

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: P331914-927

Luminaire Tested: **S123DIP-S560D365U927-4F0-1E-UDD-D1**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P331914-927
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: S123DIP-S560D365U927-4F0-1E-UDD-D1
Description: DEFINE 3 DIRECT-INDIRECT PENDANT LED LUMINAIRE
DOWNLIGHT 560 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: 2860.4 lumens
Efficiency: N/A
Efficacy: 104.0 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

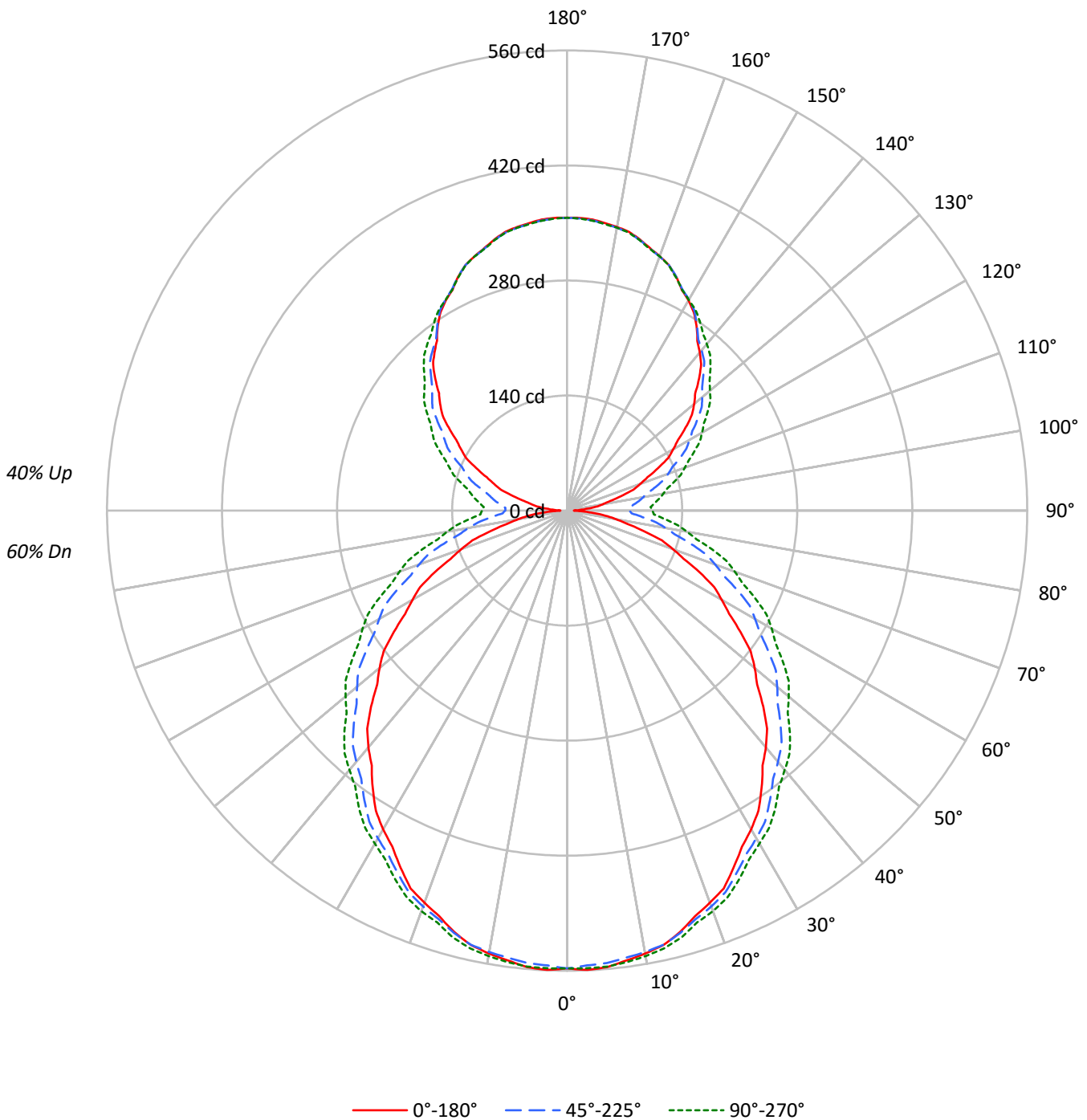
Input Watts (W): 27.5
Input Voltage (V): 120
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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	110	110	110	110	102	102	102	102	89	89	89	77	77	77	65	65	65	60
1	99	94	89	85	92	88	84	80	76	73	70	65	63	61	56	54	53	48
2	89	81	74	69	83	76	70	65	66	61	57	57	53	50	48	46	43	39
3	81	71	63	57	75	66	59	54	58	52	48	50	46	42	42	39	36	33
4	74	63	54	48	69	59	51	45	51	45	40	44	39	36	38	34	31	28
5	68	56	47	41	63	52	44	39	46	39	35	40	35	31	34	30	27	24
6	63	50	41	35	58	47	39	33	41	35	30	36	31	27	31	27	24	21
7	58	45	37	31	54	42	35	29	37	31	26	32	27	24	28	24	21	18
8	54	41	33	27	50	38	31	26	34	28	23	30	25	21	26	22	19	16
9	50	37	30	24	47	35	28	23	31	25	21	27	22	19	24	20	17	15
10	47	34	27	22	44	32	25	21	29	23	19	25	20	17	22	18	15	13

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	5997	5997	5997
5°	6015	5845	5849
10°	5961	5711	5682
15°	5884	5558	5501
20°	5774	5383	5300
25°	5639	5182	5090
30°	5500	5002	4877
35°	5344	4810	4707
40°	5195	4636	4524
45°	5031	4469	4378
50°	4868	4304	4219
55°	4689	4134	4074
60°	4513	3964	3925
65°	4335	3780	3750
70°	4066	3576	3568
75°	3724	3338	3386
80°	3326	3109	3176
85°	2963	2948	3053



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	52.8	1.8
10°-20°	150.5	5.3
20°-30°	225.2	7.9
30°-40°	268.9	9.4
40°-50°	281.3	9.8
50°-60°	264.0	9.2
60°-70°	220.5	7.7
70°-80°	157.8	5.5
80°-90°	95.1	3.3
90°-100°	82.2	2.9
100°-110°	112.9	3.9
110°-120°	147.2	5.1
120°-130°	172.0	6.0
130°-140°	182.2	6.4
140°-150°	173.3	6.1
150°-160°	144.6	5.1
