

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: P331425-935

Luminaire Tested: **SA2XXDIP-C1005D330U935-4F0-1E-UDD-D4**

Issue Date: 10/7/2019

Test Information

Test Method: LM-79-08
Report Number: P331425-935
REPORT IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-1807-864-16,
Test Lab: INNOVATION CENTER
Issue Date: 10/7/2019
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: NEO-RAY
Catalog Number: SA2XXDIP-C1005D330U935-4F0-1E-UDD-D4
Description: DEFINE 2 DIRECT-INDIRECT PENDANT LED LUMINAIRE
DOWNLIGHT 1005 LUMENS PER FOOT, DROP SATIN WHITE DIFFUSER
UPLIGHT 330 LUMENS PER FOOT, BATWING OPTIC
Light Source: -
Ballast/Driver: ELECTRONIC DRIVER

Summary

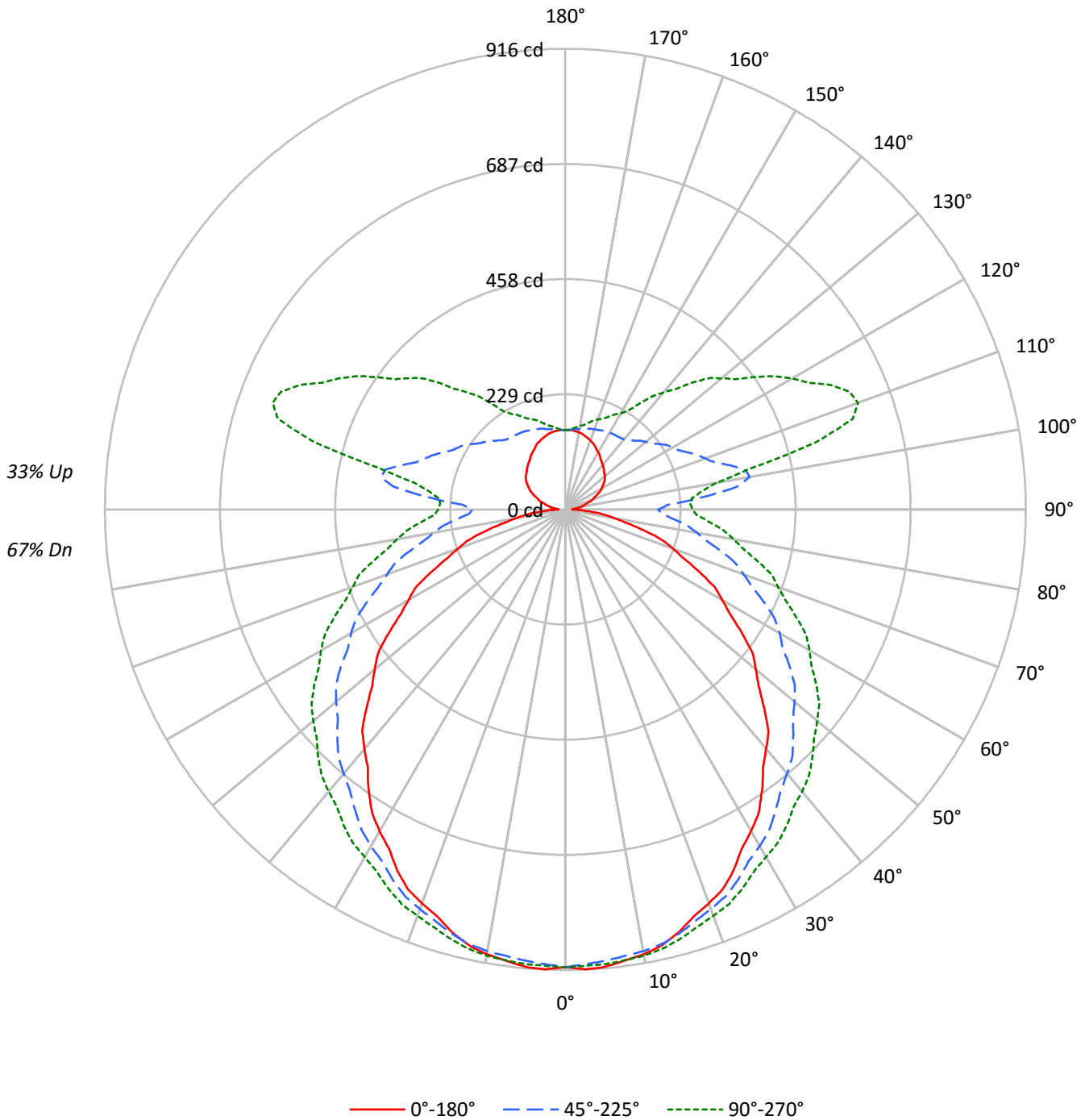
Lumens per Lamp: N/A
Luminaire Lumens: 4575.7 lumens
Efficiency: N/A
Efficacy: 91.9 lumens/watt
Spacing Criteria (0/90/45): 1.21 / 1.32 / 1.42
Luminous Opening: Rectangular w/ Sides (W: 0.17' x L: 4' x H: 0.08')
CIE Type: Semi-Direct

