

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: P331291-940

Luminaire Tested: **S122DIP-S485D330U940-4F0-1E-UDD-F**

Issue Date: 3/3/2020

**Test Information**

Test Method: LM-79-08  
Report Number: P331291-940  
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-S485D330U940-4F0-1E-UDD-F  
Description: DEFINE 2 DIRECT-INDIRECT PENDANT LED LUMINAIRE  
DOWNLIGHT 485 LUMENS PER FOOT, FLUSH SATIN WHITE DIFFUSER  
UPLIGHT 330 LUMENS PER FOOT, NO LENS  
Light Source: -  
Ballast/Driver: ELECTRONIC DRIVER

**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 2930.7 lumens  
Efficiency: N/A  
Efficacy: 106.6 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: Semi-Direct

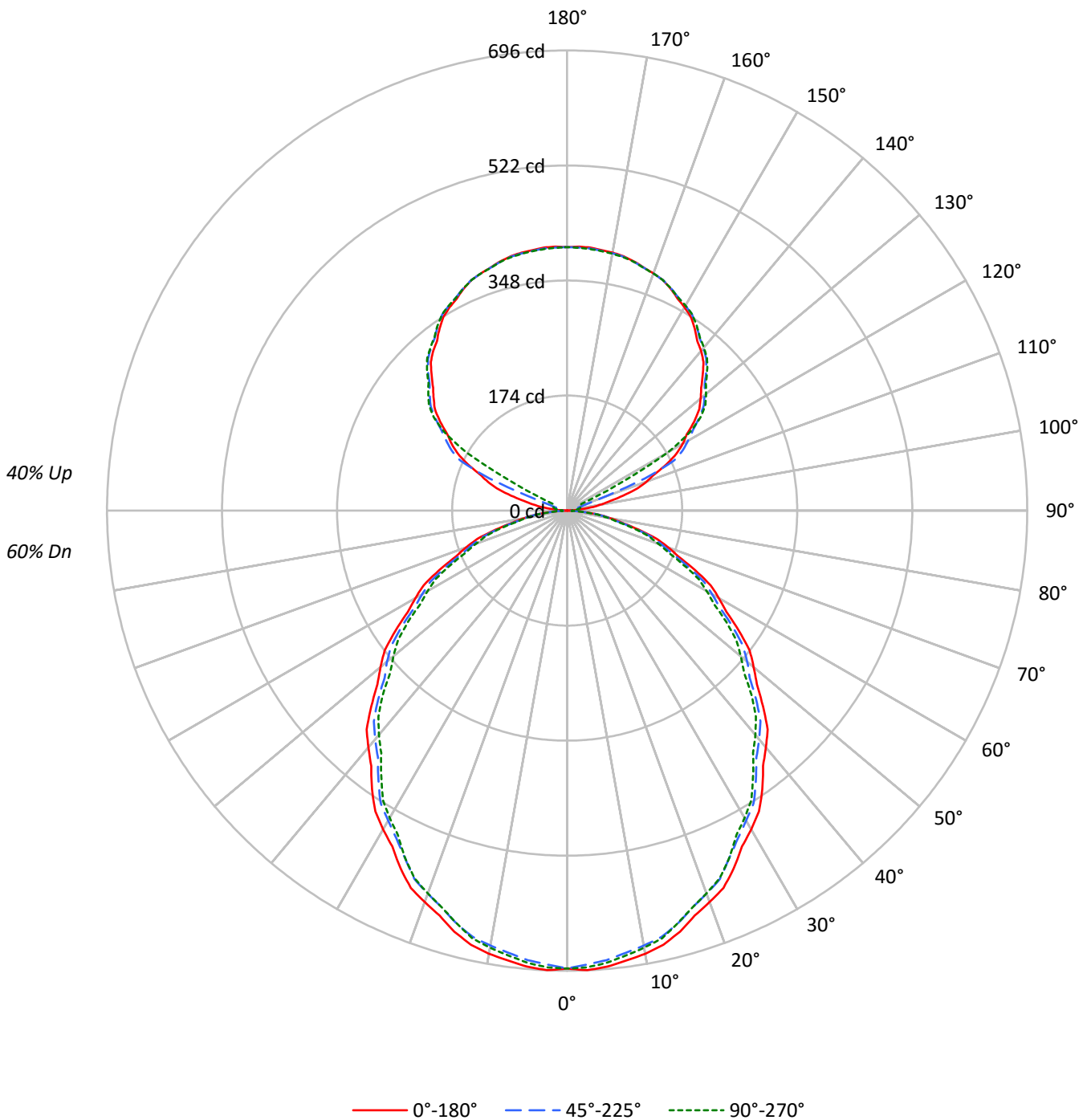
Input Watts (W): 27.5  
Input Voltage (V): 120  
Input Current (A<sub>in</sub>): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 25 FT



