

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: P333373-840

Luminaire Tested: **S125DIW-S610D470U840-4F0-1E-UDD-D1**

Issue Date: 3/3/2020

**Test Information**

Test Method: LM-79-08  
Report Number: P333373-840  
REPORT IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-1807-864-11,  
Test Lab: INNOVATION CENTER  
Issue Date: 3/3/2020  
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)  
Product Line: NEO-RAY  
Catalog Number: S125DIW-S610D470U840-4F0-1E-UDD-D1  
Description: DEFINE 5 DIRECT-INDIRECT WALL MOUNT LED LUMINAIRE  
DOWNLIGHT 610 LUMENS PER FOOT, DROP SATIN WHITE DIFFUSER  
UPLIGHT 470 LUMENS PER FOOT, FLUSH SATIN WHITE DIFFUSER  
Light Source: -  
Ballast/Driver: ELECTRONIC DRIVER

**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 4066.6 lumens  
Efficiency: N/A  
Efficacy: 134.7 lumens/watt  
Spacing Criteria (0/90/45): 1.21 / 1.21 / 1.34  
Luminous Opening: Rectangular w/ Sides (W: 0.42' x L: 4' x H: 0.08')  
CIE Type: General Diffuse

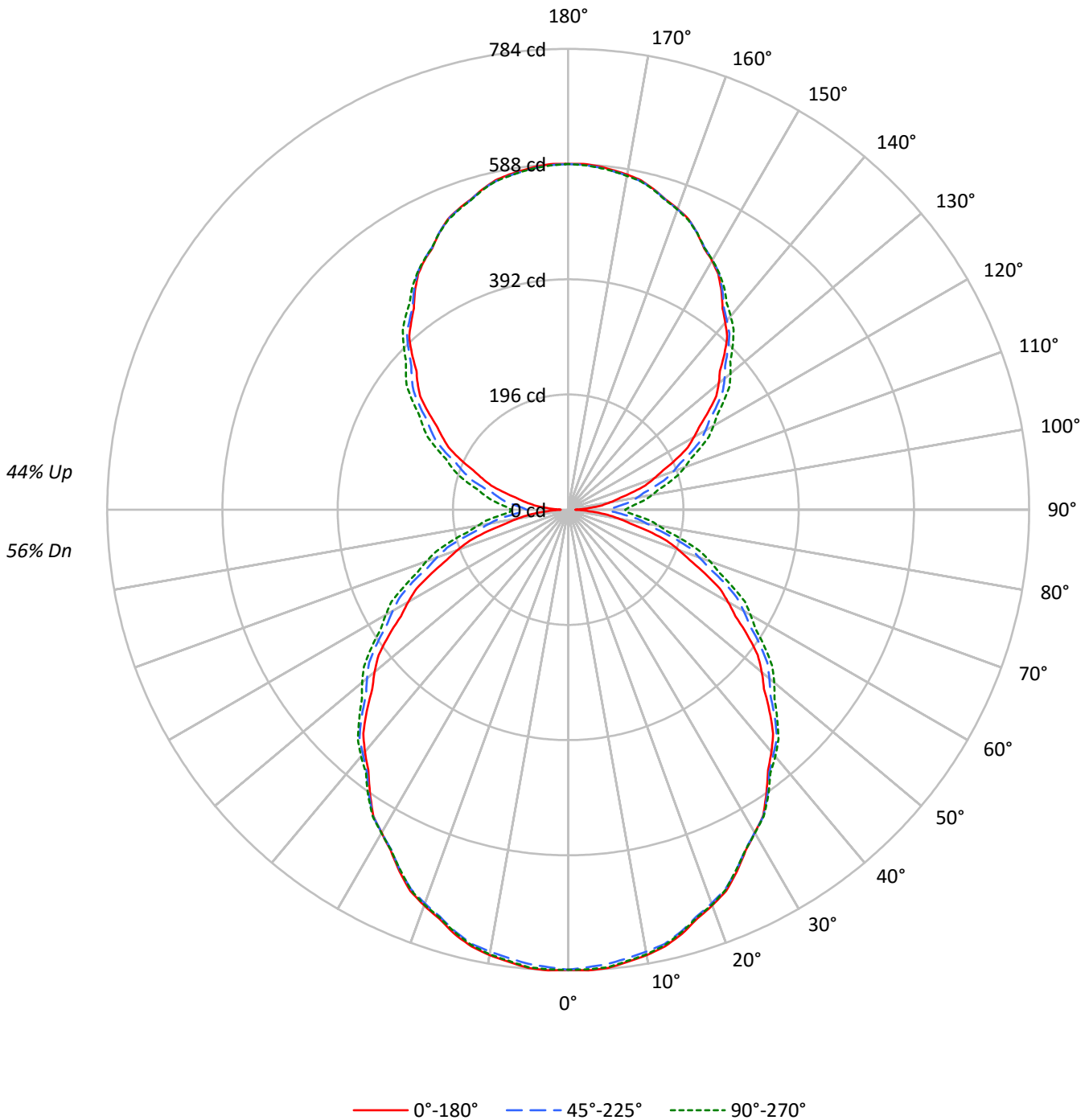
Input Watts (W): 30.2  
Input Voltage (V): 120  
Input Current (Ain): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 25 FT



