

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: P331336-830

Luminaire Tested: **SA2XXDIP-C675D330U830-4F0-1E-UDD-F**

Issue Date: 10/7/2019

Test Information

Test Method: LM-79-08
Report Number: P331336-830
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-C675D330U830-4F0-1E-UDD-F
Description: DEFINE 2 DIRECT-INDIRECT PENDANT LED LUMINAIRE
DOWNLIGHT 675 LUMENS PER FOOT, FLUSH SATIN WHITE DIFFUSER
UPLIGHT 330 LUMENS PER FOOT, NO LENS
Light Source: -
Ballast/Driver: ELECTRONIC DRIVER

Summary

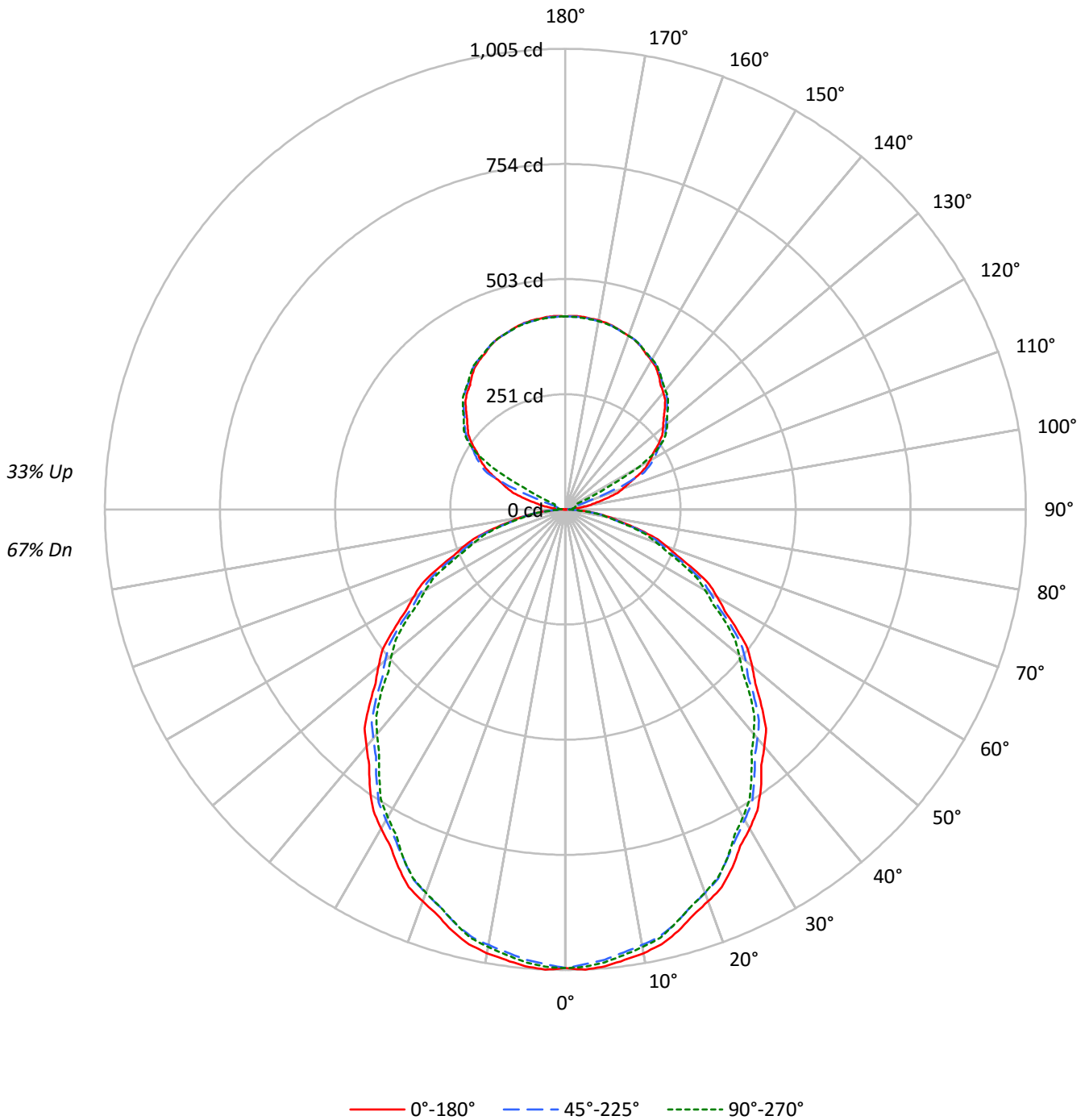
Lumens per Lamp: N/A
Luminaire Lumens: 3781.2 lumens
Efficiency: N/A
Efficacy: 108.0 lumens/watt
Spacing Criteria (0/90/45): 1.2 / 1.16 / 1.3
Luminous Opening: Rectangular (W 0.17' x L: 4' x H: 0')
CIE Type: Semi-Direct

