

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: P331338-940

Luminaire Tested: **SA2XXDIP-C675D330U940-4F0-1E-UDD-F4**

Issue Date: 10/7/2019

Test Information

Test Method: LM-79-08
Report Number: P331338-940
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-C675D330U940-4F0-1E-UDD-F4
Description: DEFINE 2 DIRECT-INDIRECT PENDANT LED LUMINAIRE
DOWNLIGHT 675 LUMENS PER FOOT, FLUSH SATIN WHITE DIFFUSER
UPLIGHT 330 LUMENS PER FOOT, BATWING OPTIC
Light Source: -
Ballast/Driver: ELECTRONIC DRIVER

Summary

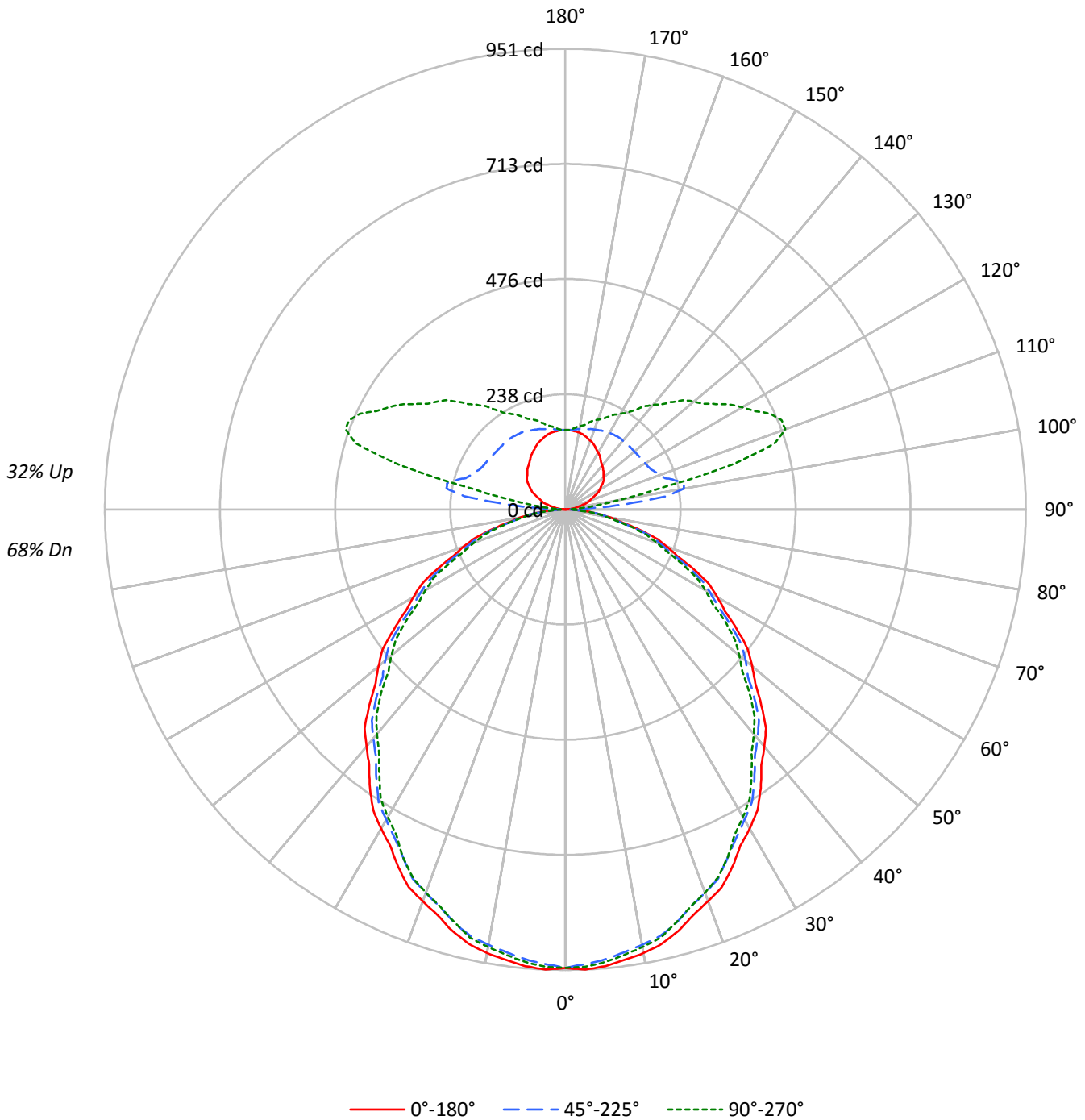
Lumens per Lamp: N/A
Luminaire Lumens: 3550.1 lumens
Efficiency: N/A
Efficacy: 101.4 lumens/watt
Spacing Criteria (0/90/45): 1.2 / 1.16 / 1.3
Luminous Opening: Rectangular (W 0.17' x L: 4' x H: 0')
CIE Type: Semi-Direct

