

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: P332279-940

Luminaire Tested: **S123RDIP-S560D585U940-4F0-1E-UDD-F**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P332279-940
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-S560D585U940-4F0-1E-UDD-F
Description: DEFINE 3 DIRECT-INDIRECT PENDANT LED LUMINAIRE
DOWNLIGHT 560 LUMENS PER FOOT, FLUSH SATIN WHITE DIFFUSER, REGRESSED
HOUSING
UPLIGHT 585 LUMENS PER FOOT, NO LENS
Light Source: -
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 3992.2 lumens
Efficiency: N/A
Efficacy: 121.7 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

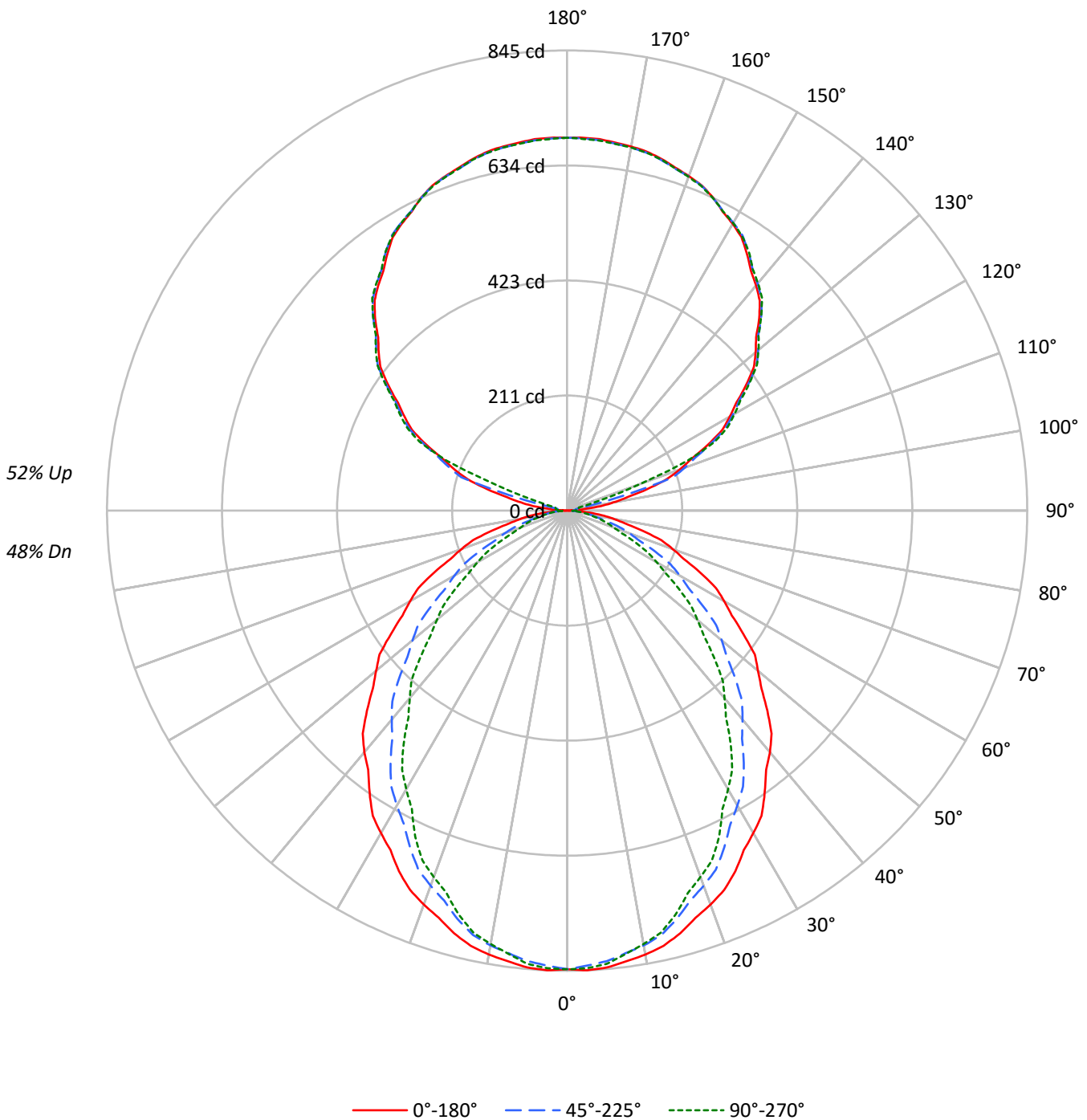
Input Watts (W): 32.8
Input Voltage (V): 120
Input Current (A_{in}): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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Luminous Intensity Polar Plot





