

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: P332273

Luminaire Tested: **S123RDIP-S560D365U835-4F0-1E-UDD-F**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P332273
REPORT IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-1807-864-5,
Test Lab: INNOVATION CENTER
Issue Date: 3/3/2020
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: NEO-RAY
Catalog Number: S123RDIP-S560D365U835-4F0-1E-UDD-F
Description: DEFINE 3 DIRECT-INDIRECT PENDANT LED LUMINAIRE
DOWNLIGHT 560 LUMENS PER FOOT, FLUSH SATIN WHITE DIFFUSER, REGRESSED
HOUSING
UPLIGHT 365 LUMENS PER FOOT, NO LENS
Light Source: -
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 3585.5 lumens
Efficiency: N/A
Efficacy: 130.4 lumens/watt
Spacing Criteria (0/90/45): 1.21 / 1.06 / 1.22
Luminous Opening: Rectangular (W 0.25' x L: 4' x H: 0')
CIE Type: General Diffuse

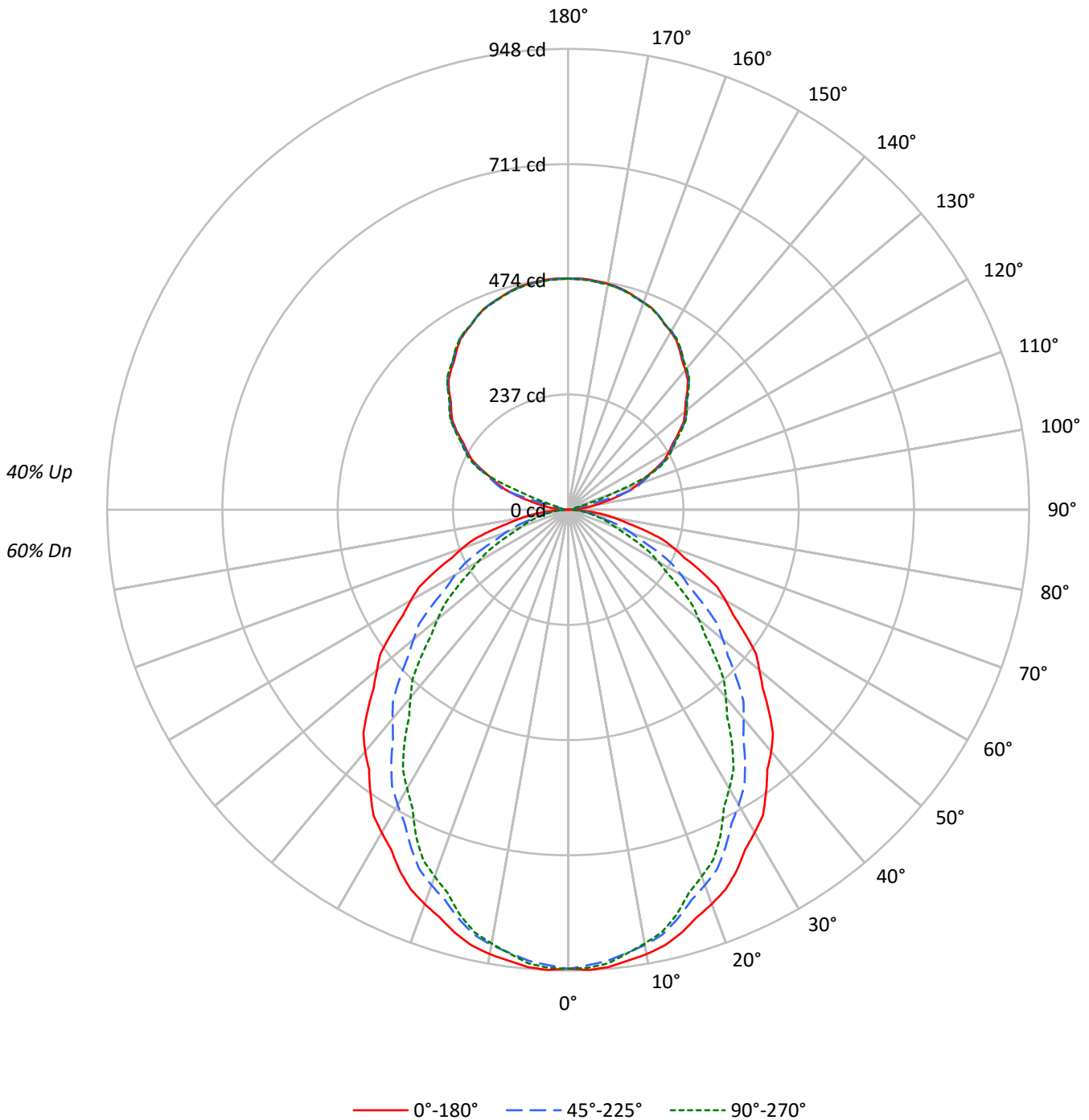
Input Watts (W): 27.5
Input Voltage (V): 120
Input Current (A_{in}): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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	102	102	102	102	89	89	89		76	76	76		65	65	65	60
1	100	96	92	89	94	90	87	84	78	76	74		68	66	64		58	57	56	51
2	92	84	78	73	85	79	74	69	69	65	62		60	57	54		51	49	47	43
3	84	74	67	61	78	70	64	58	61	56	52		53	50	46		46	43	41	37
4	77	66	58	52	72	62	55	50	55	49	45		48	44	40		41	38	35	32
5	71	59	51	45	66	56	48	43	49	43	39		43	39	35		37	34	31	28
6	65	53	45	39	61	50	43	38	44	39	34		39	34	31		34	30	28	25
7	61	48	40	35	56	46	38	33	40	35	30		36	31	27		31	27	25	22
8	56	44	36	31	53	42	35	30	37	31	27		33	28	25		29	25	22	20
9	53	40	33	28	49	38	31	27	34	28	24		30	26	22		27	23	20	18
10	49	37	30	25	46	35	28	24	31	26	22		28	23	20		25	21	18	16

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	10167	10167	10167
5°	10205	10065	10122
10°	10147	9939	9905
15°	10038	9706	9604
20°	9889	9415	9196
25°	9734	9089	8797
30°	9531	8712	8236
35°	9320	8335	7720
40°	9128	7890	7082
45°	8873	7451	6506
50°	8594	6953	5863
55°	8310	6382	5262
60°	8047	5772	4600
65°	7707	5112	3940
70°	7279	4293	3182
75°	6658	3377	2994
80°	5938	2994	2752
85°	5014	2643	2458