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	73	73	73	68
1	102	97	93	90	96	92	88	85	82	79	77	73	71	69	64	63	61	57
2	93	85	79	73	87	80	75	70	72	67	64	64	60	57	56	54	52	48
3	85	75	67	61	79	71	64	59	63	58	54	56	52	49	50	47	44	41
4	77	66	58	52	73	63	56	50	56	50	46	50	46	42	45	41	38	35
5	71	59	51	45	67	56	49	43	51	44	40	45	40	36	40	36	33	30
6	66	53	45	39	62	51	43	37	46	39	35	41	36	32	37	32	29	27
7	61	48	40	34	57	46	38	33	41	35	31	37	32	28	33	29	26	24
8	57	44	36	30	53	42	34	29	38	32	27	34	29	25	31	27	23	21
9	53	40	32	27	50	38	31	26	35	29	25	32	26	23	28	24	21	19
10	49	37	29	25	47	35	28	24	32	26	22	29	24	21	26	22	19	17

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	15285	15285	15285
5°	15344	15123	15211
10°	15252	14969	15044
15°	15064	14775	14760
20°	14795	14483	14467
25°	14530	14125	14125
30°	14188	13798	13679
35°	13868	13403	13204
40°	13468	13009	12760
45°	13075	12618	12305
50°	12645	12210	11776
55°	12197	11738	11299
60°	11699	11170	10756
65°	11163	10609	10120
70°	10485	9928	9456
75°	9538	9145	8914
80°	8461	8210	7782
85°	6928	6576	5891



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	89.0	2.5
10°-20°	250.5	7.1
20°-30°	368.2	10.4
30°-40°	427.7	12.0
40°-50°	427.2	12.0
50°-60°	372.6	10.5
60°-70°	275.5	7.8
70°-80°	156.0	4.4
80°-90°	43.4	1.2
90°-100°	65.5	1.8
100°-110°	222.3	6.3
110°-120°	236.2	6.7
120°-130°	194.4	5.5
130°-140°	156.1	4.4
140°-150°	118.0	3.3
150°-160°	82.9	2.3
160°-170°	48.8	1.4
170°-180°	15.9	0.4
0°-30°	707.7	19.9
0°-40°	1135.4	32.0
0°-60°	1935.1	54.5
0°-90°	2410.1	67.9
90°-120°	524.0	14.8
90°-150°	992.5	28.0
90°-180°	1140.0	32.1
0°-180°	3550.1	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	947	947	947	947	947	
5°	947	943	933	940	938	90
15°	901	895	884	887	883	254
25°	816	808	793	794	793	375
35°	704	694	680	675	670	439
45°	573	566	553	543	539	442
55°	433	428	417	406	401	387
65°	292	286	278	270	265	289
75°	153	151	147	142	143	163
85°	37	36	36	33	32	43
90°	0	4	11	10	10	2
95°	11	27	124	47	36	12
105°	38	58	233	417	355	41
115°	68	86	195	403	467	67
125°	94	112	188	327	379	84
135°	111	132	186	274	314	86
145°	127	146	185	229	251	79
155°	144	155	179	203	211	66
165°	157	162	172	182	185	44
175°	164	164	165	167	167	16
180°	164	164	164	164	164	