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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
RW	70	50	30	10	70	50	30	10	50	30	10	50	30	10	50	30	10
RCR																	
0	109	109	109	109	101	101	101	101	87	87	87	74	74	74	62	62	62
1	98	94	89	85	91	87	83	80	75	72	69	64	62	60	53	52	50
2	89	81	75	69	82	76	70	65	65	61	57	55	52	49	46	44	42
3	81	71	63	57	75	66	59	54	57	52	47	49	45	41	41	38	35
4	74	63	55	48	68	59	51	46	51	45	40	43	39	35	36	33	30
5	68	56	47	41	63	52	45	39	45	39	35	39	34	30	33	29	26
6	63	50	42	36	58	47	39	34	41	35	30	35	30	26	30	26	23
7	58	45	37	31	54	42	35	30	37	31	26	32	27	23	27	23	20
8	54	41	33	28	50	38	31	26	34	28	23	29	24	21	25	21	18
9	50	37	30	25	46	35	28	23	31	25	21	27	22	19	23	19	16
10	47	34	27	22	43	32	26	21	28	23	19	25	20	17	21	17	15

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

	0°	45°	90°
0°	5054	5054	5054
5°	5064	4961	4977
10°	5029	4873	4865
15°	4969	4767	4723
20°	4888	4635	4581
25°	4792	4495	4406
30°	4676	4340	4247
35°	4567	4199	4102
40°	4457	4049	3955
45°	4331	3922	3825
50°	4213	3783	3710
55°	4069	3652	3575
60°	3913	3503	3437
65°	3749	3347	3282
70°	3561	3133	3123
75°	3269	2928	2928
80°	2884	2679	2713
85°	2526	2512	2645



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	74.0	1.8
10°-20°	210.1	5.2
20°-30°	312.4	7.7
30°-40°	370.1	9.1
40°-50°	382.6	9.4
50°-60°	352.5	8.7
60°-70°	284.9	7.0
70°-80°	190.8	4.7
80°-90°	100.2	2.5
90°-100°	94.9	2.3
100°-110°	157.3	3.9
110°-120°	224.5	5.5
120°-130°	274.9	6.8
130°-140°	297.4	7.3
140°-150°	286.2	7.0
150°-160°	239.2	5.9
160°-170°	159.0	3.9
170°-180°	55.6	1.4
0°-30°	596.5	14.7
0°-40°	966.6	23.8
0°-60°	1701.7	41.8
0°-90°	2277.7	56.0
90°-120°	476.7	11.7
90°-150°	1335.1	32.8
90°-180°	1789.0	44.0
0°-180°	4066.6	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	783	783	783	783	783	
5°	783	781	776	781	781	74
15°	747	748	743	747	744	210
25°	679	681	677	679	676	312
35°	588	593	591	593	593	368
45°	484	492	496	502	503	373
55°	372	384	397	405	408	333
65°	256	274	292	303	307	254
75°	141	161	186	200	205	150
85°	42	68	94	111	117	45
90°	13	41	70	89	97	10
95°	40	61	91	111	118	40
105°	111	126	152	169	176	119
115°	202	210	230	243	247	200
125°	291	294	309	320	324	260
135°	376	378	384	393	396	290
145°	454	455	457	460	462	284
155°	519	519	520	521	519	239
165°	564	564	564	565	563	159
175°	587	585	585	587	584	56
180°	588	588	588	588	588	



