

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: P331387-927

Luminaire Tested: **SA2XXDIP-C865D530U927-4F0-1E-UDD-D**

Issue Date: 10/7/2019

**Test Information**

Test Method: LM-79-08  
Report Number: P331387-927  
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-C865D530U927-4F0-1E-UDD-D  
Description: DEFINE 2 DIRECT-INDIRECT PENDANT LED LUMINAIRE  
DOWNLIGHT 865 LUMENS PER FOOT, DROP SATIN WHITE DIFFUSER  
UPLIGHT 530 LUMENS PER FOOT, NO LENS  
Light Source: -  
Ballast/Driver: ELECTRONIC DRIVER

**Summary**

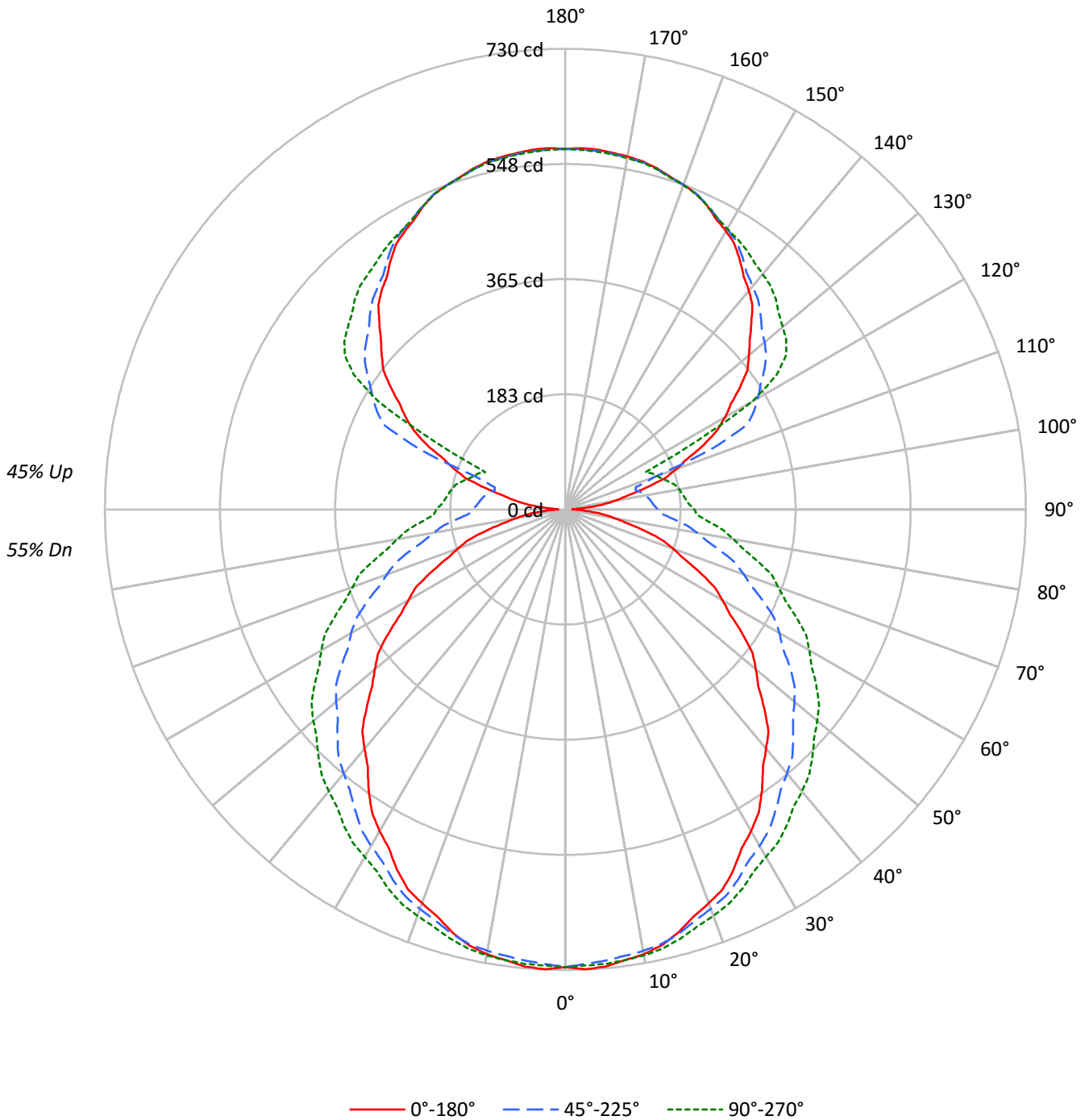
Lumens per Lamp: N/A  
Luminaire Lumens: 4442.9 lumens  
Efficiency: N/A  
Efficacy: 91.0 lumens/watt  
Spacing Criteria (0/90/45): 1.21 / 1.32 / 1.42  
Luminous Opening: Rectangular w/ Sides (W: 0.17' x L: 4' x H: 0.08')  
CIE Type: General Diffuse