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COEFFICIENT OF UTILIZATION - ZONAL CAVITY METHOD:

RF	20									20									20									20										
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	107	107	107	107	98	98	98	98	82	82	82	67	67	67	54	54	54	48																				
1	98	93	90	86	90	86	83	80	72	70	68	60	58	57	48	47	46	41																				
2	89	82	76	71	82	76	70	66	64	60	57	53	50	48	43	41	39	35																				
3	81	72	65	59	75	67	61	56	57	52	48	47	44	41	38	36	34	30																				
4	75	64	56	50	68	59	53	47	50	45	41	42	38	35	34	32	29	26																				
5	69	57	49	43	63	53	46	41	45	40	36	38	34	31	31	28	26	23																				
6	63	51	43	38	58	48	41	36	41	35	31	34	30	27	28	25	23	20																				
7	59	46	39	33	54	43	36	31	37	32	28	31	27	24	26	23	20	18																				
8	54	42	35	29	50	39	33	28	34	28	25	29	24	21	24	21	18	16																				
9	51	39	31	26	47	36	29	25	31	26	22	26	22	19	22	19	17	14																				
10	47	35	28	24	44	33	27	22	29	23	20	24	20	18	20	17	15	13																				

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	9065	9065	9065
5°	9100	8975	9027
10°	9049	8862	8833
15°	8952	8655	8564
20°	8818	8395	8200
25°	8679	8105	7845
30°	8499	7768	7343
35°	8311	7432	6884
40°	8140	7035	6315
45°	7913	6645	5801
50°	7663	6199	5228
55°	7409	5692	4692
60°	7175	5147	4103
65°	6872	4559	3512
70°	6493	3827	2839
75°	5939	3011	2670
80°	5294	2672	2455
85°	4471	2359	2186



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	79.1	2.0
10°-20°	220.1	5.5
20°-30°	316.9	7.9
30°-40°	356.9	8.9
40°-50°	341.4	8.6
50°-60°	279.6	7.0
60°-70°	188.7	4.7
70°-80°	94.9	2.4
80°-90°	27.0	0.7
90°-100°	24.9	0.6
100°-110°	118.6	3.0
110°-120°	284.9	7.1
120°-130°	362.8	9.1
130°-140°	387.7	9.7
140°-150°	362.5	9.1
150°-160°	292.4	7.3
160°-170°	188.7	4.7
170°-180°	65.0	1.6
0°-30°	616.0	15.4
0°-40°	972.9	24.4
0°-60°	1594.0	39.9
0°-90°	1904.6	47.7
90°-120°	428.4	10.7
90°-150°	1541.4	38.6
90°-180°	2088.0	52.3
0°-180°	3992.2	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	842	842	842	842	842	
5°	842	839	831	836	835	80
15°	803	795	777	773	768	226
25°	731	713	682	668	660	336
35°	632	607	566	537	524	396
45°	520	488	436	399	381	401
55°	395	360	303	265	250	354
65°	270	231	179	147	138	267
75°	143	110	72	66	64	152
85°	36	22	19	18	18	41
90°	0	6	12	14	15	3
95°	31	12	16	19	19	38
105°	152	154	111	26	22	161
115°	284	287	292	297	299	281
125°	401	405	407	408	409	358
135°	499	502	504	505	504	384
145°	576	579	580	581	581	360
155°	634	633	634	636	633	292
165°	669	667	667	670	667	189
175°	685	682	682	686	682	65
180°	685	685	685	685	685	



