

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: P331301

Luminaire Tested: **SA2XXDIP-C485D530U835-4F0-1E-UDD-F1**

Issue Date: 10/7/2019

**Test Information**

Test Method: LM-79-08  
Report Number: P331301  
REPORT IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-1807-864-8,  
Test Lab: INNOVATION CENTER  
Issue Date: 10/7/2019  
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)  
Product Line: NEO-RAY  
Catalog Number: SA2XXDIP-C485D530U835-4F0-1E-UDD-F1  
Description: DEFINE 2 DIRECT-INDIRECT PENDANT LED LUMINAIRE  
DOWNLIGHT 485 LUMENS PER FOOT, FLUSH SATIN WHITE DIFFUSER  
UPLIGHT 530 LUMENS PER FOOT, FLUSH SATIN WHITE DIFFUSER  
Light Source: -  
Ballast/Driver: ELECTRONIC DRIVER

**Summary**

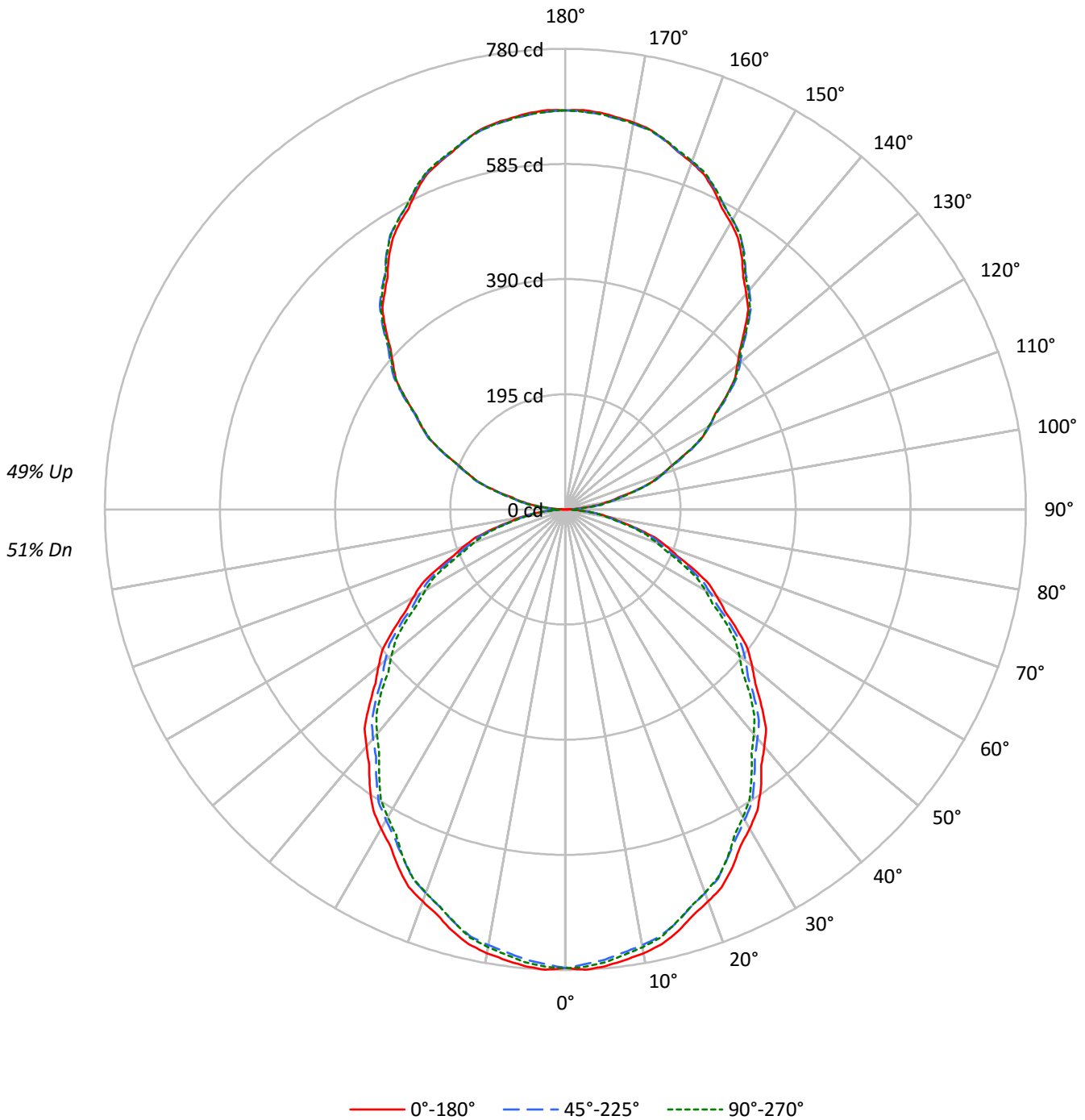
Lumens per Lamp: N/A  
Luminaire Lumens: 3868.2 lumens  
Efficiency: N/A  
Efficacy: 117.9 lumens/watt  
Spacing Criteria (0/90/45): 1.2 / 1.16 / 1.3  
Luminous Opening: Rectangular (W 0.17' x L: 4' x H: 0')  
CIE Type: General Diffuse