160°-170°	96.3	3.4
170°-180°	33.7	1.2
0°-30°	428.5	15.0
0°-40°	697.4	24.4
0°-60°	1242.7	43.4
0°-90°	1716.1	60.0
90°-120°	342.3	12.0
90°-150°	869.8	30.4
90°-180°	1144.0	40.0
0°-180°	2860.4	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	557	557	557	557	557	
5°	558	556	553	557	557	53
15°	531	533	532	538	538	149
25°	479	485	487	495	495	221
35°	413	422	430	439	442	258
45°	337	352	367	378	384	260
55°	257	277	299	315	320	230
65°	178	202	228	246	252	176
75°	96	125	155	175	183	103
85°	30	60	92	112	119	31
90°	8	41	75	96	104	6
95°	23	49	81	100	107	24
105°	68	84	112	128	135	72
115°	122	131	151	166	171	121
125°	176	178	194	205	209	157
135°	227	228	235	244	247	175
145°	275	275	275	280	281	171
155°	314	314	314	315	313	144
165°	342	341	341	342	341	96
175°	356	354	354	356	354	34
180°	356	356	356	356	356	



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CANDELA DISTRIBUTION (FULL):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
0°	557.1	557.1	557.1	557.1	557.1	557.1	557.1	557.1	557.1	557.1	557.1
2.5°	559.5	559.2	558.9	558.5	558.2	557.6	556.7	555.9	555.0	554.1	555.0
5°	557.7	557.4	557.1	556.9	556.6	556.0	555.2	554.4	553.7	552.8	553.9
7.5°	552.2	552.2	552.3	552.4	552.5	552.1	551.3	550.5	549.7	548.9	550.2
10°	547.4	547.6	547.9	548.2	548.4	548.3	547.6	546.9	546.2	545.6	546.9
12.5°	541.5	541.9	542.3	542.6	543.0	543.0	542.6	542.1	541.6	541.1	542.4
15°	531.0	531.4	531.8	532.2	532.6	532.7	532.6	532.4	532.3	532.2	533.5
17.5°	517.6	518.4	519.3	520.1	520.9	521.3	521.2	521.1	521.1	521.0	522.2
20°	507.9	508.7	509.5	510.3	511.1	511.7	512.0	512.2	512.5	512.8	514.0
22.5°	497.7	498.5	499.3	500.2	501.0	501.5	501.9	502.3	502.7	503.0	504.6
25°	479.4	480.8	482.1	483.5	484.8	485.7	486.1	486.5	486.9	487.3	489.0
27.5°	461.0	462.5	464.1	465.6	467.1	468.3	469.1	470.0	470.9	471.7	473.2
30°	447.8	449.6	451.3	453.1	454.9	456.3	457.3	458.4	459.5	460.6	462.2
32.5°	433.2	435.2	437.2	439.2	441.2	442.8	444.3	445.6	447.0	448.5	450.2
35°	412.6	414.8	416.9	419.1	421.3	423.3	425.0	426.7	428.5	430.2	432.3
37.5°	390.8	393.2	395.6	398.1	400.5	402.8	405.0	407.1	409.2	411.5	413.8