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	111	111	111	111	105	105	105	105	93	93	93	82	82	82	72	72	72	67
1	100	94	90	85	94	89	85	81	79	75	72	69	67	64	61	59	57	53
2	90	81	74	68	84	77	70	65	68	63	58	60	56	52	52	49	46	43
3	82	71	62	56	76	67	59	53	59	53	48	52	47	43	46	42	39	35
4	74	62	53	47	70	59	51	45	52	46	41	46	41	37	40	36	33	30
5	68	55	46	40	64	52	44	38	47	40	35	41	36	31	36	32	28	25
6	63	50	41	34	59	47	39	33	42	35	30	37	32	27	33	28	25	22
7	58	45	36	30	54	42	34	29	38	31	26	34	28	24	30	25	22	19
8	54	41	32	27	50	39	31	25	35	28	23	31	25	21	27	23	19	17
9	50	37	29	24	47	35	28	23	32	25	21	28	23	19	25	21	17	15
10	47	34	26	21	44	32	25	20	29	23	19	26	21	17	23	19	16	14

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	14699	14699	14699
5°	14772	14150	14097
10°	14679	13733	13578
15°	14477	13289	13032
20°	14222	12815	12506
25°	13968	12358	12028
30°	13612	11889	11549
35°	13253	11434	11211
40°	12874	11047	10874
45°	12515	10702	10584
50°	12128	10388	10300
55°	11724	10052	10011
60°	11226	9702	9705
65°	10711	9294	9342
70°	10136	8856	8949
75°	9394	8423	8587
80°	8224	7984	8220
85°	7107	7603	7937



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	86.3	1.9
10°-20°	247.4	5.4
20°-30°	374.9	8.2
30°-40°	456.6	10.0
40°-50°	491.2	10.7
50°-60°	477.0	10.4
60°-70°	416.5	9.1
70°-80°	320.7	7.0
80°-90°	216.6	4.7
90°-100°	211.5	4.6
100°-110°	322.9	7.1
110°-120°	299.5	6.5
120°-130°	227.6	5.0
130°-140°	167.5	3.7
140°-150°	116.8	2.6
150°-160°	80.1	1.7
160°-170°	47.1	1.0
170°-180°	15.3	0.3
0°-30°	708.5	15.5
0°-40°	1165.2	25.5
0°-60°	2133.4	46.6
0°-90°	3087.3	67.5
90°-120°	834.0	18.2
90°-150°	1345.9	29.4
90°-180°	1488.0	32.5
0°-180°	4575.7	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	910	910	910	910	910	
5°	913	909	901	909	908	87
15°	871	873	874	885	884	245
25°	792	801	813	828	833	364
35°	682	705	730	758	768	426
45°	560	596	641	681	695	432
55°	429	478	545	591	610	383
65°	293	358	435	488	507	291
75°	162	237	321	375	394	172
85°	48	129	214	267	288	51
90°	14	94	184	235	253	9
95°	21	100	271	245	252	20
105°	44	102	339	561	517	47
115°	71	105	268	507	584	70
125°	94	113	226	394	458	84
135°	108	130	194	306	356	84
145°	122	141	178	229	257	77
155°	139	150	173	196	204	64
165°	152	156	166	176	179	43
175°	158	158	159	161	161	15
180°	158	158	158	158	158	