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	88.7	2.5
10°-20°	246.8	6.9
20°-30°	355.3	9.9
30°-40°	400.3	11.2
40°-50°	382.9	10.7
50°-60°	313.6	8.7
60°-70°	211.6	5.9
70°-80°	106.4	3.0
80°-90°	29.5	0.8
90°-100°	17.3	0.5
100°-110°	82.4	2.3
110°-120°	198.0	5.5
120°-130°	252.1	7.0
130°-140°	269.3	7.5
140°-150°	251.9	7.0
150°-160°	203.2	5.7
160°-170°	131.1	3.7
170°-180°	45.2	1.3
0°-30°	690.8	19.3
0°-40°	1091.1	30.4
0°-60°	1787.6	49.9
0°-90°	2135.0	59.5
90°-120°	297.7	8.3
90°-150°	1071.0	29.9
90°-180°	1450.0	40.4
0°-180°	3585.5	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	944	944	944	944	944	
5°	944	940	932	938	937	90
15°	901	892	871	867	862	254
25°	820	800	765	750	741	377
35°	709	681	634	602	588	444
45°	583	547	490	447	427	450
55°	443	404	340	297	280	397
65°	303	259	201	165	155	299
75°	160	123	81	74	72	171
85°	41	25	21	20	20	46
90°	0	4	8	10	11	3
95°	22	8	11	13	13	27
105°	105	107	77	18	16	112
115°	198	200	203	206	208	195
125°	278	281	283	283	284	249
135°	347	349	350	351	350	267
145°	400	402	403	404	404	250
155°	441	440	440	442	440	203
165°	465	464	463	466	464	131
175°	476	474	474	476	474	45
180°	476	476	476	476	476	



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CANDELA DISTRIBUTION (FULL):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
0°	944.5	944.5	944.5	944.5	944.5	944.5	944.5	944.5	944.5	944.5	944.5
2.5°	947.6	947.0	946.5	945.9	945.4	944.3	942.7	941.0	939.4	937.8	939.3
5°	944.5	943.7	942.8	942.0	941.1	939.7	937.6	935.6	933.5	931.5	933.0
7.5°	935.8	934.9	933.9	933.0	932.1	930.3	927.7	925.0	922.3	919.7	920.5
10°	928.4	927.2	926.0	924.8	923.7	921.5	918.5	915.4	912.3	909.3	909.4
12.5°	918.0	916.7	915.3	914.0	912.7	910.2	906.4	902.7	898.9	895.2	895.1
15°	900.8	899.0	897.1	895.2	893.4	890.0	885.3	880.5	875.7	871.0	870.1
17.5°	879.2	877.1	874.9	872.7	870.5	866.4	860.3	854.3	848.2	842.2	840.4
20°	863.3	860.6	857.9	855.1	852.4	847.8	841.3	834.9	828.4	821.9	819.7
22.5°	845.5	842.4	839.3	836.1	833.0	828.0	821.1	814.2	807.4	800.5	797.7
25°	819.6	815.4	811.1	806.9	802.6	796.6	788.7	780.9	773.1	765.3	761.7
27.5°	788.2	783.5	778.8	774.1	769.4	762.7	754.0	745.3	736.6	727.9	722.9