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CANDELA DISTRIBUTION (FULL):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
0°	842.2	842.2	842.2	842.2	842.2	842.2	842.2	842.2	842.2	842.2	842.2
2.5°	845.0	844.5	844.0	843.5	843.0	842.0	840.6	839.1	837.7	836.2	837.6
5°	842.2	841.5	840.7	840.0	839.2	837.9	836.1	834.3	832.4	830.6	832.0
7.5°	834.5	833.7	832.8	832.0	831.2	829.6	827.2	824.8	822.4	820.1	820.8
10°	827.9	826.8	825.7	824.7	823.7	821.7	819.0	816.3	813.5	810.8	810.9
12.5°	818.6	817.4	816.2	815.0	813.9	811.6	808.2	804.9	801.6	798.3	798.2
15°	803.3	801.6	800.0	798.3	796.7	793.6	789.4	785.2	780.9	776.7	775.9
17.5°	784.0	782.1	780.2	778.2	776.2	772.6	767.1	761.8	756.3	751.0	749.4
20°	769.8	767.4	765.0	762.5	760.1	756.0	750.2	744.5	738.7	732.9	730.9
22.5°	753.9	751.2	748.4	745.6	742.8	738.3	732.2	726.0	720.0	713.8	711.3
25°	730.8	727.1	723.3	719.5	715.7	710.3	703.3	696.3	689.4	682.4	679.2
27.5°	702.8	698.7	694.5	690.3	686.1	680.1	672.3	664.6	656.8	649.1	644.6
30°	683.8	679.2	674.7	670.1	665.6	659.0	650.5	642.0	633.5	625.0	619.8
32.5°	664.6	659.5	654.3	649.2	644.0	636.9	627.9	618.9	609.9	600.9	595.3
35°	632.5	627.1	621.6	616.2	610.6	603.2	593.8	584.4	575.0	565.6	559.0
37.5°	600.0	594.0	587.9	581.8	575.7	567.7	557.6	547.6	537.5	527.4	520.0
40°	579.3	572.6	565.9	559.2	552.5	543.8	533.1	522.3	511.5	500.7	492.8
42.5°	555.7	549.0	542.4	535.7	529.1	520.1	509.0	497.8	486.7	475.5	466.9
45°	519.8	513.0	506.1	499.4	492.5	483.2	471.5	459.9	448.2	436.5	427.8
47.5°	483.8	476.4	468.9	461.4	453.9	444.3	432.6	420.9	409.2	397.5	388.2
50°	457.6	450.5	443.4	436.2	429.1	419.4	407.1	394.8	382.5	370.2	360.8
52.5°	434.2	426.4	418.7	410.9	403.2	393.2	381.0	368.9	356.7	344.6	334.7
55°	394.8	387.4	380.0	372.5	365.1	354.9	342.0	329.1	316.2	303.3	294.4
57.5°	358.5	350.4	342.2	334.1	326.0	315.5	302.6	289.6	276.6	263.7	255.4
60°	333.3	325.0	316.6	308.3	300.0	289.4	276.9	264.3	251.6	239.1	230.9
62.5°	308.2	299.9	291.5	283.1	274.8	264.3	251.7	239.2	226.5	213.9	206.3
65°	269.8	261.4	253.2	244.8	236.4	226.3	214.5	202.7	190.8	179.0	171.6
67.5°	231.4	223.0	214.5	206.1	197.7	187.8	176.4	165.1	153.7	142.3	136.8
70°	206.3	198.0	189.9	181.7	173.5	164.1	153.5	142.9	132.2	121.6	116.3
72.5°	181.1	173.1	165.0	156.9	148.8	140.0	130.4	120.6	111.0	101.4	97.0
75°	142.8	135.5	128.2	120.9	113.6	105.8	97.5	89.1	80.8	72.4	70.9
77.5°	107.8	101.2	94.6	88.0	81.4	75.4	70.1	64.7	59.3	53.9	53.1
80°	85.4	79.2	72.9	66.7	60.5	55.8	52.6	49.4	46.2	43.1	42.5
82.5°	64.1	58.7	53.3	48.0	42.5	39.1	37.6	36.2	34.7	33.2	32.7
85°	36.2	32.9	29.5	26.2	22.8	21.0	20.5	20.1	19.6	19.1	18.8
87.5°	13.2	12.1	11.0	9.9	8.7	8.4	8.6	8.9	9.3	9.5	9.5
90°	0.5	1.6	2.8	3.9	5.0	6.3	7.8	9.3	10.7	12.2	12.7
92.5°	9.5	9.2	8.8	8.5	8.2	8.6	9.7	10.8	11.9	13.0	13.7
95°	31.0	26.4	21.8	17.1	12.5	10.8	12.0	13.3	14.5	15.8	16.6
97.5°	62.3	60.3	58.2	56.1	54.0	49.0	40.8	32.6	24.5	16.4	17.3
100°	86.0	88.2	90.5	92.7	95.0	87.3	69.6	52.1	34.4	16.8	17.7
102.5°	112.8	114.4	116.1	117.7	119.3	110.5	91.2	72.0	52.7	33.4	30.7
105°	151.6	152.8	154.1	155.2	156.5	152.0	141.9	131.7	121.5	111.4	91.4
107.5°	192.4	193.4	194.5	195.5	196.4	197.7	199.3	200.9	202.5	204.1	189.5
110°	219.7	220.6	221.5	222.4	223.3	224.4	225.6	226.9	228.1	229.3	225.6



