

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: P331289-840

Luminaire Tested: **SA2XXDIP-C485D330U840-4F0-1E-UDD-D1**

Issue Date: 10/7/2019

**Test Information**

Test Method: LM-79-08  
Report Number: P331289-840  
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-C485D330U840-4F0-1E-UDD-D1  
Description: DEFINE 2 DIRECT-INDIRECT PENDANT LED LUMINAIRE  
DOWNLIGHT 485 LUMENS PER FOOT, DROP SATIN WHITE DIFFUSER  
UPLIGHT 330 LUMENS PER FOOT, FLUSH SATIN WHITE DIFFUSER  
Light Source: -  
Ballast/Driver: ELECTRONIC DRIVER

**Summary**

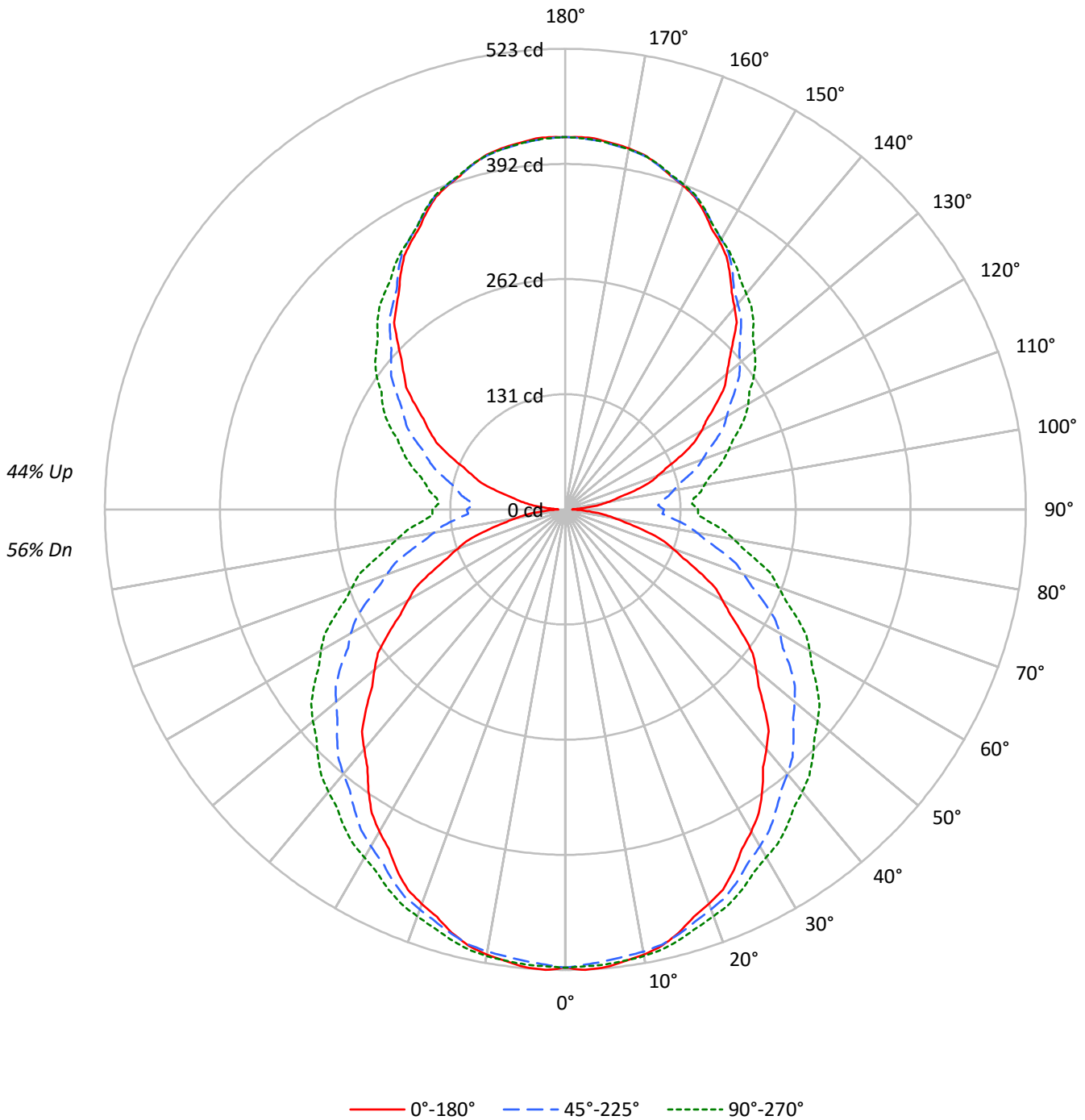
Lumens per Lamp: N/A  
Luminaire Lumens: 3169.3 lumens  
Efficiency: N/A  
Efficacy: 115.2 lumens/watt  
Spacing Criteria (0/90/45): 1.21 / 1.32 / 1.42  
Luminous Opening: Rectangular w/ Sides (W: 0.17' x L: 4' x H: 0.08')  
CIE Type: General Diffuse

