

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: P331396-927

Luminaire Tested: **SA2XXDIP-C865D725U927-4F0-1E-UDD-D**

Issue Date: 10/7/2019

**Test Information**

Test Method: LM-79-08  
Report Number: P331396-927  
REPORT IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-1807-864-2,  
Test Lab: INNOVATION CENTER  
Issue Date: 10/7/2019  
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)  
Product Line: NEO-RAY  
Catalog Number: SA2XXDIP-C865D725U927-4F0-1E-UDD-D  
Description: DEFINE 2 DIRECT-INDIRECT PENDANT LED LUMINAIRE  
DOWNLIGHT 865 LUMENS PER FOOT, DROP SATIN WHITE DIFFUSER  
UPLIGHT 725 LUMENS PER FOOT, NO LENS  
Light Source: -  
Ballast/Driver: ELECTRONIC DRIVER

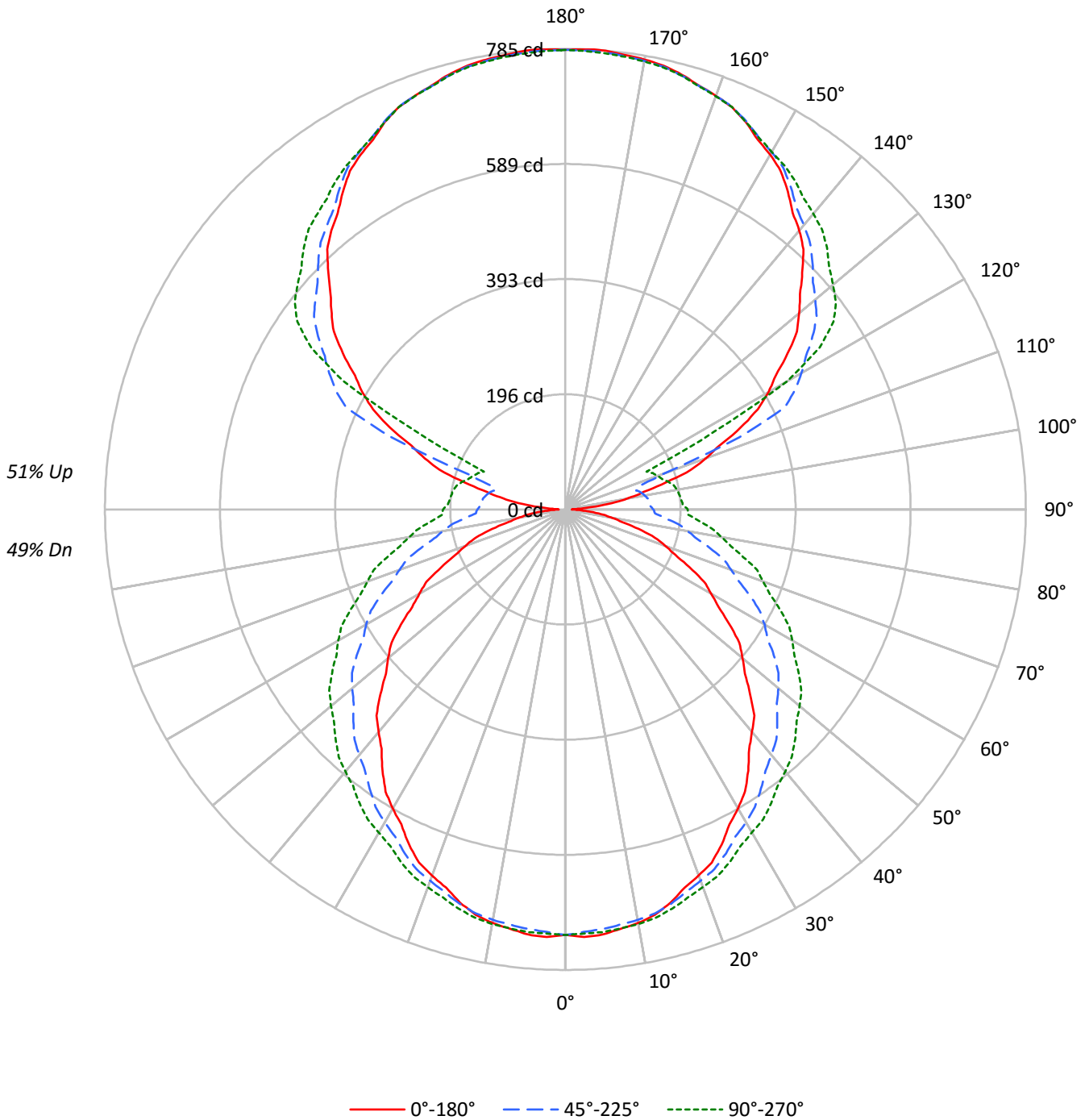
**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 5064.1 lumens  
Efficiency: N/A  
Efficacy: 93.1 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: General Diffuse  
  
