

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: P332159-830

Luminaire Tested: **S123DIW-S775D755U830-4F0-1E-UDD-D1**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P332159-830
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-S775D755U830-4F0-1E-UDD-D1
Description: DEFINE 3 DIRECT-INDIRECT WALL MOUNT LED LUMINAIRE
DOWNLIGHT 775 LUMENS PER FOOT, DROP SATIN WHITE DIFFUSER
UPLIGHT 755 LUMENS PER FOOT, FLUSH SATIN WHITE DIFFUSER
Light Source: -
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 5514.6 lumens
Efficiency: N/A
Efficacy: 122.5 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: General Diffuse

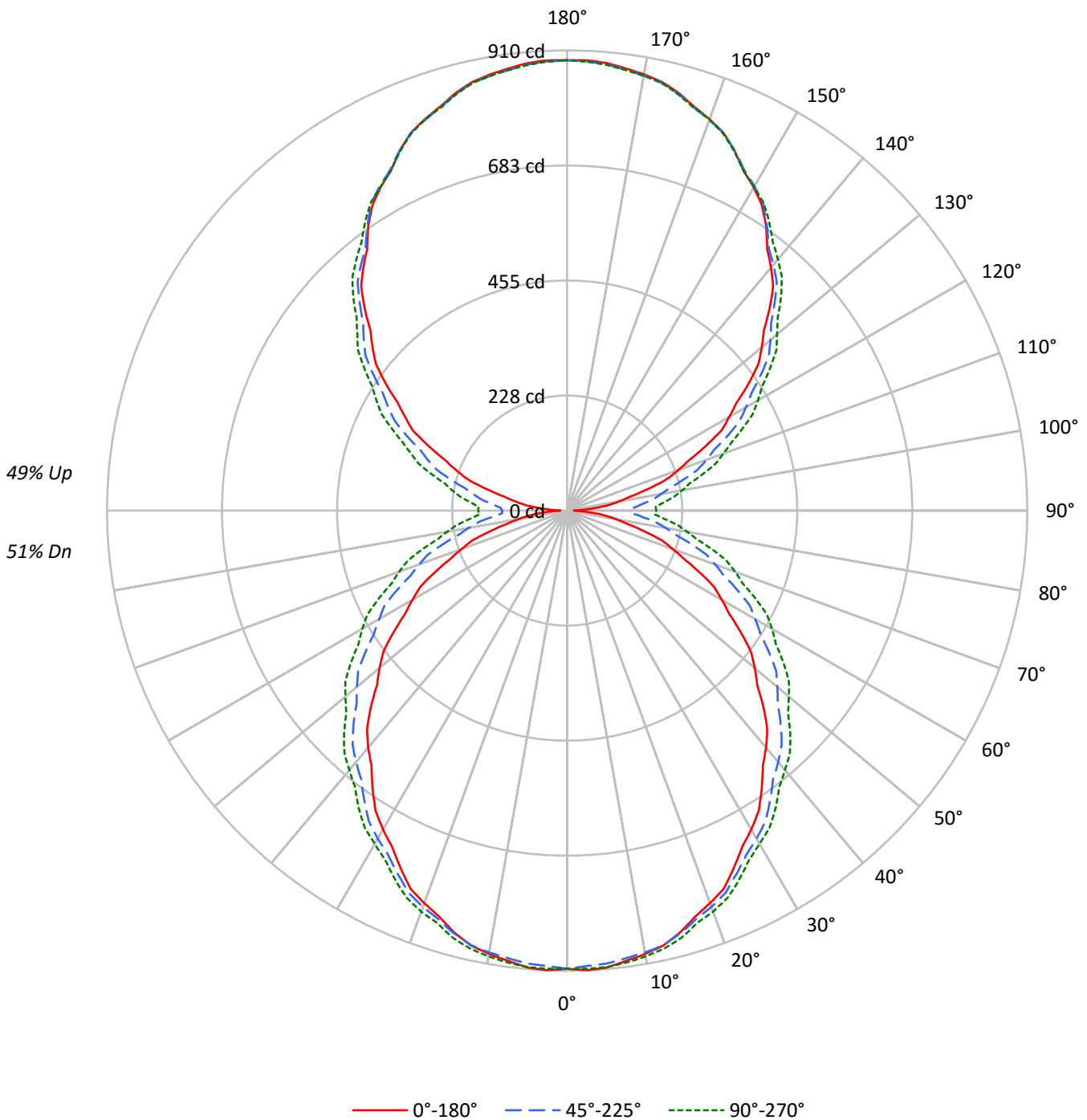
Input Watts (W): 45
Input Voltage (V): 120
Input Current (A_{in}): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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	107	107	107	107	99	99	99	99	84	84	84	70	70	70	57	57	57	51
1	97	92	88	84	89	85	81	78	72	69	66	60	58	56	48	47	46	40
2	88	80	73	68	81	74	68	63	62	58	54	52	49	46	42	40	38	33
3	80	70	62	56	73	65	58	52	55	49	45	45	42	38	37	34	32	27
4	73	62	53	47	67	57	50	44	48	43	38	40	36	32	33	30	27	23
5	67	55	46	40	61	51	43	38	43	37	33	36	31	28	29	26	23	20
6	61	49	41	35	56	45	38	32	39	33	28	32	28	24	27	23	20	17
7	57	44	36	30	52	41	34	28	35	29	25	29	25	21	24	21	18	15
8	53	40	32	27	48	37	30	25	32	26	22	27	22	19	22	19	16	14
9	49	36	29	24	45	34	27	22	29	24	20	25	20	17	21	17	15	12
10	46	33	26	21	42	31	24	20	27	21	18	23	18	15	19	16	13	11

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	9752	9752	9752
5°	9782	9507	9512
10°	9694	9287	9240
15°	9570	9038	8945
20°	9390	8755	8621
25°	9171	8428	8278
30°	8945	8133	7931
35°	8692	7823	7655
40°	8450	7540	7358
45°	8182	7269	7122
50°	7918	7000	6860
55°	7627	6725	6625
60°	7343	6446	6385
65°	7051	6149	6098
70°	6611	5815	5805
75°	6055	5432	5506
80°	5416	5056	5164
85°	4828	4799	4966



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	85.9	1.6
10°-20°	244.8	4.4
20°-30°	366.2	6.6
30°-40°	437.3	7.9
40°-50°	457.5	8.3
50°-60°	429.4	7.8
60°-70°	358.6	6.5
70°-80°	256.6	4.7
80°-90°	155.6	2.8
90°-100°	154.0	2.8
100°-110°	244.2	4.4