Input Watts (W): 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	101	101	101	101	87	87	87	73	73	73	61	61	61	56
1	97	92	88	84	90	86	82	78	73	70	68	62	60	58	52	50	48	43
2	88	80	73	67	81	74	68	63	63	59	55	54	50	47	44	42	40	35
3	80	69	61	55	74	65	57	52	55	50	45	47	43	39	39	36	33	29
4	73	61	53	46	67	57	49	43	49	43	38	41	37	33	34	31	28	24
5	67	54	46	39	62	51	43	37	43	37	33	37	32	28	31	27	24	21
6	61	49	40	34	57	45	38	32	39	33	28	33	28	25	28	24	21	18
7	57	44	35	29	52	41	33	28	35	29	25	30	25	22	25	21	19	16
8	53	40	32	26	49	37	30	25	32	26	22	28	23	19	23	19	16	14
9	49	36	28	23	45	34	27	22	29	24	19	25	21	17	21	18	15	13
10	46	33	26	21	42	31	24	20	27	21	17	23	19	15	20	16	13	11

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

	0°	45°	90°
0°	8402	8402	8402
5°	8443	8088	8058
10°	8390	7850	7761
15°	8275	7596	7448
20°	8129	7324	7148
25°	7984	7062	6875
30°	7780	6794	6601
35°	7575	6536	6409
40°	7360	6315	6215
45°	7153	6118	6051
50°	6934	5937	5888
55°	6700	5744	5722
60°	6417	5546	5546
65°	6122	5313	5339
70°	5796	5061	5115
75°	5371	4816	4908
80°	4707	4564	4698
85°	4070	4346	4535



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	49.3	1.6
10°-20°	141.4	4.5
20°-30°	214.3	6.8
30°-40°	261.0	8.2
40°-50°	280.8	8.9
50°-60°	272.7	8.6
60°-70°	238.1	7.5
70°-80°	183.3	5.8
80°-90°	124.7	3.9
90°-100°	111.5	3.5
100°-110°	145.1	4.6
110°-120°	183.1	5.8
120°-130°	209.8	6.6
130°-140°	219.5	6.9
140°-150°	207.5	6.5
150°-160°	172.7	5.4
160°-170°	114.5	3.6
170°-180°	40.0	1.3
0°-30°	405.0	12.8
0°-40°	666.0	21.0
0°-60°	1219.4	38.5
0°-90°	1765.5	55.7
90°-120°	439.7	13.9
90°-150°	1076.6	34.0
90°-180°	1404.0	44.3
0°-180°	3169.3	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	520	520	520	520	520	
5°	522	520	515	519	519	49
15°	498	499	499	506	505	140
25°	452	458	464	473	476	208
35°	390	403	417	433	439	244
45°	320	340	367	389	398	247
55°	245	273	311	338	348	219
65°	167	205	249	279	290	166
75°	93	135	183	214	226	98
85°	27	74	122	153	164	29
90°	8	56	112	140	151	6
95°	24	64	110	137	146	26
105°	80	104	143	169	179	85
115°	146	157	189	211	219	144
125°	209	213	235	254	261	187
135°	269	274	282	296	302	208
145°	326	329	331	336	338	204
155°	373	374	375	377	376	172
165°	406	405	405	408	406	114
175°	422	421	420	422	421	40
180°	423	423	423	423	423	