Input Watts (W): 54.4  
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





TEST NUMBER: P331396-927

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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	50	30	10	0	
RCR																						
0	107	107	107	107	98	98	98	98	83	83	83	68	68	68	55	55	55	49				
1	96	91	87	83	88	84	80	76	70	67	65	58	56	54	46	45	43	38				
2	87	79	72	66	79	72	67	62	61	56	52	50	47	44	40	37	35	31				
3	79	69	61	55	72	63	56	51	53	48	43	44	40	36	35	32	29	25				
4	72	60	52	46	66	56	48	43	47	41	37	38	34	31	31	28	25	21				
5	66	54	45	39	60	49	42	36	42	36	31	34	30	26	28	24	22	18				
6	61	48	40	33	55	44	37	31	37	31	27	31	26	23	25	21	19	16				
7	56	43	35	29	51	40	33	27	34	28	24	28	23	20	23	19	17	14				
8	52	39	31	26	47	36	29	24	31	25	21	26	21	18	21	17	15	12				
9	48	36	28	23	44	33	26	21	28	23	19	24	19	16	19	16	13	11				
10	45	33	25	20	41	30	24	19	26	20	17	22	17	14	18	14	12	10				

**AVERAGE LUMINANCE (cd/sqm):**

	0°	45°	90°
0°	11711	11711	11711
5°	11768	11274	11230
10°	11694	10940	10818
15°	11533	10587	10382
20°	11328	10209	9963
25°	11128	9845	9582
30°	10845	9471	9201
35°	10557	9109	8932
40°	10256	8801	8662
45°	9969	8526	8433
50°	9662	8276	8207
55°	9341	8008	7975
60°	8945	7730	7732
65°	8536	7405	7441
70°	8073	7053	7130
75°	7484	6710	6841
80°	6553	6361	6548
85°	5671	6056	6323



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	68.7	1.4
10°-20°	197.1	3.9
20°-30°	298.7	5.9
30°-40°	363.8	7.2
40°-50°	391.3	7.7
50°-60°	380.0	7.5
60°-70°	331.8	6.6
70°-80°	255.5	5.0
80°-90°	173.4	3.4
90°-100°	144.2	2.8
100°-110°	182.0	3.6
110°-120°	313.0	6.2
120°-130°	454.5	9.0
130°-140°	462.9	9.1
140°-150°	420.2	8.3
150°-160°	335.9	6.6
160°-170°	216.5	4.3
170°-180°	74.5	1.5
0°-30°	564.5	11.1
0°-40°	928.2	18.3
0°-60°	1699.6	33.6
0°-90°	2460.3	48.6
90°-120°	639.3	12.6
90°-150°	1976.9	39.0
90°-180°	2604.0	51.4
0°-180°	5064.1	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	725	725	725	725	725	
5°	727	724	718	724	723	69
15°	694	696	696	705	704	195
25°	631	638	648	660	663	290
35°	543	562	581	604	612	340
45°	446	475	511	542	554	344
55°	342	380	434	471	486	305
65°	233	286	347	388	404	232
75°	129	189	255	299	314	137
85°	38	103	170	213	229	41
90°	11	79	150	193	209	9
95°	45	78	143	184	198	52
105°	178	217	125	166	182	190
115°	330	354	413	193	153	324
125°	463	472	515	546	558	413
135°	571	581	596	622	631	441
145°	661	661	670	680	683	414
155°	728	724	730	733	729	335
165°	767	764	766	769	766	217
175°	785	781	782	785	780	75
180°	783	783	783	783	783	



