

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: P332593-840

Luminaire Tested: **S124DIP-S795D590U840-4F0-1E-UDD-D1**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P332593-840
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: S124DIP-S795D590U840-4F0-1E-UDD-D1
Description: DEFINE 4 DIRECT-INDIRECT PENDANT LED LUMINAIRE
DOWNLIGHT 795 LUMENS PER FOOT, DROP SATIN WHITE DIFFUSER
UPLIGHT 590 LUMENS PER FOOT, FLUSH SATIN WHITE DIFFUSER
Light Source: -
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 5338.3 lumens
Efficiency: N/A
Efficacy: 132.5 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

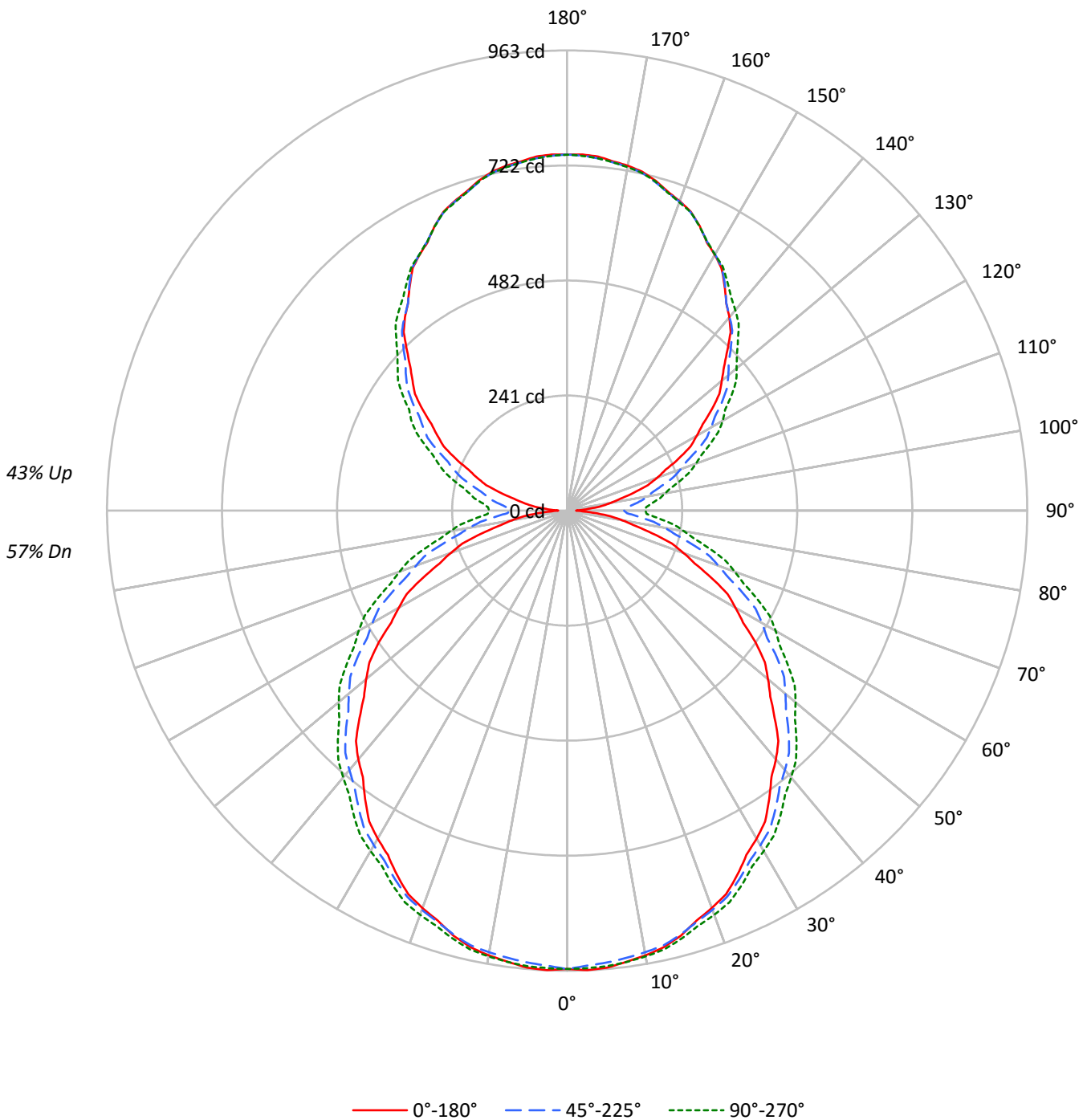
Input Watts (W): 40.3
Input Voltage (V): 120
Input Current (A_{in}): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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	109	109	109	109	101	101	101	101	87	87	87	74	74	74	62	62	62	57
1	98	93	89	85	91	87	83	80	75	72	69	63	61	59	53	52	50	45
2	89	81	74	68	82	75	69	64	65	60	56	55	52	49	46	44	41	37
3	81	71	63	56	75	66	59	53	57	51	47	48	44	41	40	37	35	31
4	74	62	54	47	68	58	51	45	50	44	40	43	38	35	36	32	30	26
5	68	55	47	40	62	52	44	38	45	39	34	38	33	30	32	29	26	22
6	62	50	41	35	58	46	39	33	40	34	29	34	30	26	29	25	22	20
7	57	45	36	31	53	42	34	29	36	30	26	31	26	23	27	23	20	17
8	53	40	32	27	49	38	31	26	33	27	23	29	24	20	24	21	18	15
9	50	37	29	24	46	35	28	23	30	25	20	26	22	18	22	19	16	14
10	46	34	26	21	43	32	25	20	28	22	18	24	20	16	21	17	14	12

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	7744	7744	7744
5°	7768	7569	7589
10°	7720	7444	7439
15°	7651	7301	7261
20°	7547	7143	7089
25°	7429	6965	6898
30°	7302	6789	6703
35°	7158	6609	6532
40°	7042	6436	6353
45°	6871	6278	6200
50°	6727	6095	6039
55°	6577	5924	5849
60°	6344	5704	5676
65°	6089	5468	5463
70°	5778	5200	5215
75°	5348	4904	4991
80°	4865	4620	4771
85°	4264	4369	4644



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	90.8	1.7
10°-20°	260.3	4.9
20°-30°	393.5	7.4
30°-40°	476.1	8.9
40°-50°	503.4	9.4
50°-60°	473.7	8.9
60°-70°	393.1	7.4
70°-80°	276.1	5.2
80°-90°	158.3	3.0
90°-100°	141.8	2.7
100°-110°	214.1	4.0
