

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: P331354-930

Luminaire Tested: **SA2XXDIP-C675D725U930-4F0-1E-UDD-F**

Issue Date: 10/7/2019

Test Information

Test Method: LM-79-08
Report Number: P331354-930
REPORT IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-1807-864-2,
Test Lab: INNOVATION CENTER
Issue Date: 10/7/2019
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: NEO-RAY
Catalog Number: SA2XXDIP-C675D725U930-4F0-1E-UDD-F
Description: DEFINE 2 DIRECT-INDIRECT PENDANT LED LUMINAIRE
DOWNLIGHT 675 LUMENS PER FOOT, FLUSH SATIN WHITE DIFFUSER
UPLIGHT 725 LUMENS PER FOOT, NO LENS
Light Source: -
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 4566.2 lumens
Efficiency: N/A
Efficacy: 99.5 lumens/watt
Spacing Criteria (0/90/45): 1.2 / 1.16 / 1.3
Luminous Opening: Rectangular (W 0.17' x L: 4' x H: 0')
CIE Type: General Diffuse

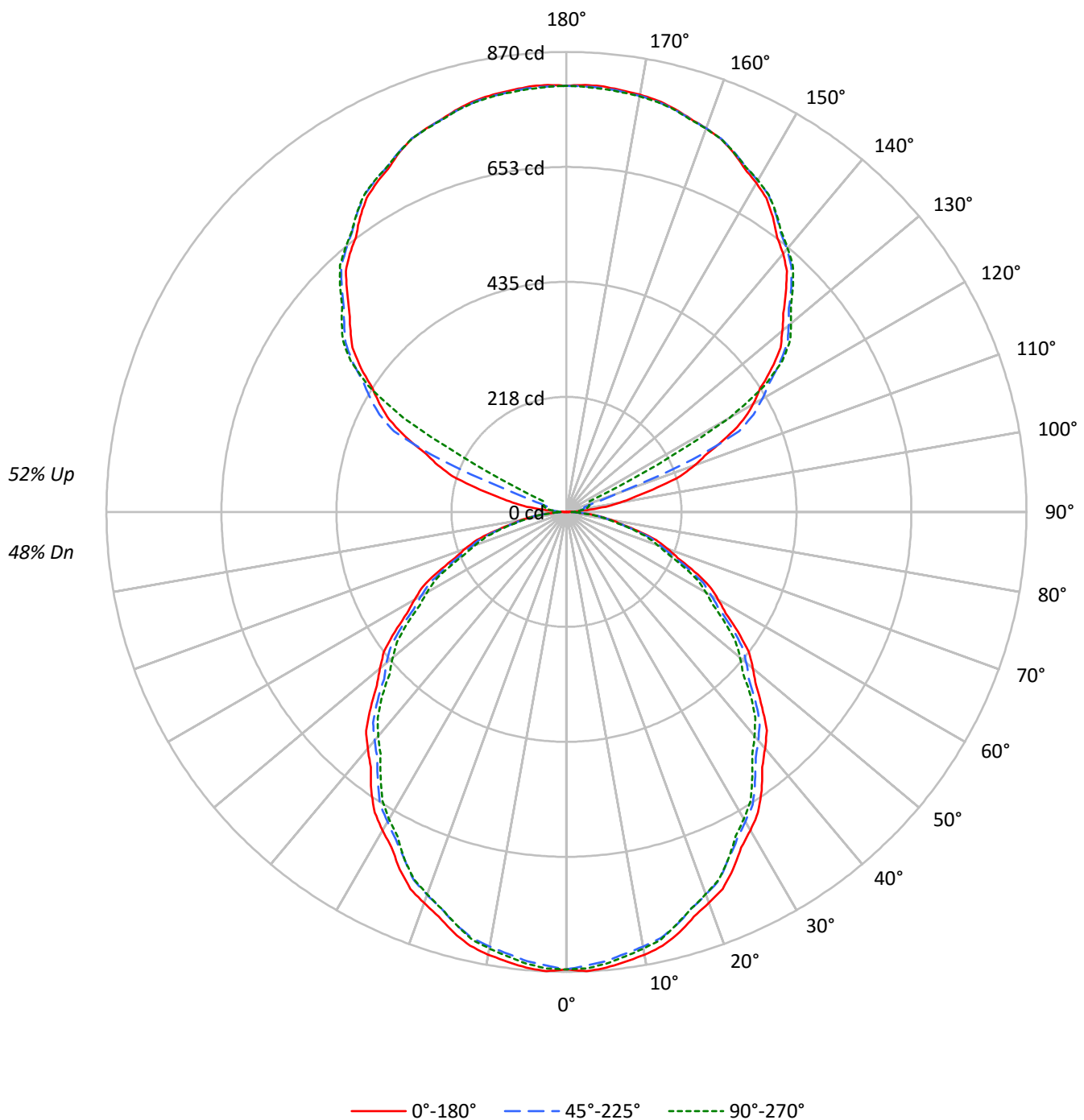
Input Watts (W): 45.9
Input Voltage (V): 120
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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
RW	70	50	30	10	70	50	30	10	50	30	10	50	30	10	50	30	10
RCR																	
0	107	107	107	107	98	98	98	98	82	82	82	68	68	68	55	55	55
1	97	93	89	86	89	86	82	79	72	70	68	60	58	56	48	47	46
2	89	81	75	70	81	75	70	65	63	59	56	52	50	47	42	40	39
3	81	71	64	58	74	66	60	54	56	51	47	46	43	40	38	35	33
4	74	63	55	49	68	58	52	46	50	44	40	41	37	34	34	31	28
5	68	56	48	42	62	52	45	40	44	39	35	37	33	30	30	27	25
6	63	51	42	37	57	47	40	34	40	34	30	34	29	26	27	24	22
7	58	46	38	32	53	42	35	30	36	31	27	30	26	23	25	22	19
8	54	41	34	28	49	38	32	27	33	28	24	28	24	20	23	20	17
9	50	38	30	25	46	35	28	24	30	25	21	26	21	18	21	18	16
10	47	35	27	23	43	32	26	21	28	23	19	24	20	17	20	17	14