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CANDELA DISTRIBUTION (FULL):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
0°	910.4	910.4	910.4	910.4	910.4	910.4	910.4	910.4	910.4	910.4	910.4
2.5°	915.8	915.1	914.3	913.6	912.9	911.7	910.1	908.4	906.8	905.2	906.4
5°	913.1	912.2	911.4	910.4	909.6	908.3	906.5	904.7	903.0	901.2	903.0
7.5°	904.9	904.3	903.7	903.2	902.6	901.6	900.3	898.9	897.6	896.2	898.3
10°	898.6	898.0	897.4	896.8	896.2	895.5	894.7	893.7	892.9	892.0	894.3
12.5°	888.0	888.1	888.3	888.4	888.5	888.2	887.6	886.9	886.3	885.6	888.0
15°	870.9	871.5	872.0	872.6	873.2	873.5	873.5	873.5	873.5	873.5	876.2
17.5°	848.7	850.0	851.2	852.4	853.6	854.7	855.7	856.6	857.6	858.5	861.3
20°	834.0	835.4	836.9	838.4	839.8	841.1	842.3	843.4	844.6	845.8	849.0
22.5°	818.1	819.8	821.5	823.2	824.9	826.6	828.2	829.8	831.5	833.1	836.4
25°	791.7	793.8	795.8	797.9	800.0	802.3	804.9	807.5	810.2	812.8	816.3
27.5°	760.0	763.4	766.7	770.1	773.4	776.6	779.7	782.8	785.9	789.1	793.5
30°	738.9	742.7	746.6	750.4	754.1	758.0	761.8	765.6	769.4	773.3	777.9
32.5°	715.7	720.0	724.3	728.6	732.8	737.2	741.8	746.2	750.8	755.3	760.7
35°	682.2	687.2	692.2	697.2	702.1	707.4	713.0	718.5	724.1	729.7	736.2
37.5°	645.8	651.5	657.3	663.0	668.7	675.2	682.4	689.7	696.9	704.1	711.3
40°	621.5	627.9	634.4	640.8	647.3	654.4	662.4	670.3	678.2	686.1	693.8
42.5°	598.3	604.7	611.1	617.6	624.1	631.8	640.9	650.1	659.1	668.2	676.5
45°	559.5	567.4	575.3	583.2	591.2	600.2	610.5	620.8	631.0	641.3	650.4
47.5°	521.2	529.9	538.5	547.1	555.7	566.0	578.1	590.0	602.1	614.1	623.6
50°	494.8	503.9	513.0	522.1	531.2	542.3	555.5	568.7	581.9	595.1	605.1
52.5°	469.5	479.1	488.6	498.2	507.7	519.4	533.3	547.3	561.1	575.1	585.2
55°	428.9	439.4	450.0	460.5	471.1	484.0	499.2	514.4	529.7	544.9	555.5
57.5°	388.7	400.6	412.5	424.5	436.4	450.0	465.6	481.1	496.7	512.2	523.6
60°	360.2	372.8	385.5	398.0	410.7	425.3	442.0	458.7	475.4	492.1	503.3
62.5°	334.9	347.9	361.0	374.1	387.2	402.1	418.8	435.5	452.3	469.0	480.8
65°	292.9	307.3	321.7	336.0	350.4	366.3	383.6	400.8	418.1	435.4	447.5
67.5°	254.4	269.4	284.4	299.5	314.4	330.8	348.5	366.3	383.9	401.7	413.8
70°	227.0	242.2	257.4	272.7	287.9	304.6	322.9	341.0	359.2	377.4	389.9
72.5°	201.6	217.3	233.1	248.7	264.5	281.5	300.0	318.4	336.8	355.2	367.6
75°	162.3	178.7	195.1	211.5	228.0	245.6	264.3	283.1	301.9	320.6	333.2
77.5°	124.3	141.5	158.7	175.8	193.0	211.1	230.2	249.3	268.3	287.4	300.0
80°	98.9	116.8	134.7	152.7	170.5	189.0	208.0	227.1	246.2	265.2	277.5
82.5°	77.8	95.5	113.1	130.8	148.4	166.9	186.2	205.5	224.8	244.1	256.4
85°	47.5	65.7	83.9	102.0	120.2	138.7	157.5	176.2	195.0	213.8	226.1
87.5°	25.9	43.6	61.3	78.9	96.5	114.8	133.9	153.1	172.2	191.1	202.9
90°	13.5	31.4	49.7	67.2	84.9	103.7	124.0	144.8	165.5	184.5	196.0
92.5°	15.8	33.3	51.3	68.5	86.4	106.2	131.2	158.9	185.6	204.2	209.6
95°	21.2	36.2	53.0	69.6	88.2	111.2	142.8	186.8	239.7	271.0	267.3
97.5°	26.6	40.5	56.0	72.3	90.2	113.0	147.5	201.3	276.8	344.0	364.8
100°	32.6	44.4	58.0	73.7	90.7	112.8	145.3	198.9	281.0	372.3	427.0
102.5°	37.2	47.8	60.4	75.3	91.4	112.9	143.8	192.7	269.5	366.1	445.6
105°	43.7	53.5	64.1	77.1	92.3	112.7	142.2	184.6	250.0	338.9	430.1
107.5°	52.2	60.0	68.9	79.9	93.3	112.5	141.0	179.3	235.4	310.8	392.2
110°	57.0	64.1	71.8	81.6	93.8	112.8	140.5	176.8	228.3	296.2	368.5