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### Luminous Intensity Polar Plot





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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	65	65	65	60
1	100	96	92	88	93	90	86	83	78	76	73	68	66	64	58	57	55	51
2	91	84	77	72	85	78	73	68	68	64	61	59	56	53	51	49	47	42
3	83	73	66	60	77	69	62	57	60	55	51	52	49	45	45	42	40	36
4	76	65	57	51	71	61	54	48	54	48	44	47	42	39	40	37	34	31
5	70	58	50	44	65	55	47	42	48	42	38	42	37	34	36	33	30	27
6	64	52	44	38	60	49	42	36	43	37	33	38	33	30	33	29	26	24
7	60	47	39	33	56	44	37	32	39	33	29	35	30	26	30	26	23	21
8	55	43	35	30	52	41	33	28	36	30	26	32	27	23	28	24	21	19
9	52	39	32	26	48	37	30	25	33	27	23	29	24	21	26	22	19	17
10	48	36	29	24	45	34	27	23	30	25	21	27	22	19	24	20	17	15

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

	0°	45°	90°
0°	11183	11183	11183
5°	11225	11063	11128
10°	11158	10952	11006
15°	11020	10810	10798
20°	10825	10596	10584
25°	10630	10334	10334
30°	10381	10094	10006
35°	10147	9806	9662
40°	9853	9518	9333
45°	9565	9229	9001
50°	9251	8932	8616
55°	8923	8586	8267
60°	8557	8173	7869
65°	8164	7759	7404
70°	7671	7260	6916
75°	6981	6687	6525
80°	6192	6007	5700
85°	5057	4798	4316



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	65.1	2.2
10°-20°	183.3	6.3
20°-30°	269.4	9.2
30°-40°	312.9	10.7
40°-50°	312.5	10.7
50°-60°	272.6	9.3
60°-70°	201.5	6.9
70°-80°	114.1	3.9
80°-90°	31.7	1.1
90°-100°	13.3	0.5
100°-110°	48.7	1.7
110°-120°	130.3	4.4
120°-130°	215.1	7.3
130°-140°	228.7	7.8
140°-150°	212.6	7.3
150°-160°	170.9	5.8
160°-170°	110.1	3.8
170°-180°	37.9	1.3
0°-30°	517.7	17.7
0°-40°	830.6	28.3
0°-60°	1415.7	48.3
0°-90°	1763.0	60.2
90°-120°	192.3	6.6
90°-150°	848.7	29.0
90°-180°	1168.0	39.9
0°-180°	2930.7	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	693	693	693	693	693	
5°	693	690	683	688	687	66
15°	659	655	647	649	646	186
25°	597	591	580	581	580	274
35°	515	508	498	494	490	321
45°	419	414	404	397	394	323
55°	317	313	305	297	294	283
65°	214	210	203	197	194	211
75°	112	110	107	104	105	120
85°	27	27	26	24	23	31
90°	0	3	6	7	8	2
95°	19	10	11	13	12	23
105°	88	91	18	21	22	94
115°	166	171	178	51	24	163
125°	234	238	244	246	246	209
135°	290	295	297	300	300	224
145°	336	336	341	343	342	210
155°	370	368	371	373	371	171
165°	390	389	390	391	390	110
175°	399	397	398	400	397	38
180°	398	398	398	398	398	



