

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: P331351-930

Luminaire Tested: **S122DIP-S675D725U930-4F0-1E-UDD-D**

Issue Date: 3/3/2020

**Test Information**

Test Method: LM-79-08  
Report Number: P331351-930  
REPORT IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-1807-864-2,  
Test Lab: INNOVATION CENTER  
Issue Date: 3/3/2020  
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)  
Product Line: NEO-RAY  
Catalog Number: S122DIP-S675D725U930-4F0-1E-UDD-D  
Description: DEFINE 2 DIRECT-INDIRECT PENDANT LED LUMINAIRE  
DOWNLIGHT 675 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: 4554.9 lumens  
Efficiency: N/A  
Efficacy: 99.2 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

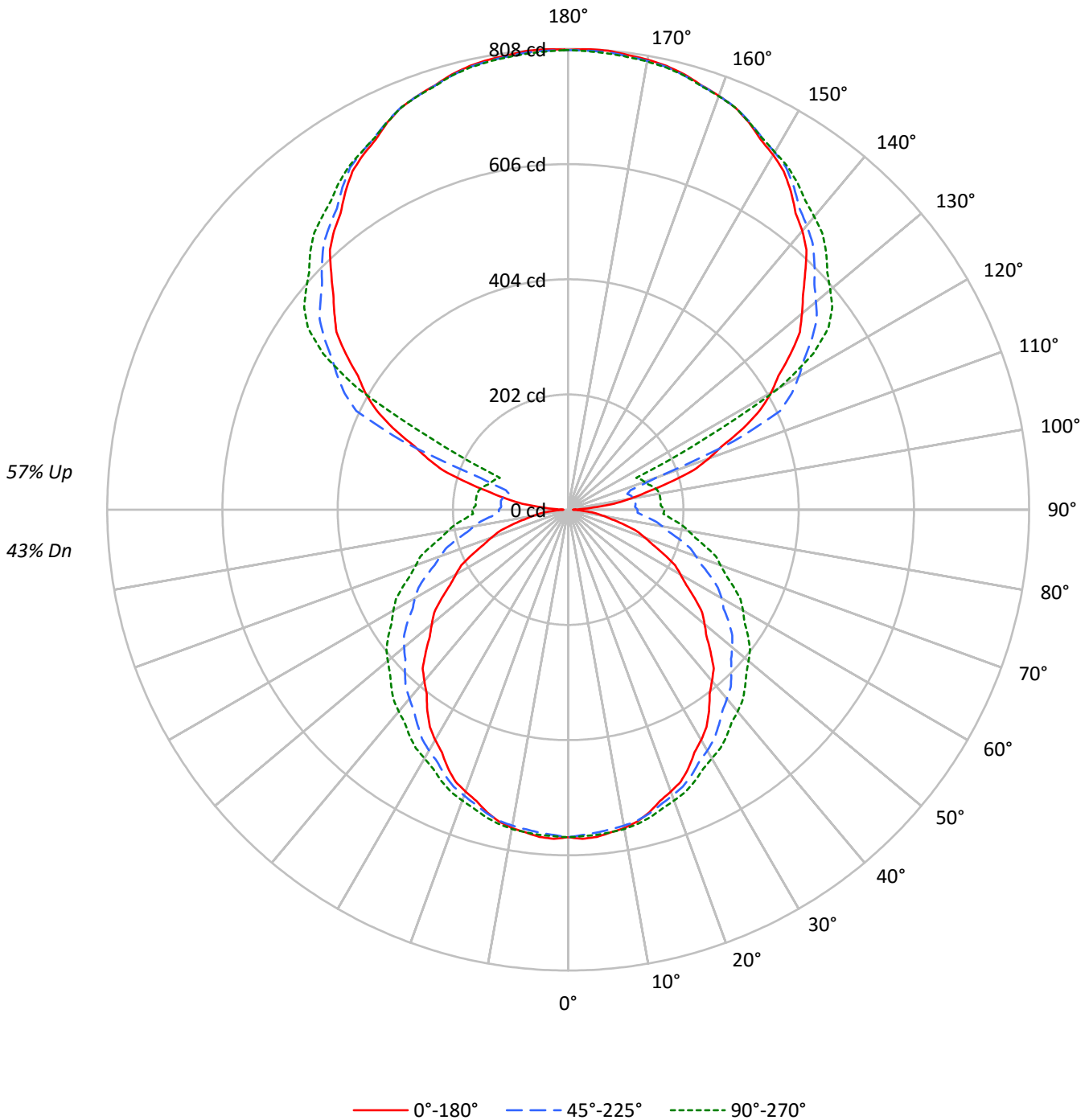
Input Watts (W): 45.9  
Input Voltage (V): 120  
Input Current (A<sub>in</sub>): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 25 FT



