

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: P331925-830

Luminaire Tested: **S123DIP-S560D585U830-4F0-1E-UDD-F**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P331925-830
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: S123DIP-S560D585U830-4F0-1E-UDD-F
Description: DEFINE 3 DIRECT-INDIRECT PENDANT LED LUMINAIRE
DOWNLIGHT 560 LUMENS PER FOOT, FLUSH SATIN WHITE DIFFUSER
UPLIGHT 585 LUMENS PER FOOT, NO LENS
Light Source: -
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 4393.6 lumens
Efficiency: N/A
Efficacy: 134.0 lumens/watt
Spacing Criteria (0/90/45): 1.21 / 1.18 / 1.31
Luminous Opening: Rectangular (W 0.25' x L: 4' x H: 0')
CIE Type: General Diffuse

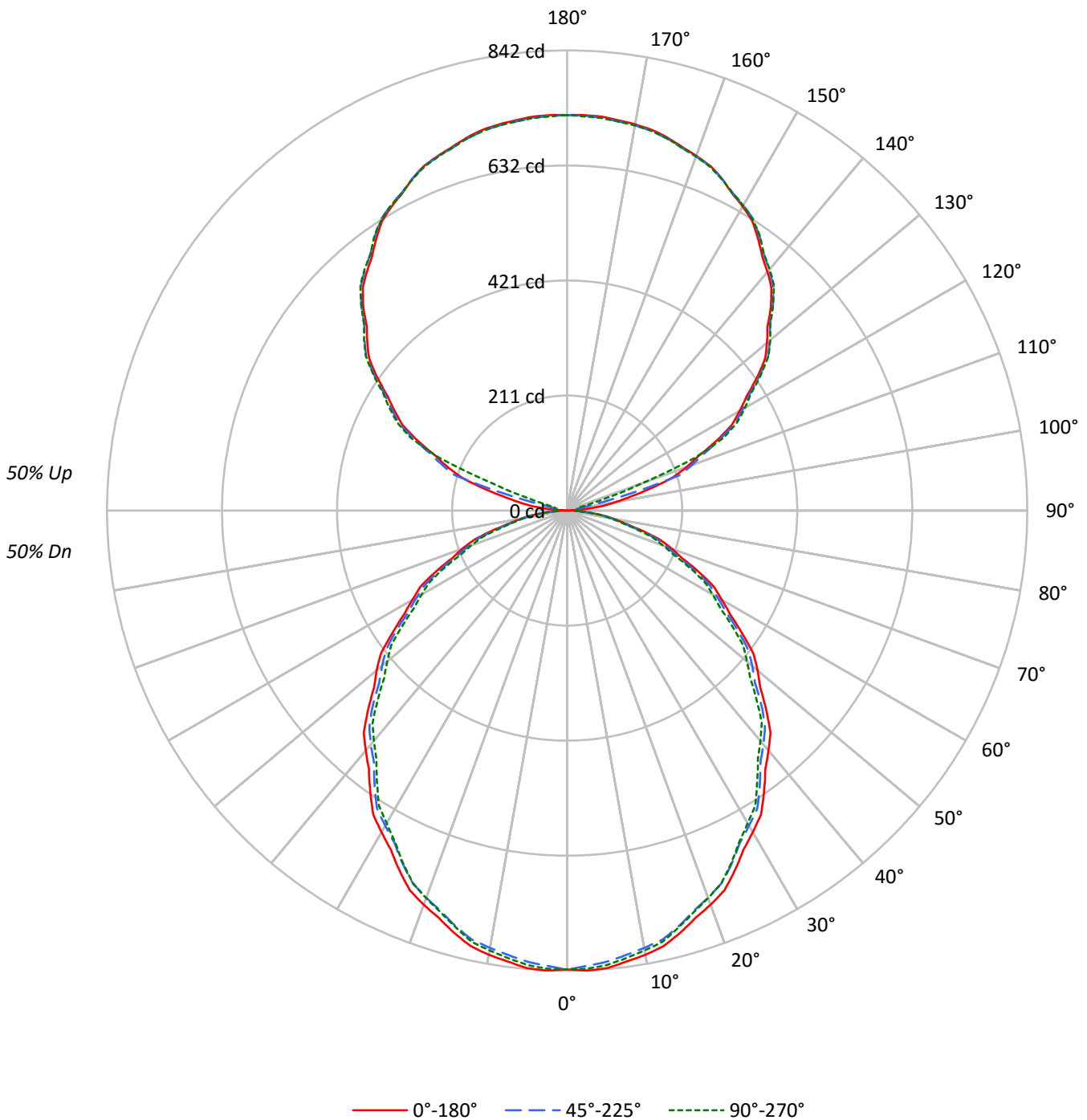
Input Watts (W): 32.8
Input Voltage (V): 120
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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	107	107	107	107	99	99	99	99	83	83	83	69	69	69	56	56	56	50
1	98	93	89	86	90	86	83	80	73	70	68	61	59	57	49	48	47	42
2	89	81	75	70	82	75	70	65	64	60	56	53	50	48	43	41	40	35
3	81	72	64	58	74	66	60	55	56	51	47	47	43	40	38	36	34	30
4	74	63	55	49	68	59	52	46	50	45	40	42	38	35	34	31	29	25
5	68	56	48	42	62	52	45	40	45	39	35	38	33	30	31	28	25	22
6	63	51	42	37	58	47	40	34	40	35	30	34	30	26	28	25	22	19
7	58	46	38	32	53	42	35	30	36	31	27	31	26	23	26	22	20	17
8	54	41	34	28	49	39	32	27	33	28	24	28	24	21	23	20	18	15
9	50	38	30	25	46	35	29	24	30	25	21	26	22	19	22	18	16	14
10	47	35	27	23	43	32	26	21	28	23	19	24	20	17	20	17	15	13

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	9038	9038	9038
5°	9081	8956	9018
10°	9021	8878	8933
15°	8914	8778	8795
20°	8791	8635	8643
25°	8626	8464	8445
30°	8444	8274	8211
35°	8253	8073	7970
40°	8056	7852	7731
45°	7837	7649	7462
50°	7618	7400	7194
55°	7330	7141	6923
60°	7042	6837	6622
65°	6788	6510	6306
70°	6408	6134	5860
75°	5856	5644	5407
80°	5281	5058	5015
85°	4631	4458	4286



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	79.1	1.8
10°-20°	223.3	5.1
20°-30°	329.9	7.5
30°-40°	385.4	8.8
40°-50°	387.4	8.8
50°-60°	340.3	7.7
60°-70°	253.5	5.8
70°-80°	144.5	3.3