110°-120°	293.0	5.5
120°-130°	351.6	6.6
130°-140°	377.0	7.1
140°-150°	361.7	6.8
150°-160°	302.3	5.7
160°-170°	201.1	3.8
170°-180°	70.4	1.3
0°-30°	744.6	13.9
0°-40°	1220.8	22.9
0°-60°	2197.9	41.2
0°-90°	3025.3	56.7
90°-120°	648.9	12.2
90°-150°	1739.2	32.6
90°-180°	2313.0	43.3
0°-180°	5338.3	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	959	959	959	959	959	
5°	960	957	950	958	957	91
15°	921	921	918	928	927	259
25°	842	848	852	863	865	388
35°	737	750	760	775	779	461
45°	614	635	655	673	679	475
55°	481	504	536	557	564	429
65°	333	368	404	430	439	330
75°	185	225	270	299	309	196
85°	57	102	150	181	193	61
90°	19	68	119	152	163	14
95°	48	90	137	167	178	50
105°	144	167	208	236	247	153
115°	258	269	300	323	330	254
125°	370	370	395	414	420	330
135°	474	478	485	500	506	367
145°	574	575	576	582	584	359
155°	657	657	656	658	656	302
165°	715	713	712	715	713	201
175°	744	741	740	744	740	71
180°	745	745	745	745	745	



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CANDELA DISTRIBUTION (FULL):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
0°	959.3	959.3	959.3	959.3	959.3	959.3	959.3	959.3	959.3	959.3	959.3
2.5°	962.7	962.1	961.5	961.0	960.4	959.4	957.8	956.2	954.7	953.2	954.5
5°	960.3	959.6	958.9	958.2	957.5	956.2	954.5	952.9	951.2	949.6	951.5
7.5°	952.1	951.7	951.3	950.9	950.4	949.5	948.2	946.7	945.3	944.0	946.1
10°	945.2	945.0	944.8	944.5	944.3	943.6	942.4	941.2	940.0	938.8	941.0
12.5°	935.8	935.7	935.7	935.6	935.6	935.2	934.4	933.5	932.7	931.9	933.9
15°	920.6	920.8	921.0	921.3	921.5	921.3	920.6	919.9	919.1	918.4	920.6
17.5°	899.7	900.4	901.1	901.9	902.6	902.8	902.7	902.6	902.4	902.3	904.5
20°	885.1	885.9	886.6	887.3	888.0	888.5	888.7	888.9	889.2	889.4	891.8
22.5°	868.8	869.7	870.6	871.5	872.4	873.1	873.5	873.9	874.3	874.8	877.2
25°	842.1	843.5	845.1	846.5	847.9	849.0	849.7	850.4	851.1	851.8	854.4
27.5°	812.5	814.6	816.7	818.8	820.9	822.5	823.6	824.7	825.8	826.9	829.3
30°	792.7	794.7	796.6	798.5	800.4	802.1	803.9	805.5	807.2	808.8	811.4
32.5°	771.2	773.6	775.9	778.1	780.4	782.4	784.4	786.2	788.1	789.9	792.9
35°	736.9	739.7	742.7	745.5	748.3	750.9	753.4	755.8	758.1	760.5	763.9