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	13976	13976	13976
5°	14029	13827	13908
10°	13946	13686	13754
15°	13772	13508	13494
20°	13527	13242	13228
25°	13286	12916	12916
30°	12972	12616	12506
35°	12682	12254	12073
40°	12313	11894	11666
45°	11953	11536	11250
50°	11560	11163	10766
55°	11153	10731	10331
60°	10698	10214	9836
65°	10208	9700	9253
70°	9588	9073	8644
75°	8721	8359	8153
80°	7736	7504	7122
85°	6336	6002	5391

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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	81.4	1.8
10°-20°	229.0	5.0
20°-30°	336.6	7.4
30°-40°	391.0	8.6
40°-50°	390.6	8.6
50°-60°	340.6	7.5
60°-70°	251.9	5.5
70°-80°	142.7	3.1
80°-90°	40.4	0.9
90°-100°	26.9	0.6
100°-110°	98.6	2.2
110°-120°	263.5	5.8
120°-130°	435.0	9.5
130°-140°	462.7	10.1
140°-150°	430.0	9.4
150°-160°	345.7	7.6
160°-170°	222.8	4.9
170°-180°	76.7	1.7
0°-30°	647.0	14.2
0°-40°	1038.1	22.7
0°-60°	1769.3	38.7
0°-90°	2204.2	48.3
90°-120°	389.0	8.5
90°-150°	1716.8	37.6
90°-180°	2362.0	51.7
0°-180°	4566.2	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	866	866	866	866	866	
5°	866	862	853	859	858	82
15°	824	819	808	811	807	232
25°	746	739	725	726	725	343
35°	643	635	622	617	612	402
45°	524	517	505	496	493	404
55°	396	391	381	372	367	354
65°	267	262	254	247	242	264
75°	140	138	134	129	131	149
85°	34	33	32	30	29	39
90°	1	7	12	14	16	3
95°	38	20	23	26	25	46
105°	177	185	36	42	44	189
115°	335	346	360	102	48	330
125°	474	482	493	497	499	423
135°	587	596	601	607	606	453
145°	681	681	690	694	691	426
155°	749	745	751	754	750	345
165°	790	786	788	792	788	223
175°	808	804	805	808	803	77
180°	806	806	806	806	806	