80°-90°	43.5	1.0
90°-100°	26.3	0.6
100°-110°	125.4	2.9
110°-120°	301.2	6.9
120°-130°	383.5	8.7
130°-140°	409.8	9.3
140°-150°	383.2	8.7
150°-160°	309.1	7.0
160°-170°	199.5	4.5
170°-180°	68.7	1.6
0°-30°	632.3	14.4
0°-40°	1017.7	23.2
0°-60°	1745.5	39.7
0°-90°	2187.0	49.8
90°-120°	452.8	10.3
90°-150°	1629.3	37.1
90°-180°	2207.0	50.2
0°-180°	4393.6	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	840	840	840	840	840	
5°	840	837	829	836	835	80
15°	800	797	788	793	789	225
25°	726	722	713	713	711	334
35°	628	624	614	610	606	393
45°	515	512	502	494	490	397
55°	391	389	380	373	369	350
65°	266	263	256	250	248	263
75°	141	138	136	132	130	151
85°	38	36	36	35	35	41
90°	1	6	13	15	16	4
95°	33	12	17	20	20	41
105°	160	163	118	28	24	170
115°	300	304	309	314	316	297
125°	424	428	430	431	432	378
135°	527	531	533	534	533	406
145°	608	612	613	614	614	381
155°	670	669	670	672	669	309
165°	707	705	705	709	705	200
175°	724	721	721	725	721	69
180°	724	724	724	724	724	



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CANDELA DISTRIBUTION (FULL):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
0°	839.7	839.7	839.7	839.7	839.7	839.7	839.7	839.7	839.7	839.7	839.7
2.5°	842.5	842.1	841.6	841.0	840.6	839.5	838.1	836.7	835.4	834.0	835.2
5°	840.4	839.6	838.8	838.0	837.2	835.9	834.2	832.4	830.7	828.9	830.5
7.5°	832.2	831.4	830.6	829.8	829.0	827.6	825.9	824.0	822.2	820.4	821.8
10°	825.3	824.4	823.7	822.8	822.1	820.6	818.5	816.4	814.4	812.3	813.7
12.5°	816.1	815.3	814.6	814.0	813.3	812.0	810.0	808.0	806.2	804.2	805.2
15°	799.9	799.4	798.7	798.1	797.4	796.1	794.0	791.9	789.8	787.7	789.0
17.5°	781.4	780.5	779.7	778.8	778.0	776.6	774.5	772.4	770.3	768.2	769.1
20°	767.5	766.6	765.5	764.6	763.6	762.1	760.1	758.0	755.8	753.8	754.4
22.5°	751.9	750.9	750.0	749.0	748.0	746.5	744.4	742.3	740.3	738.2	738.7
25°	726.3	725.4	724.4	723.5	722.5	721.0	718.9	716.8	714.7	712.7	712.8
27.5°	699.1	698.1	697.2	696.3	695.3	693.7	691.4	689.3	687.0	684.8	684.9
30°	679.4	678.6	677.8	677.0	676.2	674.7	672.4	670.1	668.0	665.7	665.7
32.5°	659.8	658.7	657.6	656.6	655.5	654.1	652.4	650.6	648.9	647.2	646.3