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**CANDELA DISTRIBUTION (FULL):**

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
0°	692.6	692.6	692.6	692.6	692.6	692.6	692.6	692.6	692.6	692.6	692.6
2.5°	695.8	695.2	694.6	694.0	693.4	692.5	691.2	689.9	688.6	687.2	688.5
5°	692.6	692.0	691.4	690.8	690.3	689.1	687.5	685.9	684.2	682.6	683.8
7.5°	686.4	685.5	684.7	683.7	682.8	681.5	679.8	678.2	676.5	674.8	676.1
10°	680.6	679.6	678.5	677.5	676.5	675.0	673.2	671.5	669.8	668.0	669.1
12.5°	672.6	671.7	670.7	669.9	669.0	667.6	665.8	664.1	662.3	660.5	661.3
15°	659.3	658.4	657.5	656.7	655.8	654.3	652.4	650.5	648.5	646.7	647.2
17.5°	642.2	641.4	640.5	639.6	638.7	637.3	635.3	633.4	631.4	629.5	630.2
20°	630.0	629.1	628.2	627.3	626.4	625.0	622.9	620.8	618.8	616.7	617.2
22.5°	617.8	616.5	615.3	614.0	612.8	611.2	609.2	607.3	605.3	603.3	603.4
25°	596.7	595.5	594.3	593.2	592.0	590.1	587.6	585.1	582.6	580.1	580.3
27.5°	572.7	571.7	570.6	569.5	568.5	566.9	565.0	562.9	561.0	559.0	558.6
30°	556.8	555.5	554.4	553.2	552.0	550.3	548.0	545.9	543.7	541.4	541.0
32.5°	539.7	538.8	537.8	536.8	535.9	534.2	531.9	529.6	527.3	525.0	524.1
35°	514.8	513.3	511.8	510.3	508.9	506.9	504.6	502.2	499.8	497.5	496.6
37.5°	486.7	485.4	484.1	482.8	481.4	479.7	477.2	474.9	472.5	470.2	469.0
40°	467.5	466.3	465.1	464.0	462.8	461.0	458.6	456.3	453.9	451.6	450.2
42.5°	448.9	447.6	446.5	445.3	444.2	442.4	440.0	437.7	435.2	432.8	431.4
45°	418.9	417.9	416.8	415.8	414.7	413.1	410.9	408.7	406.4	404.2	402.6
47.5°	389.1	388.1	387.1	386.1	385.1	383.5	381.2	378.9	376.6	374.3	372.6
50°	368.3	367.6	366.8	366.0	365.3	363.9	361.9	359.8	357.7	355.6	353.6
52.5°	348.0	347.1	346.1	345.1	344.1	342.7	340.7	338.8	336.8	334.8	333.1
55°	317.0	316.1	315.2	314.3	313.4	312.1	310.3	308.5	306.7	305.0	303.3
57.5°	285.8	285.1	284.4	283.7	283.0	281.7	279.7	277.8	275.8	273.8	272.1
60°	265.0	264.5	263.9	263.2	262.7	261.4	259.3	257.2	255.1	253.1	251.5
62.5°	244.8	243.9	242.9	241.9	241.0	239.8	238.2	236.6	235.0	233.4	231.8
65°	213.7	212.9	212.0	211.1	210.3	209.0	207.6	206.1	204.6	203.1	201.8
67.5°	182.2	181.5	180.7	180.0	179.3	178.3	177.0	175.7	174.3	173.0	172.0
70°	162.5	161.9	161.3	160.7	160.2	159.2	157.8	156.5	155.2	153.8	152.8
72.5°	142.2	141.7	141.1	140.4	139.9	139.2	138.3	137.4	136.6	135.7	134.6
75°	111.9	111.6	111.3	111.0	110.7	110.2	109.4	108.7	108.0	107.2	106.3
77.5°	84.7	84.2	83.7	83.2	82.7	82.3	82.0	81.7	81.4	81.1	80.7
80°	66.6	66.4	66.3	66.2	66.0	65.8	65.5	65.2	64.9	64.6	64.1
82.5°	49.6	49.5	49.5	49.5	49.4	49.3	49.1	49.0	48.8	48.6	48.1
85°	27.3	27.2	27.0	26.8	26.8	26.6	26.4	26.3	26.1	25.9	25.5
87.5°	9.6	9.5	9.5	9.4	9.3	9.2	9.0	8.9	8.7	8.6	8.3
90°	0.3	1.0	1.7	2.4	3.1	3.7	4.2	4.7	5.3	5.8	6.1
92.5°	5.8	5.8	5.7	5.6	5.5	5.7	5.9	6.2	6.4	6.7	6.9
95°	18.7	16.6	14.5	12.4	10.3	9.5	9.9	10.3	10.8	11.2	11.6
97.5°	37.2	31.2	25.2	19.4	13.4	10.9	11.9	12.9	14.0	15.1	15.3
100°	51.0	42.3	33.4	24.7	16.0	12.0	13.2	14.3	15.3	16.4	16.9
102.5°	66.3	64.4	62.5	60.7	58.9	53.3	44.2	35.1	26.0	16.9	17.6
105°	87.7	89.5	91.5	93.5	95.3	87.6	70.1	52.6	35.0	17.6	18.3
107.5°	112.0	113.6	115.1	116.7	118.2	108.5	87.6	66.6	45.6	24.6	23.9
110°	127.7	129.0	130.5	131.8	133.1	124.5	106.0	87.5	68.9	50.5	44.1