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CANDELA DISTRIBUTION (FULL):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
0°	865.6	865.6	865.6	865.6	865.6	865.6	865.6	865.6	865.6	865.6	865.6
2.5°	869.6	868.9	868.1	867.4	866.7	865.4	863.8	862.2	860.5	858.9	860.4
5°	865.6	864.9	864.1	863.4	862.7	861.3	859.2	857.2	855.2	853.1	854.6
7.5°	857.9	856.8	855.7	854.5	853.4	851.7	849.7	847.6	845.5	843.4	844.9
10°	850.6	849.3	848.0	846.7	845.5	843.7	841.5	839.3	837.0	834.8	836.3
12.5°	840.7	839.5	838.3	837.1	836.0	834.4	832.1	829.9	827.7	825.5	826.6
15°	823.9	822.9	821.7	820.7	819.5	817.7	815.4	812.9	810.6	808.1	808.9
17.5°	802.7	801.5	800.5	799.3	798.3	796.5	794.0	791.6	789.1	786.7	787.6
20°	787.3	786.3	785.1	784.0	782.9	781.1	778.4	775.9	773.3	770.7	771.3
22.5°	772.0	770.5	768.9	767.4	765.8	763.9	761.4	759.0	756.5	754.1	754.2
25°	745.8	744.3	742.8	741.3	739.8	737.5	734.3	731.2	728.1	725.0	725.3
27.5°	715.8	714.4	713.1	711.8	710.5	708.6	706.0	703.6	701.1	698.6	698.1
30°	695.8	694.3	692.8	691.4	689.9	687.8	685.0	682.2	679.5	676.7	676.1
32.5°	674.5	673.3	672.1	670.9	669.8	667.7	664.8	661.9	658.9	656.0	655.0
35°	643.4	641.6	639.7	637.8	635.9	633.6	630.6	627.6	624.7	621.7	620.6
37.5°	608.2	606.6	605.0	603.3	601.8	599.4	596.5	593.5	590.6	587.6	586.2
40°	584.2	582.8	581.3	579.8	578.4	576.2	573.2	570.2	567.3	564.3	562.6
42.5°	561.0	559.5	558.0	556.5	555.1	552.9	549.8	546.9	544.0	541.0	539.2
45°	523.5	522.2	520.9	519.7	518.4	516.3	513.6	510.8	508.0	505.2	503.2
47.5°	486.2	485.0	483.8	482.6	481.4	479.3	476.4	473.5	470.7	467.7	465.6
50°	460.2	459.3	458.4	457.5	456.6	454.8	452.2	449.6	447.0	444.4	441.9
52.5°	435.0	433.7	432.5	431.3	430.1	428.3	425.8	423.4	420.9	418.5	416.4
55°	396.2	395.1	394.0	392.8	391.8	390.0	387.8	385.6	383.4	381.2	379.0
57.5°	357.2	356.4	355.5	354.6	353.7	352.0	349.6	347.2	344.7	342.3	340.1
60°	331.3	330.5	329.8	329.1	328.3	326.6	324.1	321.5	318.9	316.3	314.2
62.5°	306.0	304.8	303.6	302.4	301.3	299.6	297.7	295.6	293.7	291.6	289.8
65°	267.2	266.0	265.0	263.8	262.7	261.2	259.4	257.6	255.7	253.9	252.2
67.5°	227.7	226.8	225.9	225.0	224.1	222.9	221.2	219.6	217.9	216.2	214.9
70°	203.1	202.4	201.6	200.9	200.2	198.9	197.2	195.6	194.0	192.2	190.9
72.5°	177.8	177.0	176.3	175.5	174.8	173.9	172.8	171.8	170.7	169.6	168.4
75°	139.8	139.4	139.1	138.7	138.4	137.7	136.8	135.8	134.9	134.0	132.9
77.5°	105.9	105.3	104.6	104.0	103.4	102.9	102.5	102.1	101.7	101.3	100.9
80°	83.2	83.1	82.8	82.7	82.5	82.2	81.9	81.4	81.1	80.7	80.1
82.5°	62.0	61.9	61.9	61.8	61.8	61.6	61.4	61.2	61.0	60.7	60.1
85°	34.2	33.9	33.8	33.6	33.3	33.2	33.0	32.9	32.6	32.4	31.9
87.5°	12.1	12.1	12.1	12.1	12.1	12.0	11.9	11.8	11.7	11.7	11.3
90°	0.6	2.0	3.4	4.9	6.3	7.5	8.6	9.6	10.6	11.7	12.3
92.5°	11.7	11.7	11.5	11.4	11.3	11.5	12.0	12.5	13.0	13.5	13.9
95°	37.9	33.7	29.4	25.1	20.8	19.1	20.1	21.0	21.9	22.7	23.4
97.5°	75.3	63.2	51.1	39.1	27.0	22.0	24.1	26.3	28.4	30.4	31.0
100°	103.2	85.4	67.8	50.0	32.2	24.5	26.7	28.9	31.1	33.3	34.2
102.5°	134.0	130.3	126.5	122.8	119.0	107.9	89.4	71.0	52.6	34.2	35.5
105°	177.3	181.2	185.1	189.0	192.8	177.1	141.7	106.3	70.9	35.5	37.0
107.5°	226.7	229.8	232.9	236.0	239.2	219.6	177.1	134.7	92.2	49.8	48.3
110°	258.4	261.1	263.8	266.5	269.2	251.8	214.4	177.0	139.5	102.1	89.1