35°	628.1	627.2	626.2	625.3	624.3	622.7	620.7	618.6	616.5	614.4	613.5
37.5°	595.8	594.6	593.3	592.1	590.9	589.3	587.1	585.0	582.9	580.8	579.7
40°	573.3	572.3	571.4	570.4	569.4	567.8	565.5	563.4	561.1	558.8	557.5
42.5°	550.7	549.7	548.6	547.4	546.4	544.7	542.4	540.3	538.0	535.7	534.4
45°	514.8	514.2	513.5	512.8	512.2	510.9	508.8	506.7	504.6	502.5	500.6
47.5°	479.1	478.2	477.3	476.4	475.4	473.9	472.0	470.0	468.1	466.1	464.2
50°	454.9	454.0	453.3	452.4	451.7	450.3	448.1	446.0	443.9	441.9	440.1
52.5°	429.4	428.9	428.4	427.8	427.3	425.8	423.7	421.5	419.2	417.1	415.6
55°	390.6	390.4	390.3	390.1	389.9	388.8	386.7	384.7	382.6	380.5	378.7
57.5°	353.6	353.1	352.5	352.0	351.5	350.3	348.6	347.0	345.3	343.7	342.1
60°	327.1	326.9	326.8	326.6	326.4	325.4	323.5	321.5	319.6	317.6	316.2
62.5°	303.4	302.9	302.6	302.2	301.7	300.6	298.6	296.7	294.7	292.8	291.4
65°	266.5	265.6	264.9	264.0	263.3	262.0	260.4	258.8	257.2	255.6	254.3
67.5°	227.2	226.6	225.8	225.2	224.4	223.5	222.3	221.0	219.8	218.7	217.5
70°	203.6	202.6	201.7	200.8	199.7	198.8	197.8	196.9	195.9	194.9	193.8
72.5°	178.8	178.0	177.4	176.6	176.0	175.0	174.0	172.9	171.7	170.7	169.7
75°	140.8	140.2	139.5	138.8	138.3	137.7	137.1	136.7	136.2	135.7	135.0
77.5°	107.2	106.8	106.4	106.1	105.8	105.3	104.7	104.2	103.5	102.9	102.5
80°	85.2	84.7	84.3	83.8	83.2	82.8	82.6	82.2	81.9	81.6	81.4
82.5°	63.8	63.7	63.6	63.5	63.4	63.3	63.3	63.2	63.2	63.2	62.8
85°	37.5	37.2	36.9	36.6	36.3	36.1	36.1	36.1	36.1	36.1	35.8
87.5°	15.1	15.0	14.8	14.7	14.5	14.5	14.7	14.9	15.1	15.3	15.3
90°	0.6	1.7	2.9	4.1	5.3	6.7	8.2	9.8	11.3	12.9	13.4
92.5°	10.0	9.7	9.3	9.0	8.7	9.0	10.3	11.4	12.6	13.8	14.5
95°	32.8	27.9	23.0	18.1	13.2	11.4	12.7	14.0	15.4	16.7	17.5
97.5°	65.9	63.7	61.5	59.3	57.1	51.7	43.1	34.5	25.9	17.3	18.3
100°	90.9	93.2	95.7	98.0	100.4	92.3	73.6	55.0	36.4	17.7	18.7
102.5°	119.2	120.9	122.7	124.4	126.1	116.8	96.4	76.1	55.7	35.3	32.4
105°	160.2	161.6	162.9	164.1	165.4	160.7	150.0	139.2	128.5	117.7	96.6
107.5°	203.4	204.4	205.6	206.6	207.6	209.0	210.7	212.4	214.1	215.7	200.3
110°	232.2	233.2	234.1	235.1	236.0	237.2	238.5	239.8	241.1	242.4	238.5



