

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: P331654-927

Luminaire Tested: **SA2XXRDIP-C485D530U927-4F0-1E-UDD-F**

Issue Date: 10/7/2019

**Test Information**

Test Method: LM-79-08  
Report Number: P331654-927  
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: SA2XXRDIP-C485D530U927-4F0-1E-UDD-F  
Description: DEFINE 2 DIRECT-INDIRECT PENDANT LED LUMINAIRE  
DOWNLIGHT 485 LUMENS PER FOOT, FLUSH SATIN WHITE DIFFUSER, REGRESSED  
HOUSING  
UPLIGHT 530 LUMENS PER FOOT, NO LENS  
Light Source: -  
Ballast/Driver: ELECTRONIC DRIVER

**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 3020.3 lumens  
Efficiency: N/A  
Efficacy: 92.1 lumens/watt  
Spacing Criteria (0/90/45): 1.2 / 0.99 / 1.16  
Luminous Opening: Rectangular (W 0.17' x L: 4' x H: 0')  
CIE Type: General Diffuse

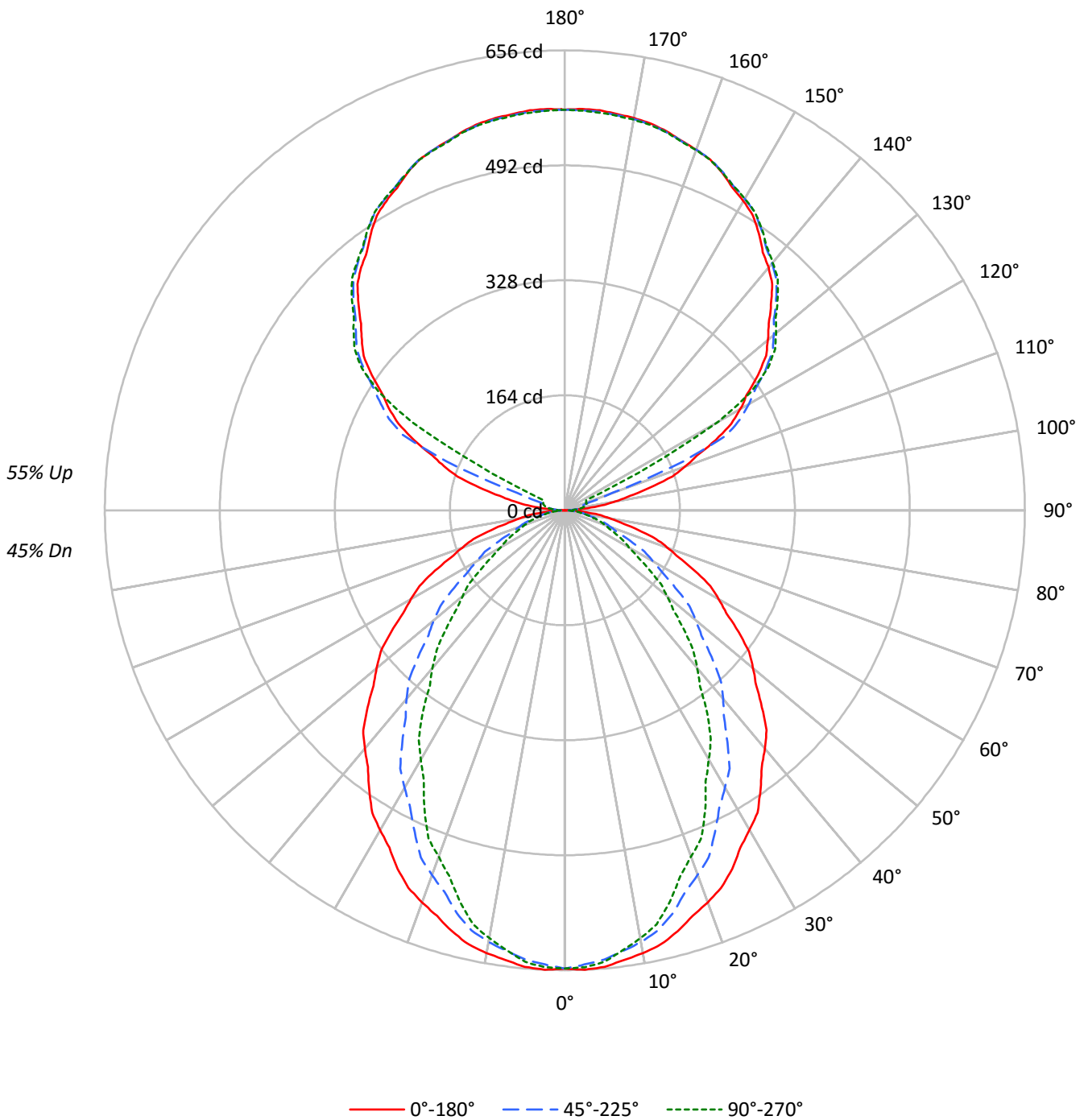
Input Watts (W): 32.8  
Input Voltage (V): 120  
Input Current (Ain): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 25 FT



