

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: P331424-930

Luminaire Tested: **S122DIP-S1005D330U930-4F0-1E-UDD-D1**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P331424-930
REPORT IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-1807-864-8,
Test Lab: INNOVATION CENTER
Issue Date: 3/3/2020
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: NEO-RAY
Catalog Number: S122DIP-S1005D330U930-4F0-1E-UDD-D1
Description: DEFINE 2 DIRECT-INDIRECT PENDANT LED LUMINAIRE
DOWNLIGHT 1005 LUMENS PER FOOT, DROP SATIN WHITE DIFFUSER
UPLIGHT 330 LUMENS PER FOOT, FLUSH SATIN WHITE DIFFUSER
Light Source: -
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 4244.9 lumens
Efficiency: N/A
Efficacy: 85.2 lumens/watt
Spacing Criteria (0/90/45): 1.21 / 1.32 / 1.42
Luminous Opening: Rectangular w/ Sides (W: 0.17' x L: 4' x H: 0.08')
CIE Type: Semi-Direct

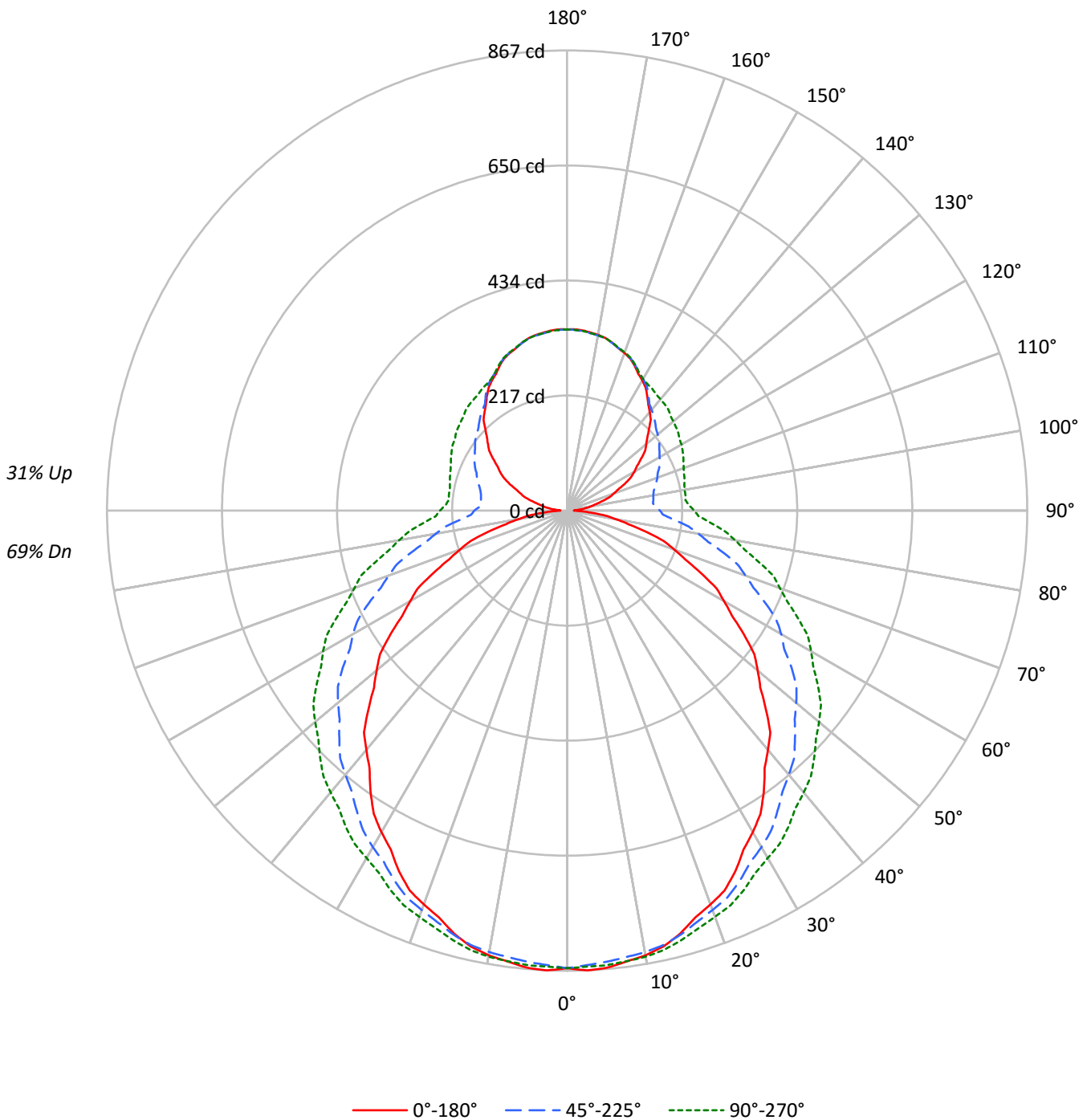
Input Watts (W): 49.8
Input Voltage (V): 120
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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	112	112	112	112	105	105	105	105	94	94	94	83	83	83	73	73	73	69
1	100	95	90	85	94	89	85	81	79	76	73	70	68	65	62	60	58	54
2	90	81	74	68	85	77	70	65	68	63	59	60	56	53	53	50	47	43
3	82	71	63	56	77	67	59	53	60	54	49	53	48	44	46	43	39	36
4	75	62	54	47	70	59	51	45	53	46	41	47	41	37	41	37	33	30
5	68	55	46	40	64	53	44	38	47	40	35	42	36	32	37	32	29	26
6	63	50	41	34	59	47	39	33	42	35	30	38	32	28	33	29	25	22
7	58	45	36	30	55	43	35	29	38	31	27	34	29	24	30	26	22	20
8	54	41	32	27	51	39	31	26	35	28	24	31	26	22	28	23	20	17
9	50	37	29	24	47	35	28	23	32	26	21	29	23	19	26	21	18	16
10	47	34	26	21	44	33	25	21	29	23	19	27	21	18	24	19	16	14

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	13919	13919	13919
5°	13988	13400	13350
10°	13899	13004	12858
15°	13709	12584	12339
20°	13467	12136	11842
25°	13227	11701	11390
30°	12890	11257	10936
35°	12550	10828	10617
40°	12191	10461	10297
45°	11850	10133	10022
50°	11485	9837	9754
55°	11101	9519	9479
60°	10631	9187	9189
65°	10145	8801	8846
70°	9596	8384	8474
75°	8897	7976	8132
80°	7792	7559	7784
85°	6733	7197	7515



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	81.7	1.9
