

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: P331649-927

Luminaire Tested: **SA2XXRDIP-C485D330U927-4F0-1E-UDD-F1**

Issue Date: 10/7/2019

**Test Information**

Test Method: LM-79-08  
Report Number: P331649-927  
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: SA2XXRDIP-C485D330U927-4F0-1E-UDD-F1  
Description: DEFINE 2 DIRECT-INDIRECT PENDANT LED LUMINAIRE  
DOWNLIGHT 485 LUMENS PER FOOT, FLUSH SATIN WHITE DIFFUSER, REGRESSED  
HOUSING  
UPLIGHT 330 LUMENS PER FOOT, FLUSH SATIN WHITE DIFFUSER  
Light Source: -  
Ballast/Driver: ELECTRONIC DRIVER

**Summary**

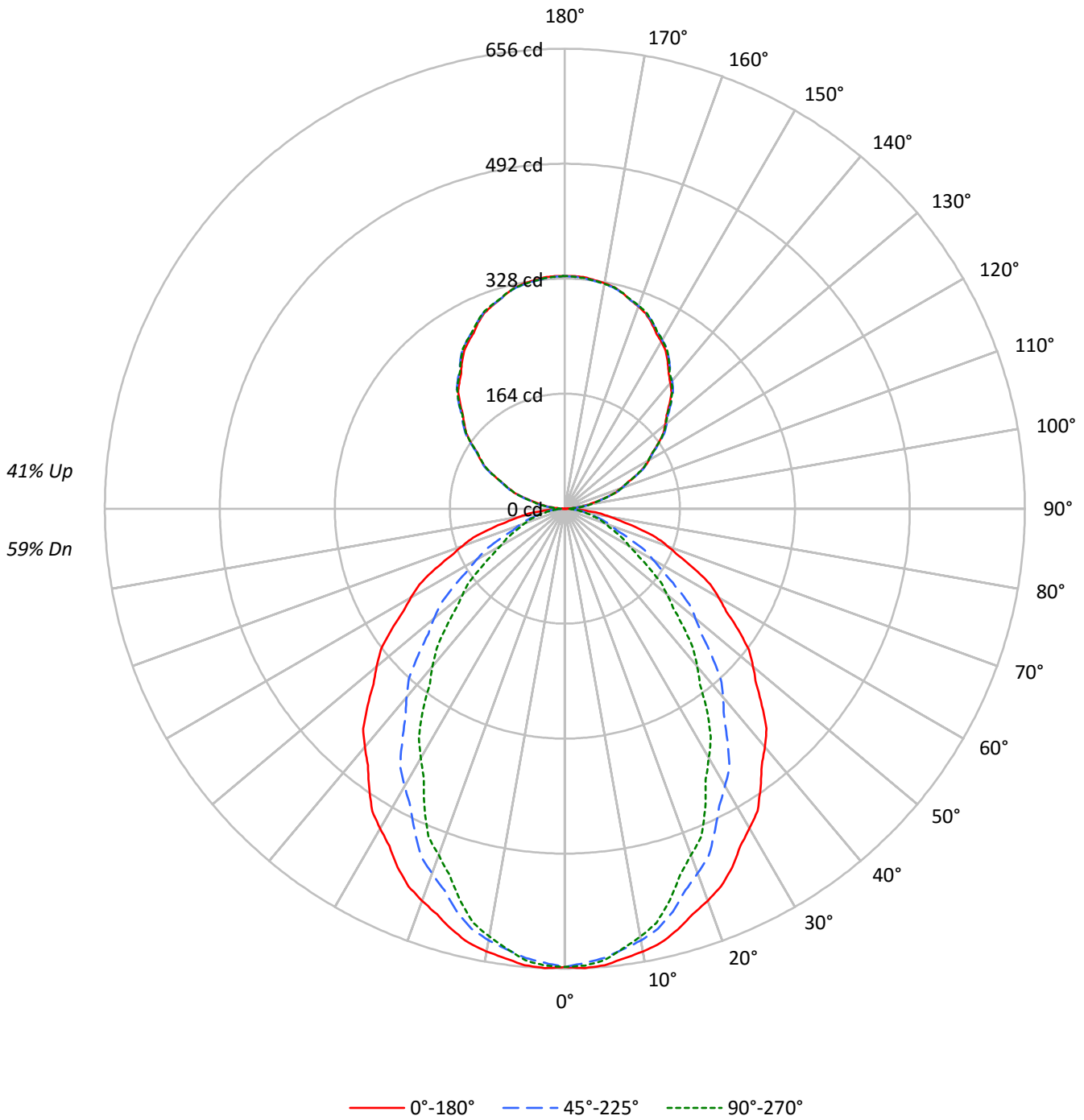
Lumens per Lamp: N/A  
Luminaire Lumens: 2273.3 lumens  
Efficiency: N/A  
Efficacy: 82.7 lumens/watt  
Spacing Criteria (0/90/45): 1.2 / 0.99 / 1.16  
Luminous Opening: Rectangular (W 0.17' x L: 4' x H: 0')  
CIE Type: General Diffuse

