

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: P331558-830

Luminaire Tested: **S122DIW-S865D435U830-4F0-1E-UDD-D1**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P331558-830
REPORT IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-1807-864-8,
Test Lab: INNOVATION CENTER
Issue Date: 3/3/2020
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: NEO-RAY
Catalog Number: S122DIW-S865D435U830-4F0-1E-UDD-D1
Description: DEFINE 2 DIRECT-INDIRECT WALL MOUNT LED LUMINAIRE
DOWNLIGHT 865 LUMENS PER FOOT, DROP SATIN WHITE DIFFUSER
UPLIGHT 435 LUMENS PER FOOT, FLUSH SATIN WHITE DIFFUSER
Light Source: -
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 4709.3 lumens
Efficiency: N/A
Efficacy: 101.9 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: Semi-Direct

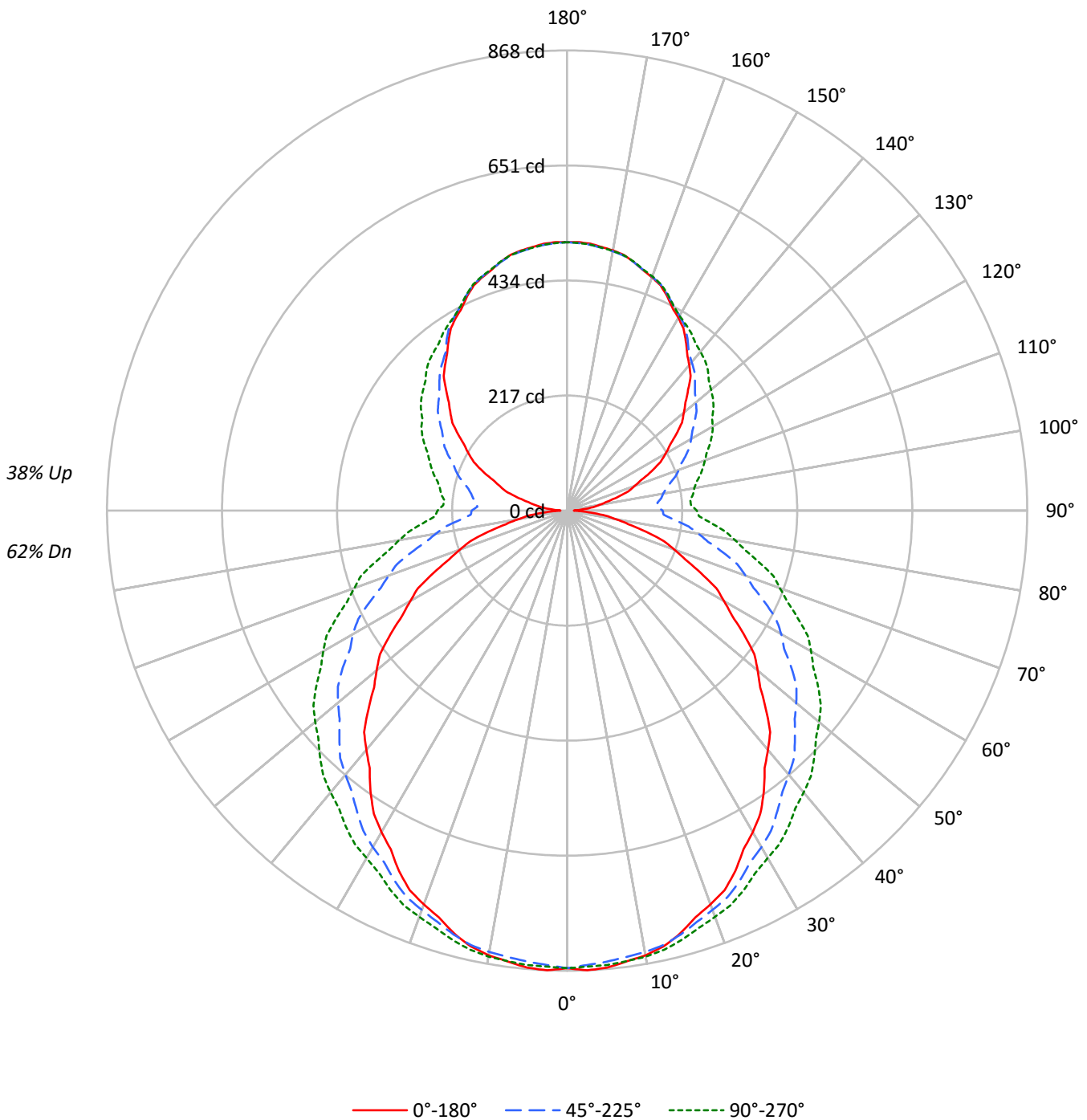
Input Watts (W): 46.2
Input Voltage (V): 120
Input Current (A_{in}): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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	110	110	110	110	103	103	103	103	90	90	90	78	78	78	67	67	67	62
1	99	93	89	85	92	87	83	80	76	73	70	66	64	61	57	55	53	48
2	89	81	73	68	83	75	69	64	66	61	57	57	53	50	49	46	43	39
3	81	70	62	55	75	66	58	53	57	52	47	50	45	41	43	39	36	32
4	74	62	53	46	68	58	50	44	51	44	39	44	39	35	38	34	31	27
5	68	55	46	40	63	52	44	38	45	39	34	39	34	30	34	30	26	23
6	62	49	40	34	58	46	38	32	41	34	29	35	30	26	30	26	23	20
7	57	44	36	30	53	42	34	28	37	30	26	32	27	23	28	24	20	18
8	53	40	32	26	50	38	30	25	33	27	23	29	24	20	25	21	18	16
9	50	37	29	23	46	35	27	22	31	25	20	27	22	18	23	19	16	14
10	46	34	26	21	43	32	25	20	28	22	18	25	20	16	22	18	15	13

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	13934	13934	13934
5°	14000	13412	13361
10°	13914	13017	12870
15°	13722	12596	12353
20°	13478	12147	11855
25°	13241	11713	11401
30°	12903	11268	10947
35°	12562	10837	10627
40°	12203	10472	10307
45°	11862	10143	10033
50°	11495	9847	9765
55°	11112	9528	9489
60°	10644	9199	9199
65°	10156	8809	8853
70°	9605	8393	8482
75°	8902	7984	8141
80°	7800	7568	7791
85°	6748	7205	7523



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	81.8	1.7
10°-20°	234.5	5.0