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CANDELA DISTRIBUTION (continued):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
112.5°	62.3	68.4	75.5	84.1	95.2	113.6	140.1	174.4	221.9	283.4	349.5
115°	70.7	75.4	80.5	87.4	96.7	113.0	139.4	171.1	213.8	267.8	324.7
117.5°	78.0	81.4	85.2	90.6	98.6	114.3	138.5	168.2	206.2	254.1	304.6
120°	83.3	85.8	88.8	92.6	99.9	114.9	138.4	166.6	201.8	246.1	292.9
122.5°	88.5	89.9	92.2	95.7	102.2	116.8	138.9	165.1	197.9	238.8	282.2
125°	93.9	94.8	96.6	100.3	106.3	119.6	139.9	163.0	191.2	226.2	265.4
127.5°	99.3	100.2	102.5	106.2	111.7	124.1	142.3	162.2	186.1	215.7	249.8
130°	102.5	103.3	106.1	110.0	115.9	127.3	144.1	161.8	183.2	208.8	239.6
132.5°	105.3	106.5	109.5	113.7	119.8	130.5	145.4	161.4	180.2	202.2	230.1
135°	108.4	109.6	113.3	117.9	124.8	134.8	147.5	161.1	176.2	193.7	217.2
137.5°	112.5	113.9	117.5	122.3	129.2	137.8	148.6	159.9	172.2	186.0	206.0
140°	115.7	116.7	120.0	124.6	131.0	139.1	148.7	158.8	169.7	181.5	199.3
142.5°	118.9	119.5	122.7	127.3	133.4	140.7	149.7	159.0	168.8	179.4	194.5
145°	122.3	123.6	126.6	131.1	137.2	143.9	152.1	160.7	169.1	178.2	189.8
147.5°	127.4	128.3	131.2	135.4	140.5	146.5	154.2	161.7	169.4	177.2	185.9
150°	130.8	131.7	134.1	138.1	142.7	148.2	155.2	162.1	169.1	176.4	183.7
152.5°	134.2	134.7	137.1	140.5	144.9	149.8	156.1	162.4	168.7	175.2	182.0
155°	139.1	139.3	141.1	144.5	147.8	152.4	157.6	162.7	167.9	173.1	178.9
157.5°	143.0	143.4	144.8	147.7	150.4	154.2	158.6	162.7	166.5	170.9	175.9
160°	145.7	146.0	147.2	149.6	152.1	155.5	159.1	162.7	165.8	169.4	173.7
162.5°	148.4	148.2	149.5	151.4	153.6	156.2	159.4	162.5	165.1	168.2	171.8
165°	151.5	151.2	151.8	153.6	155.2	157.0	159.7	161.9	163.7	165.8	168.5
167.5°	154.0	153.7	154.2	155.4	156.5	157.6	159.6	161.4	162.3	163.7	165.4
170°	155.8	155.2	155.5	156.4	157.0	157.9	159.4	160.9	161.5	162.5	163.7
172.5°	156.7	156.4	156.2	157.1	157.5	158.2	159.2	160.2	160.6	161.0	162.0
175°	157.9	157.6	157.3	157.9	157.9	158.2	158.8	159.4	159.1	159.4	159.7
177.5°	158.4	157.9	157.7	158.2	158.2	158.2	158.4	158.9	158.4	158.2	158.4
180°	158.2	158.2	158.2	158.2	158.2	158.2	158.2	158.2	158.2	158.2	158.2



