

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: P331335

Luminaire Tested: **SA2XXDIP-C675D330U835-4F0-1E-UDD-D4**

Issue Date: 10/7/2019

Test Information

Test Method: LM-79-08
Report Number: P331335
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-C675D330U835-4F0-1E-UDD-D4
Description: DEFINE 2 DIRECT-INDIRECT PENDANT LED LUMINAIRE
DOWNLIGHT 675 LUMENS PER FOOT, DROP SATIN WHITE DIFFUSER
UPLIGHT 330 LUMENS PER FOOT, BATWING OPTIC
Light Source: -
Ballast/Driver: ELECTRONIC DRIVER

Summary

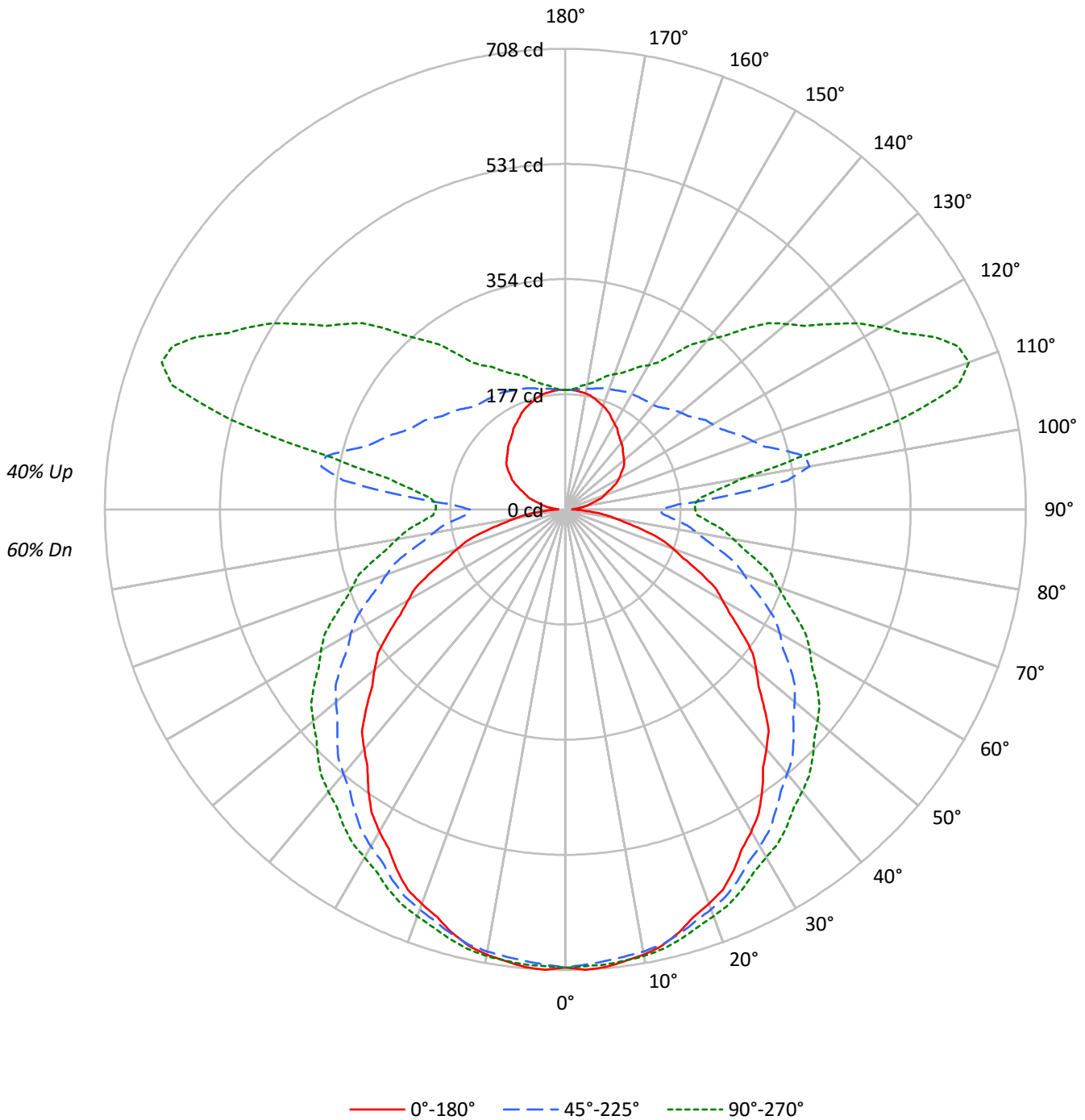
Lumens per Lamp: N/A
Luminaire Lumens: 3967.5 lumens
Efficiency: N/A
Efficacy: 113.4 lumens/watt
Spacing Criteria (0/90/45): 1.21 / 1.32 / 1.42
Luminous Opening: Rectangular w/ Sides (W: 0.17' x L: 4' x H: 0.08')
CIE Type: Semi-Direct