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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	106	106	106	106	97	97	97	97	80	80	80	65	65	65	51	51	51	45				45
1	97	93	89	86	89	85	82	79	71	69	67	58	56	55	46	45	44	38				38
2	89	82	76	71	81	75	70	66	63	59	56	51	49	47	41	39	38	33				33
3	81	72	65	59	74	66	60	55	56	51	48	46	43	40	37	34	33	28				28
4	74	64	56	51	68	59	52	47	50	45	41	41	37	35	33	30	28	25				25
5	68	57	49	44	63	53	46	41	45	39	35	37	33	30	30	27	25	22				22
6	63	51	44	38	58	48	41	36	40	35	31	34	30	27	27	24	22	19				19
7	58	47	39	33	54	43	36	31	37	31	28	31	27	24	25	22	20	17				17
8	54	42	35	30	50	39	33	28	34	28	25	28	24	21	23	20	18	16				16
9	51	39	31	27	46	36	29	25	31	26	22	26	22	19	21	18	16	14				14
10	47	36	29	24	43	33	27	23	28	23	20	24	20	17	20	17	15	13				13

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

	0°	45°	90°
0°	10555	10555	10555
5°	10595	10423	10481
10°	10516	10252	10165
15°	10394	9949	9663
20°	10227	9514	9036
25°	10055	9021	8432
30°	9818	8516	7655
35°	9585	7965	6974
40°	9352	7396	6184
45°	9079	6754	5471
50°	8796	6106	4770
55°	8510	5413	4096
60°	8176	4682	3400
65°	7798	3931	3095
70°	7345	3238	2851
75°	6787	2951	2658
80°	5997	2641	2427
85°	4705	2075	2075



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	61.2	2.0
10°-20°	168.0	5.6
20°-30°	235.9	7.8
30°-40°	257.3	8.5
40°-50°	236.6	7.8
50°-60°	185.8	6.2
60°-70°	121.1	4.0
70°-80°	62.5	2.1
80°-90°	17.6	0.6
90°-100°	19.1	0.6
100°-110°	69.9	2.3
110°-120°	186.8	6.2
120°-130°	308.4	10.2
130°-140°	328.0	10.9
140°-150°	304.8	10.1
150°-160°	245.1	8.1
160°-170°	157.9	5.2
170°-180°	54.4	1.8
0°-30°	465.2	15.4
0°-40°	722.4	23.9
0°-60°	1144.8	37.9
0°-90°	1346.0	44.6
90°-120°	275.8	9.1
90°-150°	1217.0	40.3
90°-180°	1674.0	55.4
0°-180°	3020.3	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	654	654	654	654	654	
5°	654	650	643	648	647	62
15°	622	615	595	584	578	175
25°	564	544	506	483	473	259
35°	486	455	404	368	354	304
45°	398	357	296	255	240	307
55°	302	255	192	158	146	270
65°	204	156	103	84	81	202
75°	109	69	47	43	43	115
85°	25	14	11	11	11	30
90°	0	5	8	10	11	2
95°	27	14	16	18	18	33
105°	126	131	25	30	31	134
115°	238	245	255	73	34	234
125°	336	342	349	352	354	300
135°	416	422	426	430	430	321
145°	482	482	489	492	490	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	



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**CANDELA DISTRIBUTION (FULL):**