Input Watts (W): 32.8  
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



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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	50	30	10	0	
RCR																						
0	107	107	107	107	99	99	99	99	84	84	84	70	70	70	57	57	57	51	51	51	51	
1	98	94	90	86	90	87	83	80	74	71	69	62	60	58	51	49	48	43	43	43	43	
2	89	82	76	70	82	76	70	66	65	61	57	54	51	49	44	42	41	36	36	36	36	
3	81	72	65	59	75	67	60	55	57	52	48	48	44	41	39	37	35	31	31	31	31	
4	75	64	56	50	69	59	52	47	51	45	41	43	39	35	35	32	30	26	26	26	26	
5	68	57	49	43	63	53	46	40	45	40	35	38	34	31	32	29	26	23	23	23	23	
6	63	51	43	37	58	47	40	35	41	35	31	35	30	27	29	25	23	20	20	20	20	
7	58	46	38	32	54	43	36	31	37	31	27	31	27	24	26	23	20	18	18	18	18	
8	54	42	34	29	50	39	32	27	34	28	24	29	24	21	24	21	18	16	16	16	16	
9	50	38	31	26	47	36	29	24	31	25	22	27	22	19	22	19	16	14	14	14	14	
10	47	35	28	23	44	33	26	22	29	23	19	24	20	17	21	17	15	13	13	13	13	

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

	0°	45°	90°
0°	12540	12540	12540
5°	12588	12407	12480
10°	12514	12281	12342
15°	12359	12122	12109
20°	12139	11883	11869
25°	11922	11589	11589
30°	11641	11320	11222
35°	11379	10996	10835
40°	11051	10673	10467
45°	10727	10351	10095
50°	10374	10017	9661
55°	10007	9627	9272
60°	9597	9164	8825
65°	9158	8703	8302
70°	8601	8143	7756
75°	7829	7498	7317
80°	6946	6732	6388
85°	5669	5391	4835



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	73.0	1.9
10°-20°	205.5	5.3
20°-30°	302.1	7.8
30°-40°	350.9	9.1
40°-50°	350.5	9.1
50°-60°	305.6	7.9
60°-70°	226.0	5.8
70°-80°	128.0	3.3
80°-90°	37.1	1.0
90°-100°	42.8	1.1
100°-110°	133.0	3.4
110°-120°	227.3	5.9
120°-130°	298.9	7.7
130°-140°	335.5	8.7
140°-150°	329.0	8.5
150°-160°	275.9	7.1
160°-170°	183.0	4.7
170°-180°	64.0	1.7
0°-30°	580.6	15.0
0°-40°	931.5	24.1
0°-60°	1587.6	41.0
0°-90°	1978.7	51.2
90°-120°	403.1	10.4
90°-150°	1366.6	35.3
90°-180°	1889.0	48.8
0°-180°	3868.2	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	777	777	777	777	777	
5°	777	773	766	771	770	74
15°	739	735	725	728	724	208
25°	669	663	650	652	650	308
35°	577	570	558	553	550	360
45°	470	464	453	445	442	362
55°	356	351	342	333	329	318
65°	240	235	228	221	217	237
75°	126	124	120	116	117	134
85°	31	30	29	27	26	35
90°	1	8	20	19	19	3
95°	30	35	36	36	35	34
105°	123	124	126	127	127	129
115°	228	231	230	230	228	226
125°	332	337	335	334	333	296
135°	429	435	437	436	434	332
145°	521	525	529	529	527	325
155°	596	598	599	602	600	274
165°	648	648	648	651	649	183
175°	675	673	672	675	672	64
180°	676	676	676	676	676	



