

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: P332153-935

Luminaire Tested: **S123DIW-S775D460U935-4F0-1E-UDD-D1**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P332153-935
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: S123DIW-S775D460U935-4F0-1E-UDD-D1
Description: DEFINE 3 DIRECT-INDIRECT WALL MOUNT LED LUMINAIRE
DOWNLIGHT 775 LUMENS PER FOOT, DROP SATIN WHITE DIFFUSER
UPLIGHT 460 LUMENS PER FOOT, FLUSH SATIN WHITE DIFFUSER
Light Source: -
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 4158.8 lumens
Efficiency: N/A
Efficacy: 110.3 lumens/watt
Spacing Criteria (0/90/45): 1.2 / 1.26 / 1.37
Luminous Opening: Rectangular w/ Sides (W: 0.25' x L: 4' x H: 0.08')
CIE Type: Semi-Direct

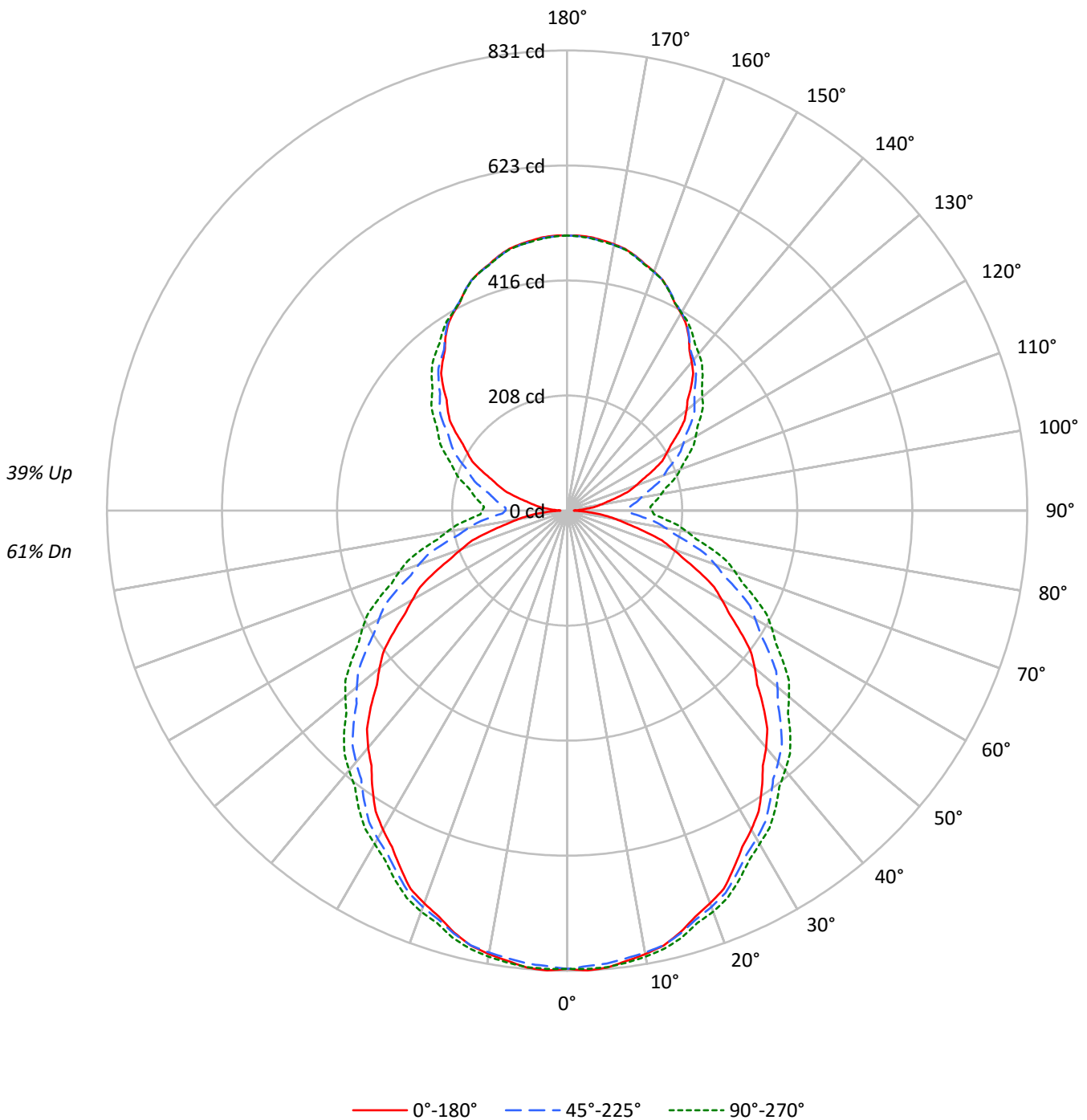
Input Watts (W): 37.7
Input Voltage (V): 120
Input Current (A_{in}): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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Luminous Intensity Polar Plot