110°-120°	342.5	6.2
120°-130°	415.4	7.5
130°-140°	448.7	8.1
140°-150°	431.8	7.8
150°-160°	361.4	6.6
160°-170°	240.5	4.4
170°-180°	84.2	1.5
0°-30°	696.9	12.6
0°-40°	1134.2	20.6
0°-60°	2021.1	36.6
0°-90°	2791.9	50.6
90°-120°	740.7	13.4
90°-150°	2036.6	36.9
90°-180°	2723.0	49.4
0°-180°	5514.6	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	906	906	906	906	906	
5°	907	905	899	906	906	86
15°	864	866	866	875	874	243
25°	780	789	792	805	805	359
35°	671	687	700	714	718	420
45°	549	572	597	615	624	423
55°	418	451	486	512	521	375
65°	289	328	371	400	411	286
75°	157	203	253	284	297	168
85°	48	98	150	182	193	51
90°	14	69	128	163	176	11
95°	52	96	150	182	193	55
105°	165	192	239	266	277	177
115°	302	317	350	374	382	299
125°	438	442	467	485	490	391
135°	567	570	580	594	598	436
145°	686	686	688	695	697	428
155°	784	784	785	787	783	361
165°	854	852	852	856	851	241
175°	888	886	886	889	885	84
180°	891	891	891	891	891	



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CANDELA DISTRIBUTION (FULL):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
0°	906.0	906.0	906.0	906.0	906.0	906.0	906.0	906.0	906.0	906.0	906.0
2.5°	909.9	909.4	908.9	908.3	907.9	906.8	905.5	904.1	902.7	901.3	902.7
5°	907.0	906.5	906.1	905.7	905.2	904.4	903.1	901.7	900.4	899.1	900.9
7.5°	898.1	898.1	898.2	898.3	898.4	897.9	896.5	895.3	894.0	892.8	894.9
10°	890.2	890.6	891.1	891.6	891.9	891.6	890.5	889.5	888.3	887.2	889.5
12.5°	880.7	881.4	881.9	882.6	883.2	883.2	882.4	881.7	880.9	880.1	882.1
15°	863.6	864.2	864.9	865.5	866.2	866.4	866.2	866.0	865.7	865.5	867.7
17.5°	841.9	843.2	844.5	845.7	847.1	847.7	847.6	847.5	847.4	847.3	849.3
20°	826.0	827.4	828.7	830.0	831.3	832.2	832.6	833.1	833.5	834.0	835.9
22.5°	809.5	810.8	812.1	813.4	814.7	815.7	816.3	816.9	817.6	818.1	820.7
25°	779.7	781.8	784.0	786.3	788.4	789.9	790.5	791.2	791.8	792.5	795.3
27.5°	749.7	752.1	754.7	757.1	759.7	761.6	763.0	764.4	765.8	767.2	769.7
30°	728.3	731.2	734.1	736.9	739.7	742.1	743.8	745.6	747.3	749.0	751.7
32.5°	704.6	707.8	711.1	714.3	717.5	720.2	722.5	724.8	727.1	729.3	732.2
35°	671.1	674.6	678.2	681.6	685.1	688.3	691.2	694.0	696.9	699.7	703.0