10°-20°	234.3	5.5
20°-30°	355.0	8.4
30°-40°	432.4	10.2
40°-50°	465.2	11.0
50°-60°	451.7	10.6
60°-70°	394.4	9.3
70°-80°	303.7	7.2
80°-90°	205.2	4.8
90°-100°	162.0	3.8
100°-110°	169.7	4.0
110°-120°	182.5	4.3
120°-130°	188.8	4.4
130°-140°	185.3	4.4
140°-150°	168.9	4.0
150°-160°	139.4	3.3
160°-170°	92.4	2.2
170°-180°	32.3	0.8
0°-30°	670.9	15.8
0°-40°	1103.3	26.0
0°-60°	2020.2	47.6
0°-90°	2923.4	68.9
90°-120°	514.3	12.1
90°-150°	1057.3	24.9
90°-180°	1321.0	31.1
0°-180°	4244.9	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	862	862	862	862	862	
5°	865	861	853	860	860	82
15°	825	827	827	838	837	232
25°	750	759	770	784	788	345
35°	646	667	691	717	727	404
45°	530	564	607	644	658	409
55°	406	452	516	559	577	363
65°	277	339	412	462	480	275
75°	154	224	304	355	374	163
85°	45	123	202	253	272	48
90°	13	89	175	222	240	9
95°	25	87	162	208	224	25
105°	68	107	171	213	229	73
115°	120	138	191	227	241	118
125°	170	175	212	244	256	152
135°	218	222	234	259	270	169
145°	263	265	267	275	280	165
155°	301	302	303	304	303	138
165°	328	327	327	329	328	92
175°	341	340	339	341	340	32
180°	341	341	341	341	341	



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CANDELA DISTRIBUTION (FULL):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
0°	862.1	862.1	862.1	862.1	862.1	862.1	862.1	862.1	862.1	862.1	862.1
2.5°	867.2	866.5	865.8	865.1	864.5	863.3	861.8	860.2	858.7	857.1	858.3
5°	864.6	863.8	863.0	862.1	861.3	860.1	858.4	856.7	855.1	853.4	855.1
7.5°	856.9	856.3	855.7	855.2	854.7	853.8	852.5	851.2	849.9	848.6	850.6
10°	850.9	850.4	849.8	849.2	848.6	848.0	847.2	846.3	845.5	844.7	846.9
12.5°	840.9	841.0	841.1	841.2	841.3	841.1	840.5	839.8	839.3	838.6	840.9
15°	824.7	825.2	825.7	826.3	826.9	827.1	827.1	827.1	827.1	827.1	829.6
17.5°	803.6	804.9	806.0	807.1	808.3	809.3	810.2	811.1	812.0	812.9	815.5
20°	789.7	791.1	792.5	793.9	795.2	796.5	797.6	798.7	799.8	801.0	804.0
22.5°	774.7	776.2	777.9	779.5	781.1	782.7	784.2	785.8	787.3	788.9	792.0
25°	749.7	751.6	753.6	755.5	757.5	759.7	762.1	764.7	767.2	769.6	773.0
27.5°	719.7	722.8	726.0	729.2	732.4	735.4	738.3	741.3	744.2	747.2	751.4