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CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
0°	910.4	910.4	910.4	910.4	910.4	910.4	910.4	910.4
2.5°	907.5	908.7	909.9	910.2	909.7	909.3	908.8	908.4
5°	904.7	906.5	908.3	909.0	908.7	908.4	908.1	907.8
7.5°	900.4	902.6	904.7	905.6	905.3	905.0	904.7	904.4
10°	896.6	899.1	901.4	902.4	902.1	901.8	901.6	901.2
12.5°	890.4	892.7	895.0	896.0	895.8	895.4	895.2	894.9
15°	878.8	881.4	884.1	885.3	884.9	884.7	884.3	884.1
17.5°	864.0	866.8	869.5	870.9	870.9	870.9	870.9	870.9
20°	852.2	855.5	858.7	860.3	860.3	860.3	860.3	860.3
22.5°	839.6	842.8	846.0	847.9	848.3	848.9	849.3	849.8
25°	819.8	823.4	826.9	829.1	830.0	830.9	831.7	832.6
27.5°	798.0	802.5	806.9	809.4	810.1	810.7	811.4	812.0
30°	782.6	787.3	792.0	794.8	795.7	796.5	797.5	798.3
32.5°	766.1	771.5	776.9	780.3	782.0	783.5	785.1	786.7
35°	742.6	749.1	755.5	759.7	761.8	763.9	765.9	767.9
37.5°	718.4	725.6	732.7	737.4	739.5	741.8	743.9	746.1
40°	701.4	709.0	716.6	721.8	724.4	727.0	729.7	732.4
42.5°	684.8	693.2	701.5	707.0	709.6	712.3	714.9	717.6
45°	659.4	668.6	677.6	683.6	686.6	689.5	692.4	695.3
47.5°	633.1	642.6	652.1	658.5	661.7	665.0	668.1	671.4
50°	615.0	625.0	635.0	641.6	644.8	648.0	651.3	654.4
52.5°	595.5	605.6	615.9	622.7	626.1	629.6	633.1	636.5
55°	566.1	576.6	587.2	594.3	598.1	602.0	605.8	609.6
57.5°	535.0	546.4	557.8	565.3	569.2	573.1	577.0	580.8
60°	514.4	525.6	536.7	544.4	548.5	552.6	556.7	560.8
62.5°	492.7	504.5	516.3	524.2	528.1	531.9	535.8	539.7
65°	459.5	471.5	483.5	491.5	495.2	499.0	502.9	506.7
67.5°	425.9	438.1	450.2	458.3	462.3	466.2	470.3	474.2
70°	402.6	415.2	427.8	435.8	439.4	442.9	446.4	450.0
72.5°	380.0	392.4	404.7	413.0	417.2	421.5	425.7	429.9
75°	345.9	358.4	371.1	379.3	383.1	386.9	390.7	394.5
77.5°	312.5	325.0	337.6	345.9	350.0	354.1	358.3	362.3
80°	289.8	302.2	314.5	322.7	326.8	330.9	335.0	339.1
82.5°	268.7	281.0	293.3	301.4	305.3	309.2	313.1	316.9
85°	238.4	250.7	263.0	271.2	275.3	279.5	283.5	287.7
87.5°	214.8	226.7	238.8	246.7	250.5	254.2	258.0	261.7
90°	207.3	218.5	230.8	238.8	242.3	245.8	249.3	252.8
92.5°	214.2	221.9	230.8	236.4	239.8	242.3	246.1	249.1
95°	253.7	246.3	244.7	245.3	244.9	246.0	248.6	252.4
97.5°	348.1	325.1	303.1	288.3	277.2	273.1	272.2	273.0
100°	431.4	404.5	373.7	343.9	321.9	312.0	306.4	304.2
102.5°	483.6	485.8	465.9	433.8	409.6	390.5	382.7	378.5
105°	503.6	548.3	562.5	559.2	543.5	527.9	518.1	517.0
107.5°	469.1	530.7	572.2	593.5	599.1	601.3	601.9	599.4
110°	442.1	505.9	554.3	585.6	601.8	610.9	616.8	619.7



