

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: P331347-927

Luminaire Tested: **SA2XXDIP-C675D530U927-4F0-1E-UDD-F4**

Issue Date: 10/7/2019

Test Information

Test Method: LM-79-08
Report Number: P331347-927
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-C675D530U927-4F0-1E-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: 3776.6 lumens
Efficiency: N/A
Efficacy: 93.7 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

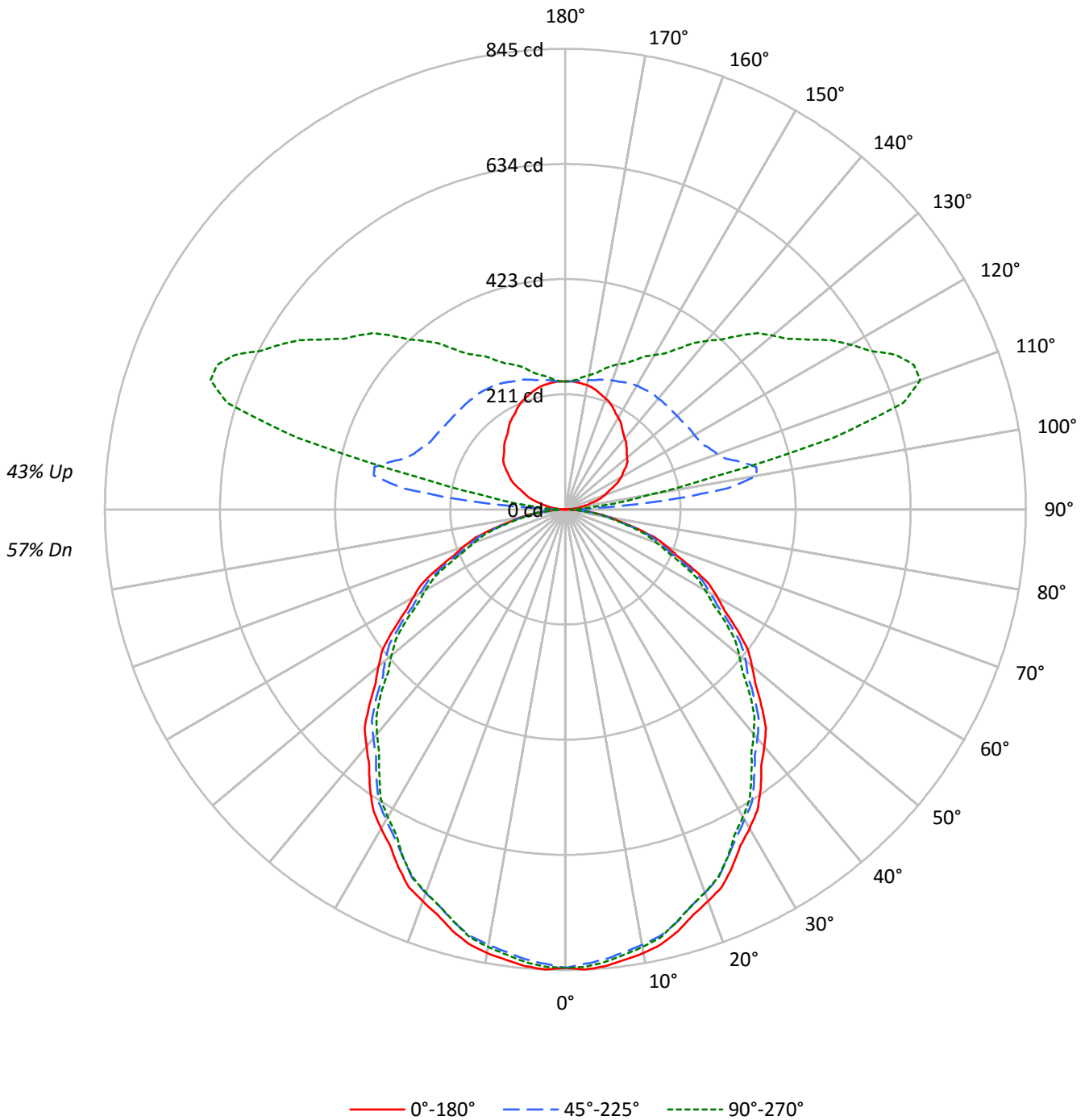
Input Watts (W): 40.3
Input Voltage (V): 120
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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°	13580	13580	13580
5°	13632	13434	13514
10°	13550	13298	13365
15°	13382	13125	13112
20°	13144	12866	12854
25°	12909	12549	12549
30°	12603	12258	12152
35°	12321	11907	11732
40°	11965	11556	11335
45°	11615	11209	10930
50°	11233	10846	10462
55°	10835	10427	10038
60°	10395	9923	9558
65°	9918	9425	8993
70°	9314	8818	8398
75°	8478	8122	7923
80°	7522	7290	6918
85°	6150	5835	5243