30°	699.7	703.3	706.9	710.5	714.1	717.8	721.4	725.0	728.6	732.2	736.6
32.5°	677.7	681.8	685.8	689.9	693.9	698.1	702.4	706.6	710.9	715.2	720.3
35°	646.0	650.7	655.4	660.1	664.9	669.8	675.1	680.4	685.7	691.0	697.1
37.5°	611.5	616.9	622.4	627.8	633.2	639.4	646.2	653.1	659.9	666.8	673.5
40°	588.5	594.6	600.7	606.8	612.9	619.7	627.2	634.7	642.2	649.7	657.0
42.5°	566.6	572.6	578.7	584.8	590.9	598.3	606.9	615.6	624.1	632.8	640.6
45°	529.8	537.3	544.8	552.3	559.8	568.3	578.1	587.8	597.5	607.2	615.9
47.5°	493.6	501.7	509.9	518.0	526.2	536.0	547.4	558.7	570.1	581.5	590.5
50°	468.6	477.2	485.8	494.4	503.0	513.6	526.0	538.5	551.0	563.5	573.0
52.5°	444.6	453.6	462.7	471.7	480.8	491.9	505.0	518.2	531.3	544.5	554.2
55°	406.1	416.0	426.1	436.1	446.1	458.3	472.7	487.1	501.6	516.0	526.0
57.5°	368.1	379.4	390.6	401.9	413.2	426.2	440.9	455.6	470.3	485.0	495.8
60°	341.1	353.0	365.0	376.9	388.9	402.8	418.6	434.4	450.2	466.0	476.6
62.5°	317.2	329.5	341.9	354.2	366.6	380.7	396.6	412.4	428.3	444.1	455.3
65°	277.4	291.0	304.6	318.2	331.8	346.8	363.2	379.5	395.9	412.3	423.7
67.5°	240.9	255.1	269.3	283.6	297.7	313.2	330.0	346.8	363.5	380.3	391.8
70°	214.9	229.3	243.8	258.2	272.6	288.5	305.7	322.9	340.1	357.3	369.2
72.5°	190.9	205.8	220.7	235.5	250.5	266.6	284.1	301.5	318.9	336.4	348.1
75°	153.7	169.3	184.7	200.3	215.9	232.5	250.3	268.1	285.8	303.6	315.5
77.5°	117.7	134.0	150.3	166.5	182.8	199.9	218.0	236.0	254.0	272.1	284.1
80°	93.7	110.6	127.6	144.6	161.4	179.0	197.0	215.1	233.1	251.1	262.8
82.5°	73.7	90.4	107.1	123.8	140.6	158.1	176.3	194.6	212.9	231.1	242.8
85°	45.0	62.2	79.4	96.6	113.8	131.3	149.1	166.9	184.7	202.4	214.1
87.5°	24.5	41.3	58.0	74.7	91.4	108.8	126.8	144.8	162.9	180.9	192.2
90°	12.8	29.7	46.6	63.4	80.3	98.3	117.5	136.6	155.8	175.0	186.0
92.5°	16.6	32.2	47.8	63.3	78.8	95.3	112.8	130.2	147.7	165.1	176.0
95°	24.9	38.6	52.3	66.0	79.7	95.0	111.8	128.6	145.4	162.2	172.7
97.5°	36.1	48.3	60.4	72.6	84.8	99.0	115.2	131.4	147.7	164.0	174.2
100°	45.3	56.1	66.9	77.7	88.5	101.7	117.5	133.2	149.0	164.7	175.0
102.5°	54.0	63.8	73.6	83.4	93.2	105.7	121.1	136.5	151.8	167.1	177.2
105°	68.2	76.4	84.6	92.9	101.2	112.6	127.1	141.7	156.3	170.8	180.7
