

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: P333373-940

Luminaire Tested: **S125DIW-S610D470U940-4F0-1E-UDD-D1**

Issue Date: 3/3/2020

**Test Information**

Test Method: LM-79-08  
Report Number: P333373-940  
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-S610D470U940-4F0-1E-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: 3590.8 lumens  
Efficiency: N/A  
Efficacy: 118.9 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

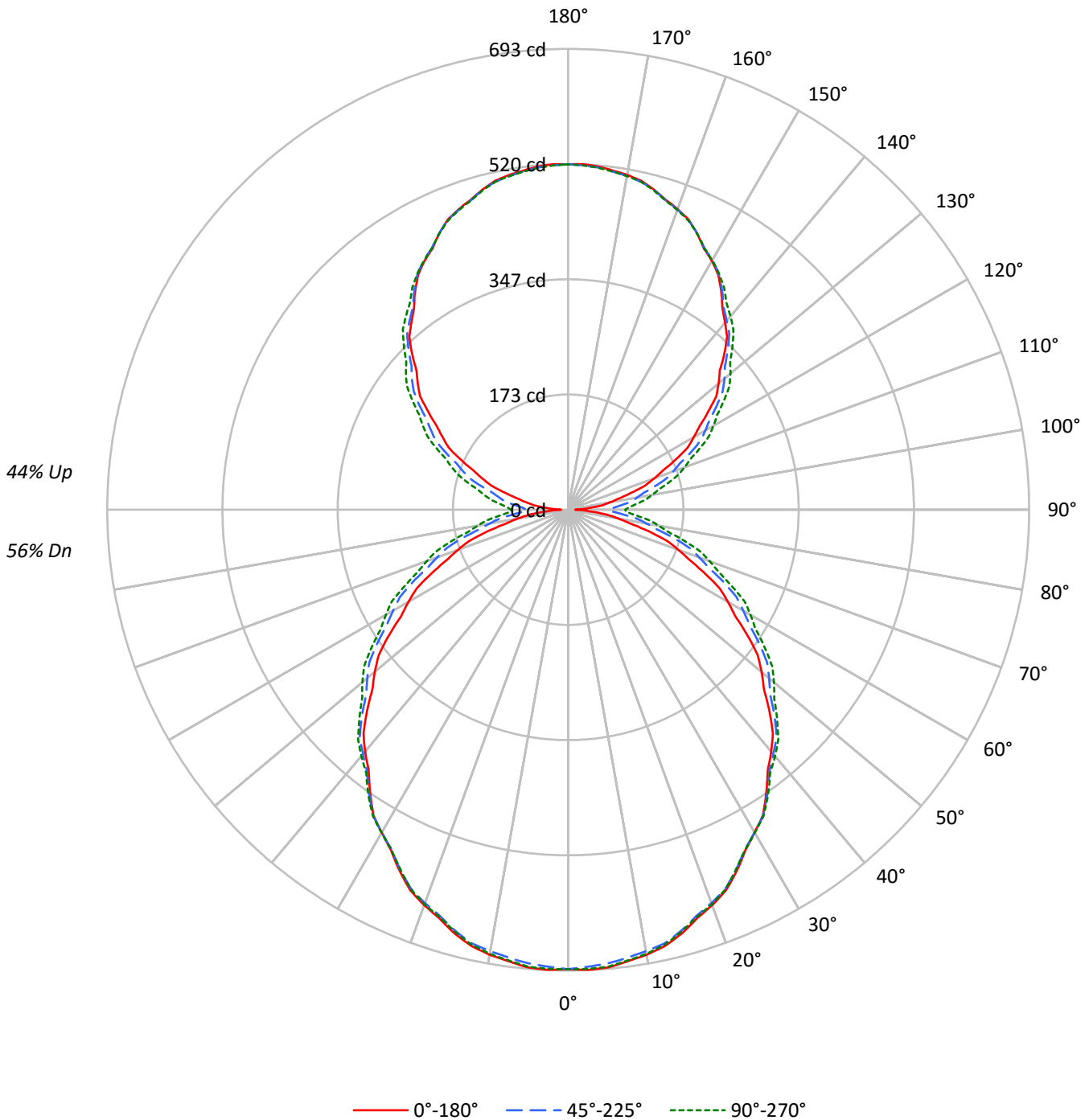
Input Watts (W): 30.2  
Input Voltage (V): 120  
Input Current (A<sub>in</sub>): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 25 FT