20°-30°	355.3	7.5
30°-40°	432.8	9.2
40°-50°	465.6	9.9
50°-60°	452.2	9.6
60°-70°	394.8	8.4
70°-80°	304.0	6.5
80°-90°	206.0	4.4
90°-100°	172.6	3.7
100°-110°	202.2	4.3
110°-120°	238.0	5.1
120°-130°	261.7	5.6
130°-140°	267.1	5.7
140°-150°	249.1	5.3
150°-160°	206.6	4.4
160°-170°	137.1	2.9
170°-180°	47.9	1.0
0°-30°	671.6	14.3
0°-40°	1104.4	23.5
0°-60°	2022.2	42.9
0°-90°	2927.0	62.2
90°-120°	612.8	13.0
90°-150°	1390.7	29.5
90°-180°	1782.0	37.8
0°-180°	4709.3	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	863	863	863	863	863	
5°	865	862	854	861	860	82
15°	826	828	828	839	838	232
25°	750	759	770	785	789	345
35°	647	668	692	718	728	404
45°	530	565	608	645	659	409
55°	406	453	516	560	578	363
65°	278	340	413	462	480	276
75°	154	224	304	356	374	163
85°	45	123	203	253	273	48
90°	13	91	180	227	245	10
95°	32	96	171	217	233	33
105°	98	137	202	244	260	104
115°	176	194	248	283	297	173
125°	251	257	294	325	337	225
135°	323	328	341	366	375	250
145°	390	393	396	404	408	244
155°	446	448	449	451	450	205
165°	486	485	485	488	486	137
175°	505	504	503	506	504	48
180°	506	506	506	506	506	



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CANDELA DISTRIBUTION (FULL):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
0°	863.0	863.0	863.0	863.0	863.0	863.0	863.0	863.0	863.0	863.0	863.0
2.5°	868.0	867.3	866.7	866.0	865.3	864.2	862.6	861.1	859.5	858.0	859.1
5°	865.4	864.7	863.8	863.0	862.1	860.9	859.2	857.5	855.9	854.2	855.9
7.5°	857.7	857.1	856.6	856.1	855.5	854.6	853.3	852.1	850.7	849.5	851.5
10°	851.8	851.2	850.6	850.1	849.5	848.9	848.0	847.2	846.3	845.5	847.7
12.5°	841.7	841.9	842.0	842.1	842.2	841.9	841.3	840.7	840.1	839.4	841.7
15°	825.5	826.0	826.6	827.2	827.6	827.9	827.9	827.9	827.9	827.9	830.5
17.5°	804.5	805.6	806.8	807.9	809.1	810.1	811.1	811.9	812.8	813.7	816.3
20°	790.4	791.8	793.2	794.7	796.0	797.3	798.3	799.5	800.6	801.7	804.7
22.5°	775.4	777.0	778.6	780.2	781.8	783.4	785.0	786.6	788.2	789.7	792.8
25°	750.5	752.3	754.3	756.3	758.2	760.4	762.9	765.4	767.9	770.4	773.7
27.5°	720.4	723.6	726.7	729.9	733.1	736.1	739.0	742.1	745.0	747.9	752.1
30°	700.4	704.0	707.7	711.2	714.8	718.5	722.1	725.7	729.3	732.9	737.4