Input Watts (W): 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	110	110	110	110	102	102	102	102	89	89	89	77	77	77	66	66	66	60
1	98	93	88	84	91	87	83	79	75	72	69	65	62	60	55	53	52	47
2	89	80	73	67	82	75	69	64	65	60	56	56	52	49	47	45	42	38
3	81	70	62	55	75	65	58	52	57	51	46	49	44	41	41	38	35	31
4	73	62	53	46	68	58	50	44	50	44	39	43	38	34	37	33	30	26
5	67	55	46	39	62	51	43	37	45	38	33	39	33	29	33	29	26	23
6	62	49	40	34	57	46	38	32	40	34	29	35	30	26	30	26	22	20
7	57	44	36	30	53	41	34	28	36	30	25	32	26	23	27	23	20	17
8	53	40	32	26	49	38	30	25	33	27	22	29	24	20	25	21	18	15
9	49	37	29	23	46	34	27	22	30	24	20	26	21	18	23	19	16	14
10	46	33	26	21	43	32	25	20	28	22	18	24	20	16	21	17	14	12

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	11373	11373	11373
5°	11428	10947	10905
10°	11356	10624	10504
15°	11200	10282	10083
20°	11002	9915	9676
25°	10807	9560	9307
30°	10532	9197	8935
35°	10254	8846	8673
40°	9960	8547	8413
45°	9681	8279	8190
50°	9382	8037	7969
55°	9070	7777	7745
60°	8686	7508	7509
65°	8287	7191	7227
70°	7841	6852	6923
75°	7270	6518	6643
80°	6370	6177	6361
85°	5506	5882	6138



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	66.7	1.7
10°-20°	191.4	4.8
20°-30°	290.0	7.3
30°-40°	353.3	8.9
40°-50°	380.0	9.6
50°-60°	369.1	9.3
60°-70°	322.3	8.1
70°-80°	248.1	6.3
80°-90°	168.2	4.2
90°-100°	188.2	4.7
100°-110°	333.1	8.4
110°-120°	320.2	8.1
120°-130°	248.9	6.3
130°-140°	188.0	4.7
140°-150°	134.6	3.4
150°-160°	93.0	2.3
160°-170°	54.7	1.4
170°-180°	17.8	0.4
0°-30°	548.2	13.8
0°-40°	901.4	22.7
0°-60°	1650.6	41.6
0°-90°	2389.1	60.2
90°-120°	841.4	21.2
90°-150°	1412.9	35.6
90°-180°	1578.0	39.8
0°-180°	3967.5	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	704	704	704	704	704	
5°	706	703	697	703	702	67
15°	674	676	676	684	684	190
25°	612	620	629	641	644	281
35°	528	545	564	586	594	330
45°	433	461	496	527	538	334
55°	332	369	422	457	472	297
65°	227	277	337	377	392	225
75°	126	183	248	290	305	133
85°	37	100	165	207	222	40
90°	11	75	147	186	200	8
95°	20	87	256	207	209	20
105°	48	101	350	590	533	52
115°	80	113	280	543	627	79
125°	108	129	245	428	496	96
135°	125	150	219	340	393	97
145°	142	163	207	263	292	89
155°	162	174	201	227	236	74
165°	176	181	193	204	207	50
175°	183	184	185	187	187	17
180°	184	184	184	184	184	