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### Luminous Intensity Polar Plot





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**COEFFICIENT OF UTILIZATION - ZONAL CAVITY METHOD:**

RF	20									20									20									20										
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	50	30	10	0														
RCR																																						
0	109	109	109	109	101	101	101	101	87	87	87	74	74	74	62	62	62	56																				
1	98	94	89	85	91	87	83	80	75	72	69	64	62	60	53	52	50	45																				
2	89	81	75	69	82	76	70	65	65	61	57	55	52	49	46	44	42	37																				
3	81	71	63	57	75	66	59	54	57	52	47	49	45	41	41	38	35	31																				
4	74	63	55	48	68	59	51	46	51	45	40	43	39	35	36	33	30	27																				
5	68	56	47	41	63	52	45	39	45	39	35	39	34	30	33	29	26	23																				
6	63	50	42	36	58	47	39	34	41	35	30	35	30	26	30	26	23	20																				
7	58	45	37	31	54	42	35	30	37	31	26	32	27	23	27	23	20	18																				
8	54	41	33	28	50	38	31	26	34	28	23	29	24	21	25	21	18	16																				
9	50	37	30	25	46	35	28	23	31	25	21	27	22	19	23	19	16	14																				
10	47	34	27	22	43	32	26	21	28	23	19	25	20	17	21	17	15	13																				

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

	0°	45°	90°
0°	4463	4463	4463
5°	4472	4380	4394
10°	4440	4302	4295
15°	4388	4209	4171
20°	4316	4093	4045
25°	4232	3969	3891
30°	4129	3833	3751
35°	4033	3708	3622
40°	3935	3576	3493
45°	3825	3463	3378
50°	3720	3340	3276
55°	3593	3225	3156
60°	3455	3093	3035
65°	3310	2956	2898
70°	3145	2767	2758
75°	2887	2586	2585
80°	2548	2365	2396
85°	2232	2219	2336



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	65.3	1.8
10°-20°	185.5	5.2
20°-30°	275.9	7.7
30°-40°	326.8	9.1
40°-50°	337.9	9.4
50°-60°	311.2	8.7
60°-70°	251.6	7.0
70°-80°	168.5	4.7
80°-90°	88.5	2.5
90°-100°	83.8	2.3
100°-110°	138.9	3.9
110°-120°	198.2	5.5
120°-130°	242.7	6.8
130°-140°	262.6	7.3
140°-150°	252.7	7.0
150°-160°	211.2	5.9
160°-170°	140.4	3.9
170°-180°	49.1	1.4
0°-30°	526.7	14.7
0°-40°	853.5	23.8
0°-60°	1502.6	41.8
0°-90°	2011.2	56.0
90°-120°	420.9	11.7
90°-150°	1178.9	32.8
90°-180°	1580.0	44.0
0°-180°	3590.8	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	691	691	691	691	691	
5°	691	690	685	690	690	66
15°	660	660	656	660	657	186
25°	600	601	598	600	597	276
35°	519	523	522	524	524	325
45°	428	435	438	443	444	330
55°	329	339	350	357	360	294
65°	226	242	258	268	271	224
75°	125	143	164	177	181	132
85°	37	60	83	98	104	40
90°	11	36	62	79	86	9
95°	35	54	81	98	104	35
105°	98	112	134	149	156	105
115°	178	185	203	214	218	176
125°	257	259	273	282	286	230
135°	332	334	339	347	350	256
145°	401	402	403	407	408	251
155°	458	458	459	460	458	211
165°	498	498	498	499	497	141
175°	518	517	516	519	516	49
180°	519	519	519	519	519	