Input Watts (W): 27.5  
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	0
RCR																		
0	109	109	109	109	102	102	102	102	88	88	88	76	76	76	65	65	65	59
1	100	96	92	89	94	90	87	84	78	76	74	68	66	64	58	57	56	51
2	92	85	79	74	86	79	74	70	69	65	62	60	57	55	52	50	48	44
3	84	75	68	62	78	70	64	59	62	57	53	54	50	47	46	44	41	38
4	77	67	59	53	72	63	56	51	55	50	46	48	44	41	42	39	36	33
5	71	60	52	46	66	56	49	44	50	44	40	44	39	36	38	35	32	29
6	66	54	46	40	61	51	44	39	45	39	35	40	35	32	35	31	28	26
7	61	49	41	36	57	46	39	34	41	35	31	36	32	28	32	28	25	23
8	57	45	37	32	53	42	35	30	38	32	28	33	29	25	29	26	23	21
9	53	41	34	29	50	39	32	27	35	29	25	31	26	23	27	24	21	19
10	50	38	31	26	47	36	29	25	32	27	23	29	24	21	25	22	19	17

**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	2.7
10°-20°	168.0	7.4
20°-30°	235.9	10.4
30°-40°	257.3	11.3
40°-50°	236.6	10.4
50°-60°	185.8	8.2
60°-70°	121.1	5.3
70°-80°	62.5	2.7
80°-90°	17.5	0.8
90°-100°	21.0	0.9
100°-110°	65.3	2.9
110°-120°	111.6	4.9
120°-130°	146.7	6.5
130°-140°	164.7	7.2
140°-150°	161.5	7.1
150°-160°	135.4	6.0
160°-170°	89.8	4.0
170°-180°	31.4	1.4
0°-30°	465.2	20.5
0°-40°	722.4	31.8
0°-60°	1144.8	50.4
0°-90°	1345.9	59.2
90°-120°	197.9	8.7
90°-150°	670.7	29.5
90°-180°	927.0	40.8
0°-180°	2273.3	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	4	10	9	10	2
95°	15	17	18	18	17	17
105°	60	61	62	62	62	64
115°	112	114	113	113	112	111
125°	163	165	164	164	163	146
135°	211	214	214	214	213	163
145°	256	258	259	260	259	160
155°	292	293	294	295	295	135
165°	318	318	318	320	318	90
175°	331	330	330	331	330	31
180°	332	332	332	332	332	