107.5°	83.7	90.4	97.2	103.9	110.6	120.9	134.7	148.5	162.3	176.2	185.6
110°	92.9	98.8	104.8	110.6	116.6	126.4	140.0	153.6	167.2	180.8	189.6



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CANDELA DISTRIBUTION (continued):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
112.5°	104.0	108.9	114.0	119.0	124.1	133.1	145.9	158.8	171.7	184.7	193.4
115°	120.3	123.7	127.1	130.5	134.0	141.9	154.3	166.6	179.0	191.4	199.6
117.5°	135.2	137.7	140.2	142.8	145.3	152.1	163.3	174.5	185.7	196.9	205.0
120°	146.0	147.7	149.3	150.9	152.5	158.7	169.3	179.9	190.5	201.1	208.8
122.5°	156.0	157.0	158.1	159.1	160.2	165.8	175.9	185.9	196.0	206.1	213.4
125°	170.2	170.7	171.3	171.9	172.4	177.1	185.8	194.4	203.2	211.8	219.2
127.5°	185.2	185.6	186.1	186.5	186.9	190.7	197.6	204.6	211.5	218.4	225.1
130°	194.6	195.2	195.8	196.3	196.8	200.0	205.7	211.4	217.1	222.8	229.3
132.5°	205.2	205.6	206.0	206.4	206.8	209.3	213.9	218.3	222.9	227.4	233.6
135°	218.2	218.8	219.6	220.3	220.9	222.7	225.7	228.6	231.5	234.4	240.2
137.5°	233.1	233.6	234.1	234.6	235.1	236.1	237.5	238.9	240.3	241.7	246.7
140°	242.1	242.4	242.6	243.0	243.3	243.9	244.7	245.6	246.5	247.4	251.8
142.5°	251.3	251.6	251.8	252.2	252.5	252.7	253.1	253.5	253.8	254.1	257.7
145°	263.3	263.7	264.2	264.6	265.1	265.5	265.9	266.3	266.6	267.0	268.7
147.5°	275.1	275.7	276.1	276.7	277.2	277.6	277.9	278.2	278.4	278.7	279.0
150°	283.2	283.6	283.9	284.3	284.7	285.0	285.3	285.5	285.8	286.0	286.3
152.5°	290.3	290.7	291.1	291.5	291.8	292.2	292.4	292.8	293.1	293.4	293.7
155°	301.0	301.2	301.4	301.6	301.7	302.0	302.1	302.3	302.6	302.7	303.0
157.5°	310.1	310.3	310.4	310.5	310.7	310.8	311.0	311.0	311.1	311.3	311.7
160°	315.7	315.8	315.9	316.1	316.2	316.3	316.3	316.4	316.5	316.6	316.9
162.5°	320.7	320.8	320.8	320.8	320.9	320.9	321.0	321.1	321.1	321.1	321.6
165°	327.5	327.4	327.3	327.3	327.3	327.2	327.2	327.2	327.2	327.2	327.7
167.5°	333.1	333.0	332.8	332.6	332.4	332.3	332.2	332.2	332.2	332.2	332.6
170°	336.1	336.0	335.7	335.6	335.4	335.3	335.2	335.1	335.1	335.0	335.4
172.5°	338.2	338.0	337.9	337.6	337.5	337.3	337.3	337.2	337.1	337.0	337.5
175°	340.8	340.6	340.4	340.1	340.0	339.8	339.7	339.6	339.4	339.3	339.7