Input Watts (W): 35
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	111	111	111	111	105	105	105	105	93	93	93	82	82	82	72	72	72	67
1	102	97	93	90	96	92	88	85	82	79	77	72	70	68	64	62	61	57
2	93	85	79	73	87	80	75	70	72	67	63	64	60	57	56	54	51	48
3	85	75	67	61	79	71	64	58	63	58	53	56	52	48	50	46	44	40
4	77	66	58	52	73	63	55	50	56	50	46	50	45	42	44	41	38	35
5	71	59	51	45	67	56	49	43	50	44	39	45	40	36	40	36	33	30
6	66	53	45	39	62	51	43	37	45	39	35	41	36	32	36	32	29	26
7	61	48	40	34	57	46	38	33	41	35	31	37	32	28	33	29	26	23
8	56	44	36	30	53	42	34	29	38	32	27	34	29	25	31	26	23	21
9	53	40	32	27	50	38	31	26	35	29	24	31	26	23	28	24	21	19
10	49	37	29	24	47	35	28	24	32	26	22	29	24	21	26	22	19	17

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	16157	16157	16157
5°	16219	15985	16078
10°	16123	15823	15901
15°	15921	15616	15600
20°	15639	15309	15292
25°	15358	14931	14931
30°	14997	14585	14458
35°	14661	14168	13957
40°	14235	13748	13487
45°	13819	13337	13006
50°	13366	12906	12446
55°	12892	12405	11944
60°	12368	11806	11370
65°	11801	11213	10697
70°	11084	10494	9994
75°	10081	9669	9426
80°	8945	8675	8229
85°	7317	6947	6224



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	94.1	2.5
10°-20°	264.8	7.0
20°-30°	389.2	10.3
30°-40°	452.1	12.0
40°-50°	451.6	11.9
50°-60°	393.8	10.4
60°-70°	291.2	7.7
70°-80°	164.9	4.4
80°-90°	45.4	1.2
90°-100°	14.0	0.4
100°-110°	51.5	1.4
110°-120°	137.7	3.6
120°-130°	227.3	6.0
130°-140°	241.8	6.4
140°-150°	224.7	5.9
150°-160°	180.7	4.8
160°-170°	116.4	3.1
170°-180°	40.1	1.1
0°-30°	748.0	19.8
0°-40°	1200.1	31.7
0°-60°	2045.4	54.1
0°-90°	2546.9	67.4
90°-120°	203.3	5.4
90°-150°	897.1	23.7
90°-180°	1234.0	32.6
0°-180°	3781.2	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1001	1001	1001	1001	1001	
5°	1001	996	986	993	992	95
15°	952	946	934	938	933	268
25°	862	854	838	840	838	396
35°	744	734	719	713	708	464
45°	605	598	584	574	570	467
55°	458	452	441	430	424	409
65°	309	303	294	285	280	305
75°	162	160	155	150	151	173
85°	40	38	38	35	34	45
90°	0	4	6	8	8	3
95°	20	10	12	13	13	24
105°	93	97	19	22	23	99
115°	175	181	188	54	25	172
125°	248	252	258	260	260	221
135°	307	311	314	317	317	237
145°	356	356	360	362	361	222
155°	392	389	392	394	392	180
165°	413	411	412	414	412	117
175°	422	420	421	422	420	40
180°	421	421	421	421	421	