37.5°	702.3	705.6	708.9	712.2	715.5	718.6	721.5	724.5	727.5	730.4	733.9
40°	679.9	683.1	686.1	689.2	692.4	695.6	698.9	702.3	705.6	708.9	712.6
42.5°	654.2	657.6	661.2	664.6	668.1	671.8	675.7	679.6	683.6	687.4	691.5
45°	614.4	618.9	623.5	628.0	632.6	637.1	641.7	646.2	650.7	655.2	659.3
47.5°	576.4	581.1	585.7	590.5	595.1	600.1	605.3	610.6	615.8	621.1	625.3
50°	548.9	554.1	559.4	564.6	569.9	575.1	580.4	585.6	590.9	596.1	601.0
52.5°	521.4	526.6	531.9	537.1	542.4	548.1	554.0	560.1	566.1	572.1	576.8
55°	481.2	486.3	491.3	496.2	501.3	507.4	514.5	521.7	528.9	536.0	540.8
57.5°	436.4	442.5	448.8	454.9	461.1	467.8	474.9	482.0	489.2	496.2	501.9
60°	407.1	413.3	419.5	425.8	431.9	439.0	446.9	454.7	462.6	470.5	475.9
62.5°	378.7	385.6	392.3	399.1	405.9	413.2	421.1	429.0	436.9	444.7	450.2
65°	333.0	340.6	348.3	355.9	363.6	371.4	379.5	387.7	395.8	403.8	409.8
67.5°	288.9	297.1	305.2	313.3	321.4	329.8	338.5	347.2	355.9	364.6	370.6
70°	258.8	267.0	275.1	283.3	291.3	299.9	309.0	318.1	327.1	336.2	342.6
72.5°	229.6	237.9	246.3	254.6	262.9	271.9	281.6	291.1	300.8	310.4	316.7
75°	184.8	193.6	202.4	211.3	220.0	229.5	239.5	249.5	259.6	269.6	276.3
77.5°	142.9	152.2	161.6	171.0	180.3	190.3	200.8	211.3	221.8	232.3	239.0
80°	117.0	126.6	136.1	145.7	155.3	165.3	175.8	186.3	196.8	207.3	214.5
82.5°	91.3	101.2	111.2	121.1	131.0	141.3	151.8	162.3	172.8	183.3	190.6
85°	57.0	67.0	77.0	87.1	97.0	107.4	118.2	128.9	139.7	150.4	157.5
87.5°	32.1	42.1	52.2	62.2	72.2	82.6	93.2	103.9	114.5	125.2	132.3
90°	18.9	29.9	40.8	51.8	62.7	73.8	85.1	96.4	107.8	119.1	126.7
92.5°	28.7	38.9	49.1	59.3	69.5	80.1	91.1	102.0	113.0	124.0	131.2
95°	48.5	57.6	66.6	75.6	84.6	94.5	105.2	115.8	126.5	137.2	144.0
97.5°	73.0	80.7	88.5	96.1	103.8	113.1	123.8	134.5	145.3	156.0	162.7
100°	92.4	99.2	105.9	112.6	119.4	127.9	138.4	148.9	159.3	169.8	176.4
102.5°	113.6	119.3	124.9	130.6	136.2	144.1	154.3	164.5	174.6	184.8	191.5
105°	143.9	148.8	153.7	158.5	163.5	170.6	180.0	189.2	198.6	207.9	214.3
107.5°	177.6	181.7	185.8	189.9	193.9	200.2	208.6	217.0	225.5	233.9	240.1
110°	199.9	203.4	207.0	210.7	214.2	220.2	228.3	236.6	244.8	253.1	258.2