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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°	7.6	7.0	6.3	5.5	4.8	4.7	4.9	5.2	5.5	5.8	5.6
90°	0.3	1.0	1.7	2.5	3.2	4.4	5.7	7.1	8.4	9.8	9.7
92.5°	5.0	5.5	6.1	6.7	7.2	7.6	7.9	8.2	8.6	8.9	9.0
95°	14.6	15.2	15.8	16.4	17.0	17.4	17.5	17.7	17.8	17.9	17.9
97.5°	26.6	27.2	27.6	28.2	28.8	29.2	29.4	29.6	29.9	30.1	30.1
100°	35.6	36.0	36.5	37.1	37.5	37.9	38.0	38.3	38.4	38.7	38.7
102.5°	44.9	45.3	45.7	46.1	46.5	46.9	47.1	47.3	47.5	47.8	47.8
105°	60.2	60.4	60.5	60.8	60.9	61.1	61.2	61.3	61.5	61.6	61.7
107.5°	75.5	75.8	76.0	76.4	76.6	76.8	76.8	76.8	76.8	76.8	76.8
110°	85.4	85.7	86.1	86.5	86.8	87.1	87.1	87.1	87.1	87.1	87.1



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**CANDELA DISTRIBUTION (continued):**

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
112.5°	96.1	96.5	96.9	97.2	97.6	97.8	97.7	97.7	97.6	97.6	97.4
115°	111.9	112.3	112.7	113.0	113.4	113.6	113.4	113.3	113.2	113.0	113.0
117.5°	127.7	128.3	128.7	129.2	129.8	129.8	129.4	129.1	128.7	128.4	128.3
120°	138.2	138.8	139.3	139.7	140.2	140.2	139.7	139.3	138.8	138.2	138.2
122.5°	147.9	148.5	149.1	149.6	150.3	150.4	150.0	149.7	149.3	149.0	148.9
125°	162.9	163.4	164.0	164.5	165.1	165.3	165.1	164.9	164.8	164.5	164.4
127.5°	177.5	178.2	179.0	179.6	180.3	180.5	180.4	180.1	179.9	179.7	179.4
130°	186.7	187.5	188.3	189.1	189.9	190.3	190.1	190.0	189.9	189.7	189.6
132.5°	197.0	197.6	198.3	198.9	199.6	199.9	199.9	200.0	200.0	200.0	199.8
135°	210.7	211.4	212.1	212.8	213.5	213.9	214.0	214.1	214.3	214.4	214.3
137.5°	225.2	225.8	226.3	227.0	227.5	227.8	228.0	228.1	228.3	228.5	228.5
140°	234.0	234.6	235.1	235.7	236.2	236.6	236.9	237.3	237.6	237.9	237.9
142.5°	243.0	243.5	244.1	244.6	245.2	245.6	245.7	246.0	246.2	246.4	246.4
145°	255.8	256.3	256.7	257.1	257.5	257.9	258.3	258.7	259.0	259.4	259.5
147.5°	267.3	267.8	268.3	268.9	269.3	269.7	270.0	270.3	270.5	270.8	270.9
150°	275.1	275.5	275.8	276.2	276.6	276.9	277.2	277.4	277.7	277.9	278.1
152.5°	282.1	282.4	282.8	283.2	283.5	283.9	284.2	284.5	284.8	285.1	285.3
155°	292.5	292.6	292.9	293.0	293.2	293.4	293.6	293.7	294.0	294.1	294.5
157.5°	301.3	301.5	301.6	301.7	301.9	302.0	302.1	302.2	302.3	302.5	302.9
160°	306.7	306.9	307.0	307.1	307.2	307.4	307.4	307.4	307.5	307.6	307.9
162.5°	311.6	311.7	311.7	311.7	311.8	311.8	311.9	312.0	312.0	312.0	312.5
165°	318.2	318.1	318.1	318.1	318.0	317.9	317.9	317.9	317.9	317.9	318.4
167.5°	323.7	323.5	323.4	323.1	323.0	322.9	322.8	322.8	322.8	322.8	323.2
170°	326.6	326.5	326.2	326.1	325.9	325.7	325.7	325.6	325.6	325.5	325.9
172.5°	328.6	328.4	328.3	328.0	327.9	327.7	327.7	327.6	327.6	327.5	328.0
175°	331.1	330.9	330.7	330.5	330.3	330.2	330.1	329.9	329.8	329.7	330.1
177.5°	332.1	331.9	331.8	331.7	331.5	331.4	331.3	331.2	331.1	331.0	331.3
180°	331.7	331.7	331.7	331.7	331.7	331.7	331.7	331.7	331.7	331.7	331.7