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CANDELA DISTRIBUTION (FULL):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
0°	946.7	946.7	946.7	946.7	946.7	946.7	946.7	946.7	946.7	946.7	946.7
2.5°	951.1	950.3	949.5	948.7	947.9	946.6	944.8	943.0	941.2	939.4	941.0
5°	946.7	945.9	945.1	944.3	943.5	942.0	939.8	937.5	935.3	933.1	934.7
7.5°	938.3	937.1	935.9	934.6	933.4	931.6	929.3	927.0	924.8	922.5	924.1
10°	930.3	928.9	927.5	926.0	924.7	922.7	920.3	917.9	915.4	913.0	914.6
12.5°	919.4	918.2	916.9	915.6	914.4	912.6	910.1	907.7	905.3	902.9	904.0
15°	901.2	900.0	898.8	897.6	896.3	894.4	891.8	889.1	886.5	883.9	884.8
17.5°	877.9	876.6	875.5	874.2	873.1	871.1	868.4	865.8	863.1	860.4	861.4
20°	861.1	860.0	858.7	857.5	856.3	854.3	851.4	848.6	845.8	842.9	843.6
22.5°	844.4	842.7	841.0	839.3	837.6	835.4	832.8	830.1	827.4	824.7	824.8
25°	815.6	814.0	812.4	810.7	809.1	806.6	803.2	799.8	796.3	792.9	793.3
27.5°	782.8	781.4	780.0	778.5	777.0	775.0	772.2	769.5	766.8	764.1	763.5
30°	761.0	759.4	757.8	756.2	754.6	752.2	749.2	746.2	743.2	740.1	739.5
32.5°	737.7	736.4	735.1	733.8	732.5	730.3	727.1	723.9	720.7	717.5	716.4
35°	703.6	701.7	699.6	697.6	695.5	692.9	689.7	686.4	683.2	680.0	678.8
37.5°	665.2	663.4	661.6	659.9	658.2	655.6	652.4	649.2	646.0	642.7	641.1
40°	639.0	637.4	635.8	634.2	632.6	630.2	626.9	623.7	620.5	617.2	615.4
42.5°	613.6	611.9	610.3	608.7	607.1	604.7	601.4	598.2	594.9	591.7	589.7
45°	572.6	571.1	569.7	568.4	566.9	564.7	561.7	558.7	555.6	552.6	550.4
47.5°	531.8	530.5	529.1	527.8	526.5	524.2	521.0	517.9	514.8	511.6	509.3
50°	503.4	502.4	501.4	500.3	499.4	497.4	494.6	491.8	488.9	486.1	483.3
52.5°	475.7	474.4	473.1	471.7	470.4	468.4	465.7	463.1	460.4	457.7	455.4
55°	433.3	432.1	430.9	429.6	428.5	426.6	424.2	421.8	419.4	417.0	414.5
57.5°	390.7	389.8	388.8	387.8	386.8	385.0	382.4	379.7	377.0	374.3	371.9
60°	362.3	361.5	360.7	359.9	359.1	357.2	354.5	351.6	348.7	345.9	343.7
62.5°	334.7	333.3	332.1	330.7	329.5	327.7	325.6	323.3	321.2	319.0	316.9
65°	292.2	291.0	289.8	288.6	287.3	285.7	283.7	281.7	279.6	277.7	275.8
67.5°	249.1	248.1	247.1	246.1	245.1	243.8	241.9	240.1	238.4	236.5	235.1
70°	222.1	221.3	220.5	219.7	218.9	217.6	215.7	213.9	212.1	210.3	208.8
72.5°	194.5	193.6	192.8	192.0	191.2	190.2	189.0	187.9	186.7	185.5	184.1
75°	152.9	152.5	152.1	151.7	151.3	150.6	149.6	148.6	147.6	146.6	145.3
77.5°	115.8	115.1	114.4	113.7	113.1	112.5	112.1	111.6	111.3	110.8	110.3
80°	91.0	90.9	90.6	90.4	90.2	89.9	89.5	89.1	88.7	88.3	87.7
82.5°	67.8	67.7	67.7	67.6	67.6	67.4	67.1	67.0	66.7	66.4	65.7
85°	37.4	37.1	36.9	36.7	36.5	36.3	36.1	35.9	35.7	35.5	34.9
87.5°	13.2	13.0	12.9	12.8	12.6	12.4	12.4	12.6	12.6	12.3	11.8
90°	0.4	1.2	2.5	3.1	3.7	4.7	6.3	8.5	10.4	10.7	10.4
92.5°	3.8	5.5	7.8	9.2	11.3	14.3	21.4	31.5	40.4	40.9	34.6
95°	11.1	12.3	15.4	18.3	23.3	30.9	45.4	72.8	109.3	123.5	108.1
97.5°	17.9	19.6	23.0	27.3	33.1	41.6	59.8	98.1	158.8	210.8	221.1
100°	24.3	25.2	28.0	33.1	39.4	48.2	64.9	103.3	171.4	248.9	294.3
102.5°	30.1	30.8	33.6	38.6	45.2	54.0	69.5	103.6	166.6	250.1	321.5
105°	38.4	39.7	41.9	46.6	53.6	62.4	77.2	105.2	157.2	233.4	317.3
107.5°	47.5	48.5	50.6	55.0	61.9	70.8	85.2	109.6	152.6	215.5	289.6
110°	53.6	54.8	56.7	60.8	67.4	76.6	90.4	113.1	151.6	207.0	272.2