37.5°	635.6	639.5	643.5	647.4	651.4	655.1	658.6	662.1	665.6	669.1	672.9
40°	611.9	615.9	619.8	623.8	627.6	631.9	636.2	640.6	645.0	649.4	653.1
42.5°	585.8	590.7	595.5	600.3	605.1	609.8	614.3	619.0	623.5	628.1	632.2
45°	548.7	554.0	559.2	564.5	569.8	575.1	580.6	586.1	591.6	597.1	601.2
47.5°	509.8	515.9	521.8	527.7	533.7	539.8	546.1	552.3	558.6	564.9	569.6
50°	484.6	490.7	496.8	503.0	509.2	515.6	522.5	529.2	536.0	542.8	547.8
52.5°	457.7	464.2	470.7	477.2	483.7	490.7	498.2	505.7	513.2	520.7	525.9
55°	418.5	425.7	432.9	440.2	447.4	455.0	462.9	470.8	478.6	486.5	492.5
57.5°	380.1	387.7	395.2	402.7	410.4	418.4	427.1	435.7	444.3	453.0	458.9
60°	353.4	361.2	369.1	377.0	384.9	393.3	402.4	411.3	420.3	429.3	435.5
62.5°	328.0	336.1	344.2	352.2	360.3	369.1	378.6	388.1	397.7	407.2	413.3
65°	289.2	297.7	306.2	314.8	323.4	332.4	342.1	351.8	361.5	371.1	377.7
67.5°	249.7	258.7	267.9	276.9	286.0	295.5	305.3	315.1	324.9	334.8	342.0
70°	222.1	231.5	240.9	250.3	259.8	269.8	280.3	290.8	301.3	311.9	318.9
72.5°	196.8	206.2	215.7	225.1	234.5	244.7	255.5	266.5	277.3	288.1	295.4
75°	156.9	167.2	177.6	187.8	198.1	208.8	219.7	230.7	241.7	252.7	259.9
77.5°	122.2	132.6	143.0	153.4	163.7	174.5	185.6	196.6	207.6	218.7	226.3
80°	97.7	108.5	119.2	130.0	140.7	151.7	163.2	174.6	186.0	197.4	204.8
82.5°	76.3	87.3	98.2	109.1	120.1	131.3	142.9	154.5	166.1	177.7	185.1
85°	48.4	59.3	70.3	81.2	92.2	103.5	115.2	126.8	138.4	150.1	157.5
87.5°	26.4	37.6	48.8	60.1	71.4	82.8	94.3	105.9	117.5	129.1	136.7
90°	13.6	25.8	38.2	50.4	62.8	75.5	88.7	101.9	115.1	128.3	136.4
92.5°	28.9	39.7	50.4	61.3	72.0	83.4	95.6	107.7	119.9	132.1	139.9
95°	52.1	61.7	71.4	81.1	90.7	101.5	113.5	125.5	137.5	149.5	156.9
97.5°	82.9	91.5	100.0	108.6	117.1	127.0	138.1	149.3	160.4	171.6	178.9
100°	104.1	112.0	119.9	127.9	135.8	145.2	156.1	166.9	177.9	188.7	195.5
102.5°	128.5	135.3	142.1	149.0	155.9	164.9	175.8	186.7	197.7	208.6	215.3
105°	165.3	170.9	176.4	182.0	187.6	195.8	206.6	217.4	228.3	239.1	245.2
107.5°	207.2	211.9	216.5	221.2	225.8	232.9	242.4	251.9	261.5	271.0	277.4
110°	233.3	237.5	241.8	246.1	250.3	257.0	266.1	275.1	284.3	293.3	299.6



