

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: P331787-830

Luminaire Tested: **S122RDIW-S485D435U830-4F0-1E-UDD-F**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P331787-830
REPORT IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-1807-864-2,
Test Lab: INNOVATION CENTER
Issue Date: 3/3/2020
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: NEO-RAY
Catalog Number: S122RDIW-S485D435U830-4F0-1E-UDD-F
Description: DEFINE 2 DIRECT-INDIRECT WALL MOUNT LED LUMINAIRE
DOWNLIGHT 485 LUMENS PER FOOT, FLUSH SATIN WHITE DIFFUSER, REGRESSED
HOUSING
UPLIGHT 435 LUMENS PER FOOT, NO LENS
Light Source: -
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 3232.8 lumens
Efficiency: N/A
Efficacy: 107.0 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

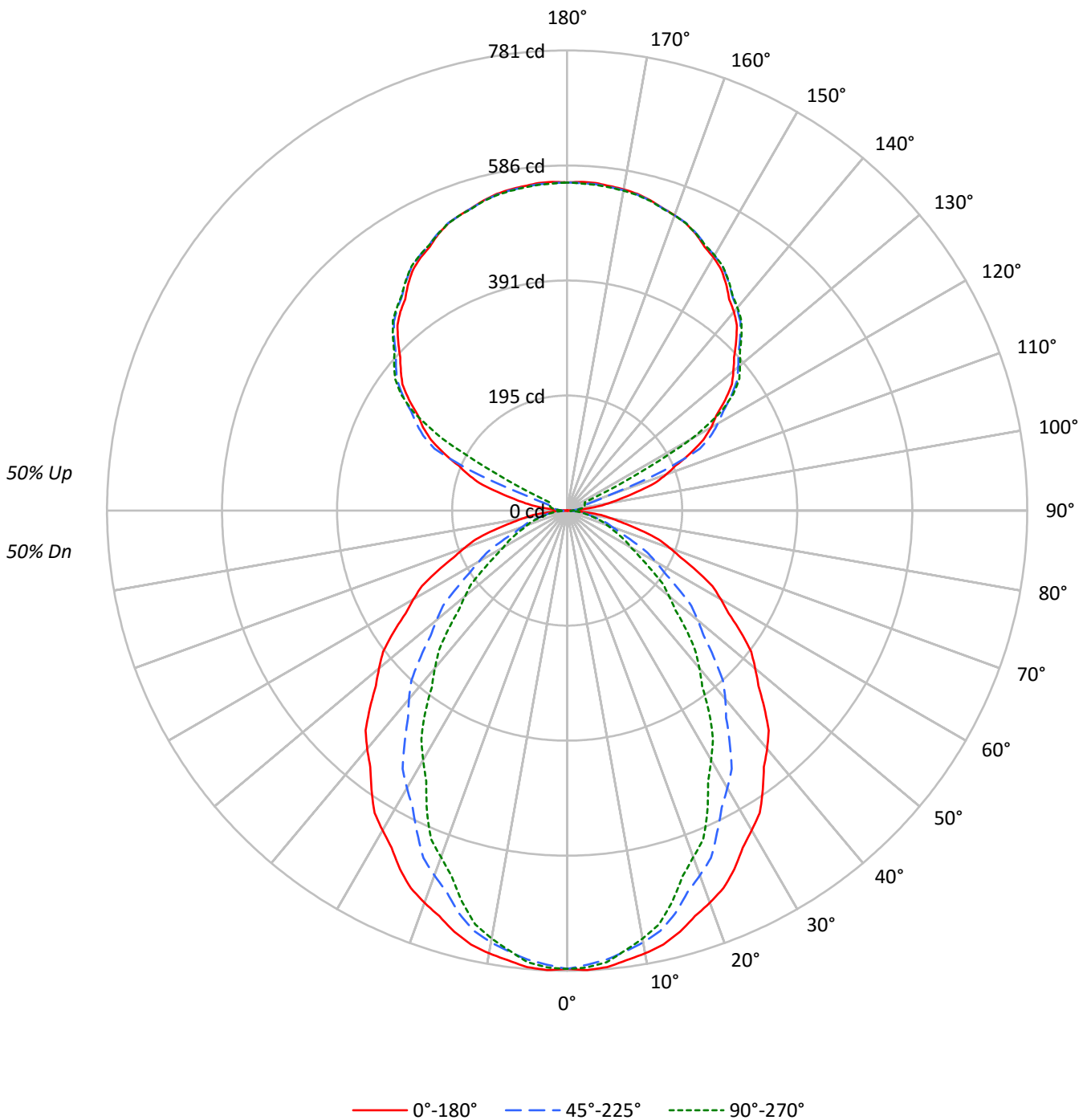
Input Watts (W): 30.2
Input Voltage (V): 120
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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					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	107	107	107	107	99	99	99	99	83	83	83	69	69	69	56	56	56	50					50			
1	98	94	90	87	90	87	84	81	74	71	69	61	60	58	50	49	48	43					43			
2	90	83	77	72	83	76	71	67	65	61	58	54	52	49	45	43	41	36					36			
3	82	73	66	60	76	68	62	57	58	53	49	48	45	42	40	38	36	31					31			
4	75	65	57	51	69	60	54	48	52	47	42	44	40	37	36	33	31	27					27			
5	69	58	50	44	64	54	47	42	46	41	37	39	35	32	33	30	27	24					24			
6	64	52	44	39	59	49	42	37	42	37	32	36	32	28	30	27	24	21					21			
7	59	47	40	34	55	44	37	32	38	33	29	33	28	25	27	24	22	19					19			
8	55	43	36	30	51	40	34	29	35	30	26	30	26	23	25	22	20	17					17			
9	51	39	32	27	48	37	30	26	32	27	23	28	23	20	23	20	18	16					16			
10	48	36	29	25	44	34	28	23	30	25	21	26	22	19	22	19	16	14					14			