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CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
112.5°	416.7	478.4	529.3	564.3	585.7	598.6	607.0	611.8
115°	383.7	439.3	487.9	525.3	550.1	567.3	578.4	584.4
117.5°	355.9	405.7	450.6	485.8	510.7	528.6	539.8	545.2
120°	340.4	386.3	426.8	460.1	484.7	502.2	514.3	520.5
122.5°	327.0	369.5	408.0	438.4	460.3	477.1	487.7	493.0
125°	306.5	345.8	380.5	408.5	428.8	443.0	453.2	458.3
127.5°	286.3	321.9	354.4	380.4	398.4	411.8	420.9	425.5
130°	273.4	306.6	337.7	362.4	379.7	392.4	400.8	405.6
132.5°	260.7	291.8	320.6	344.1	361.1	373.8	381.8	386.2
135°	243.1	269.3	295.6	316.8	332.3	344.7	352.5	356.1
137.5°	227.5	249.6	271.0	289.5	303.4	314.1	320.9	324.7
140°	217.7	236.9	255.6	272.2	283.8	293.4	299.7	303.3
142.5°	210.3	226.4	242.2	256.1	266.8	275.5	281.1	283.0
145°	201.0	212.8	223.9	234.4	243.1	249.8	254.3	256.7
147.5°	194.2	202.3	209.9	216.9	223.6	228.4	231.2	232.5
150°	191.1	197.8	204.1	209.6	214.1	217.8	219.6	220.0
152.5°	188.4	194.6	200.0	204.7	208.4	211.5	212.8	212.9
155°	184.7	189.5	194.1	197.4	200.8	202.9	204.1	203.5
157.5°	180.4	184.4	188.2	190.9	193.2	195.0	195.5	195.5
160°	177.6	181.0	184.3	186.5	188.6	190.1	190.5	190.5
162.5°	175.0	177.9	180.7	182.4	184.5	185.5	185.8	185.5
165°	171.0	173.1	175.2	176.4	177.6	178.9	178.9	178.6
167.5°	167.1	168.8	170.2	171.3	171.9	172.5	172.5	172.1
170°	165.2	166.1	167.3	167.9	168.2	169.1	168.8	168.2
172.5°	163.0	163.7	164.6	165.0	165.3	165.7	165.4	165.1
175°	160.7	160.9	161.3	161.5	161.5	161.9	161.5	160.9
177.5°	158.9	158.9	159.2	159.2	159.2	159.2	158.9	158.4
180°	158.2	158.2	158.2	158.2	158.2	158.2	158.2	158.2

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