Input Watts (W): 48.8  
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



TEST NUMBER: P331387-927  
CATALOG NUMBER: SA2XXDIP-C865D530U927-4F0-1E-UDD-D

### Luminous Intensity Polar Plot





TEST NUMBER: P331387-927

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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	0
RCR																		
0	108	108	108	108	101	101	101	101	86	86	86	73	73	73	61	61	61	55
1	97	92	88	84	90	86	82	78	73	70	67	62	60	58	51	50	48	43
2	88	80	73	67	81	74	68	63	63	59	55	53	50	47	44	42	39	35
3	80	69	61	55	74	65	57	52	55	50	45	47	42	39	39	35	33	29
4	73	61	53	46	67	57	49	43	49	43	38	41	37	33	34	31	28	24
5	67	54	46	39	61	51	43	37	43	37	32	37	32	28	31	27	24	21
6	61	49	40	34	57	45	38	32	39	33	28	33	28	24	28	24	21	18
7	57	44	35	29	52	41	33	28	35	29	25	30	25	22	25	21	18	16
8	53	40	32	26	49	37	30	25	32	26	22	27	23	19	23	19	16	14
9	49	36	28	23	45	34	27	22	29	24	19	25	20	17	21	18	15	13
10	46	33	26	21	42	31	24	20	27	21	17	23	19	15	20	16	13	11

**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	1.5
10°-20°	197.1	4.4
20°-30°	298.7	6.7
30°-40°	363.8	8.2
40°-50°	391.3	8.8
50°-60°	380.0	8.6
60°-70°	331.8	7.5
70°-80°	255.5	5.7
80°-90°	172.9	3.9
90°-100°	137.2	3.1
100°-110°	156.1	3.5
110°-120°	243.8	5.5
120°-130°	340.2	7.7
130°-140°	341.3	7.7
140°-150°	307.2	6.9
150°-160°	245.1	5.5
160°-170°	157.9	3.6
170°-180°	54.4	1.2
0°-30°	564.5	12.7
0°-40°	928.2	20.9
0°-60°	1699.6	38.3
0°-90°	2459.8	55.4
90°-120°	537.1	12.1
90°-150°	1525.7	34.3
90°-180°	1983.0	44.6
0°-180°	4442.9	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	77	147	189	204	8
95°	35	73	137	177	191	40
105°	131	168	116	155	170	140
115°	242	263	318	166	140	238
125°	338	346	385	415	427	302
135°	417	424	438	463	472	322
145°	482	482	489	498	502	302
155°	531	528	532	535	532	245
165°	560	558	558	561	558	158
175°	573	570	570	573	569	54
180°	571	571	571	571	571	