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	12558	12558	12558
5°	12606	12402	12470
10°	12511	12198	12095
15°	12366	11836	11497
20°	12167	11320	10753
25°	11965	10735	10033
30°	11680	10133	9107
35°	11404	9477	8296
40°	11126	8800	7358
45°	10803	8035	6510
50°	10467	7267	5674
55°	10125	6441	4873
60°	9726	5570	4046
65°	9280	4676	3683
70°	8738	3852	3389
75°	8079	3512	3163
80°	7132	3133	2882
85°	5613	2482	2482



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	72.8	2.3
10°-20°	199.9	6.2
20°-30°	280.7	8.7
30°-40°	306.1	9.5
40°-50°	281.5	8.7
50°-60°	221.1	6.8
60°-70°	144.1	4.5
70°-80°	74.3	2.3
80°-90°	20.7	0.6
90°-100°	18.6	0.6
100°-110°	68.1	2.1
110°-120°	182.0	5.6
120°-130°	300.5	9.3
130°-140°	319.6	9.9
140°-150°	297.0	9.2
150°-160°	238.8	7.4
160°-170°	153.9	4.8
170°-180°	53.0	1.6
0°-30°	553.4	17.1
0°-40°	859.6	26.6
0°-60°	1362.1	42.1
0°-90°	1601.2	49.5
90°-120°	268.7	8.3
90°-150°	1185.9	36.7
90°-180°	1632.0	50.5
0°-180°	3232.8	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	778	778	778	778	778	
5°	778	774	765	771	769	74
15°	740	731	708	695	688	208
25°	672	648	603	575	563	309
35°	579	541	481	438	421	362
45°	473	424	352	304	285	365
55°	360	304	229	188	173	321
65°	243	186	122	100	96	241
75°	130	82	56	52	51	137
85°	30	16	13	13	13	36
90°	0	5	8	10	11	2
95°	26	14	16	18	17	32
105°	122	128	25	29	31	131
115°	232	239	248	71	33	228
125°	328	333	340	343	344	292
135°	405	412	415	419	419	313
145°	470	470	476	479	477	294
155°	518	514	519	521	518	238
165°	545	543	544	547	544	154
175°	558	555	556	558	555	53
180°	557	557	557	557	557	