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**CANDELA DISTRIBUTION (FULL):**

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
0°	776.7	776.7	776.7	776.7	776.7	776.7	776.7	776.7	776.7	776.7	776.7
2.5°	780.3	779.6	779.0	778.3	777.6	776.6	775.1	773.7	772.2	770.7	772.1
5°	776.7	776.0	775.4	774.7	774.1	772.8	771.0	769.2	767.3	765.5	766.8
7.5°	769.8	768.8	767.8	766.7	765.7	764.3	762.4	760.6	758.7	756.8	758.2
10°	763.3	762.1	760.9	759.8	758.6	757.0	755.0	753.1	751.1	749.1	750.4
12.5°	754.3	753.3	752.2	751.2	750.2	748.7	746.7	744.7	742.7	740.7	741.6
15°	739.4	738.4	737.4	736.4	735.4	733.8	731.6	729.5	727.3	725.2	725.8
17.5°	720.2	719.3	718.3	717.3	716.3	714.7	712.5	710.3	708.1	705.9	706.7
20°	706.5	705.5	704.5	703.5	702.5	700.9	698.5	696.2	693.9	691.6	692.1
22.5°	692.8	691.4	690.0	688.6	687.2	685.4	683.2	681.0	678.8	676.6	676.7
25°	669.2	667.8	666.5	665.2	663.9	661.8	659.0	656.1	653.3	650.5	650.8
27.5°	642.3	641.1	639.9	638.7	637.5	635.8	633.6	631.3	629.1	626.9	626.4
30°	624.4	623.0	621.7	620.4	619.0	617.1	614.6	612.2	609.7	607.2	606.7
32.5°	605.2	604.2	603.1	602.0	601.0	599.1	596.5	593.9	591.3	588.7	587.8
35°	577.3	575.6	574.0	572.3	570.7	568.5	565.9	563.2	560.5	557.9	556.9
37.5°	545.8	544.3	542.9	541.4	539.9	537.9	535.2	532.6	529.9	527.3	526.0
40°	524.3	522.9	521.6	520.3	519.0	517.0	514.3	511.7	509.0	506.4	504.9
42.5°	503.4	502.0	500.7	499.4	498.1	496.1	493.4	490.8	488.1	485.4	483.8
45°	469.8	468.6	467.4	466.3	465.1	463.3	460.8	458.3	455.8	453.3	451.5
47.5°	436.3	435.2	434.1	433.0	431.9	430.1	427.5	424.9	422.3	419.7	417.8
50°	413.0	412.2	411.3	410.5	409.7	408.1	405.8	403.5	401.1	398.8	396.5
52.5°	390.3	389.2	388.1	387.0	385.9	384.3	382.1	379.9	377.7	375.5	373.6
55°	355.5	354.5	353.5	352.5	351.5	350.0	348.0	346.0	344.0	342.0	340.1
57.5°	320.5	319.7	318.9	318.2	317.4	315.9	313.7	311.5	309.3	307.1	305.1
60°	297.2	296.6	295.9	295.2	294.6	293.1	290.8	288.4	286.1	283.8	282.0
62.5°	274.5	273.5	272.4	271.3	270.3	268.9	267.1	265.3	263.5	261.7	260.0
65°	239.7	238.7	237.7	236.7	235.8	234.4	232.8	231.1	229.4	227.8	226.3
67.5°	204.3	203.5	202.7	201.9	201.1	200.0	198.5	197.0	195.5	194.0	192.9
70°	182.2	181.6	180.9	180.2	179.6	178.5	177.0	175.5	174.0	172.5	171.4
72.5°	159.5	158.9	158.2	157.5	156.9	156.1	155.1	154.1	153.2	152.2	151.0
75°	125.5	125.1	124.8	124.5	124.1	123.6	122.7	121.9	121.1	120.2	119.2
77.5°	95.0	94.4	93.9	93.3	92.7	92.3	92.0	91.6	91.3	91.0	90.5
80°	74.7	74.5	74.4	74.2	74.0	73.8	73.4	73.1	72.8	72.4	71.9
82.5°	55.6	55.5	55.5	55.5	55.4	55.3	55.1	54.9	54.7	54.5	53.9
85°	30.6	30.5	30.3	30.1	30.0	29.8	29.6	29.5	29.3	29.1	28.6
87.5°	10.9	10.9	10.9	11.0	11.0	11.2	11.5	11.8	12.1	12.4	11.9
90°	0.6	2.1	3.6	5.1	6.7	8.8	11.6	14.4	17.2	20.0	19.7
92.5°	10.2	11.3	12.4	13.5	14.6	15.5	16.2	16.8	17.5	18.1	18.2
95°	29.7	30.9	32.2	33.5	34.7	35.5	35.7	36.0	36.2	36.5	36.5
97.5°	54.2	55.3	56.4	57.5	58.6	59.4	59.9	60.4	60.9	61.4	61.4
100°	72.4	73.4	74.4	75.5	76.5	77.2	77.6	77.9	78.3	78.7	78.7
102.5°	91.6	92.4	93.2	94.0	94.8	95.5	96.0	96.4	96.9	97.4	97.5
105°	122.6	123.0	123.4	123.7	124.1	124.4	124.7	124.9	125.2	125.5	125.7
107.5°	153.9	154.4	155.0	155.5	156.1	156.4	156.4	156.4	156.4	156.4	156.5
110°	173.9	174.7	175.4	176.2	177.0	177.3	177.3	177.3	177.3	177.3	177.3