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**CANDELA DISTRIBUTION (FULL):**

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
0°	725.3	725.3	725.3	725.3	725.3	725.3	725.3	725.3	725.3	725.3	725.3
2.5°	729.5	729.0	728.4	727.9	727.3	726.4	725.0	723.7	722.4	721.1	722.1
5°	727.4	726.7	726.0	725.3	724.6	723.6	722.2	720.7	719.4	718.0	719.4
7.5°	720.9	720.4	719.9	719.5	719.1	718.3	717.2	716.1	715.0	714.0	715.7
10°	715.9	715.4	714.9	714.5	714.0	713.4	712.7	712.0	711.3	710.6	712.5
12.5°	707.4	707.6	707.7	707.7	707.8	707.6	707.1	706.5	706.1	705.5	707.4
15°	693.8	694.3	694.7	695.2	695.6	695.9	695.9	695.9	695.9	695.9	698.0
17.5°	676.1	677.1	678.1	679.1	680.0	680.9	681.7	682.4	683.2	683.9	686.1
20°	664.3	665.5	666.7	667.9	669.0	670.1	671.0	671.9	672.9	673.8	676.4
22.5°	651.7	653.1	654.4	655.8	657.1	658.5	659.8	661.1	662.4	663.7	666.3
25°	630.7	632.3	634.0	635.6	637.2	639.1	641.2	643.3	645.4	647.5	650.3
27.5°	605.5	608.2	610.8	613.5	616.2	618.7	621.2	623.7	626.1	628.6	632.2
30°	588.7	591.7	594.8	597.8	600.8	603.9	606.9	609.9	613.0	616.0	619.7
32.5°	570.1	573.5	576.9	580.4	583.8	587.3	590.9	594.5	598.1	601.7	606.0
35°	543.4	547.4	551.4	555.4	559.4	563.6	568.0	572.4	576.9	581.3	586.5
37.5°	514.4	519.0	523.6	528.1	532.7	537.9	543.7	549.5	555.2	560.9	566.6
40°	495.1	500.3	505.4	510.6	515.6	521.4	527.7	534.0	540.3	546.6	552.7
42.5°	476.6	481.7	486.9	492.0	497.2	503.4	510.6	517.8	525.1	532.3	538.9
45°	445.7	452.0	458.3	464.6	471.0	478.2	486.3	494.6	502.7	510.9	518.1
47.5°	415.2	422.1	429.0	435.9	442.7	450.9	460.5	470.1	479.7	489.3	496.8
50°	394.2	401.4	408.7	415.9	423.2	432.1	442.5	453.0	463.6	474.1	482.0
52.5°	374.0	381.6	389.3	396.9	404.5	413.8	424.9	435.9	447.0	458.1	466.2
55°	341.7	350.1	358.5	366.9	375.3	385.6	397.7	409.9	422.0	434.1	442.5
57.5°	309.7	319.2	328.7	338.1	347.6	358.5	370.9	383.3	395.7	408.1	417.2
60°	287.0	297.0	307.0	317.1	327.2	338.8	352.1	365.4	378.7	392.1	401.0
62.5°	266.8	277.2	287.6	298.0	308.5	320.4	333.7	347.0	360.3	373.6	383.0
65°	233.4	244.8	256.3	267.7	279.2	291.8	305.5	319.3	333.1	346.9	356.5
67.5°	202.6	214.6	226.6	238.5	250.5	263.6	277.7	291.8	305.9	320.0	329.6
70°	180.8	193.0	205.1	217.2	229.4	242.7	257.2	271.6	286.1	300.6	310.7
72.5°	160.7	173.2	185.7	198.2	210.7	224.3	239.0	253.7	268.3	283.0	292.9
75°	129.3	142.4	155.4	168.6	181.6	195.7	210.6	225.5	240.5	255.4	265.5
77.5°	99.0	112.7	126.4	140.1	153.8	168.2	183.4	198.6	213.7	228.9	238.9
80°	78.8	93.1	107.3	121.6	135.9	150.5	165.7	180.9	196.1	211.3	221.1
82.5°	62.0	76.0	90.2	104.2	118.3	133.0	148.4	163.7	179.1	194.5	204.3
85°	37.9	52.4	66.8	81.3	95.8	110.5	125.4	140.4	155.3	170.3	180.1
87.5°	20.8	34.9	49.1	63.3	77.5	92.2	107.3	122.5	137.7	152.8	162.5
90°	11.1	26.0	41.0	55.8	70.8	86.3	102.2	118.2	134.1	150.1	160.1
92.5°	21.2	33.6	46.1	58.6	71.1	84.8	99.7	114.5	129.4	144.3	153.8
95°	45.2	52.0	58.9	65.8	72.6	83.4	98.3	113.2	128.1	143.0	152.5
97.5°	80.5	78.5	76.6	74.6	72.6	79.5	94.9	110.4	126.0	141.4	150.6
100°	107.7	99.0	90.5	81.8	73.2	76.5	91.7	106.9	122.2	137.4	147.1
102.5°	136.7	141.0	145.2	149.5	153.7	153.2	148.1	142.8	137.6	132.5	142.2
105°	177.5	188.1	198.6	209.2	219.8	213.9	191.6	169.4	147.2	125.0	134.5
107.5°	225.2	233.7	242.2	250.6	259.1	248.6	219.0	189.3	159.8	130.2	136.7
110°	255.2	262.5	269.9	277.2	284.5	275.7	250.7	225.8	200.8	175.9	170.8