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### Luminous Intensity Polar Plot





TEST NUMBER: P331351-930

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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	105	105	105	105	96	96	96	96	79	79	79	64	64	64	49	49	49	43
1	95	90	86	82	86	82	78	75	68	65	62	54	52	50	42	40	39	33
2	86	78	71	66	78	71	65	61	58	54	51	47	44	41	36	34	32	27
3	78	68	60	54	71	62	55	50	51	46	42	41	37	34	31	29	27	22
4	71	60	52	45	64	55	48	42	45	40	35	36	32	29	28	25	23	19
5	65	53	45	39	59	49	41	36	40	35	30	32	28	25	25	22	19	16
6	60	47	39	33	54	44	36	31	36	30	26	29	25	22	22	19	17	14
7	55	43	35	29	50	39	32	27	33	27	23	26	22	19	20	17	15	12
8	51	39	31	25	46	36	28	24	30	24	20	24	20	17	19	16	13	11
9	48	35	28	22	43	32	26	21	27	22	18	22	18	15	17	14	12	10
10	44	32	25	20	40	30	23	19	25	20	16	20	16	13	16	13	11	9

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

	0°	45°	90°
0°	9273	9273	9273
5°	9317	8925	8891
10°	9259	8661	8564
15°	9131	8383	8221
20°	8970	8083	7889
25°	8811	7795	7587
30°	8587	7498	7284
35°	8359	7211	7072
40°	8120	6969	6858
45°	7894	6750	6677
50°	7650	6553	6497
55°	7394	6340	6314
60°	7081	6122	6123
65°	6755	5864	5892
70°	6394	5587	5644
75°	5927	5315	5415
80°	5197	5036	5185
85°	4489	4797	5004



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	54.4	1.2
10°-20°	156.0	3.4
20°-30°	236.5	5.2
30°-40°	288.0	6.3
40°-50°	309.9	6.8
50°-60°	300.9	6.6
60°-70°	262.7	5.8
70°-80°	202.3	4.4
80°-90°	137.7	3.0
90°-100°	120.4	2.6
100°-110°	166.9	3.7
110°-120°	308.7	6.8
120°-130°	460.2	10.1
130°-140°	473.2	10.4
140°-150°	431.9	9.5
150°-160°	345.7	7.6
160°-170°	222.8	4.9
170°-180°	76.7	1.7
0°-30°	446.9	9.8
0°-40°	734.9	16.1
0°-60°	1345.7	29.5
0°-90°	1948.4	42.8
90°-120°	595.9	13.1
90°-150°	1961.3	43.1
90°-180°	2606.0	57.2
0°-180°	4554.9	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	574	574	574	574	574	
5°	576	573	568	573	573	55
15°	549	551	551	558	558	155
25°	499	505	513	522	525	229
35°	430	445	460	478	484	269
45°	353	376	404	429	439	272
55°	270	301	344	373	384	242
65°	185	226	275	308	320	183
75°	102	149	202	237	249	108
85°	30	82	135	168	181	32
90°	9	64	122	156	169	7
95°	45	66	118	152	162	52
105°	182	214	107	141	154	194
115°	339	360	410	176	132	333
125°	476	485	521	547	557	424
135°	588	597	610	633	639	454
145°	681	681	690	699	700	426
155°	749	745	751	754	750	345
165°	790	786	788	792	788	223
175°	808	804	805	808	803	77
180°	806	806	806	806	806	