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**CANDELA DISTRIBUTION (continued):**

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
112.5°	195.8	196.6	197.3	198.1	198.9	199.2	199.1	199.0	198.9	198.8	198.5
115°	228.1	228.9	229.6	230.4	231.1	231.4	231.1	230.9	230.6	230.4	230.3
117.5°	260.3	261.3	262.3	263.3	264.3	264.5	263.8	263.0	262.3	261.6	261.3
120°	281.7	282.7	283.7	284.7	285.8	285.8	284.7	283.7	282.7	281.7	281.7
122.5°	301.3	302.5	303.8	305.0	306.2	306.4	305.7	305.0	304.3	303.6	303.3
125°	331.9	333.0	334.2	335.3	336.4	336.8	336.4	336.1	335.7	335.3	334.9
127.5°	361.6	363.1	364.5	366.0	367.4	367.9	367.5	367.0	366.6	366.1	365.6
130°	380.4	382.0	383.6	385.3	386.9	387.6	387.4	387.1	386.9	386.6	386.4
132.5°	401.3	402.7	404.0	405.4	406.7	407.4	407.5	407.5	407.6	407.6	407.1
135°	429.4	430.8	432.2	433.6	435.0	435.8	436.0	436.3	436.6	436.8	436.7
137.5°	458.9	460.1	461.2	462.4	463.5	464.2	464.6	464.9	465.2	465.5	465.4
140°	476.7	477.9	479.0	480.1	481.3	482.2	482.8	483.4	484.1	484.7	484.7
142.5°	495.0	496.1	497.3	498.4	499.5	500.3	500.8	501.2	501.6	502.0	502.1
145°	521.2	522.1	523.0	523.9	524.8	525.6	526.3	527.1	527.9	528.6	528.7
147.5°	544.6	545.6	546.7	547.8	548.8	549.6	550.1	550.6	551.1	551.7	551.9
150°	560.6	561.3	562.1	562.8	563.6	564.2	564.7	565.2	565.7	566.3	566.6
152.5°	574.7	575.5	576.2	577.0	577.7	578.4	579.0	579.6	580.2	580.9	581.3
155°	595.9	596.3	596.7	597.0	597.4	597.8	598.2	598.6	598.9	599.3	600.0
157.5°	614.0	614.3	614.5	614.8	615.1	615.3	615.5	615.8	616.0	616.2	617.1
160°	625.0	625.2	625.5	625.7	626.0	626.2	626.3	626.4	626.6	626.7	627.5
162.5°	635.0	635.1	635.1	635.2	635.2	635.3	635.4	635.6	635.7	635.8	636.7
165°	648.4	648.2	648.1	648.0	647.9	647.8	647.8	647.8	647.8	647.8	648.7
167.5°	659.5	659.2	658.8	658.4	658.0	657.8	657.8	657.8	657.7	657.7	658.6
170°	665.5	665.1	664.7	664.3	664.0	663.7	663.6	663.4	663.3	663.2	664.1
172.5°	669.6	669.2	668.8	668.4	668.1	667.8	667.7	667.6	667.4	667.3	668.2
175°	674.6	674.2	673.8	673.5	673.1	672.8	672.5	672.3	672.0	671.7	672.6
177.5°	676.7	676.3	676.0	675.7	675.4	675.2	675.0	674.8	674.6	674.4	675.0
180°	675.7	675.7	675.7	675.7	675.7	675.7	675.7	675.7	675.7	675.7	675.7