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CANDELA DISTRIBUTION (FULL):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
0°	1000.7	1000.7	1000.7	1000.7	1000.7	1000.7	1000.7	1000.7	1000.7	1000.7	1000.7
2.5°	1005.3	1004.5	1003.6	1002.8	1001.9	1000.5	998.6	996.7	994.9	993.0	994.7
5°	1000.7	999.8	999.0	998.2	997.3	995.7	993.3	991.0	988.6	986.3	988.0
7.5°	991.8	990.5	989.2	987.9	986.6	984.7	982.3	979.9	977.5	975.1	976.8
10°	983.4	981.8	980.3	978.8	977.4	975.3	972.8	970.3	967.6	965.1	966.8
12.5°	971.9	970.5	969.1	967.8	966.5	964.6	962.0	959.4	956.9	954.3	955.5
15°	952.5	951.3	950.0	948.8	947.4	945.4	942.6	939.8	937.1	934.2	935.2
17.5°	927.9	926.6	925.4	924.1	922.8	920.8	917.9	915.1	912.3	909.5	910.5
20°	910.2	909.0	907.7	906.3	905.1	903.0	899.9	897.0	894.0	891.0	891.6
22.5°	892.5	890.7	888.9	887.1	885.3	883.1	880.2	877.4	874.6	871.8	871.9
25°	862.1	860.4	858.8	857.0	855.3	852.6	848.9	845.4	841.7	838.1	838.5
27.5°	827.5	826.0	824.4	822.8	821.3	819.2	816.2	813.4	810.5	807.7	807.0
30°	804.4	802.7	801.0	799.3	797.6	795.1	791.9	788.7	785.5	782.3	781.7
32.5°	779.8	778.4	777.0	775.6	774.3	771.9	768.5	765.2	761.8	758.4	757.2
35°	743.8	741.7	739.5	737.4	735.2	732.4	729.1	725.6	722.2	718.8	717.5
37.5°	703.1	701.3	699.4	697.5	695.7	693.0	689.6	686.2	682.8	679.3	677.7
40°	675.4	673.7	672.0	670.3	668.6	666.1	662.6	659.2	655.8	652.3	650.4
42.5°	648.6	646.8	645.1	643.4	641.7	639.1	635.7	632.3	628.9	625.5	623.3
45°	605.2	603.7	602.2	600.8	599.3	596.9	593.7	590.5	587.3	584.1	581.7
47.5°	562.1	560.7	559.3	557.9	556.5	554.1	550.7	547.4	544.1	540.7	538.3
50°	532.1	531.0	530.0	528.9	527.8	525.8	522.8	519.8	516.8	513.8	510.9
52.5°	502.8	501.4	500.0	498.6	497.2	495.1	492.3	489.5	486.6	483.8	481.4
55°	458.0	456.8	455.4	454.1	452.9	450.9	448.4	445.8	443.3	440.7	438.1
57.5°	412.9	412.0	410.9	409.9	408.9	407.0	404.2	401.3	398.5	395.7	393.1
60°	383.0	382.1	381.3	380.4	379.6	377.6	374.7	371.6	368.6	365.6	363.3
62.5°	353.7	352.3	351.0	349.6	348.3	346.4	344.1	341.8	339.5	337.1	335.0
65°	308.9	307.6	306.3	305.0	303.7	302.0	299.9	297.7	295.6	293.5	291.5
67.5°	263.3	262.2	261.2	260.1	259.1	257.7	255.7	253.8	251.9	250.0	248.5
70°	234.8	233.9	233.1	232.2	231.4	230.0	228.0	226.1	224.2	222.3	220.7
72.5°	205.6	204.6	203.8	202.9	202.1	201.0	199.8	198.6	197.4	196.0	194.6
75°	161.6	161.2	160.8	160.3	159.9	159.2	158.2	157.0	156.0	155.0	153.6
77.5°	122.4	121.7	120.9	120.2	119.5	118.9	118.5	118.0	117.6	117.2	116.6
80°	96.2	96.0	95.8	95.6	95.4	95.0	94.6	94.2	93.8	93.3	92.7
82.5°	71.6	71.5	71.5	71.4	71.4	71.3	71.0	70.8	70.5	70.2	69.5
85°	39.5	39.2	39.0	38.8	38.5	38.4	38.2	38.0	37.7	37.5	36.9
87.5°	13.9	13.8	13.6	13.4	13.1	12.9	12.7	12.4	12.3	12.0	11.6
90°	0.3	1.0	1.8	2.5	3.3	4.0	4.4	5.0	5.6	6.1	6.4
92.5°	6.1	6.1	6.0	5.9	5.8	6.0	6.2	6.5	6.8	7.1	7.3
95°	19.8	17.5	15.4	13.1	10.8	10.0	10.5	10.9	11.4	11.9	12.3
97.5°	39.3	33.0	26.7	20.5	14.1	11.5	12.6	13.7	14.8	15.9	16.2
100°	53.9	44.7	35.3	26.1	16.9	12.7	13.9	15.1	16.2	17.3	17.9
102.5°	70.0	68.1	66.1	64.2	62.2	56.4	46.8	37.1	27.5	17.8	18.6
105°	92.7	94.6	96.7	98.8	100.8	92.6	74.1	55.6	37.0	18.6	19.3
107.5°	118.4	120.1	121.7	123.4	125.0	114.7	92.6	70.4	48.2	26.0	25.3
110°	135.0	136.4	137.9	139.3	140.7	131.6	112.1	92.5	72.9	53.3	46.6