TEST NUMBER: P331387-927

CATALOG NUMBER: SA2XXDIP-C865D530U927-4F0-1E-UDD-D

**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°	20.7	34.8	49.0	63.1	77.2	91.8	106.9	122.0	137.0	152.2	161.8
90°	10.9	25.5	40.0	54.6	69.2	84.3	100.0	115.7	131.3	147.0	156.9
92.5°	18.0	30.6	43.1	55.6	68.1	81.8	96.5	111.3	126.0	140.8	150.2
95°	35.3	43.3	51.2	59.1	67.1	78.3	93.0	107.7	122.3	137.0	146.3
97.5°	60.7	61.9	63.1	64.3	65.6	73.7	88.6	103.5	118.5	133.4	142.4
100°	80.6	76.6	72.6	68.7	64.7	70.1	84.8	99.4	114.1	128.7	138.1
102.5°	101.6	106.8	112.0	117.2	122.5	124.8	124.5	124.1	123.8	123.4	132.8
105°	130.9	140.5	150.0	159.5	169.1	167.4	154.4	141.5	128.6	115.7	124.8
107.5°	165.7	173.3	181.0	188.6	196.3	190.8	172.5	154.0	135.5	117.1	123.9
110°	187.4	193.9	200.6	207.2	213.7	209.5	194.4	179.3	164.2	149.1	147.3



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**CANDELA DISTRIBUTION (continued):**

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
112.5°	208.5	214.1	219.8	225.4	231.1	236.0	240.3	244.7	249.0	253.3	227.3
115°	241.9	246.1	250.2	254.3	258.4	266.9	279.7	292.6	305.3	318.1	282.7
117.5°	270.7	274.2	277.6	281.0	284.4	291.8	303.1	314.4	325.7	337.0	333.6
120°	292.6	294.9	297.1	299.4	301.8	308.5	319.4	330.4	341.4	352.4	360.0
122.5°	311.1	312.9	314.7	316.6	318.4	324.6	335.2	345.7	356.3	366.9	373.9
125°	338.2	339.4	340.6	341.8	343.0	348.2	357.4	366.6	375.9	385.1	392.1
127.5°	363.8	364.9	365.9	367.0	368.1	372.3	379.7	387.0	394.3	401.6	408.4
130°	379.9	381.2	382.5	383.7	384.9	388.5	394.4	400.3	406.2	412.2	418.7
132.5°	396.5	397.5	398.5	399.6	400.5	403.5	408.3	413.0	417.9	422.6	429.0
135°	416.9	418.4	419.9	421.4	422.8	425.2	428.3	431.5	434.7	437.8	443.6
137.5°	438.7	439.7	440.7	441.6	442.6	444.1	446.1	448.1	450.0	451.9	457.2
140°	452.9	453.4	453.9	454.4	455.0	455.9	457.4	458.8	460.3	461.8	466.4
142.5°	464.9	465.2	465.6	466.1	466.5	467.4	468.7	469.8	471.1	472.4	476.1
145°	482.4	482.4	482.3	482.2	482.1	482.8	484.4	485.9	487.5	489.1	491.2
147.5°	498.8	498.4	498.0	497.7	497.3	498.0	499.5	501.1	502.6	504.1	504.8
150°	509.3	508.7	508.0	507.4	506.8	507.2	508.7	510.1	511.6	513.0	513.6
152.5°	518.2	517.5	516.8	516.1	515.4	515.7	517.1	518.6	519.9	521.3	521.9
155°	531.2	530.4	529.6	528.8	527.9	528.1	529.2	530.3	531.4	532.5	533.1
157.5°	541.4	540.7	540.0	539.3	538.6	538.7	539.4	540.2	541.0	541.8	542.3
160°	547.4	546.8	546.3	545.7	545.2	545.2	545.7	546.3	546.8	547.4	548.0
162.5°	552.6	552.1	551.5	551.0	550.5	550.4	550.9	551.4	551.8	552.3	552.9
165°	559.8	559.2	558.6	558.1	557.5	557.5	557.7	557.9	558.3	558.5	559.2
167.5°	565.1	564.5	564.0	563.4	562.8	562.7	562.9	563.2	563.5	563.7	564.4
170°	568.0	567.5	567.0	566.4	565.9	565.6	565.9	566.0	566.2	566.4	567.0
172.5°	570.1	569.5	568.9	568.4	567.8	567.6	567.8	568.0	568.2	568.4	569.0
175°	572.6	572.0	571.3	570.7	570.0	569.8	570.0	570.1	570.3	570.5	571.2
177.5°	573.0	572.5	572.0	571.5	570.9	570.7	570.8	570.8	570.9	571.0	571.6
180°	571.3	571.3	571.3	571.3	571.3	571.3	571.3	571.3	571.3	571.3	571.3