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**CANDELA DISTRIBUTION (continued):**

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
112.5°	142.5	143.7	144.9	146.1	147.2	145.5	141.0	136.4	131.8	127.2	103.9
115°	165.8	166.8	168.0	169.1	170.1	171.5	173.1	174.7	176.3	177.9	148.2
117.5°	186.6	187.8	189.0	190.3	191.5	192.6	193.8	194.8	195.9	197.1	189.8
120°	201.8	202.8	203.8	204.7	205.6	206.7	207.9	209.0	210.2	211.3	212.1
122.5°	214.7	215.8	216.8	217.8	218.8	219.9	221.1	222.4	223.7	225.0	225.4
125°	234.4	235.2	236.0	236.9	237.7	238.8	240.0	241.2	242.4	243.6	244.1
127.5°	252.2	253.2	254.0	255.0	255.9	256.8	257.7	258.7	259.6	260.5	261.1
130°	263.5	264.6	265.6	266.6	267.6	268.5	269.2	269.9	270.6	271.3	272.0
132.5°	275.1	275.9	276.8	277.7	278.6	279.3	280.0	280.7	281.4	282.1	282.8
135°	290.1	291.1	292.1	293.1	294.2	295.0	295.5	296.1	296.7	297.3	297.9
137.5°	305.2	305.9	306.7	307.4	308.1	308.8	309.4	310.0	310.8	311.4	312.0
140°	315.1	315.7	316.1	316.6	317.2	317.8	318.5	319.2	319.9	320.6	321.2
142.5°	323.4	323.9	324.3	324.9	325.3	325.9	326.7	327.5	328.3	329.1	329.7
145°	336.4	336.4	336.4	336.3	336.2	336.7	337.8	338.9	340.0	341.1	341.5
147.5°	347.9	347.6	347.3	347.1	346.9	347.2	348.3	349.5	350.5	351.6	351.9
150°	355.2	354.7	354.3	353.8	353.4	353.7	354.7	355.8	356.8	357.8	358.2
152.5°	361.4	361.0	360.4	359.9	359.4	359.6	360.6	361.6	362.6	363.6	363.9
155°	370.5	369.9	369.3	368.7	368.2	368.3	369.1	369.8	370.6	371.3	371.8
157.5°	377.6	377.1	376.6	376.1	375.6	375.7	376.2	376.7	377.3	377.8	378.3
160°	381.7	381.4	380.9	380.6	380.2	380.2	380.6	380.9	381.4	381.7	382.1
162.5°	385.4	385.0	384.7	384.2	383.9	383.9	384.1	384.5	384.9	385.2	385.7
165°	390.4	390.0	389.6	389.2	388.9	388.8	389.0	389.1	389.3	389.5	389.9
167.5°	394.0	393.7	393.3	392.9	392.5	392.4	392.6	392.8	393.0	393.2	393.6
170°	396.2	395.7	395.4	395.0	394.6	394.5	394.6	394.8	394.8	395.0	395.5
172.5°	397.5	397.2	396.7	396.4	396.0	395.8	396.0	396.1	396.3	396.4	396.8
175°	399.3	398.9	398.4	398.0	397.5	397.3	397.5	397.6	397.8	397.9	398.3
177.5°	399.6	399.2	398.9	398.5	398.1	398.1	398.1	398.1	398.1	398.2	398.6
180°	398.4	398.4	398.4	398.4	398.4	398.4	398.4	398.4	398.4	398.4	398.4