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**CANDELA DISTRIBUTION (continued):**

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
112.5°	284.2	290.5	296.8	303.1	309.3	313.4	315.3	317.2	319.1	321.0	282.5
115°	330.0	334.8	339.5	344.2	348.9	358.1	371.7	385.4	399.0	412.7	361.4
117.5°	369.9	374.0	378.0	382.1	386.2	394.2	406.1	418.0	429.8	441.7	434.5
120°	399.8	402.7	405.4	408.3	411.1	418.4	429.9	441.6	453.1	464.8	472.9
122.5°	425.2	427.5	429.9	432.3	434.7	441.5	452.7	464.0	475.2	486.5	493.8
125°	462.8	464.5	466.1	467.7	469.4	475.1	485.0	494.9	504.7	514.6	521.7
127.5°	497.8	499.4	501.0	502.6	504.1	508.8	516.7	524.5	532.3	540.1	547.2
130°	520.1	521.8	523.6	525.4	527.2	531.2	537.5	543.8	550.1	556.3	563.3
132.5°	542.7	544.2	545.7	547.2	548.7	551.9	557.1	562.3	567.4	572.6	579.2
135°	571.2	573.1	575.1	577.2	579.2	581.9	585.4	588.8	592.3	595.8	602.0
137.5°	600.9	602.3	603.6	605.0	606.4	608.2	610.5	612.8	615.1	617.5	623.0
140°	620.4	621.2	621.9	622.7	623.5	624.9	626.7	628.5	630.4	632.2	637.2
142.5°	636.8	637.4	638.1	638.7	639.4	640.6	642.3	644.0	645.6	647.4	651.3
145°	661.3	661.2	661.1	660.9	660.8	661.8	663.9	666.1	668.2	670.3	672.6
147.5°	683.7	683.2	682.7	682.2	681.8	682.5	684.7	686.7	688.9	691.0	691.8
150°	698.2	697.3	696.4	695.5	694.6	695.2	697.2	699.2	701.2	703.2	704.0
152.5°	710.3	709.4	708.4	707.4	706.5	706.9	708.8	710.7	712.6	714.5	715.3
155°	728.2	727.1	725.9	724.8	723.7	723.8	725.3	726.8	728.3	729.8	730.6
157.5°	742.1	741.2	740.2	739.3	738.3	738.3	739.4	740.5	741.5	742.6	743.5
160°	750.3	749.5	748.8	748.0	747.3	747.3	748.0	748.8	749.5	750.3	751.1
162.5°	757.6	756.8	756.1	755.3	754.5	754.5	755.1	755.7	756.5	757.1	758.0
165°	767.3	766.5	765.8	765.0	764.2	764.1	764.5	764.9	765.2	765.6	766.4
167.5°	774.5	773.8	773.0	772.3	771.5	771.3	771.7	772.0	772.4	772.7	773.6
170°	778.6	777.8	777.1	776.3	775.6	775.3	775.6	775.9	776.1	776.3	777.2
172.5°	781.3	780.5	779.8	779.0	778.3	778.1	778.3	778.6	778.8	779.0	780.0
175°	784.8	783.9	783.1	782.2	781.3	781.0	781.3	781.5	781.7	782.0	782.9
177.5°	785.4	784.7	784.0	783.3	782.6	782.3	782.4	782.5	782.6	782.7	783.4
180°	783.2	783.2	783.2	783.2	783.2	783.2	783.2	783.2	783.2	783.2	783.2