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**CANDELA DISTRIBUTION (FULL):**

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
0°	782.6	782.6	782.6	782.6	782.6	782.6	782.6	782.6	782.6	782.6	782.6
2.5°	784.5	784.2	784.0	783.7	783.4	782.7	781.8	780.8	779.9	778.9	779.9
5°	782.6	782.2	781.9	781.6	781.2	780.5	779.3	778.1	776.9	775.7	777.1
7.5°	775.7	775.6	775.5	775.3	775.2	774.5	773.3	772.0	770.8	769.6	770.7
10°	769.6	769.6	769.6	769.6	769.6	768.9	767.5	766.2	764.8	763.5	764.7
12.5°	761.0	761.1	761.2	761.4	761.5	761.0	759.9	758.9	757.8	756.7	757.6
15°	747.3	747.5	747.7	747.8	748.0	747.5	746.3	745.1	744.0	742.8	743.8
17.5°	729.5	729.8	730.2	730.5	730.9	730.4	729.3	728.1	726.9	725.7	726.5
20°	716.6	717.0	717.3	717.7	718.0	717.6	716.4	715.2	714.0	712.8	713.3
22.5°	702.0	702.6	703.2	703.8	704.4	704.0	702.7	701.4	700.0	698.7	699.3
25°	679.0	679.5	680.0	680.5	681.1	680.9	679.8	678.8	677.7	676.7	677.4
27.5°	653.6	654.3	655.1	655.8	656.6	656.4	655.2	654.1	652.9	651.8	652.2
30°	634.5	635.6	636.6	637.6	638.6	638.6	637.6	636.6	635.6	634.5	634.9
32.5°	617.3	618.2	619.1	620.1	620.9	621.0	620.3	619.5	618.7	617.9	618.3
35°	587.7	589.0	590.2	591.3	592.5	592.9	592.4	591.8	591.3	590.8	591.3
37.5°	558.2	559.3	560.3	561.4	562.5	562.9	562.8	562.6	562.4	562.3	562.9
40°	537.9	539.3	540.6	542.0	543.3	543.9	543.7	543.6	543.4	543.2	543.9
42.5°	515.7	517.6	519.3	521.1	522.9	523.9	524.3	524.7	525.0	525.4	526.2
45°	484.1	486.0	487.9	489.8	491.7	493.0	493.9	494.7	495.5	496.4	497.7
47.5°	451.8	453.5	455.2	457.0	458.8	460.3	461.8	463.2	464.7	466.2	468.0
50°	429.7	431.5	433.4	435.4	437.2	439.1	440.9	442.8	444.6	446.6	448.5
52.5°	406.4	408.6	410.9	413.2	415.5	417.8	420.1	422.3	424.6	426.9	428.9
55°	372.1	374.9	377.6	380.3	383.0	385.8	388.5	391.2	393.9	396.7	398.6
57.5°	337.2	340.4	343.7	347.0	350.2	353.5	356.6	359.7	362.8	366.0	368.1
60°	313.9	317.2	320.6	324.1	327.5	330.8	334.3	337.7	341.1	344.5	347.1
62.5°	291.1	294.5	297.9	301.3	304.8	308.3	311.9	315.7	319.3	323.1	325.9
65°	256.3	260.2	264.1	268.0	272.0	276.0	280.0	284.2	288.2	292.4	294.9
67.5°	223.5	227.2	231.0	234.8	238.5	242.6	246.7	250.9	255.0	259.2	262.3
70°	199.4	203.4	207.3	211.3	215.2	219.3	223.8	228.2	232.7	237.1	240.3
72.5°	176.1	180.3	184.3	188.3	192.4	196.8	201.7	206.5	211.4	216.2	219.7
75°	141.2	145.6	150.1	154.5	159.0	163.9	169.4	174.8	180.3	185.7	189.0
77.5°	107.6	112.7	117.9	122.9	128.1	133.2	138.5	143.7	149.0	154.2	157.9
80°	86.7	91.8	96.9	102.1	107.1	112.6	118.5	124.2	130.0	135.8	139.6
82.5°	67.7	73.0	78.5	83.8	89.3	94.9	100.8	106.7	112.7	118.7	122.2
85°	42.2	47.9	53.4	59.1	64.7	70.5	76.4	82.4	88.4	94.4	98.2
87.5°	24.0	29.7	35.2	40.9	46.6	52.3	58.3	64.1	70.1	76.0	80.1
90°	12.7	19.0	25.2	31.5	37.8	44.2	50.7	57.3	63.7	70.3	74.6
92.5°	22.1	27.8	33.3	39.0	44.6	50.8	57.7	64.4	71.2	78.1	82.5
95°	39.7	44.3	49.0	53.6	58.3	64.0	70.8	77.7	84.4	91.3	95.7
97.5°	58.5	62.5	66.7	70.7	74.7	80.3	87.3	94.3	101.3	108.3	112.5
100°	72.5	76.1	79.7	83.2	86.8	92.0	98.8	105.5	112.4	119.2	123.6
102.5°	87.7	91.4	95.1	98.8	102.5	107.3	113.3	119.4	125.3	131.3	135.7
105°	111.3	114.5	117.8	121.0	124.2	128.7	134.4	140.2	145.8	151.6	155.6
107.5°	137.4	140.3	143.1	145.9	148.8	152.9	158.2	163.6	169.0	174.4	178.0
110°	155.5	158.0	160.6	163.2	165.7	169.6	174.6	179.7	184.8	189.9	193.4