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CANDELA DISTRIBUTION (FULL):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
0°	704.4	704.4	704.4	704.4	704.4	704.4	704.4	704.4	704.4	704.4	704.4
2.5°	708.5	707.9	707.4	706.8	706.3	705.4	704.1	702.8	701.6	700.3	701.2
5°	706.4	705.7	705.1	704.4	703.7	702.7	701.3	700.0	698.6	697.2	698.6
7.5°	700.1	699.6	699.2	698.7	698.3	697.5	696.5	695.4	694.4	693.4	695.0
10°	695.2	694.7	694.3	693.8	693.4	692.8	692.1	691.5	690.8	690.1	691.9
12.5°	687.0	687.1	687.2	687.3	687.4	687.2	686.7	686.2	685.7	685.2	687.0
15°	673.8	674.2	674.7	675.1	675.6	675.8	675.8	675.8	675.8	675.8	677.8
17.5°	656.6	657.6	658.5	659.5	660.4	661.3	662.0	662.7	663.4	664.2	666.3
20°	645.2	646.3	647.4	648.6	649.7	650.7	651.6	652.6	653.5	654.4	656.9
22.5°	632.9	634.2	635.6	636.9	638.2	639.5	640.8	642.0	643.3	644.6	647.1
25°	612.5	614.1	615.7	617.3	618.9	620.7	622.7	624.8	626.8	628.8	631.6
27.5°	588.0	590.6	593.2	595.8	598.4	600.9	603.3	605.7	608.1	610.5	613.9
30°	571.7	574.6	577.6	580.5	583.5	586.4	589.4	592.3	595.3	598.2	601.8
32.5°	553.7	557.0	560.3	563.6	567.0	570.4	573.9	577.3	580.8	584.3	588.5
35°	527.8	531.6	535.5	539.3	543.2	547.3	551.6	555.9	560.2	564.5	569.5
37.5°	499.6	504.1	508.5	512.9	517.4	522.4	528.0	533.6	539.1	544.7	550.3
40°	480.8	485.8	490.8	495.8	500.8	506.3	512.5	518.6	524.7	530.8	536.7
42.5°	462.9	467.8	472.8	477.8	482.8	488.8	495.9	502.9	509.9	517.0	523.4
45°	432.8	439.0	445.1	451.2	457.3	464.4	472.3	480.3	488.2	496.1	503.2
47.5°	403.2	409.9	416.6	423.2	429.9	437.9	447.2	456.5	465.8	475.1	482.5
50°	382.8	389.9	396.9	403.9	410.9	419.6	429.8	440.0	450.2	460.4	468.1
52.5°	363.2	370.6	378.0	385.4	392.8	401.9	412.6	423.4	434.1	444.9	452.8
55°	331.8	339.9	348.1	356.3	364.4	374.4	386.2	398.0	409.8	421.6	429.8
57.5°	300.7	310.0	319.2	328.4	337.6	348.2	360.2	372.2	384.3	396.3	405.1
60°	278.7	288.4	298.2	308.0	317.7	329.1	342.0	354.9	367.8	380.8	389.4
62.5°	259.1	269.2	279.3	289.4	299.6	311.1	324.0	336.9	349.9	362.8	372.0
65°	226.6	237.7	248.9	260.0	271.1	283.3	296.7	310.1	323.5	336.9	346.2
67.5°	196.8	208.4	220.1	231.7	243.3	255.9	269.6	283.3	297.0	310.7	320.1
70°	175.6	187.4	199.2	211.0	222.8	235.7	249.8	263.8	277.9	292.0	301.7
72.5°	156.0	168.1	180.3	192.5	204.6	217.8	232.1	246.3	260.6	274.8	284.4
75°	125.6	138.3	151.0	163.7	176.4	190.0	204.5	219.0	233.5	248.1	257.8
77.5°	96.2	109.5	122.8	136.0	149.3	163.4	178.1	192.9	207.6	222.3	232.1
80°	76.6	90.4	104.2	118.1	131.9	146.2	161.0	175.7	190.4	205.2	214.7
82.5°	60.2	73.9	87.5	101.2	114.9	129.1	144.1	159.0	173.9	188.9	198.4
85°	36.8	50.8	64.9	78.9	93.0	107.3	121.8	136.3	150.9	165.4	174.9
87.5°	20.1	33.8	47.6	61.3	74.9	89.2	104.0	119.1	134.0	148.6	157.8
90°	10.6	24.8	39.4	53.2	67.1	82.0	98.3	115.3	131.9	146.8	155.5
92.5°	13.7	27.9	42.7	56.5	71.1	87.5	109.5	134.7	158.7	173.3	175.1
95°	20.5	32.6	46.8	60.6	77.0	97.6	127.4	171.8	226.4	255.9	247.2
97.5°	27.3	38.7	51.9	66.2	82.2	103.1	136.6	192.4	273.6	345.1	365.0
100°	34.4	43.8	55.4	69.4	84.9	105.3	136.8	192.6	281.6	381.2	440.5
102.5°	40.0	48.5	59.3	72.7	87.7	107.6	137.2	187.9	270.9	376.9	465.1
105°	48.2	56.2	65.3	77.1	91.5	110.6	139.0	182.2	252.3	349.6	451.5
107.5°	58.2	64.6	72.2	82.4	95.3	113.6	141.0	179.7	239.2	321.2	411.8
110°	64.1	70.1	76.8	85.9	97.8	115.9	142.6	179.1	233.4	306.7	387.1