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	79.1	2.1
10°-20°	222.5	5.9
20°-30°	327.1	8.7
30°-40°	379.9	10.1
40°-50°	379.5	10.0
50°-60°	331.0	8.8
60°-70°	244.7	6.5
70°-80°	138.6	3.7
80°-90°	39.4	1.0
90°-100°	93.9	2.5
100°-110°	318.8	8.4
110°-120°	338.6	9.0
120°-130°	278.8	7.4
130°-140°	223.9	5.9
140°-150°	169.2	4.5
150°-160°	118.9	3.1
160°-170°	70.0	1.9
170°-180°	22.8	0.6
0°-30°	628.7	16.6
0°-40°	1008.6	26.7
0°-60°	1719.1	45.5
0°-90°	2141.9	56.7
90°-120°	751.3	19.9
90°-150°	1423.1	37.7
90°-180°	1635.0	43.3
0°-180°	3776.6	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	841	841	841	841	841	
5°	841	838	829	835	834	80
15°	801	795	785	788	784	225
25°	725	718	704	706	704	333
35°	625	617	604	599	595	390
45°	509	503	491	482	479	392
55°	385	380	370	361	357	344
65°	260	254	247	240	235	257
75°	136	134	130	126	127	145
85°	33	32	32	29	28	38
90°	0	6	15	15	15	2
95°	16	39	177	67	52	17
105°	55	83	335	598	509	59
115°	97	123	280	578	670	96
125°	136	160	269	468	544	120
135°	159	190	266	394	450	123
145°	182	209	265	329	360	114
155°	206	223	257	291	302	95
165°	225	232	246	261	265	63
175°	234	235	237	240	239	22
180°	235	235	235	235	235	



