.5	890.7	888.9	887.1	885.3	883.1	880.2	877.4	874.6	871.8	871.9
25°	862.1	860.4	858.8	857.0	855.3	852.6	848.9	845.4	841.7	838.1	838.5
27.5°	827.5	826.0	824.4	822.8	821.3	819.2	816.2	813.4	810.5	807.7	807.0
30°	804.4	802.7	801.0	799.3	797.6	795.1	791.9	788.7	785.5	782.3	781.7
32.5°	779.8	778.4	777.0	775.6	774.3	771.9	768.5	765.2	761.8	758.4	757.2
35°	743.8	741.7	739.5	737.4	735.2	732.4	729.1	725.6	722.2	718.8	717.5
37.5°	703.1	701.3	699.4	697.5	695.7	693.0	689.6	686.2	682.8	679.3	677.7
40°	675.4	673.7	672.0	670.3	668.6	666.1	662.6	659.2	655.8	652.3	650.4
42.5°	648.6	646.8	645.1	643.4	641.7	639.1	635.7	632.3	628.9	625.5	623.3
45°	605.2	603.7	602.2	600.8	599.3	596.9	593.7	590.5	587.3	584.1	581.7
47.5°	562.1	560.7	559.3	557.9	556.5	554.1	550.7	547.4	544.1	540.7	538.3
50°	532.1	531.0	530.0	528.9	527.8	525.8	522.8	519.8	516.8	513.8	510.9
52.5°	502.8	501.4	500.0	498.6	497.2	495.1	492.3	489.5	486.6	483.8	481.4
55°	458.0	456.8	455.4	454.1	452.9	450.9	448.4	445.8	443.3	440.7	438.1
57.5°	412.9	412.0	410.9	409.9	408.9	407.0	404.2	401.3	398.5	395.7	393.1
60°	383.0	382.1	381.3	380.4	379.6	377.6	374.7	371.6	368.6	365.6	363.3
62.5°	353.7	352.3	351.0	349.6	348.3	346.4	344.1	341.8	339.5	337.1	335.0
65°	308.9	307.6	306.3	305.0	303.7	302.0	299.9	297.7	295.6	293.5	291.5
67.5°	263.3	262.2	261.2	260.1	259.1	257.7	255.7	253.8	251.9	250.0	248.5
70°	234.8	233.9	233.1	232.2	231.4	230.0	228.0	226.1	224.2	222.3	220.7
72.5°	205.6	204.6	203.8	202.9	202.1	201.0	199.8	198.6	197.4	196.0	194.6
75°	161.6	161.2	160.8	160.3	159.9	159.2	158.2	157.0	156.0	155.0	153.6
77.5°	122.4	121.7	120.9	120.2	119.5	118.9	118.5	118.0	117.6	117.2	116.6
80°	96.2	96.0	95.8	95.6	95.4	95.0	94.6	94.2	93.8	93.3	92.7
82.5°	71.6	71.5	71.5	71.4	71.4	71.3	71.0	70.8	70.5	70.2	69.5
85°	39.5	39.2	39.0	38.8	38.5	38.4	38.2	38.0	37.7	37.5	36.9
87.5°	13.9	13.9	13.7	13.6	13.5	13.5	13.6	13.6	13.7	13.8	13.2
90°	0.5	1.6	2.7	3.9	5.0	6.6	8.7	10.7	12.8	15.0	14.8
92.5°	7.6	8.5	9.2	10.1	10.9	11.6	12.1	12.6	13.1	13.6	13.6
95°	22.2	23.2	24.1	25.1	26.0	26.6	26.8	27.0	27.1	27.3	27.3
97.5°	40.5	41.4	42.2	43.1	43.9	44.5	44.9	45.2	45.6	45.9	45.9
100°	54.2	55.0	55.7	56.6	57.3	57.8	58.1	58.3	58.6	58.9	58.9
102.5°	68.6	69.2	69.7	70.4	71.0	71.5	71.8	72.2	72.6	73.0	73.0
105°	91.8	92.1	92.4	92.7	92.9	93.2	93.4	93.6	93.8	94.0	94.2
107.5°	115.2	115.6	116.0	116.5	116.9	117.1	117.1	117.1	117.1	117.1	117.2
110°	130.3	130.8	131.4	132.0	132.5	132.8	132.8	132.8	132.8	132.8	132.8



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CANDELA DISTRIBUTION (continued):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
112.5°	146.7	147.2	147.8	148.4	148.9	149.2	149.1	149.0	148.9	148.8	148.6
115°	170.8	171.4	171.9	172.5	173.1	173.2	173.1	172.9	172.7	172.5	172.4
117.5°	194.9	195.7	196.4	197.2	197.9	198.0	197.6	197.0	196.4	196.0	195.7
120°	210.9	211.7	212.4	213.2	214.0	214.0	213.2	212.4	211.7	210.9	210.9
122.5°	225.6	226.6	227.4	228.4	229.3	229.5	228.9	228.4	227.9	227.3	227.2