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CANDELA DISTRIBUTION (continued):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
112.5°	150.6	151.8	153.2	154.4	155.6	153.8	149.0	144.2	139.3	134.5	109.8
115°	175.2	176.3	177.6	178.7	179.8	181.3	182.9	184.6	186.3	188.0	156.7
117.5°	197.3	198.5	199.8	201.1	202.4	203.6	204.8	205.9	207.1	208.3	200.7
120°	213.3	214.3	215.4	216.4	217.4	218.5	219.7	220.9	222.2	223.4	224.2
122.5°	227.0	228.1	229.1	230.2	231.3	232.4	233.8	235.1	236.5	237.8	238.3
125°	247.8	248.6	249.5	250.4	251.3	252.4	253.6	255.0	256.2	257.5	258.0
127.5°	266.6	267.6	268.5	269.6	270.5	271.5	272.4	273.4	274.4	275.3	276.0
130°	278.5	279.7	280.7	281.8	282.9	283.8	284.6	285.3	286.1	286.8	287.5
132.5°	290.8	291.6	292.6	293.5	294.5	295.2	296.0	296.7	297.5	298.2	298.9
135°	306.6	307.6	308.8	309.8	310.9	311.8	312.4	313.0	313.6	314.2	314.9
137.5°	322.6	323.4	324.1	324.9	325.6	326.4	327.1	327.7	328.5	329.1	329.8
140°	333.1	333.7	334.1	334.7	335.3	335.9	336.7	337.4	338.2	338.8	339.5
142.5°	341.9	342.3	342.8	343.4	343.8	344.5	345.3	346.2	347.0	347.9	348.5
145°	355.6	355.6	355.5	355.4	355.3	355.9	357.0	358.3	359.4	360.5	361.0
147.5°	367.7	367.4	367.1	366.8	366.6	367.0	368.2	369.4	370.5	371.6	371.9
150°	375.4	374.9	374.5	374.0	373.5	373.9	374.9	376.1	377.1	378.2	378.6
152.5°	382.0	381.5	381.0	380.4	379.9	380.1	381.2	382.2	383.2	384.3	384.7
155°	391.6	391.0	390.4	389.7	389.2	389.3	390.1	390.9	391.7	392.5	392.9
157.5°	399.1	398.6	398.0	397.6	397.0	397.1	397.7	398.2	398.8	399.4	399.8
160°	403.5	403.1	402.7	402.3	401.9	401.9	402.3	402.7	403.1	403.5	403.9
162.5°	407.4	407.0	406.6	406.1	405.8	405.8	406.0	406.4	406.8	407.2	407.6
165°	412.6	412.3	411.8	411.4	411.0	410.9	411.1	411.3	411.5	411.7	412.2
167.5°	416.5	416.1	415.8	415.3	414.9	414.8	415.0	415.2	415.4	415.6	416.0
170°	418.8	418.3	417.9	417.5	417.1	417.0	417.1	417.3	417.4	417.5	418.0
172.5°	420.2	419.8	419.3	419.0	418.6	418.4	418.6	418.7	418.9	419.0	419.4
175°	422.1	421.6	421.1	420.7	420.2	420.0	420.2	420.3	420.5	420.6	421.0
177.5°	422.4	422.0	421.6	421.2	420.8	420.8	420.8	420.8	420.8	420.9	421.3
180°	421.1	421.1	421.1	421.1	421.1	421.1	421.1	421.1	421.1	421.1	421.1