30°	766.8	761.7	756.6	751.5	746.4	739.0	729.5	720.0	710.4	700.9	695.1
32.5°	745.3	739.6	733.8	728.0	722.2	714.3	704.2	694.1	684.0	673.9	667.6
35°	709.3	703.2	697.1	691.0	684.8	676.5	665.9	655.4	644.8	634.3	626.9
37.5°	672.9	666.1	659.3	652.4	645.6	636.6	625.3	614.1	602.8	591.5	583.2
40°	649.6	642.1	634.6	627.1	619.6	609.8	597.8	585.7	573.6	561.5	552.6
42.5°	623.2	615.7	608.3	600.8	593.3	583.3	570.8	558.3	545.8	533.3	523.6
45°	582.9	575.3	567.6	560.0	552.3	541.9	528.8	515.7	502.6	489.5	479.8
47.5°	542.6	534.2	525.8	517.4	509.0	498.3	485.1	472.0	458.9	445.8	435.3
50°	513.2	505.2	497.2	489.2	481.2	470.3	456.5	442.8	429.0	415.2	404.6
52.5°	486.9	478.2	469.5	460.8	452.2	441.0	427.3	413.7	400.0	386.4	375.4
55°	442.8	434.4	426.1	417.7	409.4	398.0	383.5	369.1	354.6	340.1	330.2
57.5°	402.0	392.9	383.8	374.7	365.6	353.8	339.3	324.8	310.2	295.7	286.4
60°	373.8	364.5	355.1	345.7	336.4	324.6	310.5	296.4	282.2	268.1	258.9
62.5°	345.6	336.3	326.9	317.5	308.2	296.4	282.3	268.2	254.0	239.9	231.3
65°	302.6	293.2	283.9	274.5	265.1	253.8	240.5	227.3	214.0	200.7	192.4
67.5°	259.5	250.1	240.6	231.1	221.7	210.6	197.8	185.1	172.4	159.6	153.4
70°	231.3	222.1	213.0	203.8	194.6	184.0	172.1	160.2	148.3	136.4	130.4
72.5°	203.1	194.1	185.0	176.0	166.9	157.0	146.2	135.3	124.5	113.7	108.8
75°	160.1	151.9	143.8	135.6	127.4	118.6	109.3	99.9	90.6	81.2	79.5
77.5°	120.9	113.5	106.1	98.7	91.3	84.6	78.6	72.6	66.5	60.5	59.6
80°	95.8	88.8	81.8	74.8	67.8	62.6	59.0	55.4	51.8	48.3	47.7
82.5°	71.9	65.8	59.8	53.8	47.7	43.9	42.2	40.6	38.9	37.2	36.7
85°	40.6	36.9	33.1	29.4	25.6	23.5	23.0	22.5	22.0	21.4	21.1
87.5°	14.8	13.4	12.1	10.8	9.4	8.8	9.1	9.3	9.5	9.7	9.6
90°	0.4	1.1	1.9	2.7	3.5	4.4	5.4	6.4	7.5	8.5	8.8
92.5°	6.6	6.4	6.1	5.9	5.7	6.0	6.7	7.5	8.3	9.0	9.5
95°	21.6	18.3	15.1	11.9	8.7	7.5	8.4	9.2	10.1	11.0	11.5
97.5°	43.3	41.9	40.4	39.0	37.5	34.0	28.3	22.7	17.0	11.4	12.0
100°	59.7	61.3	62.9	64.4	66.0	60.7	48.4	36.2	23.9	11.7	12.3
102.5°	78.4	79.5	80.6	81.8	82.9	76.8	63.4	50.0	36.6	23.3	21.3
105°	105.3	106.2	107.0	107.9	108.8	105.7	98.6	91.5	84.5	77.4	63.5
107.5°	133.7	134.4	135.1	135.8	136.5	137.4	138.5	139.6	140.7	141.8	131.6