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**CANDELA DISTRIBUTION (FULL):**

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
0°	520.4	520.4	520.4	520.4	520.4	520.4	520.4	520.4	520.4	520.4	520.4
2.5°	523.4	523.0	522.6	522.2	521.8	521.1	520.2	519.3	518.4	517.4	518.1
5°	521.9	521.4	520.9	520.4	519.9	519.2	518.2	517.2	516.1	515.1	516.1
7.5°	517.3	516.8	516.5	516.2	515.9	515.3	514.5	513.8	513.0	512.2	513.4
10°	513.6	513.3	512.9	512.6	512.3	511.9	511.4	510.9	510.4	509.9	511.2
12.5°	507.6	507.7	507.8	507.8	507.9	507.7	507.4	507.0	506.5	506.2	507.6
15°	497.8	498.1	498.5	498.8	499.1	499.3	499.3	499.3	499.3	499.3	500.8
17.5°	485.1	485.8	486.6	487.3	488.0	488.6	489.1	489.6	490.2	490.7	492.2
20°	476.7	477.5	478.4	479.2	480.0	480.8	481.4	482.1	482.8	483.4	485.2
22.5°	467.6	468.6	469.6	470.5	471.5	472.4	473.4	474.3	475.2	476.3	478.1
25°	452.5	453.7	454.8	456.1	457.2	458.6	460.1	461.6	463.1	464.5	466.6
27.5°	434.4	436.4	438.3	440.2	442.0	443.9	445.7	447.5	449.2	451.0	453.5
30°	422.3	424.5	426.7	428.9	431.1	433.2	435.5	437.6	439.8	441.9	444.6
32.5°	409.1	411.5	413.9	416.5	418.9	421.4	423.9	426.6	429.1	431.7	434.7
35°	389.9	392.7	395.7	398.5	401.3	404.3	407.5	410.7	413.8	417.1	420.7
37.5°	369.1	372.4	375.7	379.0	382.2	386.0	390.1	394.2	398.3	402.4	406.6
40°	355.3	358.9	362.6	366.3	370.0	374.1	378.6	383.1	387.7	392.2	396.6
42.5°	341.9	345.7	349.3	353.0	356.7	361.1	366.4	371.5	376.8	381.9	386.7
45°	319.8	324.3	328.8	333.4	337.9	343.1	348.9	354.8	360.7	366.6	371.7
47.5°	297.9	302.9	307.8	312.7	317.6	323.6	330.4	337.3	344.2	351.0	356.5
50°	282.9	288.0	293.3	298.4	303.6	309.9	317.5	325.1	332.6	340.1	345.9
52.5°	268.3	273.8	279.2	284.8	290.2	296.9	304.9	312.8	320.7	328.7	334.5
55°	245.1	251.2	257.2	263.2	269.2	276.6	285.4	294.1	302.8	311.4	317.5
57.5°	222.2	229.0	235.8	242.6	249.4	257.2	266.1	275.0	283.9	292.8	299.3
60°	205.9	213.1	220.4	227.5	234.7	243.1	252.7	262.2	271.8	281.3	287.7
62.5°	191.4	198.8	206.4	213.9	221.4	229.8	239.3	248.9	258.5	268.0	274.8
65°	167.4	175.6	183.9	192.1	200.3	209.3	219.2	229.1	239.0	248.9	255.8
67.5°	145.4	154.0	162.6	171.2	179.8	189.0	199.2	209.3	219.4	229.5	236.5
70°	129.8	138.5	147.1	155.8	164.6	174.1	184.5	194.9	205.3	215.7	222.9
72.5°	115.2	124.2	133.2	142.2	151.2	161.0	171.5	182.0	192.5	203.0	210.2
75°	92.8	102.2	111.5	120.9	130.3	140.4	151.1	161.8	172.6	183.3	190.5
77.5°	71.1	80.9	90.7	100.5	110.4	120.7	131.6	142.5	153.4	164.3	171.5
80°	56.6	66.8	77.1	87.3	97.5	108.1	119.0	129.8	140.7	151.6	158.6
82.5°	44.5	54.6	64.6	74.7	84.8	95.4	106.4	117.4	128.5	139.6	146.5
85°	27.2	37.6	48.0	58.4	68.7	79.3	90.0	100.7	111.5	122.2	129.3
87.5°	14.8	25.0	35.2	45.3	55.5	66.2	77.3	88.4	99.5	110.5	117.3
90°	7.9	18.6	29.3	39.9	50.6	62.2	74.6	87.1	99.6	112.0	118.6
92.5°	13.3	23.0	32.8	42.5	52.3	62.5	73.2	84.0	94.7	105.4	112.1
95°	24.5	33.2	41.9	50.6	59.3	68.7	79.0	89.2	99.4	109.6	115.9
97.5°	39.2	46.9	54.5	62.3	70.0	78.8	88.8	98.8	108.7	118.7	124.8
100°	50.6	57.5	64.2	71.1	78.0	86.1	95.8	105.4	115.0	124.6	130.9
102.5°	62.0	68.2	74.3	80.5	86.6	94.4	103.9	113.3	122.7	132.1	138.3
105°	80.5	85.5	90.7	95.7	100.9	107.9	116.7	125.6	134.5	143.4	149.4
107.5°	99.9	104.1	108.4	112.6	116.8	123.1	131.5	139.8	148.1	156.5	162.2
110°	111.8	115.6	119.5	123.3	127.1	133.2	141.4	149.6	157.8	166.0	171.4