125°	248.5	249.4	250.2	251.1	251.9	252.2	251.9	251.7	251.4	251.1	250.8
127.5°	270.8	271.9	273.0	274.1	275.1	275.5	275.2	274.8	274.5	274.2	273.8
130°	284.8	286.1	287.3	288.5	289.7	290.3	290.1	289.9	289.7	289.5	289.4
132.5°	300.6	301.5	302.6	303.6	304.5	305.1	305.1	305.2	305.2	305.2	304.8
135°	321.6	322.6	323.7	324.7	325.7	326.3	326.5	326.7	326.9	327.1	327.0
137.5°	343.7	344.5	345.3	346.2	347.0	347.6	347.9	348.2	348.4	348.6	348.6
140°	357.0	357.9	358.7	359.6	360.4	361.1	361.6	362.0	362.5	363.0	363.0
142.5°	370.7	371.6	372.4	373.2	374.1	374.7	374.9	375.3	375.6	376.0	376.1
145°	390.3	391.0	391.6	392.3	392.9	393.6	394.2	394.7	395.3	395.9	396.0
147.5°	407.8	408.6	409.4	410.2	411.0	411.6	412.0	412.4	412.7	413.1	413.3
150°	419.8	420.4	420.9	421.5	422.1	422.5	422.9	423.3	423.7	424.0	424.3
152.5°	430.4	430.9	431.5	432.1	432.6	433.2	433.6	434.0	434.5	435.0	435.4
155°	446.2	446.5	446.8	447.1	447.4	447.7	448.0	448.3	448.6	448.8	449.3
157.5°	459.9	460.1	460.2	460.4	460.6	460.7	460.9	461.1	461.3	461.5	462.1
160°	468.1	468.3	468.4	468.6	468.8	468.9	469.0	469.1	469.2	469.3	469.9
162.5°	475.5	475.6	475.6	475.6	475.7	475.8	475.9	476.0	476.1	476.2	476.7
165°	485.5	485.4	485.3	485.2	485.1	485.1	485.1	485.1	485.1	485.1	485.8
167.5°	493.9	493.6	493.3	493.0	492.8	492.6	492.6	492.6	492.6	492.6	493.2
170°	498.3	498.0	497.8	497.5	497.2	497.0	496.9	496.8	496.7	496.6	497.3
172.5°	501.4	501.1	500.9	500.6	500.3	500.1	500.0	499.9	499.8	499.7	500.4
175°	505.2	504.9	504.6	504.4	504.1	503.8	503.6	503.4	503.2	503.0	503.7
177.5°	506.7	506.5	506.2	506.1	505.8	505.6	505.5	505.3	505.1	505.0	505.5
180°	506.1	506.1	506.1	506.1	506.1	506.1	506.1	506.1	506.1	506.1	506.1



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CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
0°	1000.7	1000.7	1000.7	1000.7	1000.7	1000.7	1000.7	1000.7
2.5°	996.4	998.2	999.8	1000.5	1000.1	999.8	999.5	999.2
5°	989.7	991.4	993.1	993.7	993.3	992.9	992.5	992.0
7.5°	978.5	980.2	981.9	982.5	982.0	981.7	981.2	980.7
10°	968.5	970.3	971.9	972.4	971.9	971.2	970.5	969.9
12.5°	956.7	957.9	959.1	959.4	958.9	958.6	958.1	957.6
15°	936.0	936.9	937.7	937.6	936.5	935.5	934.4	933.3
17.5°	911.4	912.4	913.4	913.4	912.4	911.3	910.3	909.3
20°	892.3	893.0	893.5	893.4	892.6	891.7	890.9	890.0
22.5°	872.0	872.1	872.2	872.0	871.6	871.0	870.5	870.1
25°	839.0	839.3	839.8	839.8	839.3	839.0	838.5	838.1
27.5°	806.3	805.8	805.1	804.3	803.2	802.2	801.2	800.1
30°	781.0	780.3	779.7	778.9	778.1	777.2	776.4	775.5
32.5°	756.1	755.0	753.8	752.8	752.0	751.1	750.2	749.3
35°	716.2	714.9	713.6	712.5	711.4	710.3	709.3	708.1
37.5°	676.2	674.6	673.0	671.7	670.6	669.6	668.6	667.6
40°	648.6	646.6	644.7	643.3	642.4	641.6	640.7	639.9
42.5°	621.2	619.2	617.1	615.4	614.2	613.0	611.8	610.6
45°	579.4	577.0	574.7	573.1	572.2	571.4	570.5	569.6
47.5°	535.8	533.3	530.8	529.0	527.7	526.5	525.3	524.1
50°	507.8	504.8	501.8	499.8	498.7	497.7	496.6	495.5