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CANDELA DISTRIBUTION (FULL):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
0°	841.1	841.1	841.1	841.1	841.1	841.1	841.1	841.1	841.1	841.1	841.1
2.5°	844.9	844.2	843.5	842.8	842.1	840.9	839.3	837.7	836.1	834.6	836.0
5°	841.1	840.3	839.6	838.9	838.2	836.9	834.9	832.9	830.9	828.9	830.4
7.5°	833.6	832.5	831.4	830.3	829.2	827.6	825.6	823.6	821.6	819.5	820.9
10°	826.5	825.2	823.9	822.7	821.5	819.8	817.6	815.5	813.3	811.1	812.5
12.5°	816.8	815.7	814.5	813.4	812.3	810.7	808.5	806.4	804.2	802.1	803.1
15°	800.6	799.5	798.4	797.4	796.3	794.6	792.3	789.9	787.6	785.2	786.0
17.5°	779.9	778.8	777.8	776.7	775.6	773.9	771.5	769.1	766.8	764.4	765.2
20°	765.0	764.0	762.9	761.8	760.7	758.9	756.4	753.9	751.4	748.8	749.4
22.5°	750.1	748.6	747.1	745.6	744.1	742.2	739.8	737.4	735.1	732.7	732.8
25°	724.6	723.2	721.8	720.3	718.8	716.6	713.5	710.5	707.4	704.4	704.7
27.5°	695.5	694.2	692.9	691.6	690.3	688.5	686.0	683.7	681.2	678.8	678.3
30°	676.0	674.6	673.2	671.8	670.3	668.3	665.6	662.9	660.2	657.5	657.0
32.5°	655.4	654.2	653.1	651.9	650.8	648.8	645.9	643.1	640.2	637.4	636.4
35°	625.1	623.4	621.5	619.7	617.9	615.6	612.8	609.8	607.0	604.1	603.0
37.5°	591.0	589.4	587.8	586.2	584.7	582.4	579.6	576.7	573.9	570.9	569.6
40°	567.7	566.3	564.8	563.4	562.0	559.8	556.9	554.1	551.2	548.3	546.7
42.5°	545.1	543.6	542.2	540.7	539.3	537.2	534.2	531.4	528.5	525.7	523.9
45°	508.7	507.4	506.1	504.9	503.7	501.7	499.0	496.3	493.6	490.9	488.9
47.5°	472.5	471.3	470.1	468.9	467.7	465.7	462.9	460.1	457.3	454.5	452.4
50°	447.2	446.3	445.4	444.5	443.6	441.9	439.4	436.9	434.4	431.8	429.4
52.5°	422.6	421.4	420.3	419.1	417.9	416.1	413.8	411.4	409.0	406.6	404.6
55°	384.9	383.9	382.8	381.7	380.6	379.0	376.8	374.7	372.6	370.4	368.2
57.5°	347.1	346.3	345.4	344.5	343.6	342.1	339.7	337.3	334.9	332.6	330.4
60°	321.9	321.2	320.4	319.7	319.0	317.3	314.9	312.4	309.8	307.3	305.3
62.5°	297.3	296.1	295.0	293.8	292.7	291.1	289.2	287.2	285.3	283.4	281.5
65°	259.6	258.5	257.5	256.4	255.2	253.8	252.1	250.3	248.4	246.7	245.0
67.5°	221.3	220.4	219.5	218.6	217.8	216.6	214.9	213.3	211.8	210.1	208.8
70°	197.3	196.6	195.9	195.2	194.5	193.3	191.6	190.0	188.5	186.8	185.5
72.5°	172.8	172.0	171.3	170.6	169.8	169.0	167.9	166.9	165.9	164.8	163.6
75°	135.9	135.5	135.1	134.8	134.4	133.8	132.9	132.0	131.1	130.2	129.1
77.5°	102.9	102.3	101.6	101.0	100.4	100.0	99.6	99.2	98.9	98.5	98.0
80°	80.9	80.7	80.5	80.3	80.2	79.9	79.5	79.1	78.8	78.4	77.9
82.5°	60.2	60.1	60.1	60.0	60.0	59.9	59.7	59.5	59.3	59.0	58.4
85°	33.2	33.0	32.8	32.6	32.4	32.2	32.1	31.9	31.7	31.5	31.0
87.5°	11.7	11.7	11.8	11.7	11.6	11.6	11.7	12.0	12.4	12.1	11.6
90°	0.5	1.8	3.6	4.5	5.4	6.8	9.0	12.2	14.9	15.4	14.9
92.5°	5.5	7.9	11.2	13.2	16.2	20.5	30.7	45.1	57.9	58.7	49.6
95°	15.8	17.6	22.1	26.2	33.4	44.3	65.0	104.3	156.8	177.1	155.0
97.5°	25.7	28.2	33.0	39.1	47.5	59.7	85.9	140.6	227.7	302.3	317.1
100°	34.8	36.1	40.2	47.5	56.5	69.2	93.1	148.2	245.7	356.9	421.9
102.5°	43.1	44.1	48.2	55.4	64.8	77.4	99.6	148.5	238.9	358.7	461.0
105°	55.1	57.0	60.0	66.9	76.8	89.4	110.7	150.9	225.5	334.8	455.0
107.5°	68.1	69.6	72.6	78.9	88.7	101.5	122.1	157.1	218.7	309.1	415.3
110°	76.8	78.6	81.4	87.2	96.6	109.8	129.7	162.2	217.3	296.8	390.3