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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	110	110	110	110	103	103	103	103	90	90	90	78	78	78	67	67	67	61
1	99	94	90	86	92	88	84	81	77	74	71	66	64	62	57	55	54	49
2	90	81	75	69	83	76	70	65	66	62	58	58	54	51	49	47	44	40
3	82	71	63	57	76	67	60	54	58	53	48	50	46	42	43	40	37	33
4	74	63	54	48	69	59	51	45	52	45	41	45	40	36	38	35	32	28
5	68	56	47	41	63	52	45	39	46	40	35	40	35	31	34	31	27	24
6	63	50	41	35	58	47	39	34	41	35	30	36	31	27	31	27	24	21
7	58	45	37	31	54	43	35	29	38	31	27	33	28	24	28	24	21	19
8	54	41	33	27	50	39	31	26	34	28	24	30	25	21	26	22	19	17
9	50	37	30	24	47	35	28	23	31	25	21	28	23	19	24	20	17	15
10	47	34	27	22	44	32	26	21	29	23	19	26	21	17	22	18	15	14

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	8908	8908	8908
5°	8936	8684	8689
10°	8856	8484	8441
15°	8741	8257	8171
20°	8579	7997	7875
25°	8377	7698	7561
30°	8171	7430	7245
35°	7939	7146	6992
40°	7720	6888	6722
45°	7475	6640	6505
50°	7232	6394	6267
55°	6967	6143	6052
60°	6707	5889	5832
65°	6441	5617	5571
70°	6040	5312	5303
75°	5534	4961	5030
80°	4951	4618	4718
85°	4409	4384	4537



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	78.5	1.9
10°-20°	223.7	5.4
20°-30°	334.5	8.0
30°-40°	399.5	9.6
40°-50°	418.0	10.0
50°-60°	392.2	9.4
60°-70°	327.6	7.9
70°-80°	234.4	5.6
80°-90°	141.2	3.4
90°-100°	120.1	2.9
100°-110°	161.3	3.9
110°-120°	207.8	5.0
120°-130°	241.3	5.8
130°-140°	254.6	6.1
140°-150°	241.7	5.8
150°-160°	201.6	4.8
160°-170°	134.2	3.2
170°-180°	47.0	1.1
0°-30°	636.6	15.3
0°-40°	1036.1	24.9
0°-60°	1846.2	44.4
0°-90°	2549.4	61.3
90°-120°	489.1	11.8
90°-150°	1226.7	29.5
90°-180°	1609.0	38.7
0°-180°	4158.8	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	828	828	828	828	828	
5°	828	826	821	828	828	79
15°	789	791	791	799	799	222
25°	712	721	724	735	736	328
35°	613	627	639	652	656	383
45°	501	523	545	562	570	386
55°	382	412	444	468	476	342
65°	264	300	339	365	375	261
75°	143	186	231	260	271	153
85°	44	89	137	166	177	46
90°	12	60	111	142	153	9
95°	33	71	118	146	157	34
105°	95	118	160	184	194	101
115°	170	183	214	235	243	169
125°	245	248	272	289	294	219
135°	317	319	328	342	346	244
145°	383	383	384	390	393	239
155°	437	437	438	439	437	201
165°	476	475	475	477	475	134
175°	496	494	494	496	494	47
180°	497	497	497	497	497	