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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°	171.4	181.0	190.7	197.0	200.0	203.0	206.0	209.1
90°	166.6	176.4	186.2	192.7	195.6	198.6	201.6	204.5
92.5°	159.5	169.0	178.4	184.5	187.4	190.4	193.3	196.1
95°	155.7	165.0	174.4	180.4	183.1	185.8	188.5	191.2
97.5°	151.5	160.5	169.4	175.4	178.2	181.2	184.0	186.9
100°	147.4	156.9	166.2	172.3	175.0	177.8	180.5	183.3
102.5°	142.3	151.7	161.1	167.2	170.1	172.9	175.7	178.6
105°	134.0	143.1	152.3	158.4	161.4	164.3	167.2	170.2
107.5°	130.7	137.5	144.3	149.2	152.2	155.1	158.0	161.0
110°	145.7	143.9	142.3	142.8	145.8	148.7	151.6	154.6





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**CANDELA DISTRIBUTION (continued):**

	55°	60°	65°	70°	75°	80°	85°	90°
112.5°	201.2	175.2	149.2	137.6	140.5	143.3	146.2	149.0
115°	247.1	211.6	176.0	156.2	152.2	148.1	144.1	140.1
117.5°	330.3	326.9	323.4	312.1	292.8	273.4	254.1	234.7
120°	367.7	375.3	383.0	381.9	372.1	362.3	352.4	342.6
122.5°	381.0	387.9	395.0	398.4	398.2	397.9	397.8	397.5
125°	398.9	405.9	412.9	417.6	419.9	422.3	424.7	427.1
127.5°	415.1	421.8	428.6	433.0	435.1	437.2	439.3	441.4
130°	425.4	432.0	438.6	442.8	444.6	446.4	448.1	450.0
132.5°	435.2	441.5	447.7	451.8	453.6	455.3	457.2	458.9
135°	449.4	455.3	461.1	464.9	466.5	468.2	469.9	471.6
137.5°	462.3	467.5	472.8	476.0	477.3	478.6	479.8	481.1
140°	471.0	475.5	480.1	482.8	483.8	484.7	485.7	486.6
142.5°	479.8	483.6	487.4	489.6	490.4	491.1	491.9	492.7
145°	493.1	495.2	497.3	498.6	499.3	500.0	500.7	501.5
147.5°	505.4	506.1	506.8	507.2	507.4	507.6	507.7	507.9
150°	514.1	514.7	515.2	515.3	514.8	514.4	513.9	513.5
152.5°	522.4	523.0	523.6	523.5	522.9	522.3	521.7	521.1
155°	533.6	534.2	534.7	534.6	533.9	533.1	532.4	531.6
157.5°	543.0	543.6	544.2	544.2	543.4	542.7	542.0	541.3
160°	548.4	549.0	549.5	549.5	548.9	548.3	547.6	546.9
162.5°	553.6	554.2	554.8	554.8	554.0	553.2	552.4	551.6
165°	559.8	560.5	561.1	561.1	560.5	559.8	559.2	558.5
167.5°	565.0	565.7	566.3	566.3	565.4	564.6	563.7	562.9
170°	567.7	568.3	568.9	568.9	568.0	567.2	566.4	565.5
172.5°	569.7	570.3	570.9	570.8	570.1	569.2	568.4	567.5
175°	571.8	572.4	573.1	573.0	572.0	571.1	570.2	569.3
177.5°	572.0	572.6	573.1	573.0	572.4	571.6	571.0	570.4
180°	571.3	571.3	571.3	571.3	571.3	571.3	571.3	571.3

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