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**CANDELA DISTRIBUTION (continued):**

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
112.5°	125.5	128.9	132.1	135.4	138.7	144.2	152.0	159.8	167.4	175.2	180.4
115°	145.7	148.0	150.4	152.7	155.0	159.9	167.2	174.6	182.0	189.3	194.3
117.5°	165.1	166.9	168.7	170.7	172.5	176.6	183.2	189.8	196.2	202.8	207.5
120°	178.5	179.9	181.2	182.4	183.7	187.4	193.5	199.5	205.6	211.7	216.4
122.5°	190.8	191.8	192.9	193.9	194.9	198.3	204.2	210.1	215.9	221.8	226.1
125°	209.1	209.8	210.6	211.3	212.0	214.9	220.0	225.2	230.4	235.4	239.7
127.5°	227.8	228.5	229.2	229.9	230.8	233.1	237.1	241.2	245.2	249.2	253.2
130°	239.4	240.3	241.3	242.1	243.0	245.1	248.4	251.8	255.1	258.5	262.4
132.5°	252.6	253.3	254.0	254.6	255.3	257.0	259.7	262.5	265.3	268.0	271.6
135°	269.4	270.2	271.1	272.1	272.9	274.3	276.1	277.9	279.7	281.6	285.1
137.5°	287.9	288.6	289.2	289.9	290.6	291.4	292.4	293.3	294.3	295.2	298.2
140°	299.0	299.5	300.1	300.6	301.2	301.8	302.6	303.4	304.1	304.8	307.5
142.5°	310.4	311.0	311.5	312.0	312.7	313.1	313.4	313.8	314.1	314.4	316.6
145°	326.1	326.7	327.2	327.8	328.3	328.8	329.3	329.8	330.2	330.7	331.8
147.5°	340.7	341.4	342.0	342.7	343.4	343.9	344.2	344.6	344.9	345.2	345.5
150°	350.7	351.2	351.6	352.1	352.6	353.0	353.4	353.7	354.0	354.3	354.6
152.5°	359.6	360.0	360.5	361.0	361.4	361.9	362.2	362.6	363.0	363.5	363.8
155°	372.8	373.0	373.3	373.5	373.8	374.1	374.3	374.5	374.8	375.0	375.4
157.5°	384.2	384.4	384.5	384.7	384.9	385.0	385.2	385.3	385.4	385.6	386.1
160°	391.0	391.2	391.3	391.5	391.6	391.8	391.8	391.9	392.0	392.1	392.5
162.5°	397.3	397.4	397.4	397.4	397.5	397.5	397.6	397.7	397.8	397.8	398.4
165°	405.7	405.6	405.5	405.5	405.4	405.3	405.3	405.3	405.3	405.3	405.9
167.5°	412.6	412.4	412.2	411.9	411.7	411.6	411.5	411.5	411.5	411.5	412.0
170°	416.4	416.2	415.9	415.7	415.5	415.3	415.2	415.1	415.1	415.0	415.5
172.5°	418.9	418.7	418.5	418.2	418.0	417.8	417.8	417.7	417.6	417.5	418.1
175°	422.1	421.8	421.6	421.3	421.1	420.9	420.8	420.6	420.4	420.3	420.8
177.5°	423.3	423.1	422.9	422.8	422.6	422.4	422.3	422.2	422.0	421.9	422.3
180°	422.8	422.8	422.8	422.8	422.8	422.8	422.8	422.8	422.8	422.8	422.8