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**CANDELA DISTRIBUTION (continued):**

	55°	60°	65°	70°	75°	80°	85°	90°
0°	776.7	776.7	776.7	776.7	776.7	776.7	776.7	776.7
2.5°	773.4	774.7	776.0	776.6	776.3	776.0	775.8	775.5
5°	768.2	769.5	770.8	771.3	771.0	770.6	770.3	770.0
7.5°	759.5	760.8	762.2	762.6	762.3	761.9	761.5	761.2
10°	751.7	753.1	754.4	754.8	754.3	753.8	753.3	752.8
12.5°	742.6	743.5	744.4	744.7	744.3	744.0	743.6	743.2
15°	726.5	727.2	727.8	727.7	726.9	726.1	725.3	724.4
17.5°	707.4	708.2	709.0	708.9	708.1	707.4	706.6	705.8
20°	692.6	693.1	693.6	693.5	692.8	692.1	691.5	690.8
22.5°	676.8	676.9	677.0	676.9	676.5	676.1	675.7	675.3
25°	651.2	651.5	651.8	651.8	651.5	651.2	650.8	650.5
27.5°	625.9	625.4	624.9	624.3	623.5	622.7	621.9	621.1
30°	606.2	605.7	605.2	604.6	603.9	603.3	602.6	601.9
32.5°	586.9	586.0	585.1	584.3	583.6	583.0	582.3	581.6
35°	555.9	554.9	553.9	553.0	552.2	551.3	550.5	549.7
37.5°	524.8	523.6	522.4	521.3	520.5	519.7	518.9	518.2
40°	503.4	501.9	500.4	499.3	498.6	498.0	497.3	496.6
42.5°	482.2	480.6	478.9	477.7	476.7	475.8	474.9	473.9
45°	449.7	447.9	446.0	444.8	444.1	443.5	442.8	442.1
47.5°	415.9	413.9	412.0	410.6	409.6	408.7	407.7	406.7
50°	394.2	391.8	389.5	387.9	387.1	386.3	385.4	384.6
52.5°	371.7	369.7	367.8	366.3	365.2	364.1	363.0	361.9
55°	338.1	336.1	334.1	332.7	331.8	331.0	330.2	329.4
57.5°	303.2	301.2	299.3	298.0	297.3	296.7	296.1	295.4
60°	280.1	278.3	276.5	275.3	274.8	274.3	273.8	273.3
62.5°	258.3	256.6	254.9	253.8	253.1	252.5	251.9	251.2
65°	224.8	223.3	221.8	220.6	219.8	219.0	218.2	217.3
67.5°	191.7	190.5	189.4	188.5	187.8	187.1	186.5	185.8
70°	170.2	169.0	167.9	167.0	166.3	165.6	165.0	164.3
72.5°	149.9	148.7	147.6	146.7	146.2	145.6	145.1	144.6
75°	118.2	117.3	116.3	115.9	116.3	116.6	116.9	117.3
77.5°	90.0	89.5	89.0	88.5	88.0	87.6	87.1	86.6
80°	71.4	70.9	70.5	70.0	69.7	69.4	69.0	68.7
82.5°	53.3	52.6	52.0	51.6	51.6	51.5	51.4	51.4
85°	28.1	27.6	27.1	26.8	26.6	26.5	26.3	26.1
87.5°	11.5	11.0	10.6	10.3	10.2	10.1	10.0	9.9
90°	19.5	19.2	18.9	18.9	19.0	19.1	19.3	19.4
92.5°	18.2	18.3	18.3	18.4	18.4	18.4	18.5	18.5
95°	36.5	36.5	36.5	36.4	36.1	35.9	35.6	35.4
97.5°	61.4	61.4	61.4	61.3	61.3	61.3	61.3	61.2
100°	78.7	78.7	78.7	78.6	78.5	78.4	78.3	78.1
102.5°	97.6	97.7	97.8	97.8	97.7	97.5	97.4	97.3
105°	126.0	126.2	126.5	126.6	126.6	126.6	126.6	126.6
107.5°	156.6	156.7	156.8	156.5	155.9	155.4	154.8	154.2
110°	177.3	177.3	177.3	177.2	176.8	176.4	176.0	175.6





