

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: P331347-930

Luminaire Tested: **SA2XXDIP-C675D530U930-4F0-1E-UDD-F4**

Issue Date: 10/7/2019

Test Information

Test Method: LM-79-08
Report Number: P331347-930
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-C675D530U930-4F0-1E-UDD-F4
Description: DEFINE 2 DIRECT-INDIRECT PENDANT LED LUMINAIRE
DOWNLIGHT 675 LUMENS PER FOOT, FLUSH SATIN WHITE DIFFUSER
UPLIGHT 530 LUMENS PER FOOT, BATWING OPTIC
Light Source: -
Ballast/Driver: ELECTRONIC DRIVER

Summary

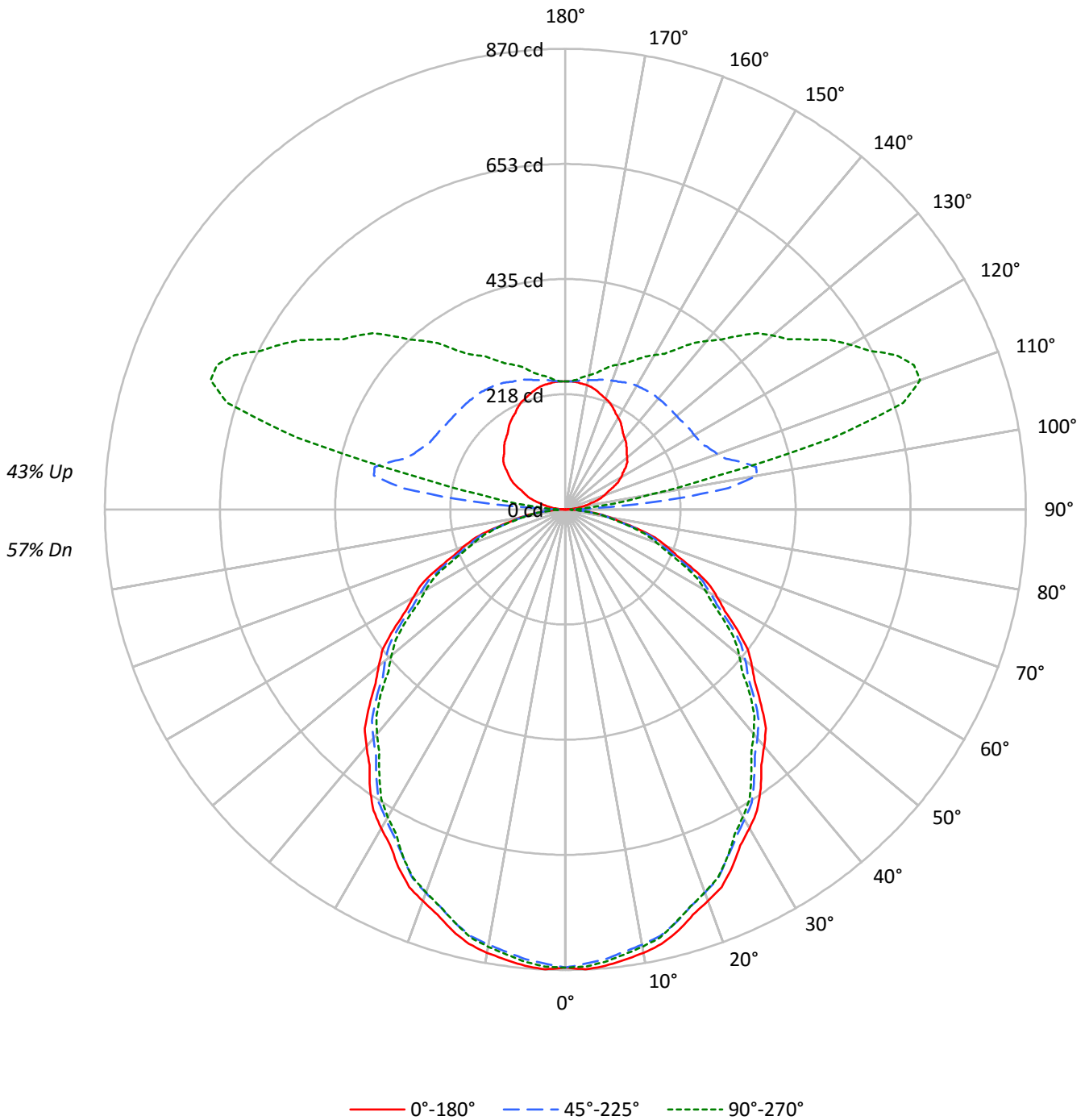
Lumens per Lamp: N/A
Luminaire Lumens: 3886.8 lumens
Efficiency: N/A
Efficacy: 96.4 lumens/watt
Spacing Criteria (0/90/45): 1.2 / 1.16 / 1.3
Luminous Opening: Rectangular (W 0.17' x L: 4' x H: 0')
CIE Type: General Diffuse