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CANDELA DISTRIBUTION (continued):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
112.5°	222.9	225.9	228.9	232.0	235.0	240.3	248.1	255.8	263.6	271.4	276.6
115°	257.6	259.7	261.9	264.0	266.2	270.9	278.3	285.7	293.1	300.4	305.6
117.5°	291.2	292.7	294.0	295.4	296.8	300.9	307.9	314.8	321.7	328.7	333.3
120°	313.0	314.2	315.4	316.6	317.8	321.7	328.3	334.8	341.3	347.9	352.0
122.5°	336.5	336.8	337.1	337.5	337.8	341.2	347.6	354.0	360.3	366.7	370.9
125°	370.0	369.8	369.6	369.3	369.1	371.9	377.7	383.5	389.4	395.3	399.5
127.5°	401.3	401.4	401.5	401.7	401.8	404.1	408.5	412.8	417.3	421.6	425.7
130°	422.5	422.6	422.8	422.9	423.1	425.1	428.9	432.7	436.6	440.4	444.4
132.5°	445.1	445.1	445.1	445.2	445.2	446.8	449.7	452.7	455.7	458.6	462.4
135°	473.8	474.6	475.4	476.2	477.0	478.2	479.8	481.5	483.2	484.8	488.4
137.5°	506.3	506.4	506.5	506.8	506.9	507.4	508.5	509.5	510.5	511.5	514.6
140°	528.1	528.1	528.1	528.1	528.1	528.3	528.5	528.7	529.0	529.2	532.1
142.5°	546.9	547.1	547.3	547.5	547.9	547.8	547.5	547.2	547.0	546.8	549.5
145°	574.2	574.4	574.7	575.0	575.2	575.4	575.6	575.7	575.8	575.9	577.2
147.5°	601.4	601.8	602.1	602.5	602.9	603.0	602.9	602.8	602.7	602.6	602.7
150°	617.9	618.2	618.4	618.7	619.0	619.1	619.1	619.1	619.1	619.1	619.1
152.5°	632.8	633.0	633.3	633.5	633.8	634.0	634.1	634.2	634.3	634.4	634.7
155°	656.6	656.6	656.6	656.6	656.6	656.5	656.4	656.3	656.2	656.0	656.5
157.5°	676.9	676.6	676.4	676.2	676.0	675.8	675.8	675.8	675.8	675.7	676.1
160°	688.8	688.7	688.6	688.5	688.3	688.2	688.1	688.0	687.8	687.7	688.1
162.5°	699.9	699.6	699.2	698.9	698.6	698.3	698.2	698.1	698.0	697.8	698.5
165°	714.8	714.4	714.0	713.7	713.3	713.0	712.7	712.5	712.2	712.0	712.7
167.5°	726.2	725.7	725.1	724.6	724.1	723.8	723.8	723.9	723.9	723.9	724.7
170°	732.7	732.1	731.3	730.7	730.0	729.8	729.9	730.0	730.2	730.3	731.1
172.5°	737.2	736.7	736.2	735.7	735.1	734.9	734.9	734.9	734.9	735.0	735.8
175°	743.6	743.0	742.4	741.6	741.0	740.6	740.5	740.4	740.2	740.1	741.0
177.5°	745.7	745.2	744.7	744.2	743.6	743.4	743.4	743.4	743.4	743.4	744.1