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
0°	653.7	653.7	653.7	653.7	653.7	653.7	653.7	653.7	653.7	653.7	653.7
2.5°	656.1	655.6	655.1	654.5	654.0	653.2	652.0	650.9	649.7	648.6	649.6
5°	653.7	653.1	652.4	651.8	651.1	649.9	648.2	646.5	644.8	643.1	644.3
7.5°	647.0	646.2	645.4	644.5	643.7	642.3	640.3	638.3	636.4	634.4	634.7
10°	641.4	640.4	639.4	638.6	637.6	635.9	633.3	630.6	628.0	625.3	625.0
12.5°	634.2	633.1	631.9	630.8	629.7	627.5	624.1	620.8	617.3	614.0	613.3
15°	621.8	620.4	618.9	617.4	616.0	613.1	608.6	604.1	599.7	595.2	592.7
17.5°	606.6	604.4	602.1	599.9	597.7	593.7	588.0	582.3	576.6	570.8	567.8
20°	595.2	592.6	589.9	587.3	584.6	580.0	573.5	566.9	560.3	553.7	550.5
22.5°	582.9	580.0	576.9	574.0	571.1	565.9	558.5	551.0	543.7	536.2	532.0
25°	564.4	560.2	556.0	551.8	547.6	541.1	532.4	523.8	515.1	506.4	501.1
27.5°	542.2	537.6	533.0	528.5	523.9	516.7	506.9	497.1	487.4	477.5	471.3
30°	526.6	521.6	516.6	511.6	506.6	498.8	488.3	477.8	467.2	456.8	450.0
32.5°	511.4	505.6	499.7	493.9	488.1	479.7	469.1	458.3	447.6	436.9	429.2
35°	486.3	479.6	472.9	466.2	459.5	450.4	438.8	427.2	415.7	404.1	395.8
37.5°	461.2	453.8	446.5	439.1	431.8	421.9	409.6	397.3	384.9	372.6	363.5
40°	443.7	435.9	427.9	420.1	412.2	401.9	389.1	376.4	363.6	350.9	341.5
42.5°	425.7	417.4	409.1	400.8	392.5	381.8	368.6	355.4	342.2	329.1	319.4
45°	397.6	388.8	379.9	371.1	362.3	351.0	337.2	323.4	309.6	295.8	286.5
47.5°	370.1	360.8	351.5	342.1	332.8	321.0	306.7	292.5	278.2	264.0	254.7
50°	350.2	340.9	331.6	322.3	312.9	301.0	286.5	272.1	257.6	243.1	234.1
52.5°	330.8	321.1	311.3	301.6	291.8	279.9	265.7	251.6	237.4	223.3	214.5
55°	302.3	292.1	281.8	271.6	261.3	249.1	234.9	220.7	206.4	192.3	184.4
57.5°	273.1	262.6	252.1	241.5	231.0	219.0	205.3	191.6	178.0	164.4	157.1
60°	253.2	242.7	232.2	221.7	211.1	199.2	185.6	172.1	158.5	145.0	138.2
62.5°	233.8	223.3	212.8	202.2	191.7	180.1	167.2	154.2	141.3	128.4	122.0
65°	204.1	193.5	182.8	172.1	161.5	150.3	138.5	126.6	114.8	102.9	98.5
67.5°	175.5	164.9	154.3	143.8	133.2	122.6	111.9	101.3	90.6	80.0	78.0
70°	155.6	145.4	135.1	124.8	114.5	104.9	95.9	86.7	77.7	68.6	67.3
72.5°	136.7	126.8	117.0	107.2	97.4	88.8	81.5	74.2	66.9	59.7	58.5
75°	108.8	99.7	90.5	81.3	72.0	65.2	60.8	56.2	51.8	47.3	46.4
77.5°	81.5	73.4	65.4	57.3	49.3	44.1	42.0	39.8	37.6	35.5	34.9
80°	64.5	57.8	51.1	44.4	37.6	33.7	32.3	31.1	29.7	28.4	27.9
82.5°	48.9	43.6	38.4	33.2	28.0	24.9	24.0	23.1	22.2	21.3	21.0
85°	25.4	22.7	19.9	17.2	14.4	12.8	12.4	12.0	11.6	11.2	11.2
87.5°	7.7	7.1	6.3	5.7	5.1	4.8	5.0	5.1	5.3	5.5	5.5
90°	0.4	1.4	2.5	3.4	4.4	5.3	6.1	6.8	7.5	8.2	8.7
92.5°	8.3	8.2	8.2	8.1	8.0	8.2	8.5	8.9	9.2	9.6	9.8
95°	26.9	23.8	20.8	17.7	14.7	13.5	14.2	14.8	15.4	16.2	16.6
97.5°	53.3	44.8	36.3	27.7	19.2	15.6	17.1	18.6	20.1	21.5	21.9
100°	73.2	60.6	48.0	35.4	22.8	17.3	18.9	20.4	22.0	23.5	24.3
102.5°	95.0	92.4	89.7	87.0	84.4	76.4	63.5	50.4	37.3	24.2	25.2
105°	125.6	128.4	131.2	134.0	136.7	125.6	100.4	75.4	50.3	25.2	26.2
107.5°	160.7	162.9	165.1	167.3	169.5	155.6	125.6	95.5	65.4	35.3	34.3
110°	183.2	185.1	187.0	188.9	190.8	178.6	152.0	125.5	98.9	72.3	63.1