177.5°	341.8	341.6	341.4	341.4	341.2	341.0	341.0	340.9	340.7	340.6	341.0
180°	341.4	341.4	341.4	341.4	341.4	341.4	341.4	341.4	341.4	341.4	341.4



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CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
0°	862.1	862.1	862.1	862.1	862.1	862.1	862.1	862.1
2.5°	859.3	860.5	861.6	861.9	861.4	861.0	860.5	860.1
5°	856.7	858.4	860.1	860.7	860.5	860.2	859.9	859.7
7.5°	852.6	854.7	856.6	857.5	857.2	857.0	856.6	856.4
10°	849.1	851.3	853.5	854.5	854.2	853.9	853.7	853.4
12.5°	843.1	845.3	847.5	848.5	848.2	847.9	847.7	847.4
15°	832.2	834.6	837.1	838.3	838.0	837.7	837.4	837.1
17.5°	818.2	820.8	823.4	824.7	824.7	824.7	824.7	824.7
20°	807.0	810.1	813.1	814.6	814.6	814.6	814.6	814.6
22.5°	795.0	798.1	801.1	802.9	803.3	803.8	804.2	804.7
25°	776.3	779.7	783.0	785.1	785.9	786.8	787.6	788.4
27.5°	755.6	759.9	764.1	766.5	767.1	767.7	768.3	768.9
30°	741.1	745.5	750.0	752.6	753.4	754.2	755.1	755.9
32.5°	725.5	730.5	735.6	738.9	740.5	741.9	743.5	744.9
35°	703.2	709.3	715.4	719.4	721.4	723.3	725.3	727.2
37.5°	680.3	687.1	693.8	698.2	700.3	702.4	704.4	706.5
40°	664.1	671.4	678.6	683.5	686.0	688.4	691.0	693.5
42.5°	648.5	656.4	664.3	669.4	672.0	674.5	676.9	679.5
45°	624.4	633.1	641.6	647.3	650.1	652.9	655.7	658.4
47.5°	599.5	608.5	617.5	623.5	626.6	629.7	632.7	635.8
50°	582.4	591.8	601.3	607.6	610.6	613.6	616.7	619.7
52.5°	563.9	573.5	583.2	589.6	592.9	596.2	599.5	602.8
55°	536.1	546.0	556.0	562.8	566.4	570.1	573.6	577.2
57.5°	506.6	517.4	528.2	535.3	539.0	542.7	546.3	550.0
60°	487.1	497.7	508.3	515.5	519.3	523.3	527.2	531.0
62.5°	466.5	477.7	488.9	496.4	500.0	503.7	507.4	511.0
65°	435.1	446.5	457.9	465.4	469.0	472.5	476.2	479.8
67.5°	403.3	414.8	426.3	434.0	437.7	441.5	445.3	449.1
70°	381.2	393.1	405.1	412.7	416.0	419.4	422.7	426.1
72.5°	359.8	371.5	383.2	391.1	395.1	399.1	403.1	407.1
75°	327.5	339.4	351.4	359.1	362.7	366.4	370.0	373.6
77.5°	295.9	307.8	319.7	327.6	331.4	335.3	339.2	343.1
80°	274.4	286.2	297.8	305.6	309.5	313.3	317.2	321.1
82.5°	254.5	266.1	277.8	285.4	289.1	292.8	296.4	300.1
85°	225.8	237.4	249.1	256.8	260.7	264.6	268.5	272.4
87.5°	203.6	214.8	226.2	233.6	237.2	240.8	244.3	247.9