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**CANDELA DISTRIBUTION (continued):**

	55°	60°	65°	70°	75°	80°	85°	90°
0°	692.6	692.6	692.6	692.6	692.6	692.6	692.6	692.6
2.5°	689.6	690.8	692.0	692.5	692.2	692.0	691.8	691.5
5°	685.0	686.2	687.3	687.8	687.5	687.2	686.9	686.6
7.5°	677.3	678.4	679.7	680.0	679.8	679.4	679.0	678.8
10°	670.3	671.5	672.7	673.1	672.6	672.2	671.7	671.3
12.5°	662.2	663.0	663.8	664.1	663.7	663.4	663.1	662.7
15°	647.8	648.5	649.0	648.9	648.2	647.5	646.8	646.0
17.5°	630.8	631.5	632.2	632.1	631.4	630.8	630.1	629.4
20°	617.6	618.0	618.5	618.4	617.8	617.2	616.6	616.0
22.5°	603.5	603.6	603.7	603.6	603.2	602.9	602.5	602.2
25°	580.7	580.9	581.2	581.2	580.9	580.7	580.3	580.1
27.5°	558.1	557.7	557.2	556.7	556.0	555.3	554.6	553.8
30°	540.6	540.1	539.7	539.1	538.5	538.0	537.3	536.7
32.5°	523.3	522.5	521.7	521.0	520.4	519.9	519.2	518.6
35°	495.7	494.8	493.9	493.1	492.4	491.6	490.9	490.2
37.5°	468.0	466.9	465.8	464.8	464.1	463.4	462.7	462.1
40°	448.9	447.5	446.2	445.2	444.6	444.1	443.4	442.8
42.5°	430.0	428.6	427.0	426.0	425.1	424.3	423.5	422.6
45°	401.0	399.4	397.7	396.6	396.0	395.5	394.8	394.2
47.5°	370.9	369.1	367.4	366.1	365.2	364.4	363.6	362.7
50°	351.5	349.4	347.3	345.9	345.2	344.5	343.7	343.0
52.5°	331.4	329.7	328.0	326.6	325.7	324.7	323.7	322.7
55°	301.5	299.7	297.9	296.7	295.9	295.2	294.4	293.7
57.5°	270.4	268.6	266.9	265.7	265.1	264.6	264.0	263.4
60°	249.8	248.2	246.6	245.5	245.0	244.6	244.2	243.7
62.5°	230.3	228.8	227.3	226.3	225.7	225.2	224.6	224.0
65°	200.5	199.1	197.8	196.7	196.0	195.3	194.6	193.8
67.5°	170.9	169.9	168.9	168.1	167.5	166.8	166.3	165.7
70°	151.8	150.7	149.7	148.9	148.3	147.7	147.1	146.5
72.5°	133.7	132.6	131.6	130.8	130.4	129.8	129.4	128.9
75°	105.4	104.6	103.7	103.3	103.7	104.0	104.2	104.6
77.5°	80.3	79.8	79.4	78.9	78.5	78.1	77.7	77.2
80°	63.7	63.2	62.9	62.4	62.2	61.9	61.5	61.3
82.5°	47.5	46.9	46.4	46.0	46.0	45.9	45.8	45.8
85°	25.1	24.6	24.2	23.9	23.7	23.6	23.5	23.3
87.5°	8.0	7.8	7.5	7.2	7.1	7.0	7.0	6.9
90°	6.4	6.7	7.0	7.3	7.4	7.5	7.7	7.8
92.5°	7.0	7.2	7.3	7.5	7.6	7.7	7.7	7.8
95°	11.9	12.2	12.5	12.7	12.6	12.5	12.5	12.4
97.5°	15.6	15.8	16.1	16.2	16.3	16.4	16.5	16.6
100°	17.5	18.0	18.5	18.8	18.9	19.1	19.2	19.4
102.5°	18.2	18.9	19.5	20.0	20.2	20.3	20.5	20.7
105°	19.0	19.7	20.4	20.9	21.1	21.4	21.7	21.9
107.5°	23.2	22.5	21.8	21.5	21.8	22.0	22.3	22.6
110°	37.6	31.2	24.8	21.8	22.0	22.3	22.6	22.7