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CANDELA DISTRIBUTION (continued):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
112.5°	288.2	290.7	293.0	295.5	297.8	294.4	285.2	275.9	266.7	257.4	210.2
115°	335.3	337.5	339.7	341.9	344.1	346.9	350.1	353.4	356.6	359.9	299.9
117.5°	377.5	379.9	382.4	384.8	387.3	389.6	391.9	394.1	396.3	398.6	384.1
120°	408.2	410.2	412.1	414.1	416.0	418.2	420.5	422.8	425.2	427.5	429.0
122.5°	434.4	436.4	438.5	440.5	442.5	444.8	447.4	450.0	452.5	455.0	455.9
125°	474.2	475.8	477.5	479.2	480.9	483.0	485.4	487.9	490.3	492.8	493.7
127.5°	510.2	512.1	514.0	515.8	517.6	519.5	521.4	523.2	525.1	526.8	528.2
130°	533.0	535.2	537.2	539.2	541.4	543.1	544.5	545.9	547.4	548.8	550.2
132.5°	556.4	558.2	559.9	561.7	563.5	565.0	566.5	567.9	569.3	570.7	571.9
135°	586.7	588.8	590.8	593.0	595.0	596.6	597.8	598.9	600.1	601.3	602.6
137.5°	617.4	618.8	620.3	621.7	623.2	624.6	625.9	627.2	628.5	629.9	631.1
140°	637.5	638.5	639.5	640.6	641.6	642.9	644.2	645.7	647.1	648.6	649.7
142.5°	654.3	655.2	656.2	657.0	657.9	659.3	660.9	662.5	664.1	665.8	666.8
145°	680.6	680.4	680.4	680.2	680.1	681.1	683.3	685.5	687.7	689.9	690.9
147.5°	703.6	703.1	702.6	702.1	701.6	702.5	704.7	706.8	709.0	711.2	711.8
150°	718.5	717.6	716.7	715.8	714.9	715.5	717.5	719.6	721.7	723.7	724.6
152.5°	731.1	730.1	729.1	728.1	727.1	727.6	729.5	731.5	733.4	735.4	736.2
155°	749.4	748.3	747.1	745.9	744.8	744.9	746.5	748.0	749.6	751.1	752.0
157.5°	763.8	762.8	761.8	760.8	759.9	759.9	761.0	762.1	763.1	764.3	765.2
160°	772.2	771.4	770.6	769.8	769.1	769.1	769.8	770.6	771.4	772.2	773.0
162.5°	779.7	778.9	778.1	777.3	776.5	776.5	777.1	777.8	778.5	779.2	780.1
165°	789.7	788.9	788.1	787.3	786.5	786.4	786.8	787.2	787.5	787.9	788.8
167.5°	797.1	796.4	795.6	794.8	794.0	793.8	794.2	794.5	794.9	795.2	796.1
170°	801.4	800.5	799.8	799.0	798.3	797.9	798.3	798.5	798.7	799.0	799.9
172.5°	804.1	803.3	802.6	801.8	801.0	800.8	801.0	801.3	801.5	801.8	802.7
175°	807.7	806.8	805.9	805.0	804.1	803.8	804.0	804.3	804.5	804.9	805.8
177.5°	808.4	807.6	806.9	806.2	805.4	805.1	805.2	805.4	805.4	805.5	806.2
180°	806.0	806.0	806.0	806.0	806.0	806.0	806.0	806.0	806.0	806.0	806.0