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**CANDELA DISTRIBUTION (FULL):**

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
0°	691.1	691.1	691.1	691.1	691.1	691.1	691.1	691.1	691.1	691.1	691.1
2.5°	692.7	692.4	692.2	692.0	691.7	691.2	690.4	689.5	688.7	687.8	688.7
5°	691.1	690.7	690.5	690.2	689.8	689.2	688.1	687.1	686.0	684.9	686.2
7.5°	684.9	684.8	684.7	684.6	684.5	683.9	682.8	681.7	680.6	679.6	680.6
10°	679.6	679.6	679.6	679.6	679.6	678.9	677.7	676.5	675.3	674.1	675.2
12.5°	672.0	672.1	672.2	672.3	672.4	672.0	671.0	670.1	669.1	668.2	669.0
15°	659.9	660.0	660.2	660.3	660.5	660.0	659.0	657.9	656.9	655.9	656.7
17.5°	644.2	644.4	644.8	645.1	645.4	645.0	644.0	642.9	641.9	640.8	641.5
20°	632.8	633.1	633.4	633.7	634.0	633.6	632.6	631.5	630.4	629.4	629.8
22.5°	619.8	620.4	620.9	621.4	622.0	621.6	620.5	619.3	618.1	617.0	617.5
25°	599.6	600.0	600.5	600.9	601.4	601.2	600.3	599.4	598.4	597.5	598.2
27.5°	577.1	577.7	578.5	579.1	579.8	579.6	578.5	577.6	576.5	575.5	575.9
30°	560.3	561.2	562.1	563.0	563.9	563.9	563.0	562.1	561.2	560.3	560.6
32.5°	545.1	545.9	546.7	547.5	548.2	548.3	547.7	547.0	546.4	545.6	546.0
35°	519.0	520.0	521.1	522.1	523.2	523.5	523.1	522.5	522.1	521.7	522.1
37.5°	492.8	493.8	494.7	495.7	496.7	497.0	497.0	496.8	496.6	496.5	497.0
40°	474.9	476.2	477.3	478.6	479.7	480.3	480.1	480.0	479.8	479.7	480.3
42.5°	455.4	457.0	458.5	460.1	461.7	462.6	463.0	463.3	463.6	464.0	464.7
45°	427.5	429.2	430.8	432.5	434.2	435.3	436.1	436.8	437.6	438.4	439.4
47.5°	399.0	400.5	402.0	403.5	405.1	406.4	407.8	409.0	410.4	411.6	413.2
50°	379.4	381.0	382.7	384.4	386.0	387.7	389.3	391.0	392.6	394.3	396.0
52.5°	358.8	360.8	362.8	364.9	366.8	368.9	371.0	372.9	375.0	376.9	378.7
55°	328.6	331.0	333.4	335.8	338.2	340.6	343.0	345.4	347.9	350.3	352.0
57.5°	297.7	300.6	303.4	306.4	309.2	312.1	314.9	317.6	320.4	323.2	325.0
60°	277.1	280.1	283.1	286.1	289.2	292.1	295.2	298.2	301.2	304.2	306.5
62.5°	257.1	260.0	263.1	266.1	269.1	272.2	275.4	278.7	282.0	285.3	287.8
65°	226.3	229.8	233.2	236.7	240.1	243.7	247.3	250.9	254.5	258.2	260.4
67.5°	197.3	200.6	203.9	207.3	210.6	214.2	217.8	221.5	225.2	228.9	231.6
70°	176.1	179.6	183.1	186.5	190.0	193.7	197.6	201.5	205.5	209.4	212.2
72.5°	155.5	159.2	162.7	166.3	169.9	173.8	178.1	182.4	186.6	190.9	194.0
75°	124.7	128.6	132.5	136.4	140.4	144.7	149.5	154.4	159.2	164.0	166.9
77.5°	95.0	99.5	104.1	108.5	113.1	117.6	122.3	126.9	131.5	136.2	139.5
80°	76.6	81.1	85.6	90.2	94.6	99.4	104.6	109.7	114.8	119.9	123.2
82.5°	59.7	64.5	69.3	74.0	78.8	83.8	89.0	94.3	99.5	104.8	107.9
85°	37.3	42.3	47.2	52.2	57.2	62.2	67.5	72.8	78.0	83.4	86.7
87.5°	21.2	26.2	31.1	36.1	41.1	46.2	51.5	56.6	61.9	67.1	70.7
90°	11.2	16.8	22.3	27.8	33.3	39.1	44.8	50.6	56.3	62.1	65.9
92.5°	19.5	24.5	29.4	34.4	39.4	44.9	50.9	56.9	62.9	68.9	72.9
95°	35.0	39.1	43.2	47.3	51.5	56.5	62.5	68.6	74.5	80.6	84.5
97.5°	51.6	55.2	58.9	62.4	66.0	70.9	77.0	83.3	89.4	95.6	99.3
100°	64.0	67.2	70.4	73.5	76.7	81.2	87.2	93.2	99.2	105.2	109.1
102.5°	77.4	80.7	84.0	87.2	90.5	94.8	100.0	105.4	110.7	115.9	119.8
105°	98.3	101.1	104.0	106.8	109.7	113.6	118.7	123.8	128.8	133.8	137.4
107.5°	121.4	123.9	126.4	128.9	131.3	135.0	139.7	144.5	149.2	154.0	157.2
110°	137.3	139.6	141.8	144.1	146.3	149.7	154.2	158.6	163.2	167.6	170.8