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CANDELA DISTRIBUTION (continued):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
112.5°	70.4	75.6	81.8	89.9	100.9	118.6	144.1	178.7	228.5	294.7	367.8
115°	80.0	84.3	88.9	95.7	105.2	121.1	146.5	178.3	222.8	280.3	342.9
117.5°	89.1	92.1	95.9	101.2	109.7	125.1	148.6	178.2	217.7	268.6	323.9
120°	95.3	97.6	100.6	104.7	112.7	127.6	150.4	178.6	214.9	261.7	313.0
122.5°	101.2	102.7	105.2	109.0	116.4	131.1	152.5	178.7	212.5	255.7	303.1
125°	108.0	109.1	111.2	115.5	122.5	136.0	156.0	179.2	208.4	245.3	287.8
127.5°	114.3	115.4	118.2	122.6	129.2	142.2	160.4	180.5	205.4	236.7	273.6
130°	117.9	119.1	122.4	127.1	134.0	146.1	163.3	181.5	203.9	231.3	264.3
132.5°	121.3	122.8	126.4	131.4	138.5	150.1	165.6	182.4	202.3	226.1	255.8
135°	125.4	126.8	131.0	136.3	144.5	155.5	169.1	183.7	200.1	219.3	244.2
137.5°	130.2	131.8	136.0	141.7	149.7	159.3	171.5	184.0	197.9	213.3	234.4
140°	133.9	135.1	139.1	144.5	152.0	161.3	172.4	183.8	196.3	209.8	228.6
142.5°	137.5	138.5	142.2	147.6	154.9	163.4	173.8	184.6	195.8	208.2	224.3
145°	142.0	143.5	147.0	152.3	159.4	167.1	176.7	186.6	196.4	207.0	219.7
147.5°	148.0	149.0	152.4	157.3	163.2	170.1	179.1	187.8	196.7	205.8	215.9
150°	151.9	153.0	155.8	160.4	165.7	172.1	180.2	188.3	196.4	204.9	213.4
152.5°	155.9	156.4	159.2	163.2	168.3	174.0	181.3	188.6	195.9	203.5	211.4
155°	161.5	161.8	163.9	167.8	171.7	177.0	183.0	189.0	195.0	201.0	207.8
157.5°	166.1	166.5	168.2	171.6	174.7	179.1	184.2	189.0	193.4	198.5	204.3
160°	169.2	169.6	171.0	173.8	176.7	180.6	184.8	189.0	192.6	196.8	201.7
162.5°	172.4	172.1	173.6	175.8	178.4	181.4	185.1	188.7	191.7	195.4	199.5
165°	176.0	175.6	176.3	178.4	180.2	182.3	185.5	188.0	190.1	192.6	195.7
167.5°	178.9	178.5	179.1	180.5	181.8	183.1	185.4	187.5	188.5	190.1	192.1
170°	180.9	180.2	180.6	181.6	182.3	183.4	185.1	186.9	187.6	188.7	190.1
172.5°	182.0	181.6	181.4	182.5	182.9	183.7	184.9	186.1	186.5	187.0	188.1
175°	183.4	183.0	182.7	183.4	183.4	183.7	184.4	185.1	184.8	185.1	185.5
177.5°	184.0	183.4	183.2	183.7	183.7	183.7	184.0	184.6	184.0	183.7	184.0
180°	183.7	183.7	183.7	183.7	183.7	183.7	183.7	183.7	183.7	183.7	183.7