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**CANDELA DISTRIBUTION (continued):**

	55°	60°	65°	70°	75°	80°	85°	90°
112.5°	198.2	197.9	197.6	197.3	197.0	196.7	196.4	196.2
115°	230.1	230.0	229.9	229.6	229.2	228.9	228.5	228.1
117.5°	261.0	260.7	260.4	260.1	259.7	259.3	258.9	258.5
120°	281.7	281.7	281.7	281.5	281.1	280.8	280.4	280.0
122.5°	303.0	302.7	302.4	302.1	301.8	301.5	301.3	301.0
125°	334.5	334.2	333.8	333.5	333.4	333.3	333.1	333.0
127.5°	365.2	364.7	364.3	363.8	363.4	363.0	362.6	362.2
130°	386.1	385.9	385.6	385.2	384.7	384.2	383.7	383.2
132.5°	406.5	405.9	405.4	404.9	404.5	404.1	403.7	403.3
135°	436.6	436.4	436.3	436.0	435.7	435.3	434.9	434.5
137.5°	465.3	465.2	465.1	464.8	464.3	463.8	463.3	462.8
140°	484.7	484.7	484.7	484.5	483.9	483.4	482.9	482.4
142.5°	502.2	502.3	502.4	502.2	501.7	501.2	500.7	500.2
145°	528.9	529.0	529.1	528.9	528.4	527.9	527.4	526.9
147.5°	552.2	552.5	552.8	552.7	552.2	551.7	551.2	550.7
150°	567.0	567.4	567.8	567.8	567.4	567.0	566.6	566.3
152.5°	581.8	582.3	582.8	582.8	582.3	581.8	581.3	580.9
155°	600.6	601.2	601.9	602.0	601.6	601.2	600.8	600.5
157.5°	617.9	618.8	619.7	619.8	619.2	618.6	618.0	617.3
160°	628.2	629.0	629.7	629.9	629.4	628.9	628.3	627.8
162.5°	637.5	638.4	639.3	639.4	638.8	638.2	637.6	637.0
165°	649.6	650.5	651.3	651.5	650.8	650.2	649.6	648.9
167.5°	659.5	660.4	661.3	661.4	660.7	660.1	659.4	658.7
170°	665.0	665.9	666.7	666.8	666.0	665.3	664.5	663.8
172.5°	669.1	670.0	670.8	670.9	670.2	669.4	668.6	667.9
175°	673.5	674.4	675.3	675.4	674.6	673.8	673.1	672.3
177.5°	675.6	676.2	676.8	676.8	676.2	675.6	675.0	674.4
180°	675.7	675.7	675.7	675.7	675.7	675.7	675.7	675.7

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