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CANDELA DISTRIBUTION (FULL):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
0°	777.8	777.8	777.8	777.8	777.8	777.8	777.8	777.8	777.8	777.8	777.8
2.5°	780.6	780.0	779.4	778.7	778.2	777.1	775.8	774.4	773.0	771.7	772.9
5°	777.8	777.0	776.3	775.5	774.7	773.3	771.3	769.2	767.2	765.2	766.6
7.5°	769.8	768.8	767.9	766.9	765.9	764.2	761.9	759.5	757.1	754.8	755.2
10°	763.1	762.0	760.8	759.8	758.7	756.6	753.5	750.3	747.2	744.0	743.6
12.5°	754.6	753.3	751.9	750.5	749.2	746.6	742.5	738.6	734.5	730.6	729.7
15°	739.8	738.1	736.4	734.6	732.9	729.4	724.1	718.8	713.5	708.1	705.2
17.5°	721.7	719.1	716.4	713.8	711.1	706.4	699.6	692.8	686.0	679.1	675.6
20°	708.1	705.0	701.9	698.8	695.6	690.1	682.3	674.5	666.7	658.8	655.0
22.5°	693.5	690.0	686.5	683.0	679.5	673.4	664.5	655.6	646.9	638.0	633.0
25°	671.6	666.6	661.6	656.5	651.5	643.9	633.5	623.2	612.8	602.6	596.2
27.5°	645.1	639.6	634.1	628.8	623.3	614.7	603.1	591.4	579.9	568.2	560.7
30°	626.5	620.6	614.6	608.7	602.8	593.5	581.0	568.4	555.9	543.5	535.5
32.5°	608.5	601.5	594.6	587.7	580.7	570.8	558.1	545.3	532.5	519.8	510.7
35°	578.6	570.6	562.7	554.7	546.7	535.8	522.1	508.3	494.6	480.8	470.9
37.5°	548.7	540.0	531.2	522.5	513.8	502.0	487.4	472.7	458.0	443.4	432.4
40°	527.9	518.6	509.2	499.8	490.4	478.2	463.0	447.8	432.6	417.5	406.3
42.5°	506.5	496.6	486.7	476.9	467.0	454.2	438.6	422.8	407.2	391.5	380.0
45°	473.1	462.6	452.0	441.6	431.1	417.6	401.2	384.8	368.3	351.9	340.8
47.5°	440.4	429.2	418.2	407.1	396.0	381.9	365.0	348.0	331.0	314.1	303.0
50°	416.7	405.6	394.5	383.4	372.3	358.2	340.9	323.8	306.5	289.3	278.5
52.5°	393.6	382.0	370.4	358.8	347.2	333.0	316.1	299.4	282.5	265.7	255.2
55°	359.7	347.5	335.3	323.1	310.9	296.3	279.5	262.6	245.6	228.8	219.4
57.5°	324.9	312.5	299.9	287.4	274.8	260.5	244.3	228.0	211.8	195.6	186.9
60°	301.2	288.8	276.3	263.7	251.2	237.0	220.8	204.7	188.6	172.5	164.5
62.5°	278.1	265.7	253.2	240.6	228.1	214.2	198.9	183.5	168.1	152.8	145.2
65°	242.9	230.2	217.5	204.8	192.2	178.8	164.8	150.6	136.6	122.4	117.2
67.5°	208.8	196.2	183.6	171.1	158.4	145.8	133.2	120.6	107.8	95.2	92.7
70°	185.1	173.0	160.7	148.5	136.3	124.8	114.0	103.2	92.5	81.6	80.1
72.5°	162.6	150.9	139.2	127.5	115.8	105.7	97.0	88.3	79.6	71.0	69.7
75°	129.5	118.6	107.6	96.7	85.7	77.6	72.3	66.9	61.6	56.3	55.2
77.5°	97.0	87.4	77.8	68.1	58.6	52.5	50.0	47.4	44.8	42.2	41.6
80°	76.7	68.7	60.8	52.8	44.8	40.1	38.5	36.9	35.3	33.7	33.2
82.5°	58.2	51.9	45.7	39.5	33.3	29.6	28.6	27.4	26.4	25.4	25.0
85°	30.3	27.0	23.7	20.5	17.2	15.3	14.8	14.3	13.9	13.4	13.4
87.5°	9.0	8.3	7.4	6.7	5.8	5.6	5.7	5.8	5.9	6.1	6.1
90°	0.4	1.4	2.4	3.4	4.3	5.2	5.9	6.6	7.4	8.0	8.5
92.5°	8.1	8.0	7.9	7.8	7.8	7.9	8.3	8.7	9.0	9.3	9.6
95°	26.2	23.2	20.3	17.3	14.3	13.2	13.9	14.4	15.1	15.7	16.1
97.5°	51.9	43.6	35.3	27.0	18.7	15.3	16.7	18.1	19.6	21.0	21.4
100°	71.4	59.0	46.8	34.5	22.2	16.9	18.4	19.9	21.4	23.0	23.7
102.5°	92.6	90.0	87.4	84.8	82.2	74.6	61.8	49.1	36.4	23.6	24.5
105°	122.4	125.2	127.8	130.5	133.2	122.3	97.9	73.4	49.0	24.6	25.5
107.5°	156.6	158.7	160.9	163.1	165.2	151.7	122.3	93.0	63.7	34.4	33.4
110°	178.4	180.3	182.2	184.1	186.0	174.0	148.1	122.2	96.3	70.5	61.5