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CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
0°	704.4	704.4	704.4	704.4	704.4	704.4	704.4	704.4
2.5°	702.1	703.0	703.9	704.2	703.8	703.5	703.1	702.8
5°	700.0	701.3	702.7	703.3	703.0	702.8	702.6	702.3
7.5°	696.6	698.3	699.9	700.6	700.4	700.1	699.9	699.7
10°	693.7	695.5	697.4	698.1	697.9	697.7	697.5	697.2
12.5°	688.8	690.6	692.5	693.2	693.0	692.8	692.6	692.3
15°	679.9	681.9	684.0	684.9	684.7	684.4	684.2	684.0
17.5°	668.4	670.6	672.7	673.8	673.8	673.8	673.8	673.8
20°	659.4	661.9	664.3	665.6	665.6	665.6	665.6	665.6
22.5°	649.6	652.1	654.5	656.0	656.3	656.7	657.1	657.4
25°	634.3	637.0	639.7	641.4	642.1	642.8	643.5	644.2
27.5°	617.4	620.8	624.3	626.2	626.7	627.2	627.7	628.2
30°	605.5	609.1	612.7	614.9	615.6	616.3	616.9	617.6
32.5°	592.7	596.9	601.0	603.7	605.0	606.2	607.4	608.6
35°	574.5	579.5	584.5	587.8	589.4	591.0	592.5	594.1
37.5°	555.8	561.3	566.9	570.5	572.2	573.8	575.5	577.2
40°	542.6	548.5	554.4	558.4	560.4	562.5	564.5	566.6
42.5°	529.8	536.3	542.7	547.0	549.0	551.1	553.1	555.1
45°	510.2	517.2	524.3	528.9	531.2	533.5	535.7	538.0
47.5°	489.8	497.2	504.5	509.4	511.9	514.4	516.9	519.4
50°	475.8	483.5	491.3	496.4	498.9	501.4	503.8	506.3
52.5°	460.7	468.6	476.5	481.8	484.4	487.1	489.8	492.5
55°	437.9	446.1	454.3	459.8	462.8	465.7	468.7	471.6
57.5°	413.9	422.7	431.5	437.4	440.4	443.4	446.4	449.4
60°	398.0	406.6	415.3	421.2	424.3	427.5	430.7	433.9
62.5°	381.1	390.3	399.5	405.6	408.5	411.5	414.5	417.5
65°	355.5	364.8	374.1	380.2	383.2	386.1	389.1	392.0
67.5°	329.5	338.9	348.3	354.6	357.6	360.7	363.8	366.9
70°	311.5	321.2	331.0	337.2	339.9	342.7	345.4	348.1
72.5°	294.0	303.5	313.1	319.5	322.8	326.1	329.3	332.6
75°	267.6	277.3	287.1	293.4	296.4	299.3	302.3	305.2
77.5°	241.8	251.5	261.2	267.6	270.8	274.0	277.1	280.3
80°	224.2	233.8	243.3	249.7	252.8	256.0	259.2	262.4
82.5°	207.9	217.4	227.0	233.2	236.2	239.2	242.2	245.2
85°	184.4	194.0	203.5	209.8	213.0	216.2	219.4	222.5
87.5°	167.0	176.1	185.5	191.6	194.5	197.4	200.3	203.2
90°	164.2	172.6	182.4	188.6	191.3	194.1	196.8	199.5
92.5°	176.0	180.5	186.4	190.1	192.5	194.1	197.1	199.2
95°	227.2	214.3	208.1	206.0	204.1	204.0	205.6	208.7
97.5°	341.4	310.5	280.7	260.7	246.5	240.5	238.0	237.7
100°	441.5	406.0	366.0	328.7	301.9	289.2	281.4	277.6
102.5°	505.2	503.5	476.3	436.4	407.0	383.6	373.3	367.1
105°	533.0	580.8	593.4	586.9	567.5	548.1	535.4	533.0
107.5°	497.4	565.1	609.5	631.7	636.9	638.2	637.7	633.6
110°	468.9	539.4	591.9	625.7	643.4	652.6	658.3	660.4