40°	376.2	378.7	381.1	383.5	386.0	388.5	391.2	393.9	396.6	399.3	401.6
42.5°	360.2	363.2	366.1	369.1	372.1	374.9	377.8	380.6	383.4	386.2	388.7
45°	337.4	340.6	343.9	347.1	350.3	353.6	357.0	360.4	363.8	367.1	369.7
47.5°	313.5	317.2	320.8	324.5	328.1	331.9	335.8	339.6	343.5	347.4	350.2
50°	297.9	301.7	305.5	309.3	313.1	317.0	321.2	325.4	329.5	333.7	336.8
52.5°	281.5	285.4	289.5	293.4	297.4	301.7	306.3	310.9	315.5	320.2	323.4
55°	257.3	261.7	266.2	270.6	275.1	279.7	284.6	289.5	294.3	299.1	302.8
57.5°	233.8	238.4	243.0	247.6	252.3	257.3	262.6	267.9	273.2	278.5	282.2
60°	217.2	222.1	227.0	231.8	236.6	241.9	247.4	252.9	258.4	264.0	267.8
62.5°	201.7	206.7	211.7	216.6	221.6	227.0	232.8	238.7	244.5	250.4	254.1
65°	177.8	183.1	188.3	193.6	198.8	204.5	210.4	216.3	222.2	228.1	232.2
67.5°	153.5	159.1	164.7	170.2	175.9	181.6	187.7	193.8	199.8	205.8	210.2
70°	136.6	142.4	148.1	153.9	159.7	165.9	172.3	178.8	185.3	191.8	196.1
72.5°	121.0	126.8	132.6	138.4	144.2	150.4	157.1	163.8	170.5	177.2	181.6
75°	96.5	102.8	109.2	115.5	121.8	128.4	135.1	141.9	148.6	155.3	159.8
77.5°	75.1	81.5	87.9	94.3	100.7	107.3	114.1	120.9	127.7	134.5	139.2
80°	60.0	66.7	73.3	79.9	86.5	93.3	100.3	107.3	114.4	121.4	126.0
82.5°	47.0	53.7	60.4	67.1	73.8	80.7	87.9	95.0	102.1	109.2	113.8
85°	29.7	36.4	43.3	50.0	56.7	63.6	70.8	78.0	85.1	92.2	96.8
87.5°	16.2	23.1	29.9	36.7	43.6	50.5	57.5	64.6	71.6	78.7	83.3
90°	8.2	15.4	22.7	29.9	37.1	44.5	52.2	59.9	67.6	75.3	80.1
92.5°	14.2	20.6	26.9	33.4	39.7	46.5	53.7	61.0	68.2	75.4	80.1
95°	23.2	28.9	34.6	40.2	45.9	52.4	59.5	66.5	73.7	80.8	85.2
97.5°	35.3	40.3	45.4	50.5	55.5	61.5	68.1	74.8	81.4	88.1	92.4
100°	43.6	48.2	52.9	57.6	62.3	67.9	74.4	80.9	87.5	94.0	98.1
102.5°	53.2	57.2	61.3	65.4	69.6	74.9	81.4	87.9	94.3	100.9	104.9
105°	67.8	71.2	74.5	78.0	81.3	86.1	92.5	98.9	105.2	111.6	115.3
107.5°	84.4	87.2	90.0	92.8	95.7	100.0	105.7	111.4	117.1	122.9	126.7
110°	94.6	97.2	99.7	102.3	104.8	108.8	114.4	119.9	125.4	130.9	134.7



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CANDELA DISTRIBUTION (continued):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