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**CANDELA DISTRIBUTION (continued):**

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
112.5°	154.1	155.8	157.5	159.2	160.9	163.9	168.4	172.7	177.2	181.6	184.5
115°	178.3	179.7	181.1	182.5	183.9	186.6	190.7	194.8	198.9	203.0	205.6
117.5°	202.5	203.3	204.2	205.0	205.9	208.2	212.1	216.0	219.8	223.7	226.3
120°	218.0	218.9	219.8	220.7	221.6	223.8	227.4	231.0	234.5	238.0	240.6
122.5°	234.3	234.6	235.1	235.4	235.8	237.7	241.3	244.9	248.4	252.0	254.4
125°	256.9	257.3	257.7	258.1	258.5	260.2	263.3	266.4	269.6	272.6	274.8
127.5°	280.5	280.6	280.8	281.0	281.2	282.5	285.1	287.7	290.3	292.7	294.9
130°	295.1	295.3	295.6	296.0	296.2	297.6	299.8	302.1	304.4	306.7	308.7
132.5°	309.1	309.8	310.5	311.2	311.9	313.0	314.6	316.2	317.8	319.4	321.4
135°	332.0	332.3	332.7	333.1	333.5	334.3	335.5	336.5	337.7	338.9	340.8
137.5°	353.5	353.9	354.3	354.7	355.1	355.6	356.3	357.0	357.8	358.5	360.3
140°	366.8	367.3	367.7	368.2	368.6	369.1	369.5	369.9	370.3	370.8	372.6
142.5°	380.8	381.0	381.3	381.5	381.7	382.1	382.5	382.8	383.2	383.6	385.1
145°	401.2	401.4	401.6	401.8	402.1	402.3	402.5	402.8	403.1	403.3	404.1
147.5°	419.5	419.6	419.8	420.0	420.3	420.4	420.6	420.9	421.1	421.3	421.8
150°	432.0	431.9	431.9	431.8	431.7	431.9	432.2	432.6	432.9	433.3	433.3
152.5°	442.4	442.6	442.6	442.7	442.9	443.0	443.2	443.4	443.4	443.6	443.8
155°	458.3	458.3	458.3	458.3	458.3	458.3	458.4	458.5	458.6	458.7	459.1
157.5°	472.5	472.3	472.2	472.0	471.7	471.7	471.8	471.9	472.0	472.1	472.4
160°	481.0	480.7	480.4	480.1	479.8	479.7	479.8	479.9	480.0	480.1	480.5
162.5°	488.4	488.2	488.0	487.8	487.6	487.5	487.5	487.5	487.6	487.6	488.0
165°	498.3	498.1	497.9	497.8	497.6	497.6	497.7	497.8	497.8	497.9	498.3
167.5°	506.8	506.4	506.0	505.7	505.3	505.2	505.2	505.2	505.2	505.2	505.7
170°	511.2	510.9	510.5	510.1	509.8	509.6	509.6	509.6	509.6	509.6	510.1
172.5°	514.5	514.2	513.8	513.4	513.1	512.9	512.9	512.9	512.9	512.9	513.4
175°	518.2	517.7	517.4	517.0	516.7	516.5	516.5	516.5	516.5	516.5	517.0
177.5°	520.0	519.7	519.4	519.2	518.8	518.6	518.6	518.5	518.4	518.4	518.8
180°	519.3	519.3	519.3	519.3	519.3	519.3	519.3	519.3	519.3	519.3	519.3