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CANDELA DISTRIBUTION (continued):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
112.5°	245.8	246.6	247.4	248.2	249.0	250.0	251.3	252.5	253.8	255.0	255.1
115°	284.3	285.0	285.6	286.3	287.0	287.8	288.9	289.9	290.9	291.9	293.1
117.5°	321.6	322.4	323.3	324.1	324.9	325.7	326.2	326.7	327.3	327.7	328.7
120°	344.8	345.8	346.9	347.9	348.9	349.6	349.9	350.3	350.6	350.9	351.9
122.5°	368.5	369.3	370.1	371.0	371.8	372.4	372.8	373.3	373.7	374.2	374.8
125°	400.7	401.7	402.6	403.5	404.4	405.1	405.6	406.0	406.4	406.9	407.1
127.5°	432.1	433.0	433.9	434.8	435.7	436.4	436.9	437.6	438.1	438.6	439.0
130°	451.7	452.5	453.4	454.3	455.2	455.9	456.4	456.8	457.3	457.7	458.2
132.5°	470.4	471.3	472.2	473.1	473.9	474.6	474.9	475.3	475.6	476.1	476.5
135°	498.9	499.6	500.2	501.0	501.7	502.2	502.7	503.1	503.5	504.0	504.4
137.5°	523.3	524.2	525.0	525.9	526.7	527.4	527.5	527.8	528.1	528.3	528.9
140°	539.6	540.3	541.0	541.6	542.3	542.9	543.1	543.5	543.9	544.2	544.7
142.5°	554.6	555.4	556.1	556.7	557.4	557.9	558.2	558.6	558.9	559.3	559.6
145°	575.7	576.5	577.3	578.1	578.9	579.4	579.6	579.9	580.1	580.3	580.5
147.5°	595.6	596.1	596.6	597.1	597.6	598.0	598.2	598.4	598.7	599.0	599.1
150°	607.8	608.1	608.4	608.8	609.1	609.4	609.7	609.8	610.1	610.3	610.6
152.5°	618.8	618.9	619.0	619.2	619.4	619.6	619.6	619.8	619.9	620.1	620.5
155°	634.2	634.0	633.7	633.6	633.3	633.3	633.4	633.5	633.6	633.7	634.3
157.5°	646.2	646.2	646.1	646.1	646.1	646.0	646.0	645.9	645.7	645.6	646.3
160°	653.5	653.4	653.4	653.2	653.1	653.0	652.8	652.7	652.6	652.6	653.2
162.5°	660.5	660.1	659.9	659.6	659.2	659.1	659.0	658.9	658.7	658.6	659.4
165°	668.8	668.4	668.2	667.8	667.4	667.2	667.1	667.0	666.9	666.7	667.7
167.5°	675.3	674.8	674.4	674.0	673.5	673.2	673.2	673.2	673.2	673.2	674.2
170°	678.9	678.5	678.1	677.6	677.2	676.9	676.9	676.9	676.9	676.9	677.9
172.5°	681.4	680.9	680.3	679.8	679.2	679.0	679.1	679.2	679.3	679.4	680.3
175°	684.6	684.0	683.4	682.9	682.3	682.1	682.2	682.3	682.4	682.5	683.3
177.5°	685.4	684.9	684.5	684.0	683.6	683.4	683.5	683.6	683.7	683.8	684.5
180°	684.6	684.6	684.6	684.6	684.6	684.6	684.6	684.6	684.6	684.6	684.6