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CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
0°	1000.7	1000.7	1000.7	1000.7	1000.7	1000.7	1000.7	1000.7
2.5°	996.4	998.2	999.8	1000.5	1000.1	999.8	999.5	999.2
5°	989.7	991.4	993.1	993.7	993.3	992.9	992.5	992.0
7.5°	978.5	980.2	981.9	982.5	982.0	981.7	981.2	980.7
10°	968.5	970.3	971.9	972.4	971.9	971.2	970.5	969.9
12.5°	956.7	957.9	959.1	959.4	958.9	958.6	958.1	957.6
15°	936.0	936.9	937.7	937.6	936.5	935.5	934.4	933.3
17.5°	911.4	912.4	913.4	913.4	912.4	911.3	910.3	909.3
20°	892.3	893.0	893.5	893.4	892.6	891.7	890.9	890.0
22.5°	872.0	872.1	872.2	872.0	871.6	871.0	870.5	870.1
25°	839.0	839.3	839.8	839.8	839.3	839.0	838.5	838.1
27.5°	806.3	805.8	805.1	804.3	803.2	802.2	801.2	800.1
30°	781.0	780.3	779.7	778.9	778.1	777.2	776.4	775.5
32.5°	756.1	755.0	753.8	752.8	752.0	751.1	750.2	749.3
35°	716.2	714.9	713.6	712.5	711.4	710.3	709.3	708.1
37.5°	676.2	674.6	673.0	671.7	670.6	669.6	668.6	667.6
40°	648.6	646.6	644.7	643.3	642.4	641.6	640.7	639.9
42.5°	621.2	619.2	617.1	615.4	614.2	613.0	611.8	610.6
45°	579.4	577.0	574.7	573.1	572.2	571.4	570.5	569.6
47.5°	535.8	533.3	530.8	529.0	527.7	526.5	525.3	524.1
50°	507.8	504.8	501.8	499.8	498.7	497.7	496.6	495.5
52.5°	478.8	476.4	473.9	471.9	470.5	469.1	467.7	466.3
55°	435.5	433.0	430.5	428.6	427.5	426.5	425.4	424.3
57.5°	390.6	388.0	385.6	383.9	383.0	382.3	381.4	380.6
60°	360.9	358.5	356.2	354.8	354.1	353.5	352.8	352.1
62.5°	332.8	330.6	328.5	327.0	326.1	325.3	324.5	323.7
65°	289.6	287.7	285.8	284.3	283.2	282.1	281.1	280.0
67.5°	246.9	245.5	244.0	242.8	242.0	241.1	240.3	239.4
70°	219.2	217.8	216.3	215.1	214.2	213.4	212.5	211.7
72.5°	193.1	191.6	190.1	189.0	188.3	187.7	187.0	186.2
75°	152.3	151.1	149.8	149.4	149.8	150.2	150.6	151.1
77.5°	115.9	115.3	114.6	114.0	113.4	112.8	112.3	111.6
80°	92.1	91.4	90.8	90.2	89.8	89.4	89.0	88.5
82.5°	68.6	67.8	67.0	66.5	66.4	66.4	66.3	66.2
85°	36.3	35.6	35.0	34.5	34.3	34.1	33.9	33.6
87.5°	11.1	10.7	10.2	9.9	9.8	9.6	9.5	9.3
90°	6.8	7.1	7.4	7.7	7.8	7.9	8.1	8.2
92.5°	7.4	7.6	7.7	7.9	8.0	8.1	8.1	8.2
95°	12.5	12.9	13.2	13.4	13.3	13.2	13.2	13.1
97.5°	16.5	16.7	17.0	17.2	17.2	17.3	17.4	17.5
100°	18.5	19.0	19.5	19.9	20.0	20.2	20.3	20.5
102.5°	19.2	20.0	20.6	21.1	21.3	21.5	21.7	21.9
105°	20.1	20.8	21.6	22.1	22.3	22.6	22.9	23.2
107.5°	24.5	23.8	23.0	22.7	23.0	23.3	23.6	23.8
110°	39.8	33.0	26.2	23.0	23.3	23.6	23.8	24.0