180°	744.8	744.8	744.8	744.8	744.8	744.8	744.8	744.8	744.8	744.8	744.8



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CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
0°	959.3	959.3	959.3	959.3	959.3	959.3	959.3	959.3
2.5°	955.8	957.3	958.6	959.2	959.0	958.8	958.6	958.4
5°	953.4	955.3	957.2	958.1	957.8	957.6	957.4	957.0
7.5°	948.3	950.4	952.6	953.5	953.3	953.0	952.8	952.6
10°	943.1	945.2	947.5	948.4	948.2	947.9	947.7	947.5
12.5°	935.8	937.9	939.8	940.7	940.7	940.6	940.6	940.5
15°	922.7	924.8	927.0	928.0	927.8	927.5	927.3	927.0
17.5°	906.7	908.9	911.1	912.1	911.9	911.7	911.5	911.3
20°	894.1	896.6	899.0	900.2	900.2	900.2	900.2	900.2
22.5°	879.6	881.9	884.3	885.8	886.2	886.5	886.9	887.3
25°	857.1	859.7	862.3	863.7	863.9	864.2	864.4	864.7
27.5°	831.7	834.1	836.7	838.0	838.3	838.6	838.9	839.1
30°	814.1	816.7	819.3	820.9	821.4	821.8	822.3	822.8
32.5°	796.0	799.0	801.9	803.8	804.2	804.7	805.2	805.7
35°	767.2	770.5	773.9	775.9	776.6	777.3	778.1	778.8
37.5°	737.2	740.6	744.0	746.1	746.8	747.6	748.3	749.1
40°	716.1	719.7	723.3	725.5	726.5	727.4	728.4	729.3
42.5°	695.4	699.3	703.3	705.7	706.4	707.2	708.0	708.7
45°	663.4	667.4	671.5	674.1	675.3	676.5	677.7	678.8
47.5°	629.4	633.7	637.9	640.7	642.2	643.6	645.0	646.4
50°	605.7	610.5	615.2	618.3	619.8	621.3	622.7	624.1
52.5°	581.7	586.4	591.2	594.3	595.7	597.1	598.5	600.1
55°	545.5	550.4	555.1	558.3	559.7	561.1	562.5	563.9
57.5°	507.7	513.3	519.0	522.5	523.8	525.1	526.5	527.9
60°	481.5	487.0	492.4	496.1	498.1	500.0	501.9	503.8
62.5°	455.7	461.2	466.7	470.4	472.3	474.2	476.1	478.0
65°	415.9	421.8	427.8	431.7	433.6	435.6	437.4	439.3
67.5°	376.7	382.7	388.8	392.7	394.7	396.5	398.4	400.2
70°	349.1	355.6	362.0	366.1	367.7	369.4	371.0	372.7
72.5°	323.0	329.2	335.5	339.5	341.3	343.3	345.1	347.0
75°	283.0	289.6	296.4	300.7	303.0	305.1	307.2	309.3
77.5°	245.8	252.6	259.3	263.9	266.2	268.4	270.7	273.1
80°	221.7	228.8	236.0	240.4	242.4	244.3	246.2	248.1
82.5°	197.9	205.3	212.7	217.4	219.4	221.6	223.7	225.8
85°	164.7	171.9	179.0	183.8	186.2	188.5	191.0	193.4
87.5°	139.4	146.4	153.5	158.1	160.3	162.4	164.6	166.7
90°	134.4	142.1	149.8	154.7	156.8	159.1	161.2	163.4