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**CANDELA DISTRIBUTION (continued):**

	55°	60°	65°	70°	75°	80°	85°	90°
0°	725.3	725.3	725.3	725.3	725.3	725.3	725.3	725.3
2.5°	722.9	723.9	724.8	725.2	724.8	724.4	724.0	723.7
5°	720.7	722.2	723.6	724.1	723.9	723.7	723.4	723.2
7.5°	717.3	719.0	720.7	721.4	721.2	721.0	720.7	720.5
10°	714.3	716.2	718.1	718.9	718.7	718.4	718.2	718.0
12.5°	709.3	711.1	713.0	713.8	713.6	713.4	713.1	712.9
15°	700.1	702.2	704.3	705.2	705.0	704.7	704.5	704.3
17.5°	688.3	690.5	692.7	693.8	693.8	693.8	693.8	693.8
20°	679.0	681.5	684.0	685.4	685.4	685.4	685.4	685.4
22.5°	668.8	671.5	674.0	675.5	675.8	676.2	676.6	677.0
25°	653.2	655.9	658.8	660.5	661.2	661.9	662.6	663.3
27.5°	635.7	639.3	642.8	644.8	645.4	645.9	646.4	646.9
30°	623.4	627.2	631.0	633.2	633.8	634.5	635.3	636.0
32.5°	610.3	614.6	618.9	621.7	622.9	624.2	625.4	626.7
35°	591.6	596.8	601.9	605.2	606.9	608.6	610.1	611.8
37.5°	572.3	578.0	583.7	587.4	589.1	590.9	592.6	594.4
40°	558.7	564.8	570.9	575.0	577.1	579.2	581.3	583.4
42.5°	545.6	552.2	558.9	563.2	565.3	567.4	569.5	571.6
45°	525.4	532.6	539.9	544.6	547.0	549.3	551.7	554.0
47.5°	504.4	511.9	519.5	524.6	527.1	529.7	532.3	534.9
50°	490.0	497.9	505.9	511.1	513.7	516.3	518.8	521.4
52.5°	474.4	482.5	490.6	496.1	498.8	501.6	504.3	507.1
55°	451.0	459.4	467.8	473.5	476.5	479.6	482.6	485.6
57.5°	426.2	435.2	444.3	450.4	453.4	456.5	459.6	462.7
60°	409.9	418.7	427.6	433.6	437.0	440.2	443.5	446.8
62.5°	392.4	401.9	411.3	417.6	420.6	423.7	426.8	429.9
65°	366.1	375.7	385.2	391.5	394.5	397.6	400.6	403.6
67.5°	339.3	349.0	358.7	365.1	368.3	371.5	374.6	377.8
70°	320.8	330.7	340.8	347.2	350.1	352.8	355.7	358.5
72.5°	302.7	312.5	322.4	329.0	332.4	335.7	339.1	342.5
75°	275.5	285.6	295.6	302.1	305.2	308.2	311.2	314.3
77.5°	249.0	259.0	268.9	275.6	278.8	282.1	285.4	288.7
80°	230.9	240.7	250.6	257.1	260.3	263.6	266.9	270.1
82.5°	214.1	223.9	233.7	240.2	243.3	246.3	249.4	252.5
85°	189.9	199.7	209.5	216.1	219.4	222.6	225.9	229.2
87.5°	172.1	181.7	191.4	197.8	200.8	203.8	206.9	209.9
90°	170.0	180.0	190.0	196.5	199.6	202.6	205.7	208.7
92.5°	163.3	172.8	182.3	188.5	191.5	194.4	197.3	200.3
95°	162.0	171.5	181.0	187.1	189.8	192.4	195.1	197.8
97.5°	159.7	168.9	178.0	184.0	187.0	189.9	192.7	195.7
100°	156.7	166.4	176.0	182.3	185.1	187.9	190.8	193.5
102.5°	151.9	161.8	171.5	177.8	180.8	183.7	186.6	189.6
105°	144.1	153.7	163.2	169.5	172.6	175.7	178.7	181.8
107.5°	143.1	149.5	155.9	160.7	163.7	166.8	169.9	173.0
110°	165.6	160.6	155.4	154.4	157.5	160.6	163.7	166.7