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CANDELA DISTRIBUTION (FULL):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
0°	827.6	827.6	827.6	827.6	827.6	827.6	827.6	827.6	827.6	827.6	827.6
2.5°	831.2	830.7	830.3	829.7	829.3	828.4	827.2	825.9	824.6	823.3	824.6
5°	828.5	828.1	827.7	827.3	826.9	826.1	824.9	823.7	822.5	821.3	822.9
7.5°	820.4	820.4	820.5	820.6	820.7	820.2	819.0	817.9	816.7	815.5	817.5
10°	813.2	813.6	814.0	814.4	814.8	814.5	813.5	812.5	811.5	810.5	812.5
12.5°	804.5	805.1	805.6	806.2	806.8	806.8	806.1	805.4	804.7	804.0	805.8
15°	788.8	789.5	790.1	790.7	791.3	791.4	791.3	791.1	790.8	790.7	792.6
17.5°	769.0	770.3	771.5	772.6	773.8	774.4	774.3	774.2	774.1	774.0	775.8
20°	754.6	755.8	757.0	758.2	759.4	760.2	760.6	761.0	761.4	761.8	763.6
22.5°	739.4	740.6	741.8	743.0	744.2	745.1	745.7	746.2	746.8	747.3	749.7
25°	712.2	714.2	716.2	718.2	720.2	721.5	722.1	722.7	723.3	723.9	726.5
27.5°	684.8	687.1	689.4	691.6	694.0	695.7	697.0	698.3	699.6	700.9	703.1
30°	665.3	668.0	670.5	673.1	675.7	677.9	679.4	681.1	682.7	684.2	686.6
32.5°	643.7	646.6	649.5	652.5	655.4	657.9	660.0	662.1	664.2	666.2	668.8
35°	613.0	616.2	619.5	622.7	625.9	628.8	631.4	634.0	636.6	639.2	642.2
37.5°	580.6	584.2	587.8	591.4	595.0	598.4	601.7	604.9	608.0	611.2	614.7
40°	559.0	562.6	566.2	569.8	573.3	577.2	581.2	585.2	589.2	593.2	596.6
42.5°	535.1	539.6	544.0	548.4	552.8	557.1	561.2	565.4	569.6	573.8	577.5
45°	501.3	506.1	510.8	515.7	520.5	525.4	530.4	535.4	540.4	545.4	549.2
47.5°	465.7	471.2	476.6	482.1	487.5	493.1	498.9	504.5	510.3	516.0	520.3
50°	442.6	448.2	453.8	459.5	465.1	471.0	477.3	483.5	489.7	495.8	500.4
52.5°	418.1	424.0	430.0	435.9	441.9	448.2	455.1	461.9	468.8	475.6	480.4
55°	382.3	388.8	395.5	402.1	408.7	415.6	422.8	430.1	437.2	444.4	449.9
57.5°	347.2	354.1	361.0	367.9	374.9	382.2	390.1	398.0	405.9	413.8	419.2
60°	322.8	329.9	337.2	344.4	351.6	359.3	367.6	375.7	383.9	392.2	397.8
62.5°	299.6	307.0	314.4	321.8	329.2	337.2	345.9	354.6	363.3	372.0	377.5
65°	264.2	272.0	279.7	287.6	295.4	303.7	312.5	321.3	330.2	339.0	345.0
67.5°	228.1	236.3	244.7	253.0	261.2	269.9	278.9	287.8	296.8	305.8	312.4
70°	202.9	211.5	220.1	228.7	237.3	246.4	256.1	265.6	275.3	284.9	291.3
72.5°	179.8	188.4	197.0	205.6	214.2	223.5	233.4	243.4	253.3	263.2	269.8
75°	143.4	152.7	162.2	171.6	181.0	190.7	200.7	210.8	220.8	230.8	237.4
77.5°	111.6	121.1	130.6	140.1	149.6	159.4	169.5	179.6	189.7	199.8	206.7
80°	89.3	99.1	108.9	118.7	128.5	138.6	149.0	159.5	169.9	180.3	187.1
82.5°	69.7	79.7	89.7	99.7	109.7	119.9	130.5	141.1	151.7	162.3	169.1
85°	44.2	54.2	64.2	74.2	84.2	94.5	105.2	115.8	126.4	137.1	143.9
87.5°	24.0	34.2	44.3	54.5	64.7	75.0	85.4	95.8	106.2	116.8	123.6
90°	12.1	22.8	33.5	44.2	54.8	65.9	77.2	88.5	99.9	111.2	118.4
92.5°	20.4	29.9	39.3	48.7	58.2	68.3	79.0	89.7	100.4	111.1	118.0
95°	33.0	41.3	49.8	58.2	66.6	76.1	86.6	97.1	107.6	118.1	124.7
97.5°	49.8	57.3	64.7	72.2	79.7	88.4	98.3	108.2	118.0	127.9	134.3
100°	61.2	68.1	75.1	82.0	88.9	97.2	106.9	116.5	126.1	135.8	141.9
102.5°	74.5	80.6	86.7	92.7	98.8	106.7	116.3	126.0	135.6	145.2	151.1
105°	95.0	100.0	105.0	109.9	114.9	122.1	131.5	140.9	150.3	159.7	165.3
107.5°	118.0	122.2	126.3	130.5	134.7	141.0	149.6	158.0	166.5	175.0	180.6
110°	132.2	136.0	139.7	143.5	147.3	153.3	161.5	169.7	177.9	186.1	191.7