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CANDELA DISTRIBUTION (continued):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
112.5°	84.8	86.6	89.6	95.1	104.3	117.7	136.9	167.6	217.7	288.8	373.0
115°	97.1	99.4	102.1	107.5	116.5	128.7	148.2	175.7	219.6	280.1	351.5
117.5°	110.0	111.8	114.5	119.3	127.9	140.6	158.6	184.4	222.8	275.8	337.9
120°	117.9	119.7	122.4	126.5	135.5	148.2	165.8	190.2	225.0	273.3	330.7
122.5°	125.5	127.0	129.7	134.1	143.1	156.1	172.7	195.3	227.5	271.9	324.6
125°	135.5	136.9	139.6	145.0	154.1	166.7	183.0	203.3	231.3	269.3	315.8
127.5°	143.5	145.3	149.1	155.0	163.7	176.7	192.6	210.8	235.2	267.8	307.7
130°	148.2	150.0	154.5	160.8	169.8	182.5	198.4	215.5	238.1	267.0	302.2
132.5°	152.5	154.7	159.5	166.3	175.6	188.3	203.4	220.2	241.0	266.6	297.9
135°	159.0	160.8	166.3	173.0	183.4	196.1	210.6	226.3	244.4	266.1	291.8
137.5°	165.2	167.3	172.8	180.0	190.3	202.0	216.3	231.0	247.5	266.0	287.6
140°	169.8	171.7	177.1	184.3	194.2	206.0	219.6	233.5	248.9	265.6	285.1
142.5°	174.6	176.0	181.1	188.3	197.9	208.9	222.1	235.8	250.0	265.6	282.6
145°	181.6	183.4	187.9	194.7	203.7	213.7	225.9	238.5	251.2	264.7	279.2
147.5°	189.2	190.5	194.9	201.1	208.7	217.5	228.9	240.1	251.5	263.1	275.8
150°	194.2	195.6	199.2	205.1	211.9	220.0	230.4	240.8	251.2	262.1	272.9
152.5°	199.3	199.9	203.6	208.7	215.2	222.5	231.9	241.1	250.5	260.2	270.4
155°	206.4	206.9	209.6	214.6	219.6	226.3	234.0	241.7	249.4	257.1	265.6
157.5°	212.4	212.9	215.1	219.4	223.4	229.0	235.5	241.7	247.3	253.8	261.2
160°	216.4	216.8	218.6	222.3	225.9	230.8	236.3	241.7	246.2	251.7	257.9
162.5°	220.4	220.1	221.9	224.8	228.1	232.0	236.6	241.3	245.1	249.9	255.1
165°	225.0	224.5	225.5	228.1	230.4	233.1	237.2	240.3	243.0	246.2	250.3
167.5°	228.8	228.2	229.0	230.8	232.4	234.1	237.1	239.7	241.0	243.0	245.6
170°	231.3	230.4	230.8	232.2	233.1	234.5	236.7	239.0	239.9	241.2	243.0
172.5°	232.7	232.2	232.0	233.3	233.9	234.8	236.4	237.9	238.4	239.1	240.5
175°	234.5	234.0	233.5	234.5	234.5	234.9	235.8	236.7	236.3	236.7	237.2
177.5°	235.3	234.6	234.2	234.9	234.9	234.9	235.3	236.0	235.3	234.9	235.3
180°	234.9	234.9	234.9	234.9	234.9	234.9	234.9	234.9	234.9	234.9	234.9



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CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
0°	841.1	841.1	841.1	841.1	841.1	841.1	841.1	841.1
2.5°	837.4	838.9	840.3	840.9	840.6	840.3	840.0	839.8
5°	831.8	833.2	834.6	835.2	834.9	834.5	834.2	833.8
7.5°	822.4	823.9	825.3	825.8	825.4	825.1	824.7	824.3
10°	814.0	815.5	816.9	817.3	816.8	816.3	815.7	815.2
12.5°	804.1	805.1	806.1	806.4	806.0	805.6	805.3	804.9
15°	786.7	787.4	788.1	788.1	787.1	786.2	785.4	784.4
17.5°	766.0	766.8	767.7	767.7	766.8	766.0	765.1	764.2
20°	750.0	750.5	751.0	750.9	750.2	749.5	748.8	748.1
22.5°	732.9	733.0	733.1	732.9	732.5	732.1	731.7	731.3
25°	705.1	705.4	705.8	705.8	705.4	705.1	704.7	704.4
27.5°	677.7	677.2	676.7	676.0	675.1	674.2	673.4	672.5
30°	656.4	655.8	655.3	654.7	653.9	653.2	652.5	651.8
32.5°	635.5	634.5	633.5	632.7	632.0	631.3	630.5	629.8
35°	602.0	600.9	599.8	598.8	597.9	597.0	596.1	595.2
37.5°	568.3	567.0	565.6	564.5	563.6	562.8	562.0	561.1
40°	545.1	543.4	541.9	540.7	540.0	539.2	538.5	537.8
42.5°	522.1	520.4	518.6	517.2	516.2	515.2	514.2	513.2
45°	487.0	485.0	483.0	481.6	480.9	480.2	479.5	478.7
47.5°	450.4	448.2	446.2	444.6	443.5	442.5	441.5	440.5
50°	426.8	424.3	421.8	420.1	419.1	418.3	417.4	416.5
52.5°	402.4	400.4	398.3	396.6	395.5	394.3	393.1	391.9
55°	366.1	363.9	361.8	360.2	359.3	358.5	357.5	356.6
57.5°	328.3	326.1	324.1	322.7	321.9	321.3	320.6	319.9
60°	303.3	301.3	299.4	298.2	297.6	297.1	296.5	296.0
62.5°	279.7	277.9	276.1	274.8	274.1	273.4	272.7	272.0
65°	243.4	241.8	240.2	238.9	238.1	237.1	236.2	235.4
67.5°	207.6	206.4	205.1	204.1	203.4	202.6	201.9	201.2
70°	184.3	183.1	181.8	180.8	180.1	179.4	178.6	177.9
72.5°	162.3	161.1	159.8	158.8	158.3	157.7	157.2	156.5
75°	128.0	127.0	125.9	125.6	125.9	126.3	126.6	127.0
77.5°	97.4	96.9	96.3	95.9	95.3	94.8	94.3	93.8
80°	77.4	76.8	76.3	75.8	75.5	75.1	74.8	74.4
82.5°	57.7	57.0	56.3	55.9	55.8	55.8	55.7	55.6
85°	30.5	29.9	29.4	29.0	28.8	28.7	28.5	28.3
87.5°	11.1	10.5	10.2	10.1	9.9	9.7	9.6	9.4
90°	14.4	13.5	14.4	14.9	14.9	14.9	14.9	14.9
92.5°	39.4	33.8	30.0	27.2	26.9	25.4	25.7	25.0
95°	118.4	90.8	71.9	61.9	56.0	52.4	51.0	51.5
97.5°	276.2	226.0	177.1	144.5	122.9	111.8	105.2	101.4
100°	412.5	356.5	294.5	239.9	202.4	183.0	169.8	161.8
102.5°	501.8	489.1	443.9	385.9	345.2	312.0	295.6	284.6
105°	548.9	599.9	605.9	590.9	562.9	534.9	515.5	509.1
107.5°	514.9	591.8	638.8	660.7	664.2	662.7	658.8	650.4
110°	485.7	566.5	624.3	661.4	680.8	689.4	693.5	693.0