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**CANDELA DISTRIBUTION (continued):**

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
112.5°	174.5	176.4	178.3	180.3	182.2	185.6	190.7	195.6	200.7	205.7	208.9
115°	201.9	203.5	205.1	206.7	208.2	211.4	216.0	220.7	225.3	229.9	232.9
117.5°	229.3	230.2	231.3	232.2	233.2	235.8	240.2	244.6	248.9	253.4	256.3
120°	246.9	247.9	248.9	249.9	251.0	253.5	257.5	261.6	265.6	269.5	272.5
122.5°	265.3	265.7	266.2	266.6	267.0	269.2	273.3	277.3	281.3	285.4	288.1
125°	290.9	291.4	291.9	292.3	292.8	294.7	298.2	301.7	305.3	308.7	311.2
127.5°	317.7	317.8	318.0	318.2	318.4	319.9	322.9	325.8	328.7	331.5	334.0
130°	334.2	334.5	334.8	335.2	335.5	337.0	339.5	342.1	344.8	347.3	349.6
132.5°	350.0	350.8	351.6	352.4	353.3	354.5	356.3	358.1	359.9	361.7	364.0
135°	376.0	376.4	376.8	377.3	377.7	378.6	379.9	381.1	382.4	383.7	386.0
137.5°	400.3	400.8	401.2	401.7	402.1	402.7	403.5	404.3	405.2	406.0	408.1
140°	415.5	416.0	416.5	417.0	417.5	418.0	418.5	418.9	419.4	419.9	421.9
142.5°	431.2	431.5	431.8	432.0	432.3	432.7	433.1	433.5	433.9	434.4	436.2
145°	454.3	454.6	454.8	455.0	455.3	455.6	455.9	456.2	456.5	456.8	457.7
147.5°	475.0	475.2	475.4	475.6	475.9	476.2	476.4	476.7	476.9	477.2	477.7
150°	489.3	489.2	489.1	489.0	488.9	489.1	489.5	489.9	490.3	490.7	490.7
152.5°	501.0	501.2	501.3	501.4	501.6	501.7	501.9	502.1	502.2	502.4	502.6
155°	519.1	519.1	519.1	519.1	519.1	519.1	519.2	519.3	519.4	519.5	519.9
157.5°	535.1	534.9	534.7	534.5	534.2	534.2	534.3	534.4	534.5	534.6	535.0
160°	544.7	544.4	544.0	543.7	543.4	543.3	543.4	543.5	543.6	543.7	544.2
162.5°	553.1	552.9	552.7	552.4	552.2	552.1	552.1	552.1	552.2	552.2	552.7
165°	564.3	564.1	563.9	563.7	563.5	563.5	563.6	563.7	563.8	563.9	564.3
167.5°	573.9	573.5	573.1	572.7	572.3	572.1	572.1	572.1	572.1	572.1	572.7
170°	579.0	578.6	578.1	577.7	577.3	577.1	577.1	577.1	577.1	577.1	577.7
172.5°	582.7	582.3	581.9	581.5	581.1	580.9	580.9	580.9	580.9	580.9	581.5
175°	586.8	586.3	585.9	585.5	585.1	584.9	584.9	584.9	584.9	584.9	585.5
177.5°	588.9	588.5	588.2	587.9	587.5	587.3	587.3	587.2	587.1	587.0	587.5
180°	588.1	588.1	588.1	588.1	588.1	588.1	588.1	588.1	588.1	588.1	588.1