112.5°	105.8	107.9	110.0	112.0	114.1	117.7	122.9	128.2	133.3	138.6	142.3
115°	122.0	123.8	125.6	127.5	129.2	132.5	137.2	142.0	146.7	151.4	154.7
117.5°	138.8	139.9	141.0	142.2	143.3	146.1	150.4	154.9	159.2	163.7	166.8
120°	148.9	149.9	150.9	152.0	153.0	155.7	159.8	163.9	168.0	172.1	175.2
122.5°	159.8	160.4	161.1	161.7	162.3	164.7	168.7	172.8	176.9	180.9	183.8
125°	175.9	176.1	176.3	176.5	176.7	178.7	182.4	186.2	190.0	193.8	196.4
127.5°	191.4	191.6	191.9	192.2	192.4	194.2	197.3	200.3	203.4	206.5	208.8
130°	201.7	202.1	202.4	202.8	203.2	204.6	207.1	209.6	212.1	214.6	217.0
132.5°	211.5	212.0	212.5	212.9	213.4	214.7	216.7	218.7	220.7	222.8	224.9
135°	227.1	227.4	227.6	227.8	228.1	228.9	230.4	231.8	233.2	234.6	236.8
137.5°	241.5	241.8	242.0	242.2	242.4	243.0	244.0	244.9	246.0	247.0	248.8
140°	251.2	251.4	251.8	252.1	252.4	252.8	253.3	253.7	254.2	254.7	256.6
142.5°	260.3	260.5	260.8	260.9	261.2	261.3	261.6	261.7	261.9	262.1	263.9
145°	274.6	274.6	274.6	274.6	274.6	274.7	274.9	275.1	275.3	275.4	276.5
147.5°	286.6	286.8	287.1	287.3	287.5	287.7	287.9	288.0	288.2	288.4	288.8
150°	295.3	295.5	295.6	295.7	295.9	296.0	296.1	296.2	296.4	296.4	296.4
152.5°	302.5	302.7	302.9	303.0	303.2	303.3	303.4	303.5	303.6	303.6	303.7
155°	313.9	313.9	313.9	313.9	313.9	313.9	313.9	313.9	314.0	314.1	314.3
157.5°	323.4	323.4	323.3	323.2	323.1	323.1	323.2	323.2	323.3	323.4	323.6
160°	329.5	329.4	329.2	329.2	329.0	328.9	328.9	328.9	328.9	328.9	329.2
162.5°	334.9	334.7	334.5	334.4	334.1	334.1	334.1	334.2	334.3	334.3	334.6
165°	341.8	341.7	341.4	341.3	341.0	341.0	341.0	341.0	341.0	341.0	341.4
167.5°	347.4	347.1	346.9	346.6	346.3	346.3	346.3	346.3	346.4	346.5	346.8
170°	350.5	350.2	350.0	349.7	349.5	349.4	349.4	349.4	349.4	349.4	349.8
172.5°	353.0	352.7	352.4	352.2	352.0	351.8	351.8	351.8	351.8	351.8	352.2
175°	355.5	355.3	355.1	354.8	354.6	354.4	354.4	354.4	354.4	354.4	354.8
177.5°	356.6	356.4	356.2	356.0	355.8	355.7	355.7	355.7	355.7	355.7	356.0
180°	356.4	356.4	356.4	356.4	356.4	356.4	356.4	356.4	356.4	356.4	356.4