32.5°	678.3	682.4	686.5	690.6	694.7	698.8	703.0	707.4	711.6	715.9	721.0
35°	646.6	651.3	656.1	660.8	665.5	670.5	675.8	681.1	686.4	691.6	697.8
37.5°	612.1	617.6	623.0	628.4	633.9	640.0	646.9	653.7	660.5	667.4	674.2
40°	589.1	595.2	601.3	607.5	613.5	620.4	627.8	635.4	642.9	650.4	657.6
42.5°	567.0	573.2	579.3	585.4	591.5	598.9	607.5	616.1	624.7	633.4	641.2
45°	530.3	537.8	545.3	552.8	560.3	568.9	578.6	588.4	598.1	607.8	616.4
47.5°	494.0	502.2	510.4	518.6	526.7	536.5	547.9	559.3	570.7	582.1	591.1
50°	469.0	477.6	486.3	494.8	503.5	514.1	526.5	539.0	551.6	564.1	573.5
52.5°	445.0	454.0	463.2	472.2	481.3	492.4	505.6	518.7	531.9	545.1	554.7
55°	406.5	416.5	426.5	436.5	446.5	458.7	473.2	487.7	502.1	516.5	526.5
57.5°	368.4	379.8	391.1	402.3	413.6	426.6	441.3	456.1	470.8	485.5	496.3
60°	341.5	353.4	365.3	377.3	389.3	403.1	419.0	434.8	450.6	466.6	477.1
62.5°	317.4	329.8	342.2	354.6	367.0	381.2	397.0	412.8	428.7	444.5	455.7
65°	277.7	291.2	304.9	318.5	332.2	347.1	363.5	379.9	396.3	412.7	424.1
67.5°	241.1	255.3	269.6	283.8	298.0	313.6	330.4	347.1	363.9	380.7	392.2
70°	215.1	229.6	244.0	258.4	273.0	288.8	306.0	323.2	340.4	357.7	369.7
72.5°	191.1	206.0	220.9	235.8	250.7	266.8	284.4	301.8	319.2	336.7	348.5
75°	153.8	169.4	184.9	200.6	216.1	232.8	250.5	268.3	286.2	303.9	315.8
77.5°	117.8	134.1	150.4	166.6	182.9	200.1	218.2	236.3	254.3	272.4	284.3
80°	93.8	110.7	127.7	144.7	161.6	179.1	197.2	215.3	233.3	251.4	263.1
82.5°	73.8	90.5	107.3	123.9	140.7	158.3	176.5	194.8	213.1	231.4	243.1
85°	45.1	62.3	79.5	96.7	114.0	131.5	149.2	167.0	184.8	202.6	214.3
87.5°	24.6	41.4	58.2	74.9	91.8	109.2	127.4	145.7	163.9	182.1	193.4
90°	12.9	30.2	47.4	64.8	82.0	100.6	120.5	140.3	160.1	180.0	191.0
92.5°	19.1	35.0	50.8	66.6	82.5	99.2	116.8	134.4	152.0	169.7	180.6
95°	32.2	46.2	60.2	74.3	88.2	103.7	120.6	137.4	154.3	171.2	181.7
97.5°	49.3	61.7	74.3	86.7	99.2	113.6	129.9	146.3	162.7	179.0	189.3
100°	63.0	74.0	85.1	96.1	107.2	120.6	136.5	152.3	168.1	184.0	194.3
102.5°	76.3	86.3	96.3	106.3	116.3	129.1	144.6	160.0	175.5	191.0	201.1
105°	98.0	106.4	114.7	123.1	131.5	143.0	157.6	172.2	186.9	201.5	211.4
107.5°	121.2	128.1	135.0	141.9	148.6	159.0	172.9	186.7	200.6	214.4	223.9