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CANDELA DISTRIBUTION (continued):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
112.5°	259.8	260.6	261.5	262.3	263.2	264.3	265.6	266.9	268.2	269.6	269.7
115°	300.5	301.2	301.9	302.7	303.4	304.3	305.4	306.4	307.5	308.6	309.8
117.5°	340.0	340.8	341.8	342.6	343.5	344.2	344.8	345.3	345.9	346.4	347.4
120°	364.5	365.5	366.6	367.7	368.8	369.5	369.9	370.2	370.6	370.9	371.9
122.5°	389.5	390.3	391.2	392.1	392.9	393.6	394.1	394.5	395.0	395.5	396.2
125°	423.6	424.6	425.6	426.5	427.4	428.2	428.7	429.1	429.6	430.1	430.3
127.5°	456.8	457.7	458.6	459.6	460.5	461.3	461.8	462.5	463.1	463.6	464.0
130°	477.4	478.3	479.3	480.2	481.2	481.9	482.4	482.9	483.3	483.8	484.3
132.5°	497.2	498.1	499.1	500.0	501.0	501.6	502.0	502.4	502.8	503.2	503.7
135°	527.4	528.1	528.8	529.5	530.3	530.8	531.3	531.8	532.3	532.7	533.1
137.5°	553.2	554.1	555.0	555.9	556.8	557.4	557.6	557.9	558.2	558.5	559.0
140°	570.3	571.1	571.8	572.5	573.3	573.8	574.1	574.5	574.9	575.2	575.7
142.5°	586.3	587.0	587.8	588.4	589.2	589.7	590.0	590.4	590.8	591.2	591.5
145°	608.5	609.4	610.2	611.1	611.9	612.5	612.7	612.9	613.1	613.4	613.6
147.5°	629.5	630.1	630.7	631.1	631.7	632.1	632.4	632.5	632.8	633.1	633.3
150°	642.4	642.8	643.1	643.5	643.9	644.1	644.4	644.6	644.9	645.1	645.4
152.5°	654.0	654.2	654.3	654.5	654.7	654.9	655.0	655.2	655.3	655.4	655.8
155°	670.3	670.1	669.9	669.7	669.4	669.4	669.5	669.6	669.7	669.9	670.4
157.5°	683.1	683.1	683.0	683.0	683.0	682.9	682.8	682.7	682.5	682.4	683.2
160°	690.8	690.7	690.6	690.4	690.3	690.2	690.0	689.9	689.8	689.8	690.4
162.5°	698.1	697.8	697.5	697.2	696.8	696.6	696.5	696.4	696.3	696.2	697.0
165°	706.9	706.5	706.2	705.9	705.5	705.2	705.1	705.0	704.9	704.7	705.8
167.5°	713.8	713.3	712.8	712.4	711.9	711.6	711.6	711.6	711.6	711.6	712.7
170°	717.7	717.2	716.7	716.2	715.8	715.5	715.5	715.5	715.5	715.5	716.5
172.5°	720.3	719.7	719.1	718.5	717.9	717.7	717.8	717.9	718.0	718.1	719.1
175°	723.6	723.0	722.4	721.8	721.2	721.0	721.0	721.2	721.3	721.4	722.3
177.5°	724.4	724.0	723.5	723.0	722.6	722.4	722.5	722.6	722.6	722.7	723.5