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CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
0°	865.6	865.6	865.6	865.6	865.6	865.6	865.6	865.6
2.5°	861.9	863.4	864.9	865.4	865.1	864.9	864.5	864.3
5°	856.1	857.5	859.0	859.6	859.2	858.8	858.5	858.1
7.5°	846.4	847.9	849.4	849.9	849.5	849.1	848.7	848.3
10°	837.7	839.3	840.7	841.1	840.7	840.1	839.5	838.9
12.5°	827.5	828.6	829.6	829.9	829.5	829.2	828.8	828.3
15°	809.7	810.4	811.1	811.1	810.1	809.2	808.3	807.3
17.5°	788.4	789.2	790.1	790.1	789.2	788.3	787.4	786.5
20°	771.8	772.4	772.9	772.8	772.1	771.4	770.6	769.9
22.5°	754.3	754.4	754.5	754.3	753.9	753.4	753.0	752.6
25°	725.7	726.0	726.4	726.4	726.0	725.7	725.3	725.0
27.5°	697.5	697.0	696.4	695.7	694.8	693.9	693.0	692.1
30°	675.6	675.0	674.4	673.8	673.0	672.3	671.6	670.8
32.5°	654.0	653.1	652.0	651.2	650.4	649.7	648.9	648.2
35°	619.5	618.4	617.3	616.3	615.4	614.4	613.5	612.5
37.5°	584.9	583.5	582.1	581.0	580.1	579.2	578.4	577.5
40°	561.0	559.3	557.7	556.4	555.7	555.0	554.2	553.5
42.5°	537.4	535.6	533.8	532.3	531.2	530.3	529.2	528.2
45°	501.2	499.1	497.1	495.7	495.0	494.2	493.5	492.7
47.5°	463.5	461.3	459.2	457.5	456.5	455.4	454.4	453.3
50°	439.3	436.7	434.1	432.4	431.4	430.5	429.6	428.6
52.5°	414.2	412.1	409.9	408.2	407.0	405.8	404.6	403.3
55°	376.7	374.5	372.3	370.7	369.8	368.9	367.9	367.0
57.5°	337.9	335.7	333.5	332.1	331.3	330.7	330.0	329.2
60°	312.2	310.1	308.1	306.9	306.3	305.7	305.2	304.6
62.5°	287.9	286.0	284.1	282.8	282.1	281.4	280.7	280.0
65°	250.5	248.8	247.2	245.9	245.0	244.0	243.1	242.2
67.5°	213.6	212.4	211.1	210.0	209.3	208.6	207.8	207.1
70°	189.6	188.4	187.1	186.1	185.3	184.6	183.8	183.1
72.5°	167.1	165.8	164.4	163.5	162.9	162.3	161.8	161.1
75°	131.8	130.7	129.6	129.2	129.6	130.0	130.3	130.7
77.5°	100.3	99.7	99.1	98.7	98.1	97.6	97.1	96.5
80°	79.7	79.1	78.5	78.0	77.7	77.3	77.0	76.6
82.5°	59.4	58.6	58.0	57.6	57.5	57.4	57.3	57.2
85°	31.4	30.8	30.2	29.8	29.7	29.5	29.4	29.1
87.5°	11.0	10.7	10.4	10.2	10.1	10.0	9.9	9.8
90°	13.0	13.6	14.3	14.7	15.0	15.2	15.5	15.7
92.5°	14.2	14.5	14.8	15.2	15.2	15.4	15.6	15.7
95°	24.1	24.7	25.4	25.6	25.4	25.4	25.2	25.1
97.5°	31.5	32.0	32.5	32.9	33.0	33.2	33.3	33.5
100°	35.3	36.4	37.4	38.1	38.3	38.6	38.8	39.1
102.5°	36.9	38.2	39.5	40.4	40.8	41.2	41.5	41.9
105°	38.4	39.9	41.3	42.2	42.8	43.3	43.8	44.4
107.5°	46.9	45.4	44.0	43.5	44.0	44.6	45.1	45.6
110°	76.1	63.2	50.2	44.0	44.5	45.0	45.6	46.1