52.5°	478.8	476.4	473.9	471.9	470.5	469.1	467.7	466.3
55°	435.5	433.0	430.5	428.6	427.5	426.5	425.4	424.3
57.5°	390.6	388.0	385.6	383.9	383.0	382.3	381.4	380.6
60°	360.9	358.5	356.2	354.8	354.1	353.5	352.8	352.1
62.5°	332.8	330.6	328.5	327.0	326.1	325.3	324.5	323.7
65°	289.6	287.7	285.8	284.3	283.2	282.1	281.1	280.0
67.5°	246.9	245.5	244.0	242.8	242.0	241.1	240.3	239.4
70°	219.2	217.8	216.3	215.1	214.2	213.4	212.5	211.7
72.5°	193.1	191.6	190.1	189.0	188.3	187.7	187.0	186.2
75°	152.3	151.1	149.8	149.4	149.8	150.2	150.6	151.1
77.5°	115.9	115.3	114.6	114.0	113.4	112.8	112.3	111.6
80°	92.1	91.4	90.8	90.2	89.8	89.4	89.0	88.5
82.5°	68.6	67.8	67.0	66.5	66.4	66.4	66.3	66.2
85°	36.3	35.6	35.0	34.5	34.3	34.1	33.9	33.6
87.5°	12.6	12.2	11.6	11.2	11.0	10.9	10.7	10.6
90°	14.6	14.4	14.2	14.1	14.2	14.3	14.4	14.5
92.5°	13.7	13.7	13.8	13.8	13.8	13.8	13.9	13.9
95°	27.3	27.3	27.3	27.2	27.1	26.9	26.7	26.5
97.5°	45.9	45.9	45.9	45.9	45.9	45.9	45.9	45.9
100°	58.9	58.9	58.9	58.9	58.8	58.7	58.6	58.5
102.5°	73.0	73.1	73.2	73.2	73.1	73.0	73.0	72.9
105°	94.3	94.5	94.7	94.8	94.8	94.8	94.8	94.8
107.5°	117.3	117.3	117.4	117.3	116.8	116.3	115.9	115.5
110°	132.8	132.8	132.8	132.6	132.3	132.1	131.8	131.5



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CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
112.5°	148.5	148.2	148.0	147.7	147.5	147.3	147.1	146.9
115°	172.3	172.2	172.1	171.9	171.6	171.4	171.1	170.8
117.5°	195.5	195.2	195.0	194.7	194.4	194.2	193.9	193.6
120°	210.9	210.9	210.9	210.8	210.6	210.3	210.0	209.7
122.5°	226.9	226.7	226.4	226.2	226.0	225.8	225.6	225.4
125°	250.5	250.2	250.0	249.8	249.7	249.6	249.5	249.4
127.5°	273.4	273.1	272.8	272.5	272.1	271.8	271.5	271.3
130°	289.2	289.0	288.8	288.5	288.1	287.8	287.4	287.0
132.5°	304.4	304.0	303.6	303.2	302.9	302.6	302.3	302.0
135°	326.9	326.8	326.7	326.5	326.2	325.9	325.6	325.4
137.5°	348.5	348.4	348.4	348.1	347.7	347.3	346.9	346.6
140°	363.0	363.0	363.0	362.8	362.4	362.0	361.7	361.3
142.5°	376.1	376.2	376.3	376.1	375.7	375.3	374.9	374.6
145°	396.1	396.2	396.2	396.1	395.7	395.3	394.9	394.5
147.5°	413.5	413.8	414.0	413.9	413.5	413.1	412.7	412.5
150°	424.6	424.9	425.2	425.2	424.9	424.6	424.3	424.0
152.5°	435.6	436.0	436.4	436.4	436.0	435.6	435.4	435.0
155°	449.8	450.3	450.7	450.8	450.5	450.3	450.0	449.7
157.5°	462.7	463.4	464.0	464.1	463.6	463.2	462.8	462.3
160°	470.4	471.0	471.6	471.6	471.3	470.9	470.5	470.1
162.5°	477.4	478.1	478.7	478.8	478.3	477.9	477.4	477.0
165°	486.4	487.1	487.8	487.9	487.4	486.9	486.4	486.0
167.5°	493.9	494.6	495.2	495.3	494.7	494.3	493.8	493.3
170°	497.9	498.6	499.3	499.4	498.8	498.2	497.7	497.1
172.5°	501.1	501.7	502.4	502.4	501.8	501.2	500.7	500.1
175°	504.4	505.0	505.7	505.8	505.2	504.6	504.1	503.5
177.5°	506.0	506.3	506.8	506.8	506.3	506.0	505.5	505.0
180°	506.1	506.1	506.1	506.1	506.1	506.1	506.1	506.1

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