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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°	5.5	5.4	5.2	5.1	5.1	5.2	5.2	5.2
90°	9.6	9.4	9.3	9.3	9.3	9.4	9.4	9.5
92.5°	9.0	9.0	9.0	9.0	9.0	9.0	9.0	9.0
95°	17.9	17.9	17.9	17.8	17.7	17.6	17.5	17.3
97.5°	30.1	30.1	30.1	30.1	30.1	30.1	30.1	30.0
100°	38.7	38.7	38.7	38.6	38.5	38.5	38.4	38.3
102.5°	47.9	47.9	48.0	48.0	47.9	47.8	47.8	47.8
105°	61.8	61.9	62.1	62.1	62.1	62.1	62.1	62.1
107.5°	76.8	76.9	76.9	76.8	76.5	76.3	76.0	75.7
110°	87.1	87.1	87.1	87.0	86.7	86.6	86.4	86.2





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**CANDELA DISTRIBUTION (continued):**

	55°	60°	65°	70°	75°	80°	85°	90°
112.5°	97.3	97.1	97.0	96.8	96.7	96.6	96.4	96.3
115°	113.0	112.9	112.8	112.7	112.5	112.3	112.2	111.9
117.5°	128.1	127.9	127.8	127.6	127.5	127.3	127.1	126.9
120°	138.2	138.2	138.2	138.2	138.0	137.8	137.6	137.4
122.5°	148.7	148.5	148.4	148.3	148.1	148.0	147.8	147.7
125°	164.2	164.0	163.8	163.7	163.7	163.6	163.5	163.4
127.5°	179.3	179.0	178.8	178.6	178.4	178.2	178.0	177.8
130°	189.5	189.4	189.3	189.1	188.9	188.5	188.3	188.1
132.5°	199.5	199.2	199.0	198.8	198.5	198.4	198.1	198.0
135°	214.3	214.2	214.1	214.0	213.8	213.7	213.5	213.3
137.5°	228.4	228.3	228.3	228.1	227.9	227.7	227.4	227.1
140°	237.9	237.9	237.9	237.7	237.5	237.3	237.0	236.8
142.5°	246.5	246.5	246.6	246.5	246.3	246.0	245.7	245.5
145°	259.6	259.6	259.7	259.6	259.4	259.1	258.9	258.6
147.5°	271.0	271.2	271.3	271.2	271.0	270.8	270.5	270.3
150°	278.3	278.5	278.7	278.7	278.5	278.3	278.1	277.9
152.5°	285.6	285.8	286.1	286.1	285.8	285.6	285.3	285.1
155°	294.8	295.1	295.4	295.5	295.2	295.1	294.9	294.7
157.5°	303.2	303.7	304.1	304.2	303.9	303.6	303.3	303.0
160°	308.3	308.7	309.1	309.1	308.9	308.6	308.4	308.2
162.5°	312.9	313.3	313.8	313.8	313.5	313.2	312.9	312.6
165°	318.8	319.2	319.6	319.7	319.4	319.1	318.8	318.5
167.5°	323.7	324.1	324.6	324.6	324.3	323.9	323.6	323.3
170°	326.4	326.8	327.3	327.3	326.9	326.5	326.1	325.7
172.5°	328.4	328.8	329.2	329.3	328.9	328.5	328.2	327.8
175°	330.6	331.0	331.4	331.4	331.1	330.7	330.3	329.9
177.5°	331.6	331.8	332.2	332.2	331.8	331.6	331.3	331.0
180°	331.7	331.7	331.7	331.7	331.7	331.7	331.7	331.7

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