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CANDELA DISTRIBUTION (continued):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
112.5°	147.8	150.9	153.9	157.0	160.1	165.5	173.2	181.0	188.6	196.4	201.9
115°	170.3	173.0	175.6	178.3	181.0	185.8	192.9	199.9	207.0	214.0	218.9
117.5°	193.7	195.4	197.0	198.7	200.4	204.5	211.0	217.6	224.1	230.7	235.4
120°	207.7	209.2	210.7	212.2	213.8	217.6	223.8	230.0	236.2	242.3	246.8
122.5°	223.0	223.9	224.8	225.7	226.6	230.1	236.1	242.2	248.2	254.3	258.6
125°	245.4	245.6	245.9	246.2	246.4	249.3	255.0	260.6	266.3	271.9	275.8
127.5°	266.9	267.3	267.7	268.0	268.4	270.9	275.4	280.1	284.7	289.3	292.8
130°	281.3	281.8	282.3	282.8	283.3	285.4	289.1	292.9	296.6	300.4	303.8
132.5°	294.9	295.6	296.3	296.9	297.6	299.4	302.4	305.4	308.4	311.4	314.7
135°	316.7	317.0	317.3	317.6	318.0	319.2	321.3	323.4	325.5	327.6	330.9
137.5°	336.8	337.1	337.3	337.6	337.9	338.7	340.2	341.7	343.2	344.7	347.4
140°	350.1	350.5	350.9	351.4	351.9	352.4	353.1	353.8	354.5	355.2	358.1
142.5°	362.9	363.2	363.4	363.8	364.0	364.3	364.5	364.8	365.2	365.4	368.0
145°	382.9	382.9	382.8	382.8	382.8	382.9	383.1	383.4	383.7	383.9	385.5
147.5°	399.5	399.8	400.1	400.4	400.7	401.0	401.2	401.5	401.7	402.0	402.4
150°	411.6	411.8	412.0	412.2	412.3	412.5	412.7	412.8	413.0	413.2	413.2
152.5°	421.6	421.9	422.1	422.3	422.6	422.8	422.8	423.0	423.1	423.2	423.4
155°	437.4	437.4	437.4	437.4	437.4	437.5	437.6	437.6	437.7	437.8	438.2
157.5°	450.8	450.7	450.6	450.5	450.4	450.4	450.5	450.6	450.6	450.6	451.0
160°	459.3	459.1	458.9	458.7	458.6	458.5	458.5	458.5	458.5	458.5	458.9
162.5°	466.7	466.5	466.2	466.0	465.8	465.7	465.7	465.8	465.9	466.0	466.4
165°	476.4	476.1	475.9	475.6	475.4	475.3	475.3	475.3	475.3	475.3	475.8
167.5°	484.1	483.8	483.5	483.1	482.8	482.6	482.7	482.8	482.8	482.8	483.5
170°	488.5	488.2	487.8	487.5	487.2	487.0	487.0	487.0	487.0	487.0	487.6
172.5°	492.0	491.6	491.3	490.9	490.5	490.3	490.3	490.3	490.3	490.3	490.9
175°	495.5	495.2	494.8	494.5	494.1	494.0	494.0	494.0	494.0	494.0	494.5
177.5°	497.1	496.7	496.5	496.2	495.9	495.8	495.8	495.8	495.8	495.8	496.2
180°	496.7	496.7	496.7	496.7	496.7	496.7	496.7	496.7	496.7	496.7	496.7