180°	723.6	723.6	723.6	723.6	723.6	723.6	723.6	723.6	723.6	723.6	723.6



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CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
0°	839.7	839.7	839.7	839.7	839.7	839.7	839.7	839.7
2.5°	836.5	837.7	839.1	839.6	839.5	839.3	839.2	839.1
5°	832.1	833.7	835.3	835.9	835.6	835.3	835.0	834.6
7.5°	823.2	824.6	826.1	826.7	826.5	826.3	826.1	826.0
10°	815.1	816.6	818.0	818.6	818.3	817.9	817.7	817.3
12.5°	806.3	807.4	808.4	808.8	808.6	808.4	808.2	808.0
15°	790.3	791.5	792.9	793.0	792.0	791.1	790.1	789.2
17.5°	770.1	770.9	771.8	772.0	771.8	771.4	771.0	770.6
20°	755.1	755.7	756.3	756.4	755.9	755.4	755.0	754.5
22.5°	739.2	739.7	740.3	740.2	739.6	739.0	738.4	737.7
25°	712.9	713.1	713.2	713.1	712.7	712.2	711.6	711.1
27.5°	685.0	685.1	685.2	685.0	684.4	683.8	683.2	682.6
30°	665.7	665.7	665.7	665.2	664.0	662.9	661.8	660.6
32.5°	645.5	644.5	643.6	642.8	642.2	641.7	641.0	640.5
35°	612.5	611.5	610.6	609.7	608.9	608.1	607.3	606.5
37.5°	578.4	577.3	576.2	575.3	574.9	574.3	573.8	573.3
40°	556.3	555.0	553.7	552.7	552.0	551.5	550.8	550.2
42.5°	533.2	531.9	530.6	529.6	529.0	528.4	527.7	527.1
45°	498.7	496.7	494.8	493.4	492.7	491.8	491.1	490.2
47.5°	462.3	460.4	458.5	457.2	456.6	455.8	455.2	454.4
50°	438.4	436.6	434.8	433.5	432.4	431.5	430.6	429.6
52.5°	414.1	412.6	411.0	409.7	408.8	407.8	406.9	406.0
55°	376.9	375.2	373.4	372.1	371.4	370.5	369.8	368.9
57.5°	340.5	338.9	337.4	336.1	335.2	334.3	333.4	332.4
60°	314.8	313.4	311.9	310.8	310.0	309.2	308.4	307.6
62.5°	289.9	288.5	287.1	286.1	285.5	285.0	284.5	283.9
65°	253.0	251.8	250.4	249.6	249.1	248.6	248.2	247.6
67.5°	216.4	215.3	214.1	213.2	212.5	211.9	211.2	210.6
70°	192.7	191.6	190.5	189.5	188.7	187.8	187.1	186.2
72.5°	168.7	167.7	166.7	166.0	165.6	165.1	164.8	164.3
75°	134.1	133.4	132.5	131.9	131.4	130.9	130.4	130.0
77.5°	101.9	101.3	100.8	100.5	100.5	100.5	100.5	100.5
80°	81.2	81.1	81.0	80.9	80.9	80.9	80.9	80.9
82.5°	62.5	62.2	61.9	61.7	61.6	61.5	61.4	61.3
85°	35.4	35.2	34.8	34.7	34.7	34.7	34.7	34.7
87.5°	15.3	15.2	15.2	15.2	15.2	15.3	15.3	15.4
