

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: P331935-830

Luminaire Tested: **S123DIP-S560D805U830-4F0-1E-UDD-F1**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P331935-830
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-S560D805U830-4F0-1E-UDD-F1
Description: DEFINE 3 DIRECT-INDIRECT PENDANT LED LUMINAIRE
DOWNLIGHT 560 LUMENS PER FOOT, FLUSH SATIN WHITE DIFFUSER
UPLIGHT 805 LUMENS PER FOOT, FLUSH SATIN WHITE DIFFUSER
Light Source: -
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 4786.9 lumens
Efficiency: N/A
Efficacy: 124.7 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

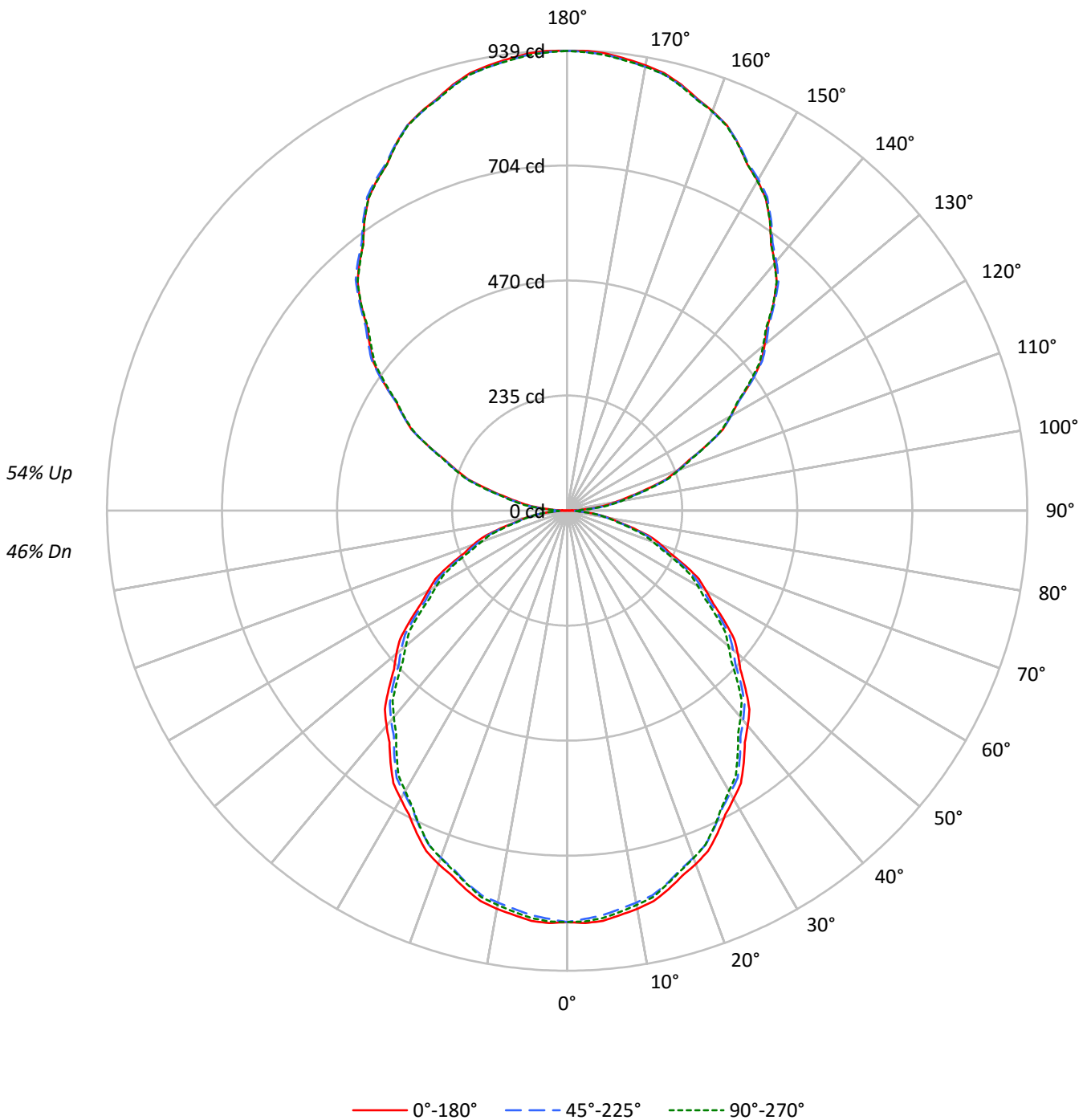
Input Watts (W): 38.4
Input Voltage (V): 120
Input Current (A_{in}): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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	106	106	106	106	97	97	97	97	81	81	81	66	66	66	52	52	52	46
1	97	92	89	85	89	85	82	79	71	68	66	58	56	55	46	45	44	38
2	88	81	75	69	81	74	69	64	62	58	55	51	48	46	40	39	37	32
3	80	71	64	58	73	65	59	54	55	50	46	45	41	39	36	33	31	27
4	73	63	55	49	67	58	51	46	49	43	39	40	36	33	32	29	27	23
5	67	56	48	42	62	52	44	39	43	38	34	36	32	29	29	26	24	20
6	62	50	42	36	57	46	39	34	39	34	29	32	28	25	26	23	21	18
7	57	45	37	32	52	42	35	30	35	30	26	29	25	22	24	21	18	16
8	53	41	33	28	49	38	31	26	32	27	23	27	23	20	22	19	16	14
9	49	37	30	25	45	35	28	23	30	24	21	25	21	18	20	17	15	13
10	46	34	27	22	42	32	25	21	27	22	18	23	19	16	19	16	13	11