90°	197.0	208.0	218.9	226.1	229.5	232.9	236.3	239.7
92.5°	186.9	197.8	208.7	215.9	219.2	222.6	225.9	229.3
95°	183.2	193.8	204.3	211.2	214.4	217.6	220.8	224.0
97.5°	184.5	194.8	205.0	211.8	215.1	218.3	221.6	224.9
100°	185.2	195.5	205.8	212.4	215.4	218.4	221.4	224.4
102.5°	187.4	197.5	207.6	214.1	217.1	220.0	223.1	226.1
105°	190.5	200.4	210.2	216.6	219.7	222.7	225.8	228.9
107.5°	194.9	204.3	213.7	219.8	222.6	225.3	228.0	230.8
110°	198.5	207.4	216.3	222.2	225.1	228.0	230.8	233.7



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CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
112.5°	202.1	210.8	219.6	225.3	228.3	231.2	234.2	237.0
115°	207.9	216.1	224.4	230.0	232.8	235.7	238.6	241.4
117.5°	213.0	221.1	229.1	234.5	237.2	239.8	242.4	245.1
120°	216.5	224.4	232.1	237.4	240.3	243.1	246.1	248.9
122.5°	220.9	228.3	235.7	240.6	243.0	245.6	248.0	250.5
125°	226.5	233.7	241.1	246.0	248.3	250.8	253.2	255.7
127.5°	231.7	238.4	245.0	249.5	251.7	254.0	256.2	258.4
130°	235.9	242.4	248.9	253.2	255.1	257.1	259.1	261.1
132.5°	239.7	245.9	252.0	256.1	258.1	260.2	262.2	264.2
135°	245.9	251.7	257.5	261.4	263.3	265.4	267.4	269.5
137.5°	251.8	256.8	261.9	265.2	266.8	268.5	270.1	271.7
140°	256.2	260.7	265.1	268.1	269.5	270.8	272.2	273.7
142.5°	261.3	264.9	268.5	270.9	272.1	273.3	274.5	275.7
145°	270.5	272.2	273.9	275.4	276.5	277.6	278.8	279.9
147.5°	279.4	279.7	280.1	280.5	281.0	281.4	281.8	282.2
150°	286.4	286.6	286.8	286.8	286.6	286.4	286.3	286.0
152.5°	293.9	294.2	294.4	294.4	294.2	293.9	293.7	293.4
155°	303.4	303.7	304.0	304.1	303.9	303.7	303.5	303.3
157.5°	312.1	312.6	313.0	313.1	312.7	312.4	312.2	311.9
160°	317.3	317.7	318.1	318.1	317.9	317.6	317.4	317.2
162.5°	322.0	322.5	322.9	322.9	322.7	322.4	322.0	321.7
165°	328.1	328.6	329.0	329.1	328.7	328.4	328.1	327.8
167.5°	333.1	333.5	334.0	334.1	333.8	333.4	333.0	332.7
170°	335.9	336.3	336.8	336.8	336.5	336.1	335.7	335.3
172.5°	337.9	338.4	338.8	338.9	338.5	338.1	337.8	337.4
175°	340.2	340.6	341.1	341.1	340.8	340.4	340.0	339.6
177.5°	341.3	341.5	341.9	341.9	341.5	341.3	341.0	340.6
180°	341.4	341.4	341.4	341.4	341.4	341.4	341.4	341.4

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