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CANDELA DISTRIBUTION (continued):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
112.5°	261.3	264.7	268.2	271.5	275.0	281.0	289.5	297.9	306.4	314.9	321.1
115°	302.3	305.4	308.5	311.5	314.6	320.0	327.5	335.2	342.7	350.3	355.7
117.5°	344.3	346.3	348.2	350.2	352.0	356.6	363.5	370.5	377.6	384.6	389.7
120°	369.9	371.8	373.9	375.9	378.0	382.2	388.6	395.1	401.6	408.0	412.9
122.5°	397.3	398.5	399.7	401.1	402.3	406.1	412.6	419.1	425.6	432.1	436.5
125°	438.1	438.6	439.0	439.5	440.0	443.3	449.3	455.3	461.4	467.4	471.4
127.5°	476.7	477.5	478.2	479.1	479.8	482.7	487.6	492.5	497.5	502.4	505.9
130°	502.5	503.5	504.5	505.6	506.5	509.1	512.9	516.9	520.8	524.7	528.3
132.5°	527.4	528.7	529.8	531.0	532.3	534.4	537.5	540.7	543.9	547.1	550.4
135°	566.6	567.2	568.0	568.7	569.4	570.9	573.2	575.4	577.7	579.9	583.2
137.5°	602.8	603.3	603.9	604.5	605.1	606.3	608.1	609.8	611.6	613.4	616.1
140°	627.2	627.9	628.7	629.4	630.3	631.0	631.9	632.6	633.5	634.2	637.4
142.5°	650.1	650.6	651.3	651.9	652.5	653.0	653.4	653.8	654.2	654.6	657.4
145°	685.9	686.0	686.1	686.2	686.3	686.5	687.0	687.5	688.0	688.4	690.0
147.5°	716.2	716.8	717.4	717.9	718.5	719.0	719.4	719.8	720.3	720.8	721.2
150°	738.1	738.4	738.7	739.0	739.3	739.6	739.9	740.3	740.6	740.8	740.8
152.5°	756.0	756.4	756.9	757.3	757.7	758.0	758.2	758.4	758.6	758.7	759.0
155°	784.3	784.3	784.3	784.3	784.3	784.3	784.5	784.7	784.8	784.9	785.6
157.5°	808.3	808.1	807.9	807.8	807.6	807.6	807.7	807.8	807.9	808.0	808.7
160°	823.4	823.1	822.8	822.5	822.2	822.0	822.0	822.0	822.0	822.0	822.8
162.5°	836.9	836.4	835.9	835.6	835.1	835.0	835.1	835.2	835.4	835.5	836.2
165°	854.2	853.8	853.3	852.8	852.3	852.1	852.1	852.1	852.1	852.1	853.0
167.5°	868.1	867.4	866.9	866.2	865.5	865.3	865.4	865.5	865.7	865.8	866.8
170°	875.9	875.2	874.7	874.0	873.4	873.1	873.1	873.1	873.1	873.1	874.2
172.5°	882.0	881.5	880.8	880.1	879.6	879.2	879.2	879.2	879.2	879.2	880.2
175°	888.4	887.9	887.2	886.6	886.0	885.7	885.7	885.7	885.7	885.7	886.6
177.5°	891.2	890.6	890.1	889.7	889.2	888.9	888.9	888.9	888.9	888.9	889.7