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**CANDELA DISTRIBUTION (continued):**

	55°	60°	65°	70°	75°	80°	85°	90°
0°	691.1	691.1	691.1	691.1	691.1	691.1	691.1	691.1
2.5°	689.5	690.4	691.2	691.5	691.4	691.3	691.2	691.1
5°	687.3	688.6	689.7	690.3	690.2	690.0	689.8	689.7
7.5°	681.6	682.7	683.8	684.2	684.0	683.9	683.8	683.6
10°	676.3	677.3	678.3	678.8	678.7	678.5	678.3	678.1
12.5°	669.8	670.6	671.5	671.6	671.2	670.8	670.5	670.0
15°	657.6	658.5	659.4	659.6	659.0	658.4	657.8	657.2
17.5°	642.2	642.8	643.5	643.7	643.4	643.0	642.7	642.3
20°	630.4	630.8	631.2	631.4	631.4	631.4	631.4	631.4
22.5°	618.0	618.7	619.2	619.3	618.9	618.6	618.2	617.9
25°	598.8	599.4	599.9	599.9	599.1	598.4	597.6	596.9
27.5°	576.3	576.8	577.2	577.2	576.9	576.7	576.4	576.1
30°	560.9	561.2	561.5	561.6	561.4	561.2	561.2	561.0
32.5°	546.3	546.5	546.9	547.0	546.8	546.6	546.5	546.4
35°	522.5	523.1	523.5	523.7	523.7	523.7	523.7	523.7
37.5°	497.7	498.3	498.9	499.2	499.1	499.0	499.0	498.9
40°	480.9	481.5	482.1	482.5	482.9	483.1	483.5	483.8
42.5°	465.4	466.1	466.8	467.3	467.3	467.3	467.4	467.5
45°	440.4	441.5	442.6	443.2	443.4	443.4	443.6	443.8
47.5°	414.7	416.3	417.8	418.7	419.1	419.4	419.7	420.1
50°	397.6	399.3	400.9	402.0	402.4	402.9	403.3	403.8
52.5°	380.5	382.3	384.1	385.1	385.5	385.8	386.1	386.5
55°	353.6	355.3	356.9	358.0	358.6	359.3	359.8	360.4
57.5°	327.0	328.9	330.7	331.9	332.4	332.9	333.3	333.8
60°	308.7	310.9	313.3	314.6	315.0	315.5	315.9	316.4
62.5°	290.3	292.7	295.2	296.8	297.3	297.9	298.5	299.1
65°	262.6	264.9	267.2	268.6	269.2	269.8	270.4	271.0
67.5°	234.3	237.1	239.8	241.6	242.4	243.2	244.0	244.7
70°	215.1	217.9	220.8	222.7	223.6	224.4	225.4	226.3
72.5°	197.2	200.2	203.3	205.2	205.9	206.5	207.2	207.9
75°	170.0	173.0	176.0	177.9	178.6	179.4	180.1	180.9
77.5°	142.8	146.2	149.5	151.4	151.9	152.6	153.2	153.8
80°	126.5	129.8	133.1	135.1	135.7	136.3	137.0	137.5
82.5°	111.1	114.3	117.5	119.7	120.7	121.8	122.9	123.9
85°	90.0	93.3	96.6	98.8	100.0	101.2	102.5	103.6
87.5°	74.3	77.8	81.3	83.7	84.8	85.9	87.0	88.1
90°	69.8	73.7	77.7	80.3	81.6	82.9	84.3	85.6
92.5°	76.8	80.7	84.6	87.2	88.5	89.7	91.0	92.2
95°	88.5	92.4	96.3	98.9	100.1	101.4	102.6	103.9
97.5°	103.2	106.9	110.7	113.1	114.2	115.4	116.5	117.6
100°	113.2	117.1	121.1	123.6	124.7	125.7	126.9	128.0
102.5°	123.8	127.7	131.6	134.2	135.4	136.5	137.7	138.8
105°	141.0	144.5	148.0	150.5	151.9	153.1	154.4	155.8
107.5°	160.5	163.7	166.9	169.1	170.0	170.9	171.8	172.7
110°	173.9	177.0	180.1	182.2	183.2	184.1	185.1	186.1