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**CANDELA DISTRIBUTION (continued):**

	55°	60°	65°	70°	75°	80°	85°	90°
112.5°	244.1	205.6	167.2	149.4	152.3	155.3	158.3	161.3
115°	310.1	258.8	207.6	178.6	172.1	165.6	159.1	152.7
117.5°	427.3	420.2	413.0	395.7	368.3	340.8	313.4	286.0
120°	480.9	488.9	497.0	493.8	479.3	464.9	450.5	436.1
122.5°	501.0	508.3	515.6	518.6	517.5	516.4	515.3	514.2
125°	528.9	536.1	543.4	548.2	550.6	553.1	555.6	558.1
127.5°	554.3	561.3	568.4	573.0	575.1	577.3	579.4	581.5
130°	570.4	577.3	584.3	588.7	590.4	592.2	593.9	595.6
132.5°	585.8	592.5	599.0	603.2	605.0	606.7	608.5	610.2
135°	608.2	614.3	620.4	624.3	626.0	627.6	629.2	630.8
137.5°	628.5	634.1	639.6	642.9	644.1	645.2	646.4	647.6
140°	642.0	646.9	651.7	654.6	655.3	656.1	656.9	657.7
142.5°	655.4	659.4	663.5	665.7	666.3	666.9	667.5	668.0
145°	674.9	677.2	679.5	680.9	681.4	682.0	682.5	683.1
147.5°	692.7	693.6	694.3	694.8	694.8	694.9	694.9	694.9
150°	704.7	705.5	706.2	706.3	705.7	705.0	704.4	703.8
152.5°	716.1	716.8	717.6	717.6	716.8	715.9	715.1	714.2
155°	731.4	732.1	732.9	732.8	731.7	730.8	729.8	728.7
157.5°	744.3	745.1	746.0	745.9	745.0	743.9	743.0	742.0
160°	751.8	752.6	753.3	753.2	752.3	751.5	750.6	749.7
162.5°	758.8	759.6	760.5	760.4	759.3	758.2	757.2	756.1
165°	767.3	768.3	769.1	769.1	768.3	767.3	766.4	765.6
167.5°	774.5	775.4	776.3	776.1	775.0	773.9	772.7	771.6
170°	778.1	779.0	779.9	779.7	778.6	777.4	776.3	775.2
172.5°	780.9	781.7	782.6	782.4	781.3	780.2	779.0	777.9
175°	783.8	784.7	785.5	785.4	784.1	782.8	781.6	780.3
177.5°	784.1	784.8	785.5	785.4	784.5	783.6	782.7	781.8
180°	783.2	783.2	783.2	783.2	783.2	783.2	783.2	783.2

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