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CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
0°	842.2	842.2	842.2	842.2	842.2	842.2	842.2	842.2
2.5°	838.9	840.3	841.6	842.1	841.9	841.6	841.4	841.2
5°	833.3	834.7	836.1	836.6	836.3	836.0	835.7	835.4
7.5°	821.6	822.3	823.1	823.2	822.7	822.2	821.7	821.2
10°	811.1	811.3	811.4	811.1	810.4	809.6	808.9	808.1
12.5°	798.1	798.0	797.9	797.4	796.5	795.6	794.8	793.9
15°	775.2	774.4	773.6	772.7	771.6	770.6	769.5	768.5
17.5°	747.8	746.2	744.5	743.0	741.4	739.8	738.2	736.6
20°	729.0	727.0	725.1	723.2	721.3	719.5	717.6	715.9
22.5°	708.9	706.4	704.0	701.9	700.2	698.5	696.8	695.1
25°	676.0	672.8	669.7	667.2	665.6	663.9	662.2	660.5
27.5°	640.2	635.8	631.3	627.9	625.3	622.8	620.2	617.6
30°	614.7	609.5	604.4	600.6	598.2	595.8	593.3	590.8
32.5°	589.7	584.0	578.4	574.3	571.8	569.2	566.6	564.1
35°	552.5	546.0	539.5	534.8	532.1	529.4	526.6	523.9
37.5°	512.6	505.2	497.8	492.5	489.1	485.7	482.3	478.9
40°	484.9	477.0	469.1	463.4	459.9	456.5	453.0	449.4
42.5°	458.3	449.7	441.0	435.2	432.0	428.9	425.8	422.7
45°	419.2	410.5	401.9	395.7	392.1	388.4	384.8	381.1
47.5°	378.7	369.3	359.9	353.6	350.4	347.1	343.8	340.5
50°	351.4	342.0	332.6	326.1	322.6	319.1	315.7	312.2
52.5°	325.0	315.2	305.4	299.0	295.9	292.7	289.6	286.5
55°	285.7	276.9	268.0	262.2	259.1	256.1	253.1	250.0
57.5°	247.0	238.7	230.4	225.0	222.4	219.8	217.2	214.6
60°	222.7	214.5	206.3	200.9	198.3	195.7	193.1	190.6
62.5°	198.5	190.8	183.1	177.9	175.2	172.5	169.8	167.1
65°	164.1	156.7	149.2	144.6	143.0	141.3	139.6	137.9
67.5°	131.3	125.6	120.1	116.5	114.7	112.9	111.1	109.3
70°	110.9	105.7	100.3	96.8	95.1	93.5	91.8	90.2
72.5°	92.6	88.4	84.0	81.5	80.8	80.1	79.4	78.6
75°	69.4	67.9	66.3	65.5	65.1	64.8	64.5	64.2
77.5°	52.3	51.5	50.6	50.1	49.8	49.5	49.2	48.9
80°	42.1	41.6	41.2	40.8	40.6	40.2	39.9	39.6
82.5°	32.3	31.8	31.4	31.1	31.0	31.0	30.9	30.9
85°	18.5	18.2	17.9	17.7	17.7	17.7	17.7	17.7
87.5°	9.5	9.5	9.5	9.4	9.3	9.2	9.1	9.1
90°	13.1	13.6	14.0	14.4	14.6	14.8	15.1	15.2
92.5°	14.4	15.2	15.9	16.3	16.5	16.6	16.8	16.9
95°	17.4	18.1	18.9	19.4	19.4	19.4	19.4	19.4
97.5°	18.2	19.1	20.0	20.5	20.6	20.7	20.9	21.0
100°	18.5	19.5	20.4	20.9	21.0	21.1	21.2	21.4
102.5°	27.8	25.1	22.3	21.0	21.1	21.4	21.6	21.8
105°	71.3	51.4	31.4	21.5	21.7	21.9	22.1	22.4
107.5°	174.8	160.2	145.4	130.6	115.5	100.4	85.3	70.3
110°	221.9	218.2	214.5	204.5	188.3	172.2	156.0	139.8