92.5°	138.4	145.5	152.8	157.4	159.5	161.5	163.6	165.6
95°	150.9	157.7	164.5	169.1	171.2	173.3	175.5	177.6
97.5°	169.5	176.1	182.9	187.2	189.3	191.4	193.4	195.5
100°	183.2	189.9	196.5	200.8	202.4	204.1	205.8	207.4
102.5°	198.0	204.7	211.3	215.5	217.5	219.4	221.5	223.4
105°	220.7	227.0	233.4	237.7	240.0	242.3	244.6	246.9
107.5°	246.3	252.6	258.8	262.8	264.5	266.2	267.8	269.5
110°	263.5	268.7	274.0	277.7	280.0	282.4	284.6	286.9



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CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
112.5°	281.9	287.0	292.3	295.9	297.9	299.9	301.8	303.9
115°	310.7	315.8	320.9	324.3	325.8	327.4	328.9	330.4
117.5°	337.7	342.2	346.8	349.9	351.5	353.3	354.9	356.5
120°	356.2	360.3	364.5	367.6	369.7	371.9	374.1	376.3
122.5°	375.3	379.6	384.0	386.8	388.1	389.3	390.5	391.8
125°	403.8	408.1	412.3	415.1	416.3	417.5	418.6	419.8
127.5°	429.7	433.7	437.8	440.5	441.9	443.3	444.7	446.2
130°	448.5	452.5	456.6	459.0	459.9	460.9	461.8	462.7
132.5°	466.3	470.1	474.0	476.6	477.8	479.0	480.2	481.4
135°	492.0	495.5	499.1	501.4	502.4	503.5	504.5	505.6
137.5°	517.8	520.9	524.1	526.2	527.6	528.9	530.1	531.4
140°	535.1	538.1	541.1	543.1	544.1	545.2	546.2	547.3
142.5°	552.2	554.9	557.5	559.5	560.4	561.4	562.4	563.3
145°	578.6	579.9	581.2	582.1	582.7	583.3	583.8	584.4
147.5°	602.8	602.9	603.0	603.3	603.9	604.6	605.2	605.8
150°	619.1	619.1	619.1	619.1	618.9	618.8	618.7	618.6
152.5°	635.0	635.3	635.6	635.6	635.3	634.9	634.6	634.3
155°	657.0	657.5	658.1	658.1	657.5	657.0	656.5	656.0
157.5°	676.5	676.9	677.3	677.2	676.8	676.4	675.9	675.5
160°	688.5	688.8	689.2	689.1	688.5	687.8	687.2	686.6
162.5°	699.2	699.9	700.6	700.6	700.0	699.3	698.7	698.1
165°	713.5	714.2	715.0	715.1	714.6	714.1	713.6	713.1
167.5°	725.4	726.2	727.0	726.9	726.2	725.4	724.6	723.8
170°	731.8	732.7	733.4	733.4	732.5	731.5	730.6	729.7
172.5°	736.7	737.6	738.4	738.4	737.5	736.6	735.7	734.9
175°	741.9	742.9	743.7	743.7	742.9	741.9	741.0	740.1
177.5°	744.8	745.5	746.2	746.2	745.4	744.6	743.7	742.9
180°	744.8	744.8	744.8	744.8	744.8	744.8	744.8	744.8

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