110°	152.7	153.3	153.9	154.5	155.2	155.9	156.8	157.6	158.5	159.4	156.8



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CANDELA DISTRIBUTION (continued):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
112.5°	170.7	171.3	171.9	172.4	173.0	173.7	174.6	175.5	176.3	177.2	177.2
115°	197.5	198.0	198.5	198.9	199.4	200.0	200.7	201.4	202.1	202.8	203.6
117.5°	223.5	224.1	224.6	225.2	225.8	226.3	226.6	227.0	227.4	227.7	228.3
120°	239.6	240.3	241.0	241.7	242.4	242.9	243.1	243.4	243.6	243.8	244.5
122.5°	256.0	256.6	257.1	257.7	258.3	258.7	259.0	259.3	259.6	259.9	260.4
125°	278.5	279.1	279.7	280.3	281.0	281.4	281.8	282.1	282.4	282.7	282.9
127.5°	300.2	300.9	301.5	302.1	302.7	303.2	303.6	304.0	304.4	304.7	305.0
130°	313.8	314.4	315.0	315.7	316.3	316.8	317.1	317.4	317.7	318.0	318.3
132.5°	326.8	327.4	328.1	328.7	329.3	329.7	330.0	330.3	330.5	330.8	331.1
135°	346.7	347.1	347.6	348.1	348.5	348.9	349.2	349.6	349.9	350.2	350.4
137.5°	363.6	364.2	364.8	365.4	366.0	366.4	366.6	366.7	366.9	367.1	367.5
140°	374.9	375.4	375.9	376.3	376.8	377.2	377.4	377.6	377.9	378.1	378.4
142.5°	385.4	385.9	386.3	386.8	387.3	387.6	387.9	388.1	388.3	388.6	388.8
145°	400.0	400.6	401.1	401.7	402.2	402.6	402.7	402.9	403.0	403.2	403.4
147.5°	413.8	414.2	414.5	414.9	415.2	415.5	415.7	415.8	416.0	416.1	416.3
150°	422.3	422.5	422.7	423.0	423.2	423.4	423.6	423.7	423.9	424.0	424.2
152.5°	429.9	430.0	430.1	430.2	430.3	430.5	430.5	430.6	430.7	430.8	431.1
155°	440.7	440.5	440.3	440.2	440.0	440.0	440.1	440.1	440.2	440.3	440.7
157.5°	449.0	449.0	449.0	448.9	448.9	448.9	448.8	448.7	448.6	448.6	449.0
160°	454.1	454.0	453.9	453.8	453.8	453.7	453.6	453.5	453.5	453.4	453.8
162.5°	458.9	458.7	458.5	458.3	458.1	457.9	457.8	457.8	457.7	457.6	458.1
165°	464.7	464.4	464.2	464.0	463.7	463.6	463.5	463.4	463.3	463.3	463.9
167.5°	469.2	468.9	468.6	468.3	467.9	467.8	467.8	467.8	467.8	467.8	468.4
170°	471.7	471.4	471.1	470.8	470.5	470.3	470.3	470.3	470.3	470.3	471.0
172.5°	473.4	473.1	472.7	472.3	471.9	471.8	471.8	471.9	472.0	472.0	472.7
175°	475.6	475.2	474.8	474.5	474.1	473.9	474.0	474.1	474.1	474.2	474.8