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CANDELA DISTRIBUTION (continued):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
112.5°	59.1	60.4	62.5	66.3	72.7	82.1	95.5	116.9	151.8	201.4	260.1
115°	67.8	69.3	71.2	75.0	81.3	89.8	103.3	122.5	153.1	195.4	245.1
117.5°	76.7	77.9	79.8	83.2	89.3	98.1	110.6	128.6	155.4	192.3	235.7
120°	82.2	83.5	85.4	88.2	94.5	103.3	115.7	132.7	156.9	190.6	230.6
122.5°	87.6	88.5	90.4	93.5	99.8	108.9	120.4	136.2	158.6	189.6	226.3
125°	94.5	95.5	97.4	101.1	107.5	116.3	127.6	141.8	161.3	187.8	220.3
127.5°	100.0	101.3	104.0	108.2	114.1	123.2	134.3	147.0	164.0	186.7	214.5
130°	103.3	104.6	107.7	112.2	118.5	127.2	138.3	150.3	166.0	186.2	210.8
132.5°	106.4	107.9	111.3	115.9	122.5	131.3	141.9	153.6	168.1	185.9	207.8
135°	110.9	112.2	115.9	120.6	128.0	136.7	146.9	157.8	170.5	185.6	203.5
137.5°	115.2	116.7	120.5	125.6	132.7	140.9	150.9	161.1	172.6	185.5	200.5
140°	118.5	119.8	123.5	128.6	135.5	143.7	153.1	162.9	173.6	185.3	198.8
142.5°	121.7	122.8	126.3	131.3	138.0	145.7	154.9	164.4	174.3	185.3	197.1
145°	126.6	128.0	131.1	135.8	142.1	149.0	157.6	166.4	175.1	184.6	194.7
147.5°	132.0	132.9	135.9	140.3	145.5	151.7	159.7	167.5	175.4	183.5	192.3
150°	135.5	136.4	138.9	143.0	147.8	153.5	160.7	167.9	175.1	182.7	190.3
152.5°	139.0	139.5	142.0	145.5	150.1	155.2	161.7	168.2	174.7	181.5	188.5
155°	144.0	144.3	146.2	149.6	153.1	157.8	163.2	168.5	173.9	179.2	185.3
157.5°	148.1	148.5	150.0	153.0	155.8	159.7	164.3	168.5	172.5	177.0	182.2
160°	150.9	151.2	152.5	155.0	157.6	161.0	164.8	168.5	171.7	175.5	179.9
162.5°	153.7	153.5	154.8	156.8	159.1	161.8	165.1	168.3	170.9	174.2	177.9
165°	156.9	156.6	157.2	159.1	160.7	162.6	165.4	167.6	169.5	171.7	174.5
167.5°	159.5	159.2	159.7	161.0	162.1	163.3	165.3	167.2	168.1	169.5	171.3
170°	161.3	160.7	161.0	161.9	162.6	163.5	165.1	166.7	167.3	168.3	169.5
172.5°	162.3	161.9	161.8	162.7	163.1	163.8	164.9	165.9	166.3	166.7	167.7
175°	163.5	163.2	162.9	163.5	163.5	163.8	164.4	165.1	164.8	165.1	165.4
177.5°	164.1	163.5	163.4	163.8	163.8	163.8	164.1	164.6	164.1	163.8	164.1
180°	163.8	163.8	163.8	163.8	163.8	163.8	163.8	163.8	163.8	163.8	163.8