TEST NUMBER: P331351-930

CATALOG NUMBER: S122DIP-S675D725U930-4F0-1E-UDD-D

**CANDELA DISTRIBUTION (FULL):**

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
0°	574.3	574.3	574.3	574.3	574.3	574.3	574.3	574.3	574.3	574.3	574.3
2.5°	577.6	577.2	576.7	576.3	575.8	575.1	574.1	573.0	572.0	571.0	571.7
5°	575.9	575.4	574.9	574.3	573.7	572.9	571.8	570.7	569.6	568.4	569.6
7.5°	570.8	570.4	570.1	569.6	569.3	568.7	567.9	567.0	566.1	565.3	566.6
10°	566.8	566.4	566.1	565.7	565.3	564.8	564.3	563.8	563.2	562.6	564.1
12.5°	560.1	560.2	560.3	560.4	560.4	560.3	559.9	559.5	559.1	558.6	560.1
15°	549.3	549.7	550.1	550.4	550.8	551.0	551.0	551.0	551.0	551.0	552.6
17.5°	535.3	536.1	536.9	537.7	538.4	539.2	539.7	540.3	540.9	541.5	543.2
20°	526.0	526.9	527.8	528.8	529.7	530.5	531.2	532.1	532.8	533.5	535.6
22.5°	516.0	517.1	518.2	519.3	520.3	521.4	522.4	523.4	524.5	525.5	527.6
25°	499.4	500.7	502.0	503.3	504.6	506.1	507.7	509.4	511.0	512.7	514.9
27.5°	479.4	481.5	483.6	485.8	487.9	489.9	491.9	493.8	495.8	497.7	500.5
30°	466.1	468.5	470.9	473.3	475.7	478.1	480.5	482.9	485.3	487.7	490.6
32.5°	451.4	454.1	456.8	459.5	462.3	465.0	467.9	470.7	473.5	476.4	479.8
35°	430.3	433.4	436.6	439.7	442.9	446.2	449.7	453.2	456.7	460.2	464.3
37.5°	407.3	411.0	414.6	418.2	421.8	425.9	430.5	435.0	439.5	444.1	448.7
40°	392.0	396.1	400.1	404.2	408.3	412.8	417.8	422.8	427.8	432.8	437.6
42.5°	377.4	381.4	385.5	389.6	393.6	398.5	404.3	410.0	415.7	421.5	426.7
45°	352.9	357.9	362.9	367.9	372.8	378.6	385.1	391.6	398.0	404.5	410.3
47.5°	328.7	334.2	339.7	345.0	350.5	357.0	364.6	372.2	379.8	387.3	393.4
50°	312.1	317.9	323.6	329.3	335.0	342.1	350.4	358.7	367.0	375.4	381.6
52.5°	296.1	302.1	308.2	314.2	320.2	327.7	336.4	345.2	353.9	362.7	369.2
55°	270.5	277.1	283.8	290.5	297.1	305.2	314.9	324.5	334.1	343.7	350.4
57.5°	245.2	252.7	260.2	267.7	275.2	283.9	293.7	303.5	313.3	323.1	330.3
60°	227.2	235.1	243.1	251.1	259.0	268.3	278.8	289.3	299.9	310.5	317.5
62.5°	211.2	219.5	227.7	235.9	244.3	253.6	264.2	274.7	285.3	295.8	303.3
65°	184.7	193.8	202.9	212.0	221.0	231.0	241.9	252.8	263.7	274.7	282.3
67.5°	160.5	169.9	179.4	188.9	198.4	208.6	219.8	231.0	242.1	253.3	261.0
70°	143.2	152.8	162.4	172.0	181.6	192.2	203.7	215.1	226.6	238.1	246.0
72.5°	127.2	137.1	147.0	156.9	166.8	177.6	189.2	200.8	212.5	224.0	231.9
75°	102.4	112.8	123.1	133.5	143.8	154.9	166.7	178.6	190.4	202.3	210.2
77.5°	78.4	89.3	100.1	110.9	121.7	133.2	145.2	157.3	169.3	181.2	189.2
80°	62.5	73.7	85.0	96.3	107.5	119.2	131.3	143.2	155.2	167.3	175.0
82.5°	49.1	60.3	71.3	82.5	93.7	105.3	117.5	129.6	141.8	154.0	161.8
85°	30.0	41.4	52.9	64.3	75.8	87.5	99.3	111.1	123.0	134.9	142.6
87.5°	16.5	27.7	39.1	50.4	61.6	73.4	85.4	97.4	109.5	121.5	129.2
90°	8.9	21.0	33.2	45.3	57.5	70.0	82.9	95.8	108.7	121.6	129.6
92.5°	19.4	29.3	39.1	49.0	58.9	69.8	81.7	93.6	105.5	117.4	125.0
95°	44.6	49.0	53.4	57.8	62.2	70.4	82.4	94.4	106.5	118.5	126.1
97.5°	81.0	76.7	72.4	68.1	63.8	68.0	80.7	93.5	106.2	119.0	126.4
100°	109.1	98.2	87.2	76.3	65.4	66.2	78.8	91.3	104.0	116.5	124.3
102.5°	139.2	141.7	144.1	146.7	149.1	146.2	137.9	129.5	121.2	112.8	120.8
105°	181.5	190.7	200.0	209.2	218.5	210.2	184.4	158.7	132.9	107.1	115.0
107.5°	230.6	238.1	245.5	252.9	260.3	247.4	214.3	181.0	147.8	114.5	119.4
110°	261.7	268.2	274.5	281.0	287.4	276.4	248.0	219.6	191.2	162.8	155.8