180°	890.6	890.6	890.6	890.6	890.6	890.6	890.6	890.6	890.6	890.6	890.6



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CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
0°	906.0	906.0	906.0	906.0	906.0	906.0	906.0	906.0
2.5°	904.1	905.5	906.8	907.5	907.3	907.1	906.9	906.8
5°	902.6	904.4	906.1	906.8	906.6	906.4	906.3	906.0
7.5°	897.1	899.4	901.5	902.5	902.2	902.0	901.7	901.4
10°	891.6	893.8	896.0	896.9	896.5	896.0	895.6	895.1
12.5°	884.2	886.2	888.2	889.0	888.5	888.2	887.7	887.2
15°	869.9	872.1	874.3	875.2	875.1	874.9	874.6	874.4
17.5°	851.3	853.3	855.3	856.1	855.8	855.5	855.2	854.9
20°	837.9	839.9	841.9	842.9	843.2	843.4	843.6	843.9
22.5°	823.1	825.7	828.1	829.3	829.2	829.1	829.0	828.8
25°	798.2	801.1	803.9	805.3	805.3	805.3	805.3	805.3
27.5°	772.1	774.6	777.0	778.4	778.5	778.7	778.9	779.1
30°	754.3	757.0	759.6	760.9	760.9	760.9	760.9	760.9
32.5°	734.9	737.7	740.6	742.3	742.7	743.3	743.8	744.3
35°	706.3	709.6	712.8	715.0	715.9	716.7	717.6	718.5
37.5°	676.6	680.3	684.0	686.3	686.9	687.7	688.3	689.1
40°	656.9	660.5	664.3	666.6	667.5	668.4	669.2	670.1
42.5°	636.2	640.3	644.4	647.1	648.3	649.5	650.7	652.0
45°	605.4	609.5	613.8	616.7	618.5	620.2	622.0	623.8
47.5°	574.3	579.0	583.7	586.7	588.1	589.5	590.8	592.1
50°	552.9	557.9	563.0	566.3	567.8	569.3	570.9	572.4
52.5°	531.1	536.4	541.6	545.2	547.1	548.9	550.8	552.7
55°	498.4	504.4	510.2	514.1	515.9	517.6	519.3	521.1
57.5°	465.0	470.9	476.8	480.9	483.0	485.0	487.0	489.1
60°	441.6	447.7	453.8	458.2	460.5	463.0	465.4	467.8
62.5°	419.5	425.7	431.8	435.9	438.2	440.5	442.7	444.9
65°	384.3	390.8	397.4	401.8	404.0	406.1	408.4	410.6
67.5°	349.1	356.4	363.5	368.1	369.9	371.7	373.6	375.4
70°	325.9	332.9	340.0	344.5	346.8	348.9	351.1	353.4
72.5°	302.6	309.7	317.0	321.7	323.9	326.0	328.2	330.5
75°	267.1	274.4	281.6	286.5	289.2	291.8	294.5	297.1
77.5°	233.9	241.6	249.2	254.0	256.1	258.1	260.1	262.1
80°	212.3	219.7	227.2	232.1	234.2	236.4	238.7	240.8
82.5°	192.6	200.0	207.5	212.3	214.5	216.7	218.9	221.0
85°	164.9	172.4	179.8	184.6	186.8	189.1	191.2	193.4
87.5°	144.2	151.8	159.4	164.4	166.5	168.8	171.1	173.3
90°	144.5	152.5	160.6	165.9	168.4	170.9	173.4	176.0
