

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: P332584-840

Luminaire Tested: **S124DIP-S795D365U840-4F0-1E-UDD-D1**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P332584-840
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-S795D365U840-4F0-1E-UDD-D1
Description: DEFINE 4 DIRECT-INDIRECT PENDANT LED LUMINAIRE
DOWNLIGHT 795 LUMENS PER FOOT, DROP SATIN WHITE DIFFUSER
UPLIGHT 365 LUMENS PER FOOT, FLUSH SATIN WHITE DIFFUSER
Light Source: -
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 4551.4 lumens
Efficiency: N/A
Efficacy: 130.0 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: Semi-Direct

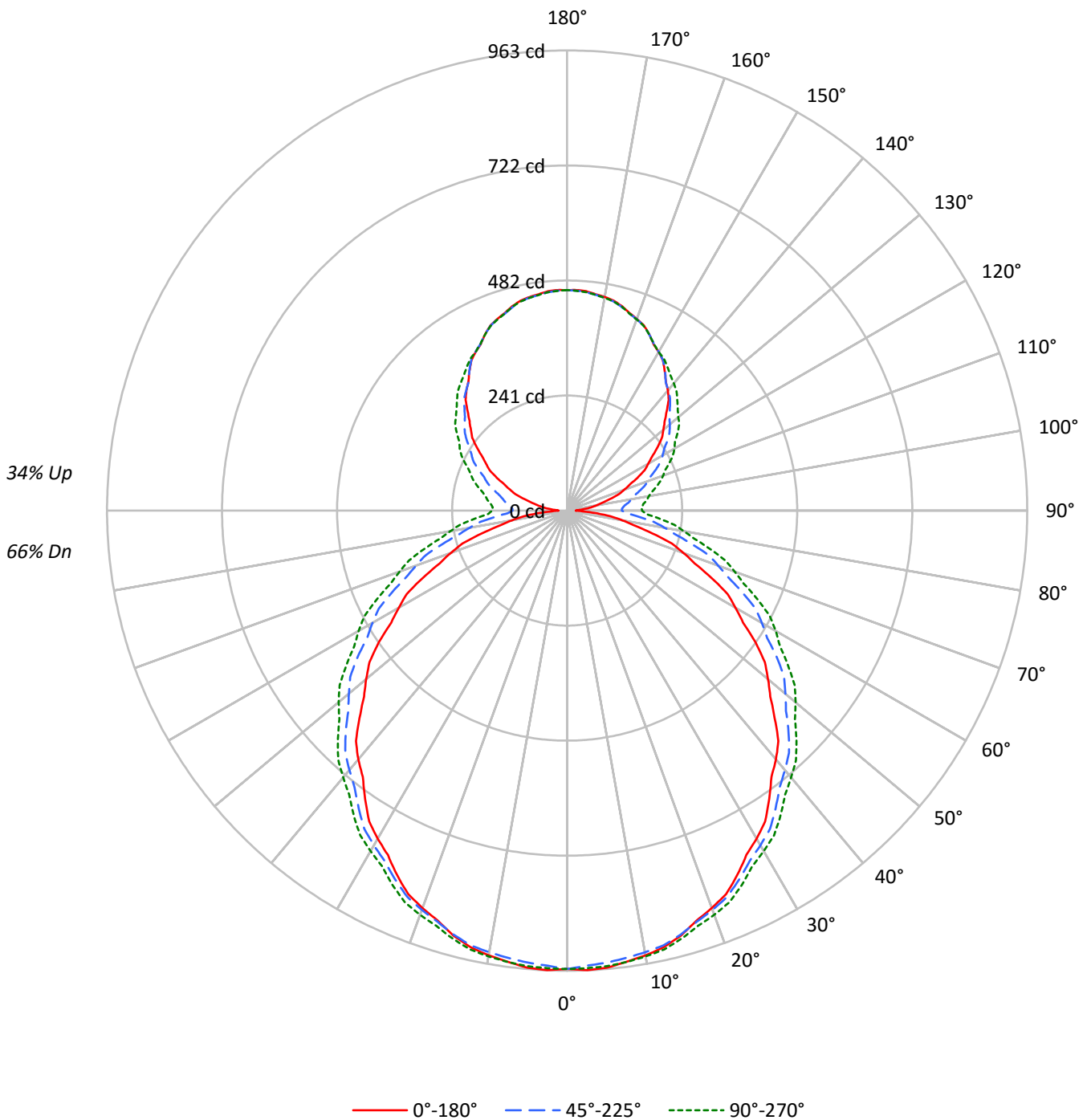
Input Watts (W): 35
Input Voltage (V): 120
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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Luminous Intensity Polar Plot





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COEFFICIENT OF UTILIZATION - ZONAL CAVITY METHOD:

RF	20									20									20									20										
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	50	30	10	50	30	10	0														
RCR																																						
0	111	111	111	111	105	105	105	105	92	92	92	81	81	81	71	71	71	66																				
1	100	95	91	87	94	90	86	82	79	76	73	70	67	65	61	59	58	53																				
2	91	82	75	70	85	78	71	66	69	64	60	60	57	53	53	50	47	43																				
3	82	72	64	57	77	68	61	55	60	54	50	53	48	45	46	43	40	36																				
4	75	63	55	48	70	60	52	46	53	47	42	47	42	38	41	37	34	31																				
5	69	56	48	41	64	53	45	39	47	41	36	42	37	33	37	33	29	26																				
6	63	51	42	36	59	48	40	34	43	36	31	38	32	28	33	29	26	23																				
7	59	46	37	31	55	43	35	30	39	32	27	34	29	25	30	26	23	20																				
8	54	41	33	28	51	39	32	26	35	29	24	31	26	22	28	23	20	18																				
9	51	38	30	25	48	36	29	24	32	26	22	29	24	20	26	21	18	16																				
10	47	35	27	22	45	33	26	21	30	24	20	27	22	18	24	20	16	15																				

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	2.0
10°-20°	260.3	5.7
20°-30°	393.5	8.6
30°-40°	476.1	10.5
40°-50°	503.4	11.1
50°-60°	473.7	10.4
60°-70°	393.1	8.6
70°-80°	276.1	6.1
80°-90°	157.5	3.5
90°-100°	123.1	2.7
100°-110°	158.7	3.5
110°-120°	199.1	4.4
120°-130°	227.7	5.0
130°-140°	237.8	5.2
140°-150°	224.9	4.9
150°-160°	187.3	4.1
160°-170°	124.6	2.7
170°-180°	43.6	1.0
0°-30°	744.6	16.4
0°-40°	1220.8	26.8
0°-60°	2197.9	48.3
0°-90°	3024.5	66.5
90°-120°	480.9	10.6
90°-150°	1171.4	25.7
90°-180°	1527.0	33.6
0°-180°	4551.4	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°	18	65	114	146	157	13
95°	35	74	121	150	160	35
105°	93	116	156	183	193	99
115°	162	173	205	228	236	160
125°	231	231	256	275	282	206
135°	294	297	304	320	326	228
145°	356	357	357	363	366	223
155°	407	407	406	408	406	187
165°	443	442	441	443	442	125
175°	461	459	459	461	459	44
180°	461	461	461	461	461	



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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°	32.0	41.9	51.8	61.7	71.7	81.9	92.5	103.1	113.6	124.2	131.3
90°	18.3	28.7	39.1	49.5	60.0	70.6	81.5	92.4	103.3	114.2	121.6
92.5°	23.9	33.5	43.1	52.7	62.3	72.5	83.2	93.9	104.6	115.3	122.3
95°	35.3	43.9	52.5	61.2	69.8	79.2	89.6	99.9	110.3	120.6	127.2
97.5°	50.1	57.5	64.7	72.1	79.5	88.4	98.7	109.0	119.4	129.7	136.2
100°	61.8	68.3	74.8	81.4	87.9	96.1	106.1	116.2	126.2	136.2	142.8
102.5°	74.9	80.5	86.0	91.6	97.1	104.8	114.6	124.4	134.1	143.9	150.4
105°	92.8	97.7	102.5	107.3	112.2	119.3	128.4	137.5	146.6	155.8	162.0
107.5°	113.6	117.6	121.7	125.7	129.7	135.9	144.3	152.7	161.1	169.6	175.6
110°	127.0	130.6	134.1	137.5	141.1	146.9	155.2	163.5	171.8	180.1	185.4



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CANDELA DISTRIBUTION (continued):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
112.5°	141.1	144.0	147.0	150.1	153.0	158.4	166.2	174.1	181.9	189.8	195.0
115°	162.0	164.2	166.3	168.4	170.7	175.4	182.9	190.4	197.8	205.4	210.6
117.5°	182.8	184.2	185.5	186.8	188.2	192.4	199.3	206.4	213.4	220.4	225.1
120°	195.9	196.9	198.0	199.0	200.1	203.9	210.6	217.3	224.0	230.7	235.0
122.5°	210.5	210.8	211.1	211.3	211.6	214.9	221.4	227.8	234.2	240.7	245.1
125°	230.9	230.7	230.5	230.1	229.9	232.8	238.6	244.6	250.4	256.3	260.7
127.5°	250.1	250.1	250.1	250.1	250.1	252.4	256.8	261.4	265.8	270.2	274.4
130°	263.0	263.0	263.0	263.0	263.0	264.9	268.7	272.6	276.4	280.2	284.4
132.5°	277.0	276.9	276.9	276.8	276.7	278.2	281.2	284.2	287.2	290.1	294.1
135°	294.4	294.9	295.4	295.8	296.3	297.4	299.0	300.7	302.4	304.1	307.7
137.5°	314.4	314.5	314.5	314.5	314.5	315.0	315.9	316.8	317.7	318.7	321.9
140°	328.0	327.9	327.8	327.7	327.6	327.7	327.9	328.2	328.4	328.7	331.7
142.5°	339.4	339.5	339.6	339.7	339.8	339.7	339.5	339.3	339.1	338.9	341.6
145°	356.2	356.2	356.3	356.4	356.5	356.6	356.6	356.7	356.8	356.9	358.2
147.5°	372.9	373.1	373.2	373.4	373.5	373.5	373.5	373.4	373.4	373.3	373.4
150°	383.2	383.3	383.4	383.5	383.5	383.6	383.6	383.6	383.6	383.6	383.6
152.5°	392.1	392.2	392.4	392.5	392.6	392.7	392.8	392.9	392.9	393.0	393.2
155°	406.8	406.8	406.8	406.8	406.8	406.8	406.7	406.6	406.6	406.5	406.8
157.5°	419.4	419.2	419.1	419.0	418.8	418.7	418.7	418.7	418.7	418.7	418.9
160°	426.8	426.7	426.7	426.6	426.5	426.4	426.4	426.3	426.2	426.1	426.4
162.5°	433.6	433.4	433.2	433.0	432.8	432.7	432.6	432.5	432.4	432.3	432.8
165°	442.8	442.6	442.4	442.1	441.9	441.7	441.5	441.4	441.2	441.1	441.5
167.5°	449.9	449.6	449.3	448.9	448.6	448.4	448.5	448.5	448.5	448.5	449.0
170°	453.9	453.5	453.1	452.7	452.3	452.2	452.2	452.3	452.4	452.5	452.9
172.5°	456.8	456.5	456.1	455.8	455.4	455.2	455.2	455.3	455.3	455.3	455.9
175°	460.7	460.3	459.9	459.5	459.1	458.9	458.8	458.7	458.7	458.6	459.1
177.5°	462.0	461.7	461.3	461.0	460.7	460.6	460.6	460.6	460.6	460.6	461.0
180°	461.4	461.4	461.4	461.4	461.4	461.4	461.4	461.4	461.4	461.4	461.4