Input Watts (W): 40.3
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	109	109	109	109	101	101	101	101	87	87	87	74	74	74	62	62	62	57
1	99	95	91	87	92	88	85	82	76	74	72	65	63	62	55	54	53	48
2	90	83	77	71	84	77	72	67	67	63	59	57	54	52	48	46	44	40
3	82	73	65	60	76	68	62	56	59	54	50	51	47	44	43	40	38	34
4	75	65	57	50	70	60	53	48	53	47	43	45	41	37	38	35	33	29
5	69	58	49	43	64	54	47	41	47	41	37	41	36	32	35	31	28	25
6	64	52	43	38	59	48	41	36	42	36	32	37	32	28	31	28	25	22
7	59	47	39	33	55	44	37	31	38	33	28	33	29	25	29	25	22	20
8	55	42	35	29	51	40	33	28	35	29	25	31	26	23	26	23	20	18
9	51	39	31	26	48	37	30	25	32	27	23	28	24	20	24	21	18	16
10	48	36	28	23	45	34	27	22	30	24	20	26	22	18	23	19	16	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	2.1
10°-20°	229.0	5.9
20°-30°	336.6	8.7
30°-40°	391.0	10.1
40°-50°	390.6	10.0
50°-60°	340.6	8.8
60°-70°	251.9	6.5
70°-80°	142.7	3.7
80°-90°	40.5	1.0
90°-100°	96.7	2.5
100°-110°	328.1	8.4
110°-120°	348.5	9.0
120°-130°	286.9	7.4
130°-140°	230.4	5.9
140°-150°	174.1	4.5
150°-160°	122.4	3.1
160°-170°	72.0	1.9
170°-180°	23.4	0.6
0°-30°	647.0	16.6
0°-40°	1038.1	26.7
0°-60°	1769.3	45.5
0°-90°	2204.4	56.7
90°-120°	773.2	19.9
90°-150°	1464.6	37.7
90°-180°	1682.0	43.3
0°-180°	3886.8	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°	0	6	16	15	15	3
95°	16	40	182	69	53	17
105°	57	86	344	616	524	60
115°	100	126	288	595	690	99
125°	140	165	277	482	559	124
135°	164	195	274	405	464	126
145°	187	215	272	338	370	117
155°	212	229	265	299	311	98
165°	232	238	253	269	273	65
175°	241	242	244	247	246	23
180°	242	242	242	242	242	



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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	11.9	11.9	12.1	12.4	12.7	12.5	12.0
90°	0.5	1.9	3.8	4.6	5.5	7.0	9.3	12.6	15.3	15.8	15.3
92.5°	5.7	8.2	11.5	13.6	16.7	21.1	31.6	46.4	59.6	60.4	51.0
95°	16.3	18.1	22.7	27.0	34.4	45.6	66.9	107.4	161.3	182.3	159.5
97.5°	26.5	29.0	33.9	40.3	48.8	61.5	88.4	144.7	234.3	311.1	326.4
100°	35.8	37.2	41.4	48.8	58.1	71.2	95.8	152.5	252.9	367.3	434.2
102.5°	44.4	45.4	49.6	57.0	66.7	79.7	102.5	152.9	245.9	369.2	474.4
105°	56.7	58.6	61.8	68.8	79.0	92.0	113.9	155.3	232.0	344.5	468.2
107.5°	70.1	71.6	74.8	81.2	91.3	104.4	125.6	161.7	225.1	318.1	427.4
110°	79.0	80.9	83.7	89.8	99.5	113.0	133.5	166.9	223.6	305.5	401.7



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CANDELA DISTRIBUTION (continued):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
112.5°	87.2	89.1	92.2	97.9	107.3	121.2	140.9	172.5	224.0	297.3	383.8
115°	100.0	102.3	105.1	110.6	119.9	132.5	152.5	180.8	226.0	288.3	361.7
117.5°	113.2	115.0	117.8	122.8	131.7	144.7	163.2	189.8	229.3	283.9	347.8
120°	121.3	123.2	126.0	130.2	139.5	152.5	170.6	195.8	231.5	281.3	340.4
122.5°	129.1	130.7	133.5	138.0	147.3	160.7	177.7	201.0	234.2	279.8	334.0
125°	139.5	140.9	143.7	149.3	158.6	171.5	188.3	209.2	238.1	277.1	325.0
127.5°	147.7	149.5	153.4	159.6	168.5	181.9	198.2	217.0	242.1	275.6	316.7
130°	152.5	154.3	159.0	165.5	174.8	187.8	204.2	221.8	245.0	274.8	311.0
132.5°	156.9	159.2	164.2	171.1	180.8	193.8	209.3	226.7	248.0	274.4	306.6
135°	163.6	165.5	171.1	178.1	188.7	201.8	216.7	232.9	251.5	273.9	300.4
137.5°	170.0	172.2	177.8	185.2	195.8	207.9	222.7	237.7	254.7	273.8	296.0
140°	174.8	176.7	182.3	189.7	199.9	212.1	226.0	240.4	256.2	273.4	293.4
142.5°	179.7	181.2	186.4	193.8	203.7	215.0	228.6	242.6	257.3	273.4	290.8
145°	186.9	188.7	193.4	200.4	209.7	219.9	232.4	245.5	258.5	272.5	287.3
147.5°	194.7	196.1	200.6	207.0	214.7	223.8	235.6	247.1	258.9	270.8	283.8
150°	199.9	201.3	205.0	211.1	218.1	226.4	237.1	247.9	258.5	269.7	280.9
152.5°	205.1	205.8	209.5	214.8	221.4	229.0	238.6	248.2	257.8	267.8	278.3
155°	212.5	213.0	215.7	220.9	226.0	232.9	240.8	248.7	256.7	264.6	273.4
157.5°	218.6	219.1	221.4	225.8	229.9	235.7	242.4	248.7	254.5	261.2	268.8
160°	222.7	223.1	225.0	228.8	232.4	237.6	243.2	248.7	253.4	259.0	265.5
162.5°	226.8	226.5	228.4	231.4	234.7	238.7	243.5	248.3	252.3	257.1	262.5
165°	231.5	231.1	232.0	234.8	237.1	239.9	244.1	247.4	250.1	253.4	257.6
167.5°	235.5	234.9	235.7	237.5	239.2	240.9	244.0	246.7	248.0	250.1	252.7
170°	238.1	237.1	237.6	239.0	239.9	241.3	243.6	246.0	246.9	248.3	250.1
172.5°	239.5	239.0	238.7	240.1	240.7	241.7	243.3	244.8	245.4	246.1	247.5
175°	241.3	240.8	240.4	241.3	241.3	241.7	242.7	243.6	243.2	243.6	244.1
177.5°	242.1	241.4	241.0	241.7	241.7	241.7	242.1	242.9	242.1	241.7	242.1
180°	241.7	241.7	241.7	241.7	241.7	241.7	241.7	241.7	241.7	241.7	241.7