110°	135.3	141.4	147.5	153.6	159.8	169.7	183.2	196.9	210.5	224.1	233.0



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CANDELA DISTRIBUTION (continued):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
112.5°	151.7	156.8	162.1	167.4	172.6	181.6	194.5	207.5	220.3	233.2	241.9
115°	175.8	179.5	183.0	186.7	190.3	198.3	210.6	222.9	235.3	247.6	255.8
117.5°	198.7	201.4	204.2	206.9	209.7	216.6	227.6	238.7	249.7	260.7	268.7
120°	214.7	216.6	218.5	220.3	222.2	228.3	238.7	249.0	259.4	269.8	277.5
122.5°	229.4	230.7	232.1	233.5	234.8	240.4	250.3	260.3	270.2	280.1	287.5
125°	251.0	251.8	252.7	253.6	254.5	259.2	267.8	276.4	285.0	293.6	300.9
127.5°	273.3	274.1	274.9	275.7	276.5	280.3	287.2	294.0	300.9	307.6	314.2
130°	287.3	288.3	289.3	290.2	291.2	294.5	300.1	305.8	311.4	317.1	323.5
132.5°	303.0	303.8	304.5	305.2	305.9	308.6	313.1	317.6	322.3	326.8	332.8
135°	322.8	323.9	324.9	325.9	327.0	328.9	332.0	334.9	337.9	340.8	346.6
137.5°	344.9	345.7	346.5	347.3	348.1	349.2	350.7	352.2	353.6	355.2	360.1
140°	358.3	358.8	359.4	360.0	360.5	361.4	362.4	363.4	364.5	365.5	369.9
142.5°	371.9	372.5	373.1	373.6	374.2	374.8	375.1	375.6	376.0	376.5	380.1
145°	390.3	391.0	391.6	392.3	392.9	393.6	394.2	394.7	395.3	395.9	397.7
147.5°	407.8	408.6	409.4	410.2	411.0	411.6	412.0	412.4	412.7	413.1	413.5
150°	419.8	420.4	420.9	421.5	422.1	422.5	422.9	423.3	423.7	424.0	424.3
152.5°	430.4	430.9	431.5	432.1	432.6	433.2	433.6	434.0	434.5	435.0	435.4
155°	446.2	446.5	446.8	447.1	447.4	447.7	448.0	448.3	448.6	448.8	449.3
157.5°	459.9	460.1	460.2	460.4	460.6	460.7	460.9	461.1	461.3	461.5	462.1
160°	468.1	468.3	468.4	468.6	468.8	468.9	469.0	469.1	469.2	469.3	469.9
162.5°	475.5	475.6	475.6	475.6	475.7	475.8	475.9	476.0	476.1	476.2	476.7
165°	485.5	485.4	485.3	485.2	485.1	485.1	485.1	485.1	485.1	485.1	485.8
167.5°	493.9	493.6	493.3	493.0	492.8	492.6	492.6	492.6	492.6	492.6	493.2
170°	498.3	498.0	497.8	497.5	497.2	497.0	496.9	496.8	496.7	496.6	497.3
172.5°	501.4	501.1	500.9	500.6	500.3	500.1	500.0	499.9	499.8	499.7	500.4
175°	505.2	504.9	504.6	504.4	504.1	503.8	503.6	503.4	503.2	503.0	503.7