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**CANDELA DISTRIBUTION (continued):**

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
112.5°	204.3	206.0	207.7	209.5	211.1	208.7	202.2	195.6	189.0	182.5	148.9
115°	237.7	239.2	240.8	242.4	244.0	245.9	248.2	250.5	252.8	255.1	212.5
117.5°	267.6	269.3	271.1	272.8	274.6	276.2	277.8	279.4	281.0	282.5	272.3
120°	289.4	290.7	292.2	293.5	294.9	296.4	298.1	299.8	301.3	303.0	304.1
122.5°	307.9	309.3	310.9	312.3	313.7	315.4	317.1	318.9	320.8	322.6	323.2
125°	336.1	337.3	338.5	339.7	340.9	342.4	344.1	345.9	347.6	349.4	350.0
127.5°	361.6	363.0	364.3	365.6	366.9	368.3	369.6	370.9	372.2	373.5	374.4
130°	377.9	379.3	380.8	382.3	383.7	385.0	386.0	387.0	388.0	389.0	390.1
132.5°	394.4	395.6	396.9	398.2	399.4	400.5	401.6	402.6	403.5	404.6	405.4
135°	415.9	417.4	418.8	420.3	421.8	422.9	423.7	424.6	425.4	426.2	427.1
137.5°	437.7	438.6	439.7	440.7	441.7	442.8	443.7	444.7	445.5	446.5	447.4
140°	451.9	452.6	453.4	454.1	454.8	455.7	456.7	457.7	458.7	459.7	460.6
142.5°	463.7	464.5	465.1	465.7	466.4	467.3	468.5	469.6	470.8	472.0	472.7
145°	482.4	482.4	482.3	482.2	482.1	482.8	484.4	485.9	487.5	489.1	489.7
147.5°	498.8	498.4	498.0	497.7	497.3	498.0	499.5	501.1	502.6	504.1	504.6
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°	653.7	653.7	653.7	653.7	653.7	653.7	653.7	653.7
2.5°	650.6	651.7	652.8	653.2	653.0	652.8	652.5	652.4
5°	645.5	646.7	647.8	648.2	647.8	647.5	647.1	646.7
7.5°	635.0	635.3	635.7	635.6	634.9	634.1	633.5	632.8
10°	624.6	624.2	623.8	623.2	622.4	621.6	620.8	620.0
12.5°	612.6	611.9	611.2	610.1	608.8	607.5	606.2	604.9
15°	590.2	587.7	585.2	583.3	581.9	580.7	579.3	578.1
17.5°	564.8	561.9	558.9	556.3	554.1	551.8	549.5	547.2
20°	547.2	543.9	540.6	537.5	534.6	531.7	528.9	525.9
22.5°	527.8	523.6	519.4	516.1	514.0	511.8	509.7	507.5
25°	495.7	490.3	484.9	481.2	479.2	477.2	475.3	473.3
27.5°	465.0	458.7	452.4	447.7	444.6	441.5	438.3	435.2
30°	443.3	436.7	429.9	424.8	421.2	417.7	414.2	410.6
32.5°	421.5	413.9	406.2	400.8	397.4	394.1	390.7	387.4
35°	387.5	379.2	371.0	365.4	362.5	359.6	356.7	353.8
37.5°	354.3	345.2	336.1	329.9	326.6	323.3	320.0	316.6
40°	332.2	322.8	313.5	307.1	303.7	300.3	296.8	293.4
42.5°	309.7	300.1	290.5	284.0	280.7	277.3	274.0	270.7
45°	277.1	267.8	258.5	252.2	249.1	245.9	242.7	239.6
47.5°	245.4	236.1	226.9	220.8	217.9	215.1	212.1	209.3
50°	225.0	215.9	206.8	201.0	198.2	195.4	192.7	189.9
52.5°	205.7	197.0	188.2	182.6	180.1	177.5	174.9	172.4
55°	176.5	168.6	160.7	155.5	153.0	150.5	148.1	145.5
57.5°	149.9	142.7	135.5	130.8	128.7	126.6	124.5	122.3
60°	131.5	124.8	118.1	113.8	111.6	109.5	107.4	105.3
62.5°	115.6	109.2	102.8	99.0	97.8	96.5	95.2	94.0
65°	94.0	89.5	85.1	82.6	82.2	81.8	81.4	81.0
67.5°	75.9	73.8	71.8	70.6	70.1	69.7	69.3	68.8
70°	66.0	64.7	63.4	62.4	61.9	61.4	60.8	60.4
72.5°	57.4	56.3	55.2	54.5	54.2	53.9	53.6	53.2
75°	45.5	44.6	43.6	43.1	43.0	42.9	42.7	42.6
77.5°	34.5	33.9	33.4	33.0	32.8	32.6	32.4	32.2
80°	27.3	26.9	26.3	26.1	26.1	26.1	26.1	26.1
82.5°	20.7	20.4	20.0	19.9	19.9	19.9	19.9	19.9
85°	11.2	11.2	11.2	11.2	11.2	11.2	11.2	11.2
87.5°	5.4	5.4	5.4	5.4	5.5	5.5	5.5	5.5
90°	9.2	9.7	10.1	10.5	10.6	10.8	11.0	11.2
92.5°	10.1	10.3	10.5	10.7	10.9	10.9	11.1	11.2
95°	17.0	17.5	18.0	18.1	18.1	18.0	17.9	17.7
97.5°	22.3	22.7	23.1	23.3	23.4	23.5	23.6	23.8
100°	25.0	25.7	26.5	26.9	27.2	27.3	27.5	27.7
102.5°	26.1	27.1	28.0	28.7	28.9	29.2	29.4	29.7
105°	27.3	28.3	29.2	29.9	30.3	30.7	31.1	31.4
107.5°	33.3	32.2	31.2	30.9	31.2	31.6	31.9	32.3
110°	53.9	44.8	35.6	31.2	31.5	31.9	32.3	32.6