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CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
112.5°	458.9	536.5	598.3	640.8	667.8	682.1	689.8	692.3
115°	426.0	495.6	554.8	601.3	633.3	654.2	665.9	669.9
117.5°	401.2	462.3	516.0	559.7	592.4	614.3	626.7	630.1
120°	389.0	445.0	492.9	534.0	565.6	586.8	599.9	604.4
122.5°	379.2	430.6	475.9	513.0	541.4	562.3	573.9	577.7
125°	365.0	411.5	451.3	485.2	511.4	528.5	539.9	543.5
127.5°	351.0	393.2	430.6	461.9	484.7	500.8	510.6	513.5
130°	342.0	380.9	416.5	446.3	468.5	483.9	492.9	496.5
132.5°	333.4	369.3	402.1	430.1	451.9	467.2	475.5	478.8
135°	321.2	351.0	380.9	406.2	425.6	440.5	448.6	450.4
137.5°	311.6	336.5	360.1	382.2	399.9	412.7	419.9	422.6
140°	305.4	327.1	347.8	367.7	382.2	394.0	400.7	403.5
142.5°	300.3	318.8	336.7	353.3	367.0	377.7	383.7	384.3
145°	293.2	308.1	322.1	335.3	346.0	353.7	358.2	359.6
147.5°	287.7	299.4	310.4	320.0	328.9	335.0	338.1	338.9
150°	283.7	293.7	303.2	311.2	318.1	323.4	326.1	326.6
152.5°	279.7	289.0	297.0	304.0	309.3	314.1	316.1	316.2
155°	274.3	281.5	288.2	293.2	298.2	301.3	303.2	302.2
157.5°	267.8	273.9	279.6	283.4	286.9	289.6	290.4	290.4
160°	263.8	268.8	273.8	276.9	280.1	282.3	282.8	282.8
162.5°	259.8	264.1	268.4	270.8	273.9	275.5	275.9	275.6
165°	253.9	257.1	260.2	262.1	263.8	265.6	265.6	265.2
167.5°	248.2	250.6	252.8	254.4	255.2	256.3	256.2	255.6
170°	245.3	246.7	248.5	249.4	249.9	251.2	250.7	249.9
172.5°	242.1	243.0	244.5	245.0	245.5	246.1	245.7	245.1
175°	238.5	239.0	239.5	239.9	239.9	240.3	239.9	239.0
177.5°	236.0	236.0	236.4	236.4	236.4	236.4	236.0	235.3
180°	234.9	234.9	234.9	234.9	234.9	234.9	234.9	234.9

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