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CANDELA DISTRIBUTION (continued):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
112.5°	199.1	200.8	202.5	204.1	205.8	203.4	197.0	190.6	184.2	177.9	145.2
115°	231.7	233.2	234.7	236.2	237.7	239.6	241.9	244.1	246.3	248.5	207.1
117.5°	260.7	262.4	264.1	265.8	267.5	269.2	270.7	272.2	273.8	275.3	265.3
120°	282.0	283.3	284.6	286.1	287.4	288.9	290.5	292.1	293.7	295.3	296.3
122.5°	300.0	301.4	302.8	304.3	305.7	307.3	309.1	310.8	312.5	314.3	315.0
125°	327.5	328.7	329.9	331.0	332.2	333.6	335.4	337.1	338.7	340.4	341.0
127.5°	352.4	353.7	355.0	356.3	357.6	358.8	360.1	361.4	362.7	363.9	364.9
130°	368.3	369.7	371.1	372.5	373.9	375.1	376.2	377.1	378.1	379.1	380.0
132.5°	384.4	385.5	386.7	388.0	389.2	390.3	391.2	392.3	393.2	394.3	395.1
135°	405.3	406.7	408.1	409.5	411.0	412.1	412.9	413.8	414.5	415.4	416.2
137.5°	426.5	427.4	428.5	429.5	430.5	431.4	432.3	433.3	434.1	435.1	435.9
140°	440.4	441.0	441.8	442.4	443.2	444.0	445.1	446.0	447.0	448.0	448.7
142.5°	451.9	452.6	453.2	453.8	454.5	455.4	456.5	457.6	458.7	459.9	460.6
145°	470.1	470.0	470.0	469.9	469.8	470.5	472.0	473.5	475.0	476.5	477.2
147.5°	486.0	485.7	485.3	485.0	484.7	485.2	486.7	488.2	489.7	491.3	491.7
150°	496.3	495.7	495.0	494.5	493.8	494.2	495.7	497.1	498.5	499.9	500.5
152.5°	505.0	504.4	503.6	502.9	502.2	502.6	503.9	505.3	506.6	508.0	508.5
155°	517.6	516.9	516.0	515.3	514.4	514.6	515.7	516.7	517.8	518.9	519.4
157.5°	527.5	526.9	526.2	525.6	524.9	524.9	525.7	526.4	527.2	527.9	528.5
160°	533.4	532.8	532.3	531.8	531.2	531.2	531.8	532.3	532.8	533.4	534.0
162.5°	538.6	538.0	537.4	537.0	536.4	536.4	536.8	537.2	537.7	538.2	538.9
165°	545.4	545.0	544.4	543.8	543.3	543.2	543.5	543.8	544.0	544.2	544.9
167.5°	550.6	550.1	549.6	549.0	548.5	548.4	548.6	548.8	549.1	549.3	550.0
170°	553.6	553.0	552.4	552.0	551.4	551.2	551.4	551.6	551.8	552.0	552.5
172.5°	555.4	555.0	554.4	553.8	553.3	553.2	553.3	553.5	553.6	553.8	554.5
175°	558.0	557.3	556.7	556.1	555.4	555.3	555.4	555.6	555.7	555.9	556.6
177.5°	558.4	557.9	557.3	556.9	556.4	556.1	556.2	556.3	556.4	556.4	556.9
180°	556.8	556.8	556.8	556.8	556.8	556.8	556.8	556.8	556.8	556.8	556.8