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CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
0°	946.7	946.7	946.7	946.7	946.7	946.7	946.7	946.7
2.5°	942.6	944.3	945.9	946.6	946.2	945.9	945.6	945.3
5°	936.3	937.9	939.5	940.1	939.8	939.3	939.0	938.5
7.5°	925.8	927.4	929.0	929.5	929.1	928.7	928.3	927.8
10°	916.2	917.9	919.5	920.0	919.4	918.8	918.2	917.6
12.5°	905.1	906.2	907.4	907.7	907.2	906.9	906.4	906.0
15°	885.6	886.4	887.2	887.1	886.0	885.0	884.0	883.0
17.5°	862.3	863.2	864.2	864.2	863.2	862.2	861.2	860.2
20°	844.2	844.8	845.3	845.3	844.5	843.6	842.8	842.0
22.5°	825.0	825.1	825.2	825.0	824.6	824.0	823.6	823.1
25°	793.7	794.1	794.5	794.5	794.1	793.7	793.3	792.9
27.5°	762.9	762.3	761.7	760.9	759.9	758.9	758.0	757.0
30°	738.9	738.2	737.6	736.9	736.1	735.3	734.5	733.7
32.5°	715.3	714.3	713.1	712.2	711.4	710.6	709.7	708.9
35°	677.6	676.4	675.1	674.0	673.1	672.0	671.0	669.9
37.5°	639.7	638.2	636.7	635.4	634.5	633.5	632.6	631.6
40°	613.6	611.7	609.9	608.6	607.8	607.0	606.2	605.4
42.5°	587.7	585.8	583.8	582.2	581.0	580.0	578.8	577.7
45°	548.1	545.9	543.7	542.2	541.4	540.6	539.8	538.9
47.5°	506.9	504.5	502.2	500.4	499.3	498.1	497.0	495.8
50°	480.5	477.6	474.7	472.9	471.8	470.8	469.8	468.8
52.5°	453.0	450.7	448.4	446.5	445.1	443.8	442.5	441.1
55°	412.1	409.7	407.2	405.5	404.5	403.5	402.4	401.4
57.5°	369.5	367.1	364.8	363.2	362.4	361.7	360.9	360.1
60°	341.4	339.2	337.0	335.6	335.0	334.4	333.8	333.1
62.5°	314.9	312.8	310.8	309.3	308.5	307.7	307.0	306.2
65°	274.0	272.2	270.4	268.9	268.0	266.9	265.9	264.9
67.5°	233.6	232.3	230.9	229.7	228.9	228.1	227.3	226.5
70°	207.4	206.1	204.6	203.5	202.7	201.9	201.1	200.3
72.5°	182.7	181.3	179.9	178.8	178.2	177.5	176.9	176.2
75°	144.1	142.9	141.7	141.3	141.7	142.1	142.5	142.9
77.5°	109.7	109.1	108.4	107.9	107.3	106.7	106.2	105.6
80°	87.1	86.5	85.9	85.3	85.0	84.5	84.2	83.7
82.5°	64.9	64.1	63.4	63.0	62.9	62.8	62.7	62.6
85°	34.3	33.7	33.1	32.6	32.5	32.3	32.1	31.8
87.5°	11.2	10.6	10.3	10.0	9.8	9.7	9.5	9.4
90°	10.1	9.5	10.1	10.4	10.4	10.4	10.4	10.4
92.5°	27.5	23.5	21.0	19.0	18.7	17.7	17.9	17.5
95°	82.6	63.3	50.1	43.2	39.1	36.6	35.6	35.9
97.5°	192.6	157.6	123.5	100.8	85.7	77.9	73.4	70.7
100°	287.7	248.6	205.5	167.3	141.2	127.6	118.5	112.8
102.5°	349.9	341.1	309.5	269.1	240.7	217.6	206.2	198.5
105°	382.8	418.4	422.5	412.1	392.5	373.0	359.4	355.1
107.5°	359.1	412.8	445.5	460.7	463.2	462.2	459.4	453.6
110°	338.7	395.1	435.4	461.3	474.8	480.8	483.7	483.3