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CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
0°	557.1	557.1	557.1	557.1	557.1	557.1	557.1	557.1
2.5°	555.9	556.7	557.6	558.0	557.9	557.8	557.7	557.5
5°	555.0	556.0	557.1	557.6	557.5	557.3	557.2	557.1
7.5°	551.6	552.9	554.4	554.9	554.8	554.6	554.4	554.3
10°	548.3	549.6	551.0	551.4	551.2	551.0	550.6	550.4
12.5°	543.7	544.9	546.1	546.6	546.4	546.1	545.8	545.6
15°	534.9	536.2	537.6	538.2	538.1	537.9	537.8	537.7
17.5°	523.5	524.7	525.9	526.4	526.2	526.0	525.9	525.6
20°	515.2	516.4	517.6	518.3	518.4	518.6	518.7	518.8
22.5°	506.1	507.7	509.2	509.9	509.8	509.8	509.7	509.6
25°	490.8	492.6	494.3	495.2	495.2	495.2	495.2	495.2
27.5°	474.8	476.3	477.8	478.6	478.7	478.8	479.0	479.0
30°	463.8	465.4	467.1	467.9	467.9	467.9	467.9	467.9
32.5°	451.9	453.6	455.3	456.4	456.7	457.0	457.3	457.6
35°	434.3	436.3	438.3	439.6	440.1	440.7	441.2	441.8
37.5°	416.0	418.3	420.6	422.0	422.4	422.8	423.3	423.7
40°	403.9	406.2	408.4	409.9	410.4	411.0	411.5	412.0
42.5°	391.2	393.7	396.2	397.8	398.6	399.3	400.1	400.8
45°	372.2	374.8	377.4	379.2	380.2	381.4	382.5	383.5
47.5°	353.2	356.0	358.9	360.8	361.6	362.4	363.3	364.1
50°	339.9	343.1	346.2	348.2	349.1	350.1	351.0	352.0
52.5°	326.6	329.8	333.0	335.2	336.4	337.5	338.7	339.8
55°	306.4	310.1	313.7	316.1	317.2	318.2	319.3	320.4
57.5°	285.9	289.5	293.2	295.6	296.9	298.2	299.4	300.7
60°	271.6	275.3	279.1	281.7	283.2	284.6	286.1	287.6
62.5°	257.9	261.7	265.5	268.1	269.4	270.8	272.2	273.5
65°	236.2	240.3	244.4	247.1	248.4	249.8	251.1	252.5
67.5°	214.7	219.1	223.6	226.3	227.4	228.5	229.7	230.8
70°	200.4	204.7	209.1	211.8	213.2	214.5	215.9	217.2
72.5°	186.0	190.4	194.9	197.8	199.2	200.5	201.8	203.2
75°	164.2	168.7	173.2	176.2	177.8	179.4	181.0	182.7
77.5°	143.9	148.5	153.2	156.2	157.5	158.7	159.9	161.2
80°	130.6	135.1	139.7	142.7	144.0	145.4	146.7	148.1
82.5°	118.4	122.9	127.5	130.6	131.9	133.2	134.6	135.9
85°	101.4	106.0	110.6	113.5	114.9	116.2	117.6	118.9
87.5°	87.9	92.5	97.2	100.2	101.6	102.9	104.3	105.7
90°	84.9	89.8	94.6	97.8	99.3	100.7	102.2	103.7
92.5°	84.8	89.4	94.1	97.0	98.2	99.4	100.5	101.7