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**CANDELA DISTRIBUTION (continued):**

	55°	60°	65°	70°	75°	80°	85°	90°
112.5°	115.4	81.9	48.4	31.8	32.1	32.4	32.7	33.0
115°	170.0	127.5	84.9	60.4	53.7	47.1	40.5	33.9
117.5°	262.0	251.7	241.4	225.4	203.6	181.9	160.2	138.4
120°	305.2	306.3	307.4	301.8	289.4	277.0	264.6	252.2
122.5°	323.8	324.6	325.2	324.3	321.9	319.5	317.1	314.7
125°	350.6	351.3	351.9	352.4	352.7	352.9	353.2	353.5
127.5°	375.3	376.3	377.2	377.7	377.8	377.9	377.9	378.0
130°	391.0	392.1	393.1	393.6	393.4	393.3	393.2	393.2
132.5°	406.3	407.2	408.1	408.4	408.3	408.2	408.1	408.1
135°	428.1	429.0	429.9	430.3	430.1	429.9	429.8	429.5
137.5°	448.3	449.2	450.1	450.4	450.0	449.7	449.5	449.2
140°	461.4	462.2	463.0	463.2	462.7	462.3	461.8	461.4
142.5°	473.5	474.2	475.0	475.2	474.7	474.2	473.7	473.2
145°	490.4	491.0	491.6	491.7	491.3	490.8	490.4	489.9
147.5°	505.1	505.6	506.0	506.0	505.7	505.3	504.9	504.5
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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