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CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
112.5°	85.1	60.4	35.7	23.5	23.7	23.8	24.1	24.3
115°	125.4	94.0	62.6	44.5	39.6	34.8	29.9	25.0
117.5°	193.1	185.5	178.0	166.2	150.1	134.1	118.1	102.1
120°	225.0	225.8	226.6	222.4	213.3	204.2	195.0	185.9
122.5°	238.7	239.2	239.7	239.0	237.3	235.5	233.8	232.0
125°	258.4	258.9	259.4	259.8	260.0	260.1	260.3	260.5
127.5°	276.7	277.4	278.1	278.4	278.5	278.5	278.5	278.6
130°	288.2	289.0	289.7	290.1	290.0	289.9	289.9	289.8
132.5°	299.5	300.1	300.8	301.0	301.0	301.0	300.9	300.8
135°	315.6	316.2	316.9	317.2	317.1	316.9	316.8	316.6
137.5°	330.5	331.1	331.8	332.0	331.8	331.6	331.3	331.1
140°	340.1	340.7	341.3	341.5	341.1	340.8	340.4	340.1
142.5°	349.0	349.6	350.2	350.2	349.9	349.6	349.2	348.8
145°	361.5	361.9	362.4	362.5	362.1	361.8	361.5	361.1
147.5°	372.3	372.7	373.1	373.1	372.8	372.5	372.2	371.9
150°	379.0	379.4	379.8	379.8	379.6	379.2	378.8	378.5
152.5°	385.1	385.5	385.9	385.9	385.4	385.0	384.6	384.1
155°	393.3	393.7	394.2	394.1	393.5	393.0	392.5	391.9
157.5°	400.3	400.8	401.1	401.1	400.6	400.1	399.5	399.1
160°	404.4	404.7	405.1	405.1	404.6	404.2	403.7	403.2
162.5°	408.0	408.5	409.0	409.0	408.3	407.7	407.2	406.6
165°	412.6	413.1	413.6	413.6	413.1	412.6	412.2	411.7
167.5°	416.5	417.0	417.5	417.4	416.8	416.1	415.6	414.9
170°	418.5	419.0	419.4	419.3	418.8	418.1	417.5	416.9
172.5°	419.9	420.4	420.8	420.8	420.2	419.6	419.0	418.4
175°	421.5	422.0	422.4	422.4	421.7	421.0	420.3	419.6
177.5°	421.7	422.1	422.4	422.4	421.9	421.4	420.9	420.5
180°	421.1	421.1	421.1	421.1	421.1	421.1	421.1	421.1

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