95°	89.7	94.1	98.5	101.4	102.7	104.1	105.4	106.8
97.5°	96.7	101.0	105.4	108.1	109.5	110.8	112.1	113.4
100°	102.1	106.2	110.4	113.1	114.6	116.1	117.6	119.0
102.5°	108.8	112.9	116.8	119.5	120.8	122.2	123.5	124.8
105°	119.1	122.9	126.7	129.2	130.6	131.9	133.2	134.6
107.5°	130.5	134.3	138.1	140.5	141.6	142.8	143.9	145.0
110°	138.5	142.2	146.0	148.3	149.2	150.2	151.1	152.1



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CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
112.5°	145.9	149.6	153.4	155.7	156.9	158.1	159.2	160.4
115°	158.0	161.3	164.6	166.8	167.8	168.8	169.8	170.9
117.5°	170.0	173.3	176.4	178.5	179.4	180.2	181.1	182.0
120°	178.2	181.3	184.3	186.2	187.1	187.9	188.7	189.6
122.5°	186.6	189.4	192.3	194.1	194.9	195.6	196.4	197.2
125°	199.0	201.6	204.1	205.8	206.5	207.2	207.9	208.6
127.5°	211.2	213.5	215.8	217.3	217.9	218.6	219.2	219.8
130°	219.3	221.6	223.9	225.2	225.6	226.0	226.3	226.7
132.5°	227.0	229.2	231.3	232.7	233.3	233.9	234.5	235.0
135°	238.9	241.1	243.3	244.7	245.3	245.8	246.3	246.8
137.5°	250.7	252.5	254.4	255.6	256.0	256.5	256.9	257.4
140°	258.6	260.5	262.5	263.6	263.9	264.1	264.4	264.6
142.5°	265.6	267.4	269.1	270.1	270.5	270.8	271.2	271.5
145°	277.5	278.5	279.6	280.2	280.5	280.7	281.1	281.4
147.5°	289.1	289.4	289.7	289.9	290.0	290.2	290.3	290.3
150°	296.4	296.4	296.4	296.4	296.3	296.2	296.1	296.0
152.5°	303.8	304.0	304.0	304.0	303.6	303.4	303.2	302.9
155°	314.6	314.8	315.1	315.0	314.6	314.1	313.7	313.2
157.5°	323.8	324.2	324.4	324.3	324.0	323.7	323.3	323.0
160°	329.5	329.9	330.2	330.2	329.9	329.7	329.5	329.2
162.5°	334.9	335.3	335.6	335.5	335.1	334.7	334.3	333.9
165°	341.7	342.1	342.5	342.5	342.0	341.6	341.1	340.7
167.5°	347.2	347.6	348.0	348.0	347.6	347.2	346.8	346.5
170°	350.2	350.7	351.1	351.1	350.7	350.2	349.8	349.4
172.5°	352.6	353.0	353.4	353.4	352.9	352.5	352.0	351.6
175°	355.1	355.5	355.9	355.8	355.5	355.0	354.6	354.1
177.5°	356.3	356.6	356.9	356.9	356.6	356.2	355.8	355.5
180°	356.4	356.4	356.4	356.4	356.4	356.4	356.4	356.4

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