92.5°	147.6	155.4	163.2	168.0	169.8	171.6	173.5	175.3
95°	164.3	171.7	179.2	184.0	186.2	188.3	190.6	192.7
97.5°	186.2	193.4	200.6	205.3	207.5	209.5	211.7	213.9
100°	202.4	209.2	216.0	220.6	223.2	225.6	228.2	230.7
102.5°	221.9	228.6	235.2	239.6	241.8	243.8	246.0	248.1
105°	251.4	257.5	263.7	267.9	270.2	272.5	274.8	277.0
107.5°	283.7	290.1	296.4	300.6	302.3	304.1	305.8	307.6
110°	305.9	312.3	318.6	322.5	324.0	325.4	326.9	328.3



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CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
112.5°	327.4	333.8	340.0	344.0	345.9	347.8	349.7	351.6
115°	361.2	366.6	372.0	375.5	377.1	378.7	380.3	381.9
117.5°	394.9	400.1	405.3	408.6	409.8	411.1	412.4	413.7
120°	417.8	422.7	427.6	430.6	431.9	433.1	434.3	435.5
122.5°	441.0	445.4	450.0	452.7	453.8	454.9	456.0	457.1
125°	475.4	479.4	483.3	485.8	486.7	487.7	488.5	489.5
127.5°	509.3	512.7	516.2	518.4	519.2	519.9	520.7	521.5
130°	531.8	535.4	538.9	540.8	541.0	541.2	541.5	541.7
132.5°	553.6	556.9	560.1	562.0	562.7	563.3	563.9	564.6
135°	586.5	589.9	593.2	595.3	596.1	596.8	597.7	598.4
137.5°	619.0	621.8	624.6	626.3	626.8	627.3	627.8	628.3
140°	640.6	643.7	646.8	648.4	648.4	648.4	648.4	648.5
142.5°	660.2	663.0	665.7	667.3	667.5	667.8	668.1	668.4
145°	691.6	693.2	694.8	695.7	696.0	696.3	696.4	696.7
147.5°	721.8	722.3	722.8	723.0	722.8	722.7	722.6	722.5
150°	740.8	740.8	740.8	740.6	740.1	739.6	739.1	738.7
152.5°	759.3	759.5	759.8	759.5	758.8	758.1	757.3	756.7
155°	786.2	786.8	787.4	787.2	786.1	785.0	783.9	782.9
157.5°	809.4	810.0	810.7	810.5	809.6	808.8	807.9	807.0
160°	823.6	824.3	825.1	825.2	824.6	824.0	823.3	822.7
162.5°	837.0	837.8	838.6	838.5	837.4	836.5	835.5	834.4
165°	853.9	854.9	855.8	855.7	854.7	853.6	852.5	851.4
167.5°	867.7	868.7	869.7	869.7	868.7	867.7	866.8	865.8
170°	875.2	876.4	877.4	877.4	876.4	875.2	874.2	873.1
172.5°	881.2	882.1	883.1	883.1	881.9	880.9	879.8	878.7
175°	887.6	888.4	889.4	889.4	888.3	887.1	886.1	885.0
177.5°	890.4	891.2	891.9	891.8	891.0	890.0	889.2	888.3
180°	890.6	890.6	890.6	890.6	890.6	890.6	890.6	890.6

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