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	1.7
10°-20°	223.3	4.7
20°-30°	329.9	6.9
30°-40°	385.4	8.1
40°-50°	387.4	8.1
50°-60°	340.3	7.1
60°-70°	253.5	5.3
70°-80°	144.5	3.0
80°-90°	44.2	0.9
90°-100°	61.1	1.3
100°-110°	182.9	3.8
110°-120°	311.1	6.5
120°-130°	409.2	8.5
130°-140°	460.0	9.6
140°-150°	452.1	9.4
150°-160°	380.6	8.0
160°-170°	253.4	5.3
170°-180°	88.7	1.9
0°-30°	632.3	13.2
0°-40°	1017.7	21.3
0°-60°	1745.5	36.5
0°-90°	2187.7	45.7
90°-120°	555.1	11.6
90°-150°	1876.4	39.2
90°-180°	2599.0	54.3
0°-180°	4786.9	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	8	18	21	22	5
95°	44	49	55	57	58	49
105°	166	168	174	174	175	178
115°	313	315	314	315	314	310
125°	458	460	459	456	453	409
135°	595	599	598	596	594	458
145°	721	723	725	724	721	450
155°	826	826	827	829	825	380
165°	900	898	898	901	897	254
175°	936	933	933	937	932	89
180°	938	938	938	938	938	



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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°	15.2	15.1	15.1	15.0	14.9	15.1	15.4	15.6	15.9	16.2	16.2
90°	0.8	2.4	4.1	5.7	7.3	9.1	11.3	13.4	15.6	17.7	18.4
92.5°	17.8	18.9	20.1	21.2	22.2	23.5	24.7	25.9	27.1	28.3	28.8
95°	43.5	44.6	45.8	46.9	48.1	49.3	50.6	51.9	53.3	54.6	55.2
97.5°	77.2	78.0	78.9	79.7	80.7	81.5	82.5	83.4	84.4	85.3	86.1
100°	100.2	101.2	102.2	103.2	104.2	105.1	105.8	106.7	107.5	108.3	108.9
102.5°	126.8	127.3	127.9	128.6	129.1	130.0	131.0	132.1	133.2	134.3	134.8
105°	165.8	166.2	166.5	166.8	167.1	168.1	169.5	171.0	172.5	173.9	173.9
107.5°	211.2	211.4	211.6	211.8	212.0	212.4	213.0	213.6	214.1	214.7	215.3
110°	239.5	239.8	240.2	240.4	240.8	241.1	241.5	241.8	242.1	242.4	243.1



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CANDELA DISTRIBUTION (continued):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
112.5°	269.0	269.2	269.4	269.6	269.8	269.8	269.9	270.0	270.1	270.1	271.0
115°	313.2	313.7	314.1	314.6	315.2	315.3	314.9	314.6	314.2	314.0	314.1
117.5°	357.7	358.1	358.4	358.6	359.0	358.9	358.5	358.1	357.7	357.2	357.2
120°	385.4	386.3	387.4	388.3	389.4	389.5	388.6	387.8	387.0	386.2	386.0
122.5°	414.3	415.0	415.8	416.4	417.2	417.4	416.9	416.5	416.0	415.7	415.2
125°	458.4	458.8	459.3	459.9	460.3	460.4	460.1	459.8	459.4	459.1	458.5
127.5°	499.1	500.1	501.1	502.2	503.2	503.6	503.2	502.8	502.5	502.1	501.2
130°	526.1	527.4	528.8	530.1	531.4	531.8	531.3	530.8	530.4	529.8	529.1
132.5°	553.3	554.6	555.9	557.2	558.6	559.0	558.6	558.3	557.9	557.5	556.8
135°	594.7	595.7	596.6	597.7	598.6	599.1	598.9	598.7	598.5	598.4	597.8
137.5°	633.0	633.9	634.6	635.5	636.3	636.9	637.3	637.7	638.2	638.6	637.9
140°	659.5	660.3	661.2	662.0	662.8	663.3	663.5	663.6	663.8	663.9	663.8
142.5°	683.7	684.6	685.3	686.2	687.0	687.6	687.9	688.2	688.4	688.7	688.5
145°	721.4	721.8	722.1	722.5	722.7	723.1	723.7	724.2	724.6	725.1	725.0
147.5°	754.5	755.1	755.6	756.2	756.9	757.3	757.8	758.3	758.7	759.2	759.2
150°	777.4	777.8	778.1	778.4	778.7	779.1	779.4	779.8	780.0	780.4	780.4
152.5°	796.4	796.7	797.2	797.7	798.1	798.5	798.7	798.9	799.1	799.3	799.6
155°	826.0	826.0	826.0	826.0	826.0	826.1	826.3	826.5	826.7	826.8	827.5
157.5°	851.4	851.2	851.0	850.8	850.6	850.6	850.7	850.9	851.0	851.1	851.9
160°	867.3	867.0	866.7	866.4	866.0	865.9	865.9	865.9	865.9	865.9	866.7
162.5°	881.5	881.1	880.6	880.1	879.7	879.5	879.7	879.8	879.9	880.1	880.8
165°	899.8	899.3	898.8	898.3	897.8	897.6	897.6	897.6	897.6	897.6	898.5
167.5°	914.4	913.7	913.0	912.4	911.7	911.5	911.6	911.7	911.9	912.0	913.0
170°	922.7	922.0	921.3	920.7	920.0	919.6	919.6	919.6	919.6	919.6	920.9
172.5°	929.1	928.5	927.8	927.2	926.5	926.1	926.1	926.1	926.1	926.1	927.2
175°	935.9	935.2	934.6	934.0	933.3	932.9	932.9	932.9	932.9	932.9	934.0
177.5°	938.7	938.2	937.6	937.1	936.6	936.3	936.3	936.3	936.3	936.3	937.1
180°	938.1	938.1	938.1	938.1	938.1	938.1	938.1	938.1	938.1	938.1	938.1