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CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
0°	827.6	827.6	827.6	827.6	827.6	827.6	827.6	827.6
2.5°	825.9	827.2	828.4	829.0	828.8	828.6	828.5	828.4
5°	824.5	826.1	827.7	828.4	828.2	828.0	827.9	827.6
7.5°	819.5	821.6	823.5	824.4	824.1	824.0	823.7	823.5
10°	814.5	816.5	818.5	819.3	818.9	818.5	818.1	817.7
12.5°	807.7	809.5	811.3	812.1	811.7	811.3	810.9	810.5
15°	794.6	796.7	798.7	799.5	799.4	799.2	798.9	798.7
17.5°	777.7	779.5	781.3	782.0	781.8	781.4	781.2	780.9
20°	765.4	767.2	769.0	770.0	770.3	770.4	770.6	770.9
22.5°	751.9	754.2	756.5	757.6	757.5	757.3	757.2	757.1
25°	729.2	731.8	734.3	735.6	735.6	735.6	735.6	735.6
27.5°	705.3	707.6	709.8	711.0	711.2	711.4	711.5	711.7
30°	689.1	691.5	693.9	695.1	695.1	695.1	695.1	695.1
32.5°	671.3	673.9	676.5	678.0	678.5	679.0	679.4	679.9
35°	645.2	648.2	651.2	653.2	653.9	654.7	655.5	656.3
37.5°	618.0	621.5	624.8	626.9	627.5	628.2	628.8	629.5
40°	600.0	603.4	606.8	608.9	609.8	610.5	611.3	612.2
42.5°	581.2	584.9	588.7	591.1	592.2	593.3	594.4	595.6
45°	553.0	556.8	560.7	563.4	565.0	566.5	568.2	569.8
47.5°	524.6	528.9	533.2	536.0	537.2	538.5	539.7	540.9
50°	505.1	509.6	514.3	517.3	518.7	520.0	521.5	522.9
52.5°	485.2	490.0	494.7	498.0	499.7	501.4	503.2	504.9
55°	455.3	460.7	466.1	469.6	471.2	472.8	474.4	476.0
57.5°	424.7	430.2	435.6	439.3	441.2	443.1	444.9	446.8
60°	403.4	409.0	414.6	418.5	420.7	422.9	425.2	427.3
62.5°	383.2	388.8	394.4	398.2	400.3	402.3	404.4	406.4
65°	351.0	357.0	363.0	367.0	369.0	371.0	373.1	375.1
67.5°	318.9	325.5	332.1	336.2	337.9	339.6	341.3	342.9
70°	297.7	304.1	310.6	314.7	316.8	318.7	320.7	322.8
72.5°	276.4	282.9	289.6	293.9	295.8	297.8	299.8	301.9
75°	244.0	250.6	257.3	261.7	264.2	266.6	269.0	271.4
77.5°	213.7	220.7	227.6	232.0	233.9	235.7	237.6	239.4
80°	193.9	200.7	207.6	212.0	214.0	215.9	218.0	220.0
82.5°	175.9	182.7	189.5	193.9	196.0	197.9	199.9	201.9
85°	150.7	157.5	164.3	168.7	170.7	172.7	174.7	176.7
87.5°	130.5	137.3	144.2	148.7	150.8	152.8	154.8	156.9
90°	125.5	132.7	139.9	144.6	146.7	148.9	151.1	153.3
92.5°	124.9	131.9	138.8	143.1	144.9	146.6	148.4	150.1
95°	131.2	137.8	144.4	148.6	150.7	152.7	154.6	156.6
97.5°	140.7	147.1	153.4	157.6	159.5	161.5	163.5	165.5
100°	147.9	154.0	160.1	164.2	166.3	168.6	170.7	172.9
102.5°	157.0	162.9	168.8	172.8	174.8	176.7	178.7	180.6
105°	170.9	176.5	182.1	185.9	187.9	189.9	191.8	193.8
107.5°	186.3	191.9	197.6	201.2	202.9	204.6	206.2	207.8
110°	197.2	202.8	208.3	211.8	213.2	214.6	216.1	217.5