177.5°	476.2	475.9	475.6	475.3	474.9	474.8	474.9	474.9	475.0	475.1	475.6
180°	475.6	475.6	475.6	475.6	475.6	475.6	475.6	475.6	475.6	475.6	475.6



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CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
0°	944.5	944.5	944.5	944.5	944.5	944.5	944.5	944.5
2.5°	940.8	942.3	943.8	944.4	944.1	943.8	943.6	943.3
5°	934.5	936.1	937.6	938.2	937.9	937.5	937.2	936.8
7.5°	921.4	922.2	923.1	923.2	922.6	922.1	921.5	920.9
10°	909.6	909.8	909.9	909.6	908.8	907.9	907.1	906.2
12.5°	895.0	894.9	894.8	894.2	893.2	892.2	891.3	890.3
15°	869.3	868.4	867.6	866.5	865.3	864.2	863.0	861.8
17.5°	838.6	836.8	834.9	833.2	831.4	829.6	827.8	826.1
20°	817.5	815.3	813.1	811.0	808.9	806.9	804.8	802.8
22.5°	795.0	792.2	789.5	787.1	785.2	783.3	781.4	779.5
25°	758.1	754.5	751.0	748.2	746.4	744.5	742.6	740.7
27.5°	717.9	713.0	708.0	704.1	701.2	698.4	695.5	692.6
30°	689.3	683.5	677.8	673.5	670.8	668.1	665.3	662.6
32.5°	661.3	654.9	648.6	644.0	641.2	638.3	635.4	632.6
35°	619.6	612.3	605.0	599.8	596.7	593.7	590.6	587.5
37.5°	574.9	566.6	558.3	552.3	548.5	544.7	540.9	537.1
40°	543.8	534.9	526.1	519.7	515.8	511.9	508.0	504.0
42.5°	514.0	504.3	494.6	488.0	484.5	481.0	477.5	474.0
45°	470.1	460.4	450.7	443.8	439.7	435.6	431.5	427.4
47.5°	424.7	414.2	403.6	396.5	392.9	389.2	385.6	381.9
50°	394.1	383.5	373.0	365.7	361.8	357.9	354.0	350.1
52.5°	364.5	353.5	342.5	335.3	331.8	328.3	324.8	321.3
55°	320.4	310.5	300.6	294.0	290.6	287.2	283.8	280.4
57.5°	277.0	267.7	258.4	252.3	249.4	246.5	243.6	240.7
60°	249.7	240.5	231.3	225.3	222.4	219.5	216.6	213.7
62.5°	222.6	214.0	205.3	199.5	196.5	193.4	190.4	187.4
65°	184.0	175.7	167.3	162.2	160.4	158.5	156.6	154.7
67.5°	147.2	140.9	134.7	130.6	128.6	126.6	124.6	122.6
70°	124.4	118.5	112.5	108.6	106.7	104.9	103.0	101.1
72.5°	103.9	99.1	94.2	91.4	90.6	89.8	89.0	88.2
75°	77.8	76.1	74.4	73.4	73.0	72.7	72.3	72.0
77.5°	58.7	57.8	56.8	56.2	55.9	55.5	55.2	54.8
80°	47.2	46.7	46.2	45.8	45.5	45.1	44.8	44.4
82.5°	36.2	35.7	35.2	34.9	34.8	34.8	34.7	34.6
85°	20.8	20.4	20.1	19.9	19.9	19.9	19.9	19.9
87.5°	9.5	9.4	9.4	9.3	9.2	9.1	9.0	8.9