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**CANDELA DISTRIBUTION (continued):**

	55°	60°	65°	70°	75°	80°	85°	90°
0°	782.6	782.6	782.6	782.6	782.6	782.6	782.6	782.6
2.5°	780.8	781.8	782.7	783.2	783.0	782.9	782.7	782.6
5°	778.4	779.8	781.1	781.7	781.6	781.4	781.2	781.1
7.5°	771.9	773.2	774.4	774.9	774.7	774.6	774.4	774.2
10°	765.9	767.0	768.2	768.7	768.6	768.4	768.2	768.0
12.5°	758.5	759.4	760.4	760.6	760.1	759.7	759.3	758.8
15°	744.8	745.8	746.8	747.0	746.3	745.6	745.0	744.3
17.5°	727.3	728.0	728.8	729.0	728.6	728.2	727.8	727.4
20°	713.9	714.4	714.9	715.1	715.1	715.1	715.1	715.1
22.5°	699.9	700.6	701.3	701.4	700.9	700.5	700.1	699.7
25°	678.1	678.8	679.4	679.4	678.5	677.7	676.8	676.0
27.5°	652.7	653.2	653.7	653.7	653.4	653.1	652.8	652.5
30°	635.2	635.6	635.9	636.0	635.8	635.6	635.5	635.3
32.5°	618.6	618.9	619.4	619.5	619.2	619.0	618.9	618.7
35°	591.8	592.4	592.9	593.1	593.1	593.1	593.1	593.1
37.5°	563.6	564.3	565.0	565.3	565.2	565.1	565.1	565.0
40°	544.6	545.3	545.9	546.4	546.8	547.1	547.5	547.9
42.5°	527.0	527.9	528.7	529.2	529.3	529.3	529.4	529.5
45°	498.8	500.0	501.2	501.9	502.1	502.2	502.4	502.6
47.5°	469.7	471.4	473.1	474.2	474.6	474.9	475.3	475.7
50°	450.3	452.2	454.0	455.2	455.8	456.3	456.8	457.3
52.5°	430.9	432.9	434.9	436.2	436.6	436.9	437.3	437.7
55°	400.4	402.3	404.1	405.5	406.2	406.9	407.5	408.2
57.5°	370.3	372.4	374.6	375.9	376.5	377.0	377.5	378.0
60°	349.6	352.1	354.8	356.3	356.8	357.3	357.8	358.3
62.5°	328.7	331.5	334.4	336.1	336.7	337.4	338.0	338.7
65°	297.4	300.0	302.6	304.2	304.9	305.6	306.2	306.9
67.5°	265.4	268.5	271.6	273.6	274.5	275.4	276.3	277.1
70°	243.6	246.8	250.0	252.2	253.2	254.2	255.3	256.3
72.5°	223.3	226.7	230.2	232.4	233.2	233.9	234.7	235.4
75°	192.5	195.9	199.3	201.5	202.3	203.2	204.0	204.9
77.5°	161.7	165.5	169.3	171.5	172.1	172.8	173.5	174.2
80°	143.3	147.0	150.8	153.0	153.7	154.4	155.1	155.7
82.5°	125.8	129.5	133.1	135.5	136.7	137.9	139.2	140.4
85°	101.9	105.6	109.4	111.9	113.3	114.6	116.0	117.3
87.5°	84.1	88.2	92.1	94.8	96.0	97.3	98.6	99.8
90°	79.1	83.5	88.0	90.9	92.4	93.9	95.4	96.9
92.5°	86.9	91.4	95.8	98.8	100.2	101.6	103.0	104.4
95°	100.2	104.6	109.1	112.0	113.4	114.8	116.2	117.6
97.5°	116.8	121.1	125.3	128.1	129.4	130.7	131.9	133.2
100°	128.2	132.6	137.1	140.0	141.2	142.4	143.7	144.9
102.5°	140.2	144.6	149.1	152.0	153.3	154.6	155.9	157.2
105°	159.7	163.7	167.6	170.5	172.0	173.4	174.9	176.4
107.5°	181.8	185.4	189.0	191.5	192.5	193.5	194.6	195.6
110°	196.9	200.5	204.0	206.3	207.4	208.5	209.6	210.8