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CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
112.5°	207.3	212.8	218.3	221.9	223.6	225.3	227.0	228.8
115°	223.8	228.7	233.6	236.8	238.3	239.8	241.3	242.9
117.5°	240.1	244.9	249.6	252.7	254.0	255.3	256.7	258.0
120°	251.3	255.9	260.4	263.3	264.5	265.7	267.0	268.2
122.5°	262.8	267.0	271.2	273.9	275.1	276.2	277.4	278.5
125°	279.7	283.5	287.4	289.8	290.8	292.0	293.0	294.0
127.5°	296.3	299.7	303.2	305.5	306.4	307.4	308.3	309.3
130°	307.3	310.7	314.2	316.2	316.8	317.5	318.1	318.7
132.5°	317.9	321.2	324.3	326.4	327.4	328.2	329.1	330.0
135°	334.2	337.4	340.7	342.8	343.5	344.4	345.2	346.0
137.5°	350.3	353.0	355.9	357.6	358.3	359.0	359.6	360.2
140°	361.0	363.9	366.9	368.5	368.9	369.3	369.7	370.1
142.5°	370.6	373.2	375.7	377.4	377.9	378.4	378.9	379.4
145°	386.9	388.5	390.0	391.0	391.4	391.9	392.4	392.8
147.5°	402.9	403.4	403.9	404.2	404.4	404.7	404.8	405.0
150°	413.2	413.2	413.2	413.1	413.0	412.9	412.8	412.7
152.5°	423.4	423.6	423.8	423.6	423.3	422.9	422.5	422.1
155°	438.5	438.9	439.2	439.0	438.4	437.8	437.2	436.6
157.5°	451.4	451.8	452.1	452.0	451.6	451.1	450.6	450.1
160°	459.3	459.8	460.2	460.2	459.9	459.5	459.2	458.8
162.5°	466.8	467.3	467.7	467.6	467.1	466.5	466.0	465.4
165°	476.3	476.8	477.3	477.3	476.6	476.0	475.4	474.8
167.5°	484.0	484.5	485.0	485.0	484.5	484.0	483.5	482.8
170°	488.2	488.8	489.4	489.4	488.8	488.2	487.6	487.0
172.5°	491.5	492.0	492.5	492.5	491.9	491.3	490.7	490.1
175°	495.0	495.5	496.0	496.0	495.4	494.8	494.2	493.6
177.5°	496.6	497.1	497.4	497.4	496.9	496.5	495.9	495.4
180°	496.7	496.7	496.7	496.7	496.7	496.7	496.7	496.7

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