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**CANDELA DISTRIBUTION (continued):**

	55°	60°	65°	70°	75°	80°	85°	90°
112.5°	187.3	190.2	193.1	195.0	195.9	196.8	197.7	198.6
115°	208.3	210.9	213.6	215.3	216.1	216.9	217.7	218.5
117.5°	229.0	231.6	234.3	235.9	236.6	237.2	237.9	238.5
120°	243.2	245.8	248.3	249.9	250.4	250.9	251.5	252.0
122.5°	256.8	259.1	261.5	263.0	263.6	264.2	264.8	265.5
125°	277.1	279.3	281.5	283.0	283.7	284.3	285.0	285.6
127.5°	297.0	299.2	301.3	302.7	303.4	304.2	304.9	305.5
130°	310.8	312.7	314.8	316.0	316.6	317.2	317.8	318.3
132.5°	323.4	325.5	327.4	328.7	329.0	329.4	329.8	330.2
135°	342.8	344.7	346.7	347.9	348.2	348.7	349.0	349.5
137.5°	362.2	364.2	366.0	367.0	367.2	367.4	367.5	367.7
140°	374.4	376.3	378.1	379.1	379.2	379.4	379.5	379.7
142.5°	386.6	388.2	389.7	390.5	390.7	390.8	390.9	391.1
145°	404.8	405.6	406.4	406.9	407.2	407.6	407.9	408.2
147.5°	422.2	422.7	423.1	423.2	422.8	422.5	422.1	421.8
150°	433.3	433.3	433.3	433.3	433.2	433.2	433.2	433.1
152.5°	444.1	444.3	444.4	444.4	444.2	443.8	443.5	443.3
155°	459.4	459.8	460.1	460.1	459.7	459.2	458.8	458.3
157.5°	472.8	473.1	473.5	473.4	472.8	472.2	471.6	471.0
160°	480.9	481.3	481.6	481.5	481.1	480.6	480.2	479.7
162.5°	488.5	488.8	489.3	489.3	488.7	488.2	487.7	487.1
165°	498.6	499.0	499.4	499.3	498.7	498.2	497.7	497.1
167.5°	506.2	506.8	507.3	507.3	506.7	506.1	505.6	505.1
170°	510.7	511.2	511.8	511.8	511.1	510.5	509.9	509.3
172.5°	514.0	514.5	515.1	515.1	514.4	513.9	513.4	512.8
175°	517.5	518.2	518.7	518.6	518.0	517.4	516.7	516.1
177.5°	519.2	519.7	520.1	520.0	519.6	519.1	518.5	518.1
180°	519.3	519.3	519.3	519.3	519.3	519.3	519.3	519.3

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