90°	13.9	14.3	14.8	15.2	15.5	15.6	15.9	16.1
92.5°	15.3	16.0	16.8	17.2	17.4	17.5	17.7	17.8
95°	18.4	19.1	20.0	20.5	20.5	20.5	20.5	20.5
97.5°	19.2	20.2	21.1	21.7	21.8	21.9	22.1	22.1
100°	19.6	20.6	21.6	22.1	22.2	22.3	22.4	22.6
102.5°	29.4	26.5	23.6	22.1	22.3	22.6	22.8	23.0
105°	75.4	54.3	33.2	22.7	22.9	23.2	23.4	23.7
107.5°	184.7	169.3	153.7	138.1	122.1	106.1	90.2	74.3
110°	234.6	230.6	226.7	216.1	199.1	182.0	164.9	147.8



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CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
112.5°	269.7	269.8	269.8	268.1	264.5	260.8	257.2	253.6
115°	310.9	312.2	313.4	314.1	314.6	315.2	315.7	316.1
117.5°	348.4	349.3	350.2	350.8	350.9	351.0	351.1	351.2
120°	372.9	373.8	374.8	375.2	375.2	375.2	375.2	375.2
122.5°	396.8	397.5	398.1	398.5	398.6	398.7	398.8	398.9
125°	430.6	430.7	431.0	431.3	431.5	431.8	432.0	432.3
127.5°	464.4	464.8	465.1	465.2	465.0	464.8	464.5	464.3
130°	484.7	485.2	485.7	485.9	485.6	485.4	485.1	484.9
132.5°	504.2	504.6	505.1	505.2	504.8	504.4	504.2	503.8
135°	533.5	533.9	534.1	534.1	533.9	533.5	533.1	532.7
137.5°	559.6	560.2	560.7	560.9	560.6	560.4	560.2	560.0
140°	576.2	576.6	577.1	577.2	577.0	576.7	576.6	576.3
142.5°	591.9	592.3	592.7	592.7	592.4	592.0	591.6	591.4
145°	613.9	614.1	614.3	614.4	614.4	614.4	614.4	614.4
147.5°	633.6	633.8	634.0	633.9	633.3	632.7	632.3	631.7
150°	645.5	645.8	646.0	646.0	645.6	645.3	644.9	644.6
152.5°	656.3	656.7	657.1	657.0	656.6	656.0	655.4	654.9
155°	671.0	671.7	672.2	672.1	671.5	670.7	670.1	669.3
157.5°	683.8	684.6	685.3	685.1	684.2	683.3	682.4	681.5
160°	691.2	691.8	692.6	692.5	691.7	690.9	690.0	689.2
162.5°	697.8	698.6	699.5	699.5	698.7	698.0	697.2	696.5
165°	706.7	707.7	708.6	708.7	707.8	707.0	706.2	705.3
167.5°	713.6	714.5	715.5	715.5	714.5	713.6	712.7	711.6
170°	717.5	718.4	719.3	719.3	718.4	717.5	716.5	715.5
172.5°	720.0	721.0	721.9	721.9	720.9	719.8	718.7	717.7
175°	723.1	724.0	724.8	724.7	723.8	722.8	721.9	720.9
177.5°	724.2	725.0	725.8	725.7	724.7	723.8	722.8	721.9
180°	723.6	723.6	723.6	723.6	723.6	723.6	723.6	723.6

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