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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°	16.2	16.2	16.2	16.3	16.4	16.4	16.5	16.6
90°	19.0	19.6	20.3	20.8	21.1	21.5	21.8	22.1
92.5°	29.3	29.9	30.3	30.5	30.3	30.2	30.0	29.8
95°	55.8	56.5	57.1	57.5	57.5	57.5	57.5	57.5
97.5°	86.8	87.6	88.3	88.7	88.6	88.6	88.5	88.4
100°	109.3	109.8	110.3	110.7	111.0	111.3	111.7	112.0
102.5°	135.3	135.7	136.2	136.5	136.4	136.3	136.3	136.2
105°	173.9	173.9	173.9	174.1	174.4	174.7	175.0	175.4
107.5°	215.7	216.3	216.9	217.0	216.8	216.6	216.4	216.2
110°	243.7	244.4	245.1	245.2	244.9	244.6	244.2	243.9



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CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
112.5°	271.7	272.5	273.3	273.6	273.6	273.5	273.4	273.4
115°	314.2	314.4	314.6	314.6	314.4	314.2	314.1	314.0
117.5°	357.2	357.1	357.1	356.8	356.5	356.0	355.5	355.1
120°	385.8	385.7	385.5	385.2	384.9	384.6	384.3	383.9
122.5°	414.8	414.3	414.0	413.5	413.0	412.6	412.1	411.6
125°	457.8	457.1	456.5	455.8	455.2	454.5	453.8	453.2
127.5°	500.3	499.4	498.5	497.7	496.9	496.2	495.4	494.6
130°	528.6	527.9	527.3	526.3	525.2	524.1	522.9	521.7
132.5°	556.0	555.2	554.4	553.6	552.7	551.8	550.9	550.1
135°	597.1	596.4	595.8	595.3	594.9	594.7	594.3	594.0
137.5°	637.3	636.6	635.8	635.2	634.6	634.0	633.4	632.7
140°	663.6	663.5	663.3	662.7	661.5	660.3	659.2	658.1
142.5°	688.4	688.2	688.1	687.6	686.6	685.8	684.9	684.0
145°	724.8	724.6	724.4	724.1	723.4	722.7	722.1	721.4
147.5°	759.2	759.2	759.2	758.7	757.7	756.7	755.7	754.8
150°	780.4	780.4	780.4	780.0	778.9	778.0	776.9	776.0
152.5°	799.7	800.0	800.3	800.0	799.2	798.3	797.5	796.6
155°	828.1	828.8	829.4	829.2	828.0	826.9	825.8	824.6
157.5°	852.5	853.2	853.8	853.8	852.9	852.0	851.0	850.1
160°	867.5	868.4	869.1	869.2	868.6	867.9	867.2	866.6
162.5°	881.7	882.5	883.4	883.2	882.1	881.1	880.1	879.0
165°	899.6	900.5	901.5	901.4	900.3	899.1	898.0	896.8
167.5°	914.1	915.0	916.1	916.1	915.0	914.1	913.0	912.0
170°	922.0	923.1	924.3	924.3	923.1	922.0	920.9	919.6
172.5°	928.2	929.3	930.2	930.2	929.0	927.8	926.7	925.6
175°	934.9	935.9	936.9	936.8	935.7	934.5	933.3	932.2
177.5°	937.9	938.7	939.4	939.4	938.5	937.5	936.7	935.8
180°	938.1	938.1	938.1	938.1	938.1	938.1	938.1	938.1

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