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**CANDELA DISTRIBUTION (continued):**

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
112.5°	291.6	297.1	302.6	308.1	313.6	316.1	315.4	314.8	314.1	313.6	272.1
115°	338.7	342.9	347.2	351.4	355.6	363.5	375.1	386.6	398.2	409.8	355.3
117.5°	379.9	383.8	387.5	391.3	395.1	402.0	411.9	421.8	431.8	441.6	432.7
120°	410.7	413.4	416.1	418.8	421.5	427.7	437.4	447.1	456.9	466.6	473.4
122.5°	436.8	439.2	441.6	443.9	446.2	452.2	461.6	471.2	480.6	490.2	496.1
125°	475.8	477.5	479.2	480.9	482.6	487.5	495.9	504.3	512.7	521.1	527.0
127.5°	511.8	513.6	515.2	516.9	518.6	522.8	529.4	536.0	542.6	549.2	555.1
130°	534.8	536.6	538.5	540.4	542.3	545.8	551.2	556.5	561.8	567.1	573.0
132.5°	558.1	559.6	561.2	562.8	564.4	567.4	571.8	576.2	580.7	585.1	590.5
135°	587.5	589.6	591.7	593.8	595.8	598.3	601.4	604.4	607.4	610.4	615.6
137.5°	618.2	619.6	621.0	622.5	623.9	625.7	627.8	629.9	632.0	634.2	638.9
140°	638.3	639.1	640.0	640.8	641.7	643.0	644.8	646.6	648.4	650.2	654.4
142.5°	655.1	655.8	656.6	657.3	658.1	659.3	661.0	662.7	664.4	666.1	669.5
145°	680.6	680.4	680.4	680.2	680.1	681.1	683.3	685.5	687.7	689.9	691.9
147.5°	703.6	703.1	702.6	702.1	701.6	702.5	704.7	706.8	709.0	711.2	712.0
150°	718.5	717.6	716.7	715.8	714.9	715.5	717.5	719.6	721.7	723.7	724.6
152.5°	731.1	730.1	729.1	728.1	727.1	727.6	729.5	731.5	733.4	735.4	736.2
155°	749.4	748.3	747.1	745.9	744.8	744.9	746.5	748.0	749.6	751.1	752.0
157.5°	763.8	762.8	761.8	760.8	759.9	759.9	761.0	762.1	763.1	764.3	765.2
160°	772.2	771.4	770.6	769.8	769.1	769.1	769.8	770.6	771.4	772.2	773.0
162.5°	779.7	778.9	778.1	777.3	776.5	776.5	777.1	777.8	778.5	779.2	780.1
165°	789.7	788.9	788.1	787.3	786.5	786.4	786.8	787.2	787.5	787.9	788.8
167.5°	797.1	796.4	795.6	794.8	794.0	793.8	794.2	794.5	794.9	795.2	796.1
170°	801.4	800.5	799.8	799.0	798.3	797.9	798.3	798.5	798.7	799.0	799.9
172.5°	804.1	803.3	802.6	801.8	801.0	800.8	801.0	801.3	801.5	801.8	802.7
175°	807.7	806.8	805.9	805.0	804.1	803.8	804.0	804.3	804.5	804.9	805.8
177.5°	808.4	807.6	806.9	806.2	805.4	805.1	805.2	805.4	805.4	805.5	806.2
180°	806.0	806.0	806.0	806.0	806.0	806.0	806.0	806.0	806.0	806.0	806.0