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**CANDELA DISTRIBUTION (continued):**

	55°	60°	65°	70°	75°	80°	85°	90°
112.5°	80.5	57.2	33.8	22.2	22.4	22.6	22.8	23.0
115°	118.6	88.9	59.2	42.1	37.5	32.9	28.3	23.6
117.5°	182.7	175.5	168.4	157.2	142.0	126.9	111.7	96.6
120°	212.9	213.7	214.4	210.4	201.8	193.1	184.5	175.8
122.5°	225.9	226.3	226.8	226.1	224.5	222.8	221.1	219.5
125°	244.5	245.0	245.4	245.8	245.9	246.1	246.3	246.5
127.5°	261.8	262.4	263.1	263.4	263.5	263.5	263.5	263.6
130°	272.7	273.4	274.1	274.5	274.4	274.3	274.3	274.2
132.5°	283.4	283.9	284.5	284.8	284.7	284.7	284.6	284.5
135°	298.5	299.2	299.8	300.1	300.0	299.8	299.7	299.5
137.5°	312.6	313.3	313.9	314.1	313.9	313.7	313.4	313.3
140°	321.7	322.4	322.9	323.1	322.7	322.4	322.1	321.7
142.5°	330.2	330.7	331.3	331.4	331.0	330.7	330.4	330.0
145°	342.0	342.4	342.9	343.0	342.6	342.3	342.0	341.6
147.5°	352.2	352.6	352.9	352.9	352.7	352.4	352.1	351.9
150°	358.6	358.9	359.4	359.4	359.1	358.7	358.4	358.1
152.5°	364.4	364.7	365.1	365.1	364.6	364.3	363.8	363.4
155°	372.1	372.5	372.9	372.8	372.3	371.8	371.3	370.8
157.5°	378.7	379.2	379.5	379.5	379.0	378.5	378.0	377.6
160°	382.5	382.9	383.3	383.3	382.8	382.4	381.9	381.5
162.5°	386.0	386.5	386.9	386.9	386.3	385.8	385.2	384.7
165°	390.4	390.8	391.3	391.3	390.8	390.4	389.9	389.5
167.5°	394.0	394.5	394.9	394.8	394.3	393.7	393.2	392.5
170°	395.9	396.4	396.8	396.7	396.2	395.6	395.0	394.4
172.5°	397.3	397.7	398.1	398.1	397.5	397.0	396.4	395.8
175°	398.8	399.2	399.7	399.6	399.0	398.3	397.6	397.0
177.5°	399.0	399.3	399.7	399.6	399.1	398.7	398.2	397.8
180°	398.4	398.4	398.4	398.4	398.4	398.4	398.4	398.4

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