177.5°	506.7	506.5	506.2	506.1	505.8	505.6	505.5	505.3	505.1	505.0	505.5
180°	506.1	506.1	506.1	506.1	506.1	506.1	506.1	506.1	506.1	506.1	506.1



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CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
0°	863.0	863.0	863.0	863.0	863.0	863.0	863.0	863.0
2.5°	860.2	861.3	862.4	862.8	862.3	861.9	861.4	861.0
5°	857.5	859.2	860.9	861.6	861.3	861.0	860.7	860.4
7.5°	853.5	855.5	857.5	858.4	858.1	857.8	857.5	857.2
10°	849.9	852.2	854.4	855.4	855.1	854.8	854.5	854.2
12.5°	844.0	846.1	848.4	849.3	849.0	848.8	848.5	848.2
15°	832.9	835.5	838.0	839.1	838.8	838.5	838.2	838.0
17.5°	819.0	821.5	824.2	825.5	825.5	825.5	825.5	825.5
20°	807.9	810.9	813.9	815.5	815.5	815.5	815.5	815.5
22.5°	795.8	798.9	801.9	803.7	804.1	804.6	805.0	805.5
25°	777.1	780.4	783.8	785.9	786.6	787.5	788.3	789.2
27.5°	756.4	760.6	764.8	767.2	767.9	768.5	769.1	769.7
30°	741.8	746.2	750.7	753.4	754.1	755.0	755.8	756.7
32.5°	726.1	731.2	736.3	739.7	741.1	742.6	744.1	745.6
35°	703.9	710.0	716.1	720.1	722.1	724.1	725.9	727.9
37.5°	680.9	687.7	694.5	698.9	701.0	703.0	705.1	707.2
40°	664.8	672.0	679.3	684.1	686.6	689.1	691.6	694.2
42.5°	649.1	657.0	665.0	670.1	672.6	675.1	677.6	680.1
45°	625.1	633.7	642.3	648.0	650.8	653.6	656.4	659.1
47.5°	600.1	609.1	618.1	624.2	627.2	630.3	633.3	636.4
50°	583.0	592.4	601.9	608.1	611.1	614.3	617.3	620.4
52.5°	564.4	574.1	583.7	590.2	593.5	596.8	600.0	603.3
55°	536.6	546.6	556.6	563.4	566.9	570.6	574.2	577.8
57.5°	507.1	517.8	528.7	535.9	539.5	543.2	546.9	550.5
60°	487.7	498.2	508.8	515.9	519.9	523.8	527.6	531.6
62.5°	466.9	478.2	489.4	496.9	500.5	504.2	507.8	511.5
65°	435.5	447.0	458.4	465.8	469.4	473.1	476.6	480.2
67.5°	403.7	415.2	426.8	434.4	438.2	442.0	445.7	449.5
70°	381.6	393.5	405.5	413.1	416.5	419.8	423.2	426.5
72.5°	360.1	371.8	383.6	391.4	395.5	399.4	403.5	407.5
75°	327.8	339.8	351.8	359.5	363.2	366.7	370.3	374.0
77.5°	296.2	308.1	320.0	327.9	331.8	335.6	339.6	343.5
80°	274.8	286.4	298.1	305.9	309.7	313.7	317.5	321.4
82.5°	254.8	266.4	278.1	285.8	289.5	293.0	296.7	300.4
85°	225.9	237.6	249.3	257.1	261.0	264.9	268.7	272.7
87.5°	204.7	216.0	227.3	234.7	238.3	241.9	245.4	249.0