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**CANDELA DISTRIBUTION (continued):**

	55°	60°	65°	70°	75°	80°	85°	90°
0°	574.3	574.3	574.3	574.3	574.3	574.3	574.3	574.3
2.5°	572.4	573.2	573.9	574.1	573.8	573.6	573.2	573.0
5°	570.7	571.8	572.9	573.4	573.2	573.0	572.8	572.6
7.5°	567.9	569.3	570.6	571.2	571.0	570.8	570.6	570.5
10°	565.6	567.0	568.6	569.2	569.0	568.8	568.7	568.4
12.5°	561.6	563.0	564.6	565.2	565.0	564.8	564.7	564.4
15°	554.3	556.0	557.7	558.4	558.2	558.0	557.8	557.7
17.5°	544.9	546.7	548.5	549.3	549.3	549.3	549.3	549.3
20°	537.6	539.6	541.6	542.7	542.7	542.7	542.7	542.7
22.5°	529.6	531.7	533.6	534.8	535.1	535.4	535.7	536.0
25°	517.1	519.3	521.5	522.9	523.5	524.1	524.6	525.2
27.5°	503.4	506.1	509.0	510.5	510.9	511.4	511.8	512.2
30°	493.7	496.6	499.5	501.3	501.9	502.5	503.0	503.5
32.5°	483.2	486.7	490.0	492.2	493.3	494.2	495.2	496.2
35°	468.4	472.5	476.5	479.2	480.5	481.8	483.1	484.4
37.5°	453.1	457.6	462.2	465.1	466.5	467.8	469.2	470.6
40°	442.4	447.2	452.0	455.3	456.9	458.6	460.2	461.9
42.5°	431.9	437.2	442.5	446.0	447.6	449.3	450.9	452.6
45°	416.0	421.7	427.5	431.2	433.1	435.0	436.8	438.6
47.5°	399.3	405.4	411.3	415.3	417.4	419.4	421.4	423.5
50°	387.9	394.2	400.6	404.7	406.8	408.8	410.7	412.8
52.5°	375.6	382.0	388.5	392.8	394.9	397.1	399.3	401.5
55°	357.0	363.7	370.4	374.9	377.3	379.7	382.1	384.5
57.5°	337.5	344.6	351.8	356.6	359.1	361.5	363.9	366.4
60°	324.5	331.5	338.6	343.4	345.9	348.5	351.1	353.8
62.5°	310.7	318.2	325.7	330.7	333.0	335.5	337.9	340.4
65°	289.8	297.4	305.0	310.0	312.4	314.8	317.2	319.6
67.5°	268.6	276.3	284.0	289.1	291.6	294.1	296.6	299.1
70°	254.0	261.9	269.9	274.9	277.1	279.4	281.6	283.8
72.5°	239.7	247.4	255.3	260.5	263.2	265.9	268.5	271.2
75°	218.2	226.1	234.1	239.2	241.7	244.0	246.5	248.8
77.5°	197.1	205.0	213.0	218.2	220.8	223.4	225.9	228.5
80°	182.8	190.6	198.4	203.6	206.1	208.7	211.3	213.9
82.5°	169.5	177.2	185.1	190.1	192.6	195.0	197.5	199.9
85°	150.3	158.2	165.9	171.0	173.7	176.3	178.9	181.4
87.5°	136.9	144.6	152.2	157.3	159.7	162.1	164.5	167.0
90°	137.6	145.7	153.7	159.0	161.4	164.0	166.4	168.9
92.5°	132.6	140.1	147.7	152.7	155.1	157.5	159.9	162.2
95°	133.8	141.5	149.2	154.0	156.1	158.2	160.3	162.4
97.5°	133.7	141.0	148.5	153.3	155.6	158.0	160.3	162.7
100°	132.2	140.1	148.0	153.1	155.4	157.7	160.0	162.2
102.5°	128.8	136.9	144.9	150.2	152.5	154.9	157.4	159.7
105°	122.9	130.9	138.8	144.0	146.5	149.1	151.6	154.2
107.5°	124.1	128.8	133.6	137.3	139.8	142.4	145.0	147.5
110°	148.7	141.7	134.7	132.4	134.9	137.5	140.1	142.6