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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°	11.4	10.8	10.5	10.4	10.2	10.0	9.9	9.7
90°	14.8	13.9	14.8	15.3	15.3	15.3	15.3	15.3
92.5°	40.5	34.8	30.9	28.0	27.6	26.2	26.5	25.8
95°	121.8	93.4	73.9	63.7	57.6	54.0	52.5	53.0
97.5°	284.3	232.6	182.3	148.7	126.5	115.0	108.3	104.4
100°	424.5	366.9	303.1	246.9	208.3	188.3	174.8	166.5
102.5°	516.4	503.4	456.8	397.1	355.2	321.1	304.3	292.9
105°	564.9	617.4	623.5	608.1	579.4	550.5	530.5	524.0
107.5°	529.9	609.1	657.5	680.0	683.5	682.0	678.0	669.4
110°	499.9	583.0	642.5	680.7	700.7	709.6	713.7	713.2



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CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
112.5°	472.3	552.2	615.8	659.5	687.3	702.1	710.0	712.5
115°	438.5	510.1	571.0	618.9	651.8	673.3	685.3	689.5
117.5°	412.9	475.8	531.1	576.0	609.7	632.3	645.0	648.5
120°	400.3	458.0	507.3	549.6	582.1	604.0	617.4	622.1
122.5°	390.3	443.1	489.8	528.0	557.2	578.7	590.7	594.6
125°	375.7	423.5	464.5	499.4	526.4	544.0	555.6	559.4
127.5°	361.3	404.6	443.2	475.4	498.9	515.4	525.5	528.5
130°	352.0	392.0	428.7	459.3	482.2	498.0	507.3	510.9
132.5°	343.1	380.1	413.8	442.6	465.0	480.9	489.4	492.8
135°	330.6	361.3	392.0	418.0	438.0	453.3	461.7	463.6
137.5°	320.7	346.3	370.6	393.4	411.6	424.8	432.1	434.9
140°	314.3	336.6	358.0	378.5	393.4	405.4	412.4	415.2
142.5°	309.1	328.1	346.5	363.6	377.7	388.7	394.9	395.5
145°	301.7	317.1	331.5	345.0	356.1	364.0	368.7	370.1
147.5°	296.1	308.2	319.4	329.3	338.5	344.8	348.0	348.8
150°	292.0	302.2	312.0	320.3	327.3	332.9	335.7	336.1
152.5°	287.9	297.4	305.7	312.9	318.4	323.3	325.3	325.4
155°	282.3	289.7	296.6	301.7	306.9	310.1	312.0	311.0
157.5°	275.7	281.8	287.7	291.7	295.3	298.1	298.9	298.9
160°	271.5	276.6	281.8	285.0	288.3	290.6	291.1	291.1
162.5°	267.4	271.8	276.2	278.7	281.9	283.6	284.0	283.6
165°	261.3	264.6	267.8	269.7	271.5	273.4	273.4	273.0
167.5°	255.4	258.0	260.2	261.9	262.7	263.7	263.7	263.1
170°	252.5	253.9	255.8	256.7	257.1	258.5	258.0	257.1
172.5°	249.2	250.1	251.6	252.2	252.7	253.3	252.8	252.3
175°	245.5	246.0	246.5	246.9	246.9	247.4	246.9	246.0
177.5°	242.9	242.9	243.3	243.3	243.3	243.3	242.9	242.1
180°	241.7	241.7	241.7	241.7	241.7	241.7	241.7	241.7

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