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CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
112.5°	320.0	374.2	417.2	446.9	465.7	475.7	481.1	482.8
115°	297.1	345.6	386.9	419.4	441.8	456.2	464.4	467.3
117.5°	279.8	322.4	359.9	390.3	413.1	428.5	437.0	439.4
120°	271.3	310.3	343.8	372.4	394.5	409.3	418.4	421.6
122.5°	264.5	300.2	331.9	357.8	377.6	392.2	400.3	402.9
125°	254.6	287.0	314.8	338.4	356.7	368.6	376.5	379.1
127.5°	244.8	274.2	300.3	322.1	338.0	349.3	356.1	358.1
130°	238.5	265.6	290.5	311.3	326.7	337.4	343.8	346.3
132.5°	232.5	257.5	280.4	300.0	315.1	325.8	331.6	333.9
135°	224.0	244.8	265.6	283.2	296.8	307.2	312.9	314.1
137.5°	217.3	234.7	251.2	266.5	278.9	287.8	292.8	294.7
140°	212.9	228.1	242.6	256.5	266.5	274.7	279.5	281.3
142.5°	209.5	222.3	234.8	246.4	255.9	263.4	267.6	268.0
145°	204.5	214.9	224.6	233.8	241.3	246.7	249.9	250.7
147.5°	200.6	208.8	216.4	223.1	229.3	233.6	235.8	236.4
150°	197.9	204.8	211.4	217.0	221.8	225.6	227.5	227.8
152.5°	195.1	201.5	207.1	212.0	215.8	219.0	220.4	220.5
155°	191.3	196.3	201.0	204.5	207.9	210.2	211.4	210.8
157.5°	186.8	191.0	194.9	197.7	200.1	202.0	202.5	202.5
160°	184.0	187.4	190.9	193.1	195.4	196.9	197.2	197.2
162.5°	181.2	184.2	187.2	188.9	191.1	192.2	192.4	192.2
165°	177.1	179.2	181.5	182.7	184.0	185.3	185.3	184.9
167.5°	173.1	174.8	176.3	177.5	178.0	178.7	178.6	178.3
170°	171.1	172.0	173.3	173.9	174.2	175.1	174.9	174.2
172.5°	168.8	169.5	170.5	170.9	171.2	171.7	171.3	170.9
175°	166.4	166.7	167.0	167.3	167.3	167.6	167.3	166.7
177.5°	164.6	164.6	164.9	164.9	164.9	164.9	164.6	164.1
180°	163.8	163.8	163.8	163.8	163.8	163.8	163.8	163.8

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