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**CANDELA DISTRIBUTION (continued):**

	55°	60°	65°	70°	75°	80°	85°	90°
112.5°	212.2	215.4	218.7	220.9	221.9	222.9	223.9	224.9
115°	235.9	238.8	241.9	243.8	244.7	245.6	246.5	247.4
117.5°	259.3	262.3	265.3	267.1	267.9	268.6	269.4	270.1
120°	275.4	278.3	281.1	283.0	283.6	284.2	284.8	285.4
122.5°	290.8	293.5	296.2	297.8	298.5	299.2	299.9	300.6
125°	313.8	316.3	318.8	320.5	321.2	321.9	322.8	323.5
127.5°	336.4	338.8	341.2	342.8	343.7	344.5	345.3	346.0
130°	351.9	354.2	356.5	357.9	358.6	359.2	359.9	360.5
132.5°	366.3	368.6	370.8	372.2	372.6	373.0	373.5	374.0
135°	388.2	390.4	392.6	393.9	394.4	394.9	395.3	395.8
137.5°	410.2	412.4	414.5	415.7	415.9	416.1	416.2	416.4
140°	424.0	426.2	428.2	429.3	429.5	429.7	429.8	430.0
142.5°	437.9	439.6	441.3	442.2	442.4	442.6	442.7	442.9
145°	458.5	459.4	460.2	460.8	461.2	461.6	461.9	462.3
147.5°	478.2	478.7	479.2	479.3	478.9	478.5	478.1	477.7
150°	490.7	490.7	490.7	490.7	490.6	490.6	490.6	490.5
152.5°	502.9	503.1	503.3	503.3	503.0	502.6	502.3	502.0
155°	520.3	520.7	521.1	521.1	520.6	520.1	519.6	519.1
157.5°	535.4	535.8	536.2	536.1	535.4	534.7	534.1	533.4
160°	544.6	545.0	545.4	545.3	544.8	544.3	543.8	543.3
162.5°	553.2	553.6	554.1	554.1	553.5	552.9	552.3	551.7
165°	564.7	565.1	565.5	565.4	564.8	564.2	563.6	563.0
167.5°	573.3	573.9	574.5	574.5	573.8	573.2	572.6	572.0
170°	578.3	579.0	579.7	579.6	578.9	578.1	577.4	576.7
172.5°	582.1	582.7	583.3	583.3	582.6	582.0	581.4	580.8
175°	586.1	586.8	587.4	587.3	586.6	585.9	585.2	584.5
177.5°	588.0	588.5	589.1	589.0	588.4	587.8	587.2	586.7
180°	588.1	588.1	588.1	588.1	588.1	588.1	588.1	588.1

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