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CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
112.5°	255.1	255.2	255.3	253.6	250.2	246.7	243.3	240.0
115°	294.2	295.3	296.5	297.2	297.7	298.2	298.6	299.1
117.5°	329.6	330.5	331.4	331.9	332.0	332.1	332.2	332.3
120°	352.8	353.7	354.5	355.0	355.0	355.0	355.0	355.0
122.5°	375.4	376.0	376.7	377.0	377.1	377.2	377.3	377.4
125°	407.3	407.5	407.8	408.0	408.2	408.5	408.7	408.9
127.5°	439.3	439.7	440.1	440.1	439.9	439.7	439.4	439.3
130°	458.6	459.1	459.5	459.7	459.4	459.2	459.0	458.8
132.5°	477.0	477.4	477.9	478.0	477.6	477.2	477.0	476.6
135°	504.7	505.1	505.3	505.3	505.1	504.7	504.4	504.0
137.5°	529.4	529.9	530.5	530.7	530.4	530.2	529.9	529.8
140°	545.1	545.5	546.0	546.1	545.9	545.6	545.5	545.2
142.5°	560.0	560.4	560.7	560.7	560.4	560.1	559.7	559.5
145°	580.8	580.9	581.2	581.3	581.3	581.3	581.3	581.3
147.5°	599.4	599.6	599.9	599.7	599.1	598.6	598.2	597.6
150°	610.7	611.0	611.2	611.2	610.8	610.5	610.1	609.8
152.5°	620.9	621.3	621.7	621.6	621.2	620.6	620.1	619.6
155°	634.8	635.4	636.0	635.9	635.3	634.5	633.9	633.2
157.5°	646.9	647.6	648.4	648.2	647.3	646.5	645.6	644.7
160°	653.9	654.5	655.2	655.1	654.4	653.6	652.8	652.0
162.5°	660.1	660.9	661.7	661.7	661.0	660.3	659.6	659.0
165°	668.6	669.5	670.4	670.5	669.7	668.9	668.1	667.3
167.5°	675.1	676.0	676.9	676.9	676.0	675.1	674.2	673.2
170°	678.8	679.7	680.6	680.6	679.7	678.8	677.9	676.9
172.5°	681.2	682.1	683.0	683.0	682.0	681.0	679.9	678.9
175°	684.1	684.9	685.7	685.6	684.7	683.9	683.0	682.0
177.5°	685.2	685.9	686.6	686.5	685.6	684.7	683.9	683.0
180°	684.6	684.6	684.6	684.6	684.6	684.6	684.6	684.6

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