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**CANDELA DISTRIBUTION (continued):**

	55°	60°	65°	70°	75°	80°	85°	90°
0°	520.4	520.4	520.4	520.4	520.4	520.4	520.4	520.4
2.5°	518.8	519.4	520.1	520.3	520.0	519.8	519.5	519.2
5°	517.2	518.2	519.2	519.6	519.4	519.3	519.1	518.9
7.5°	514.6	515.8	517.1	517.6	517.5	517.3	517.1	516.9
10°	512.5	513.8	515.2	515.8	515.6	515.4	515.3	515.1
12.5°	508.9	510.3	511.6	512.2	512.0	511.8	511.7	511.5
15°	502.3	503.8	505.3	505.9	505.8	505.6	505.4	505.3
17.5°	493.8	495.4	497.0	497.8	497.8	497.8	497.8	497.8
20°	487.2	489.0	490.8	491.7	491.7	491.7	491.7	491.7
22.5°	479.9	481.7	483.6	484.6	484.9	485.1	485.4	485.7
25°	468.6	470.6	472.6	473.9	474.4	474.9	475.4	475.9
27.5°	456.2	458.7	461.2	462.6	463.0	463.4	463.7	464.1
30°	447.4	450.0	452.7	454.2	454.7	455.2	455.8	456.3
32.5°	437.9	440.9	444.0	446.1	447.0	447.9	448.8	449.7
35°	424.4	428.2	431.8	434.2	435.5	436.6	437.8	439.0
37.5°	410.6	414.8	418.8	421.4	422.7	423.9	425.2	426.5
40°	400.9	405.3	409.6	412.5	414.0	415.6	417.1	418.6
42.5°	391.4	396.2	400.9	404.1	405.6	407.1	408.6	410.1
45°	377.0	382.1	387.3	390.7	392.4	394.2	395.8	397.5
47.5°	361.8	367.3	372.7	376.4	378.2	380.0	381.9	383.7
50°	351.5	357.2	362.9	366.7	368.6	370.4	372.2	374.1
52.5°	340.3	346.2	352.0	355.9	357.9	359.9	361.8	363.9
55°	323.6	329.6	335.6	339.7	341.9	344.1	346.3	348.4
57.5°	305.8	312.3	318.8	323.2	325.4	327.6	329.8	332.0
60°	294.1	300.4	306.8	311.1	313.5	315.9	318.2	320.5
62.5°	281.6	288.3	295.1	299.6	301.8	304.1	306.3	308.5
65°	262.7	269.5	276.4	280.9	283.1	285.3	287.4	289.6
67.5°	243.5	250.3	257.3	262.0	264.2	266.5	268.8	271.0
70°	230.1	237.3	244.5	249.1	251.2	253.2	255.2	257.2
72.5°	217.2	224.3	231.4	236.1	238.4	240.9	243.3	245.7
75°	197.7	204.9	212.1	216.8	218.9	221.2	223.3	225.5
77.5°	178.6	185.8	193.0	197.7	200.1	202.4	204.8	207.1
80°	165.7	172.7	179.8	184.4	186.8	189.1	191.5	193.8
82.5°	153.6	160.7	167.6	172.3	174.5	176.7	178.9	181.2
85°	136.2	143.3	150.4	155.0	157.3	159.8	162.1	164.4
87.5°	124.1	130.9	137.7	142.2	144.4	146.5	148.7	150.9
90°	125.1	131.7	138.3	142.5	144.6	146.7	148.9	150.9
92.5°	118.7	125.3	131.9	136.2	138.3	140.3	142.3	144.3
95°	122.3	128.7	135.0	139.2	141.0	142.9	144.7	146.5
97.5°	131.1	137.2	143.4	147.5	149.5	151.5	153.4	155.4
100°	137.0	143.3	149.5	153.4	155.2	156.9	158.8	160.5
102.5°	144.4	150.6	156.6	160.6	162.4	164.1	165.9	167.6
105°	155.4	161.5	167.4	171.4	173.2	175.1	176.9	178.7
107.5°	167.9	173.6	179.3	182.9	184.4	185.8	187.3	188.7
110°	176.7	182.1	187.4	191.0	192.6	194.2	195.8	197.3