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CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
112.5°	442.2	510.2	565.8	603.9	627.5	641.2	649.7	654.1
115°	408.1	469.3	522.4	563.4	591.0	609.7	621.4	627.1
117.5°	380.1	434.6	483.3	522.0	549.9	569.3	581.3	586.3
120°	364.9	415.1	458.9	495.4	522.7	541.8	554.5	560.5
122.5°	352.0	398.3	440.0	473.2	497.5	515.9	527.2	532.3
125°	332.4	375.0	412.2	442.8	465.3	480.8	491.6	496.5
127.5°	313.1	351.7	386.7	414.9	434.8	449.4	459.0	463.3
130°	300.8	336.6	370.0	397.0	416.1	429.9	438.8	443.4
132.5°	288.8	322.2	353.1	378.5	397.4	411.2	419.5	423.9
135°	272.0	300.1	328.1	351.2	368.2	381.7	389.9	393.1
137.5°	257.3	281.0	303.7	323.8	339.2	350.7	357.9	361.5
140°	248.2	268.7	288.6	306.7	319.3	329.9	336.5	340.0
142.5°	241.1	258.4	275.3	290.4	302.3	311.8	317.7	319.3
145°	232.0	245.1	257.4	268.9	278.5	285.6	290.3	292.5
147.5°	225.4	234.7	243.5	251.3	258.9	264.2	267.2	268.3
150°	221.9	229.7	237.1	243.4	248.7	253.0	255.1	255.5
152.5°	218.8	226.0	232.3	237.8	242.0	245.6	247.2	247.3
155°	214.5	220.1	225.4	229.3	233.2	235.7	237.1	236.4
157.5°	209.5	214.2	218.6	221.7	224.4	226.5	227.1	227.1
160°	206.3	210.2	214.1	216.6	219.1	220.8	221.2	221.2
162.5°	203.2	206.6	209.9	211.8	214.3	215.5	215.8	215.5
165°	198.6	201.0	203.5	204.9	206.3	207.8	207.8	207.4
167.5°	194.1	196.0	197.7	199.0	199.6	200.4	200.3	199.9
170°	191.9	192.9	194.3	195.0	195.4	196.4	196.1	195.4
172.5°	189.3	190.1	191.2	191.6	192.0	192.5	192.1	191.7
175°	186.6	186.9	187.3	187.6	187.6	188.0	187.6	186.9
177.5°	184.6	184.6	184.9	184.9	184.9	184.9	184.6	184.0
180°	183.7	183.7	183.7	183.7	183.7	183.7	183.7	183.7

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