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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°	138.3	145.3	152.3	156.9	159.1	161.2	163.3	165.4
90°	129.0	136.4	143.8	148.6	150.6	152.7	154.7	156.8
92.5°	129.4	136.3	143.4	147.9	149.9	151.9	153.9	155.9
95°	133.9	140.6	147.3	151.7	153.9	156.0	158.1	160.3
97.5°	142.8	149.3	155.8	160.2	162.2	164.2	166.3	168.3
100°	149.5	156.0	162.7	166.8	168.4	170.2	171.8	173.5
102.5°	156.8	163.4	169.9	174.0	175.9	177.8	179.9	181.8
105°	168.2	174.4	180.7	184.8	186.9	189.1	191.3	193.4
107.5°	181.7	187.8	193.9	197.8	199.4	201.2	202.9	204.6
110°	190.8	196.0	201.4	205.1	207.2	209.4	211.6	213.7



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CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
112.5°	200.3	205.5	210.9	214.4	216.4	218.3	220.4	222.3
115°	215.7	220.9	226.0	229.4	231.1	232.6	234.2	235.8
117.5°	229.7	234.5	239.1	242.4	244.2	245.9	247.6	249.4
120°	239.4	243.8	248.1	251.4	253.5	255.5	257.6	259.6
122.5°	249.6	254.2	258.6	261.7	263.1	264.5	265.9	267.3
125°	265.1	269.4	273.9	276.7	277.9	279.2	280.4	281.8
127.5°	278.5	282.7	286.8	289.6	291.0	292.6	294.1	295.6
130°	288.5	292.6	296.7	299.3	300.5	301.6	302.8	303.9
132.5°	298.1	302.1	306.0	308.6	309.9	311.2	312.6	313.8
135°	311.3	315.1	318.7	321.1	322.3	323.6	324.8	325.9
137.5°	325.3	328.5	331.8	334.1	335.3	336.6	337.8	339.0
140°	334.7	337.7	340.7	342.8	344.0	345.1	346.2	347.3
142.5°	344.4	347.1	349.7	351.6	352.5	353.6	354.6	355.6
145°	359.5	360.9	362.2	363.2	364.1	364.8	365.5	366.2
147.5°	373.5	373.8	373.9	374.3	375.0	375.7	376.3	377.0
150°	383.6	383.6	383.6	383.5	383.5	383.4	383.3	383.2
152.5°	393.4	393.6	393.8	393.7	393.5	393.3	393.1	392.9
155°	407.1	407.4	407.7	407.7	407.4	407.1	406.8	406.5
157.5°	419.1	419.4	419.6	419.6	419.3	419.1	418.8	418.5
160°	426.6	426.8	427.1	427.0	426.6	426.2	425.8	425.4
162.5°	433.2	433.6	434.0	434.0	433.7	433.3	432.9	432.5
165°	442.0	442.5	442.9	443.0	442.7	442.4	442.1	441.8
167.5°	449.5	449.9	450.4	450.4	449.9	449.4	448.9	448.4
170°	453.4	453.9	454.4	454.3	453.8	453.2	452.7	452.1
172.5°	456.5	457.0	457.5	457.5	457.0	456.4	455.9	455.2
175°	459.7	460.2	460.8	460.8	460.2	459.7	459.1	458.6
177.5°	461.4	461.9	462.3	462.3	461.8	461.3	460.8	460.3
180°	461.4	461.4	461.4	461.4	461.4	461.4	461.4	461.4

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