90°	9.1	9.4	9.7	10.0	10.1	10.3	10.4	10.6
92.5°	10.1	10.6	11.1	11.4	11.4	11.5	11.6	11.7
95°	12.1	12.6	13.2	13.4	13.4	13.4	13.4	13.4
97.5°	12.6	13.3	13.9	14.2	14.3	14.4	14.5	14.6
100°	12.9	13.5	14.2	14.5	14.6	14.7	14.8	14.8
102.5°	19.4	17.4	15.5	14.6	14.7	14.8	15.0	15.1
105°	49.6	35.7	21.8	14.9	15.1	15.2	15.4	15.5
107.5°	121.5	111.3	101.1	90.7	80.3	69.8	59.3	48.8
110°	154.2	151.6	149.0	142.1	130.9	119.6	108.4	97.2



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CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
112.5°	177.3	177.3	177.4	176.2	173.8	171.5	169.1	166.7
115°	204.4	205.2	206.0	206.5	206.8	207.2	207.5	207.8
117.5°	229.0	229.6	230.2	230.6	230.6	230.7	230.8	230.8
120°	245.1	245.7	246.3	246.7	246.7	246.7	246.7	246.7
122.5°	260.8	261.3	261.7	261.9	262.0	262.1	262.1	262.2
125°	283.0	283.2	283.3	283.5	283.6	283.8	284.0	284.1
127.5°	305.2	305.5	305.8	305.8	305.6	305.5	305.3	305.2
130°	318.7	319.0	319.3	319.4	319.2	319.1	318.9	318.7
132.5°	331.4	331.7	332.0	332.1	331.8	331.6	331.4	331.2
135°	350.7	350.9	351.1	351.1	350.9	350.7	350.4	350.2
137.5°	367.8	368.2	368.6	368.7	368.5	368.4	368.2	368.1
140°	378.7	379.0	379.4	379.4	379.3	379.1	379.0	378.8
142.5°	389.1	389.3	389.6	389.6	389.4	389.1	388.9	388.7
145°	403.5	403.7	403.8	403.9	403.9	403.9	403.9	403.9
147.5°	416.4	416.6	416.8	416.7	416.3	415.9	415.6	415.2
150°	424.4	424.5	424.7	424.6	424.4	424.2	423.9	423.7
152.5°	431.4	431.7	432.0	431.9	431.6	431.2	430.8	430.5
155°	441.1	441.5	441.9	441.8	441.4	440.9	440.4	439.9
157.5°	449.5	450.0	450.5	450.4	449.8	449.2	448.5	447.9
160°	454.3	454.8	455.3	455.2	454.7	454.1	453.6	453.0
162.5°	458.7	459.2	459.7	459.8	459.3	458.8	458.3	457.8
165°	464.5	465.2	465.8	465.8	465.3	464.7	464.2	463.6
167.5°	469.0	469.7	470.3	470.3	469.7	469.0	468.4	467.8
170°	471.6	472.2	472.8	472.8	472.2	471.6	471.0	470.3
172.5°	473.3	473.9	474.5	474.5	473.8	473.1	472.4	471.7
175°	475.3	475.9	476.4	476.4	475.8	475.1	474.5	473.9
177.5°	476.1	476.6	477.1	477.0	476.4	475.8	475.1	474.5
180°	475.6	475.6	475.6	475.6	475.6	475.6	475.6	475.6

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