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**CANDELA DISTRIBUTION (continued):**

	55°	60°	65°	70°	75°	80°	85°	90°
112.5°	185.5	190.8	195.9	199.3	201.0	202.7	204.3	206.0
115°	199.2	204.2	209.1	212.5	214.1	215.7	217.3	218.9
117.5°	212.3	217.1	221.9	225.0	226.4	227.9	229.3	230.9
120°	221.1	225.8	230.5	233.6	235.2	236.8	238.4	240.0
122.5°	230.6	234.9	239.2	242.2	243.6	244.9	246.3	247.7
125°	244.0	248.3	252.6	255.4	256.9	258.3	259.7	261.2
127.5°	257.0	260.8	264.8	267.3	268.5	269.7	270.9	272.2
130°	266.2	270.0	274.0	276.4	277.4	278.4	279.4	280.4
132.5°	275.1	278.6	282.2	284.5	285.6	286.6	287.7	288.8
135°	288.5	292.0	295.4	297.6	298.7	299.8	300.9	302.1
137.5°	301.2	304.3	307.3	309.2	310.0	310.8	311.6	312.5
140°	310.1	312.9	315.5	317.2	317.9	318.6	319.2	319.9
142.5°	318.8	321.0	323.3	324.7	325.2	325.8	326.3	326.9
145°	333.0	334.0	335.1	335.9	336.4	336.9	337.4	338.0
147.5°	345.8	346.1	346.4	346.6	346.7	346.8	346.9	347.0
150°	354.8	355.0	355.3	355.3	355.0	354.8	354.6	354.3
152.5°	364.1	364.4	364.7	364.7	364.4	364.1	363.8	363.5
155°	375.8	376.2	376.6	376.7	376.4	376.2	376.0	375.7
157.5°	386.6	387.2	387.7	387.8	387.4	387.0	386.7	386.3
160°	393.0	393.5	394.0	394.0	393.7	393.4	393.1	392.8
162.5°	398.9	399.4	400.0	400.0	399.7	399.3	398.9	398.5
165°	406.4	407.0	407.5	407.6	407.2	406.8	406.4	406.1
167.5°	412.6	413.1	413.7	413.8	413.4	412.9	412.5	412.1
170°	416.1	416.6	417.2	417.2	416.8	416.3	415.8	415.3
172.5°	418.6	419.2	419.7	419.8	419.3	418.8	418.4	417.9
175°	421.4	421.9	422.5	422.5	422.1	421.6	421.1	420.6
177.5°	422.7	423.0	423.4	423.4	423.0	422.7	422.3	421.9
180°	422.8	422.8	422.8	422.8	422.8	422.8	422.8	422.8

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