90°	201.9	212.8	223.8	230.9	234.3	237.8	241.2	244.7
92.5°	191.5	202.5	213.4	220.6	223.9	227.2	230.6	233.9
95°	192.3	202.8	213.4	220.3	223.4	226.6	229.7	232.8
97.5°	199.6	209.9	220.2	227.0	230.2	233.5	236.7	240.0
100°	204.5	214.8	225.2	231.8	234.7	237.7	240.6	243.6
102.5°	211.3	221.4	231.6	238.1	241.1	244.0	246.9	250.0
105°	221.3	231.3	241.2	247.7	250.7	253.7	256.8	259.9
107.5°	233.2	242.6	252.0	258.1	260.7	263.3	265.9	268.5
110°	241.9	250.8	259.7	265.5	268.2	271.1	273.8	276.6



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CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
112.5°	250.5	259.2	267.8	273.6	276.4	279.3	282.1	284.9
115°	264.0	272.3	280.5	286.1	288.8	291.6	294.4	297.1
117.5°	276.7	284.7	292.7	297.9	300.5	303.1	305.7	308.2
120°	285.3	293.0	300.9	306.1	308.9	311.7	314.4	317.3
122.5°	294.8	302.1	309.4	314.3	316.7	319.1	321.5	324.0
125°	308.0	315.3	322.5	327.3	329.7	332.2	334.5	337.0
127.5°	320.7	327.3	333.8	338.2	340.4	342.5	344.7	346.8
130°	330.0	336.5	343.0	347.1	348.9	350.8	352.7	354.5
132.5°	338.8	344.9	350.9	354.9	356.8	358.7	360.6	362.5
135°	352.3	358.1	363.8	367.7	369.6	371.6	373.5	375.4
137.5°	365.2	370.2	375.3	378.5	380.0	381.5	383.0	384.6
140°	374.4	378.8	383.2	386.2	387.4	388.7	390.0	391.2
142.5°	383.7	387.4	391.0	393.3	394.4	395.5	396.5	397.6
145°	399.4	401.1	402.9	404.3	405.3	406.3	407.3	408.3
147.5°	414.0	414.4	414.8	415.2	415.5	415.8	416.1	416.4
150°	424.6	424.9	425.2	425.2	424.9	424.6	424.3	424.0
152.5°	435.6	436.0	436.4	436.4	436.0	435.6	435.4	435.0
155°	449.8	450.3	450.7	450.8	450.5	450.3	450.0	449.7
157.5°	462.7	463.4	464.0	464.1	463.6	463.2	462.8	462.3
160°	470.4	471.0	471.6	471.6	471.3	470.9	470.5	470.1
162.5°	477.4	478.1	478.7	478.8	478.3	477.9	477.4	477.0
165°	486.4	487.1	487.8	487.9	487.4	486.9	486.4	486.0
167.5°	493.9	494.6	495.2	495.3	494.7	494.3	493.8	493.3
170°	497.9	498.6	499.3	499.4	498.8	498.2	497.7	497.1
172.5°	501.1	501.7	502.4	502.4	501.8	501.2	500.7	500.1
175°	504.4	505.0	505.7	505.8	505.2	504.6	504.1	503.5
177.5°	506.0	506.3	506.8	506.8	506.3	506.0	505.5	505.0
180°	506.1	506.1	506.1	506.1	506.1	506.1	506.1	506.1

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