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**CANDELA DISTRIBUTION (continued):**

	55°	60°	65°	70°	75°	80°	85°	90°
112.5°	230.8	189.5	148.1	128.7	131.1	133.5	136.0	138.4
115°	300.8	246.4	191.9	161.1	153.8	146.5	139.2	131.9
117.5°	423.6	414.6	405.5	386.6	357.8	329.1	300.3	271.5
120°	480.0	486.8	493.6	489.2	473.7	458.3	442.8	427.3
122.5°	502.1	508.0	514.0	516.2	514.5	512.8	511.2	509.6
125°	532.9	538.8	544.7	548.7	550.7	552.8	554.9	556.9
127.5°	561.0	566.9	572.8	576.7	578.3	580.0	581.7	583.4
130°	578.9	584.7	590.6	594.2	595.5	596.9	598.3	599.6
132.5°	596.1	601.6	607.1	610.5	611.9	613.2	614.6	615.9
135°	620.8	626.0	631.2	634.4	635.6	636.8	638.1	639.3
137.5°	643.5	648.2	652.9	655.7	656.5	657.3	658.1	658.9
140°	658.4	662.6	666.7	669.0	669.4	669.9	670.3	670.8
142.5°	672.9	676.5	679.9	681.8	682.0	682.3	682.7	683.0
145°	694.0	696.0	698.0	699.1	699.4	699.7	700.0	700.3
147.5°	712.8	713.6	714.4	714.9	714.7	714.6	714.5	714.4
150°	725.3	726.1	726.8	726.9	726.3	725.6	725.0	724.3
152.5°	736.9	737.8	738.6	738.5	737.7	736.8	736.0	735.1
155°	752.8	753.5	754.3	754.2	753.1	752.1	751.1	750.0
157.5°	766.0	766.9	767.8	767.7	766.7	765.6	764.7	763.7
160°	773.7	774.5	775.3	775.2	774.3	773.4	772.5	771.6
162.5°	780.9	781.8	782.7	782.6	781.5	780.3	779.3	778.1
165°	789.7	790.7	791.6	791.6	790.7	789.7	788.8	787.9
167.5°	797.1	798.0	798.9	798.7	797.6	796.5	795.2	794.1
170°	800.8	801.7	802.7	802.5	801.4	800.1	799.0	797.9
172.5°	803.6	804.5	805.4	805.3	804.1	803.0	801.8	800.6
175°	806.7	807.6	808.5	808.3	807.0	805.7	804.4	803.1
177.5°	807.0	807.7	808.5	808.4	807.4	806.5	805.5	804.6
180°	806.0	806.0	806.0	806.0	806.0	806.0	806.0	806.0

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