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CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
112.5°	162.9	115.6	68.3	44.8	45.3	45.7	46.1	46.6
115°	239.9	179.9	119.8	85.1	75.8	66.4	57.2	47.9
117.5°	369.6	355.0	340.5	317.9	287.2	256.6	225.9	195.3
120°	430.6	432.2	433.7	425.7	408.2	390.8	373.2	355.8
122.5°	456.9	457.8	458.8	457.5	454.1	450.7	447.4	443.9
125°	494.6	495.5	496.4	497.1	497.5	497.9	498.2	498.6
127.5°	529.5	530.8	532.1	532.9	533.0	533.0	533.1	533.2
130°	551.6	553.1	554.5	555.1	555.1	554.9	554.7	554.6
132.5°	573.2	574.4	575.6	576.2	576.0	575.9	575.8	575.6
135°	603.9	605.2	606.5	607.0	606.7	606.5	606.2	605.9
137.5°	632.4	633.7	635.0	635.4	635.0	634.5	634.1	633.6
140°	650.9	652.0	653.2	653.5	652.8	652.2	651.5	650.9
142.5°	667.9	669.0	670.0	670.3	669.6	669.0	668.3	667.6
145°	691.8	692.7	693.6	693.7	693.1	692.4	691.8	691.1
147.5°	712.5	713.2	713.9	714.0	713.4	712.8	712.3	711.8
150°	725.3	726.1	726.8	726.9	726.3	725.6	725.0	724.3
152.5°	736.9	737.8	738.6	738.5	737.7	736.8	736.0	735.1
155°	752.8	753.5	754.3	754.2	753.1	752.1	751.1	750.0
157.5°	766.0	766.9	767.8	767.7	766.7	765.6	764.7	763.7
160°	773.7	774.5	775.3	775.2	774.3	773.4	772.5	771.6
162.5°	780.9	781.8	782.7	782.6	781.5	780.3	779.3	778.1
165°	789.7	790.7	791.6	791.6	790.7	789.7	788.8	787.9
167.5°	797.1	798.0	798.9	798.7	797.6	796.5	795.2	794.1
170°	800.8	801.7	802.7	802.5	801.4	800.1	799.0	797.9
172.5°	803.6	804.5	805.4	805.3	804.1	803.0	801.8	800.6
175°	806.7	807.6	808.5	808.3	807.0	805.7	804.4	803.1
177.5°	807.0	807.7	808.5	808.4	807.4	806.5	805.5	804.6
180°	806.0	806.0	806.0	806.0	806.0	806.0	806.0	806.0

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