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CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
0°	777.8	777.8	777.8	777.8	777.8	777.8	777.8	777.8
2.5°	774.1	775.4	776.7	777.1	776.9	776.7	776.4	776.2
5°	768.0	769.4	770.8	771.3	770.8	770.3	769.9	769.4
7.5°	755.5	755.9	756.4	756.2	755.4	754.5	753.8	752.9
10°	743.1	742.6	742.2	741.5	740.6	739.6	738.7	737.7
12.5°	728.9	728.0	727.2	725.9	724.3	722.8	721.2	719.7
15°	702.2	699.3	696.3	694.0	692.4	690.9	689.3	687.8
17.5°	672.0	668.5	665.0	661.9	659.2	656.5	653.8	651.1
20°	651.0	647.1	643.2	639.5	636.1	632.6	629.2	625.8
22.5°	627.9	622.9	617.9	614.1	611.5	609.0	606.4	603.8
25°	589.7	583.3	576.9	572.5	570.1	567.8	565.5	563.2
27.5°	553.3	545.7	538.3	532.7	529.0	525.3	521.5	517.8
30°	527.4	519.5	511.5	505.4	501.1	497.0	492.8	488.5
32.5°	501.5	492.5	483.3	476.8	472.9	468.9	464.9	460.9
35°	461.1	451.2	441.4	434.7	431.3	427.8	424.4	420.9
37.5°	421.6	410.8	399.9	392.5	388.6	384.7	380.7	376.7
40°	395.2	384.1	373.0	365.4	361.4	357.3	353.2	349.1
42.5°	368.5	357.0	345.6	337.9	333.9	330.0	326.0	322.1
45°	329.7	318.7	307.6	300.1	296.3	292.6	288.8	285.1
47.5°	292.0	281.0	269.9	262.7	259.3	255.9	252.4	249.0
50°	267.7	256.9	246.1	239.1	235.8	232.5	229.2	225.9
52.5°	244.8	234.4	223.9	217.3	214.2	211.2	208.1	205.1
55°	210.0	200.6	191.2	185.0	182.1	179.1	176.2	173.1
57.5°	178.3	169.8	161.2	155.6	153.1	150.6	148.1	145.5
60°	156.5	148.5	140.5	135.3	132.8	130.3	127.8	125.3
62.5°	137.5	130.0	122.3	117.8	116.3	114.8	113.3	111.8
65°	111.9	106.5	101.2	98.3	97.8	97.4	96.9	96.4
67.5°	90.3	87.8	85.4	84.0	83.4	82.9	82.5	81.9
70°	78.5	77.0	75.4	74.3	73.7	73.0	72.4	71.8
72.5°	68.3	67.0	65.7	64.8	64.5	64.1	63.7	63.3
75°	54.1	53.1	51.9	51.3	51.2	51.0	50.8	50.7
77.5°	41.0	40.3	39.8	39.3	39.0	38.8	38.5	38.3
80°	32.5	32.0	31.3	31.0	31.0	31.0	31.0	31.0
82.5°	24.6	24.2	23.8	23.7	23.7	23.7	23.7	23.7
85°	13.4	13.4	13.4	13.4	13.4	13.4	13.4	13.4
87.5°	6.0	6.0	5.9	5.9	6.0	6.0	6.1	6.1
90°	9.0	9.4	9.8	10.2	10.4	10.6	10.7	10.8
92.5°	9.8	10.1	10.3	10.5	10.6	10.7	10.7	10.8
95°	16.6	17.1	17.5	17.7	17.6	17.5	17.4	17.3
97.5°	21.8	22.1	22.4	22.7	22.8	22.9	23.0	23.1
100°	24.4	25.1	25.8	26.3	26.5	26.7	26.8	27.0
102.5°	25.4	26.4	27.3	27.9	28.2	28.5	28.7	28.9
105°	26.6	27.5	28.6	29.2	29.5	29.9	30.3	30.6
107.5°	32.4	31.4	30.3	30.1	30.4	30.8	31.1	31.5
110°	52.6	43.6	34.7	30.3	30.7	31.1	31.5	31.9



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CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
112.5°	112.5	79.8	47.2	31.0	31.3	31.6	31.9	32.1
115°	165.7	124.2	82.8	58.8	52.4	45.9	39.5	33.0
117.5°	255.2	245.2	235.2	219.6	198.4	177.2	156.1	134.9
120°	297.5	298.5	299.6	294.1	282.0	269.9	257.8	245.7
122.5°	315.6	316.2	316.9	316.0	313.7	311.3	309.0	306.6
125°	341.7	342.3	342.9	343.4	343.7	343.9	344.2	344.4
127.5°	365.8	366.6	367.6	368.1	368.2	368.2	368.3	368.3
130°	381.1	382.0	383.0	383.5	383.4	383.3	383.2	383.1
132.5°	396.0	396.7	397.6	397.9	397.8	397.8	397.8	397.7
135°	417.2	418.0	419.0	419.2	419.1	419.0	418.8	418.6
137.5°	436.9	437.7	438.6	438.8	438.6	438.3	438.0	437.6
140°	449.6	450.4	451.2	451.4	450.9	450.4	450.1	449.6
142.5°	461.4	462.1	462.9	463.0	462.5	462.1	461.7	461.2
145°	477.9	478.4	479.1	479.2	478.7	478.2	477.9	477.4
147.5°	492.2	492.7	493.1	493.1	492.8	492.4	492.0	491.6
150°	501.1	501.5	502.1	502.2	501.7	501.2	500.8	500.4
152.5°	509.1	509.6	510.2	510.1	509.5	509.0	508.3	507.7
155°	520.0	520.5	521.0	520.9	520.2	519.5	518.8	518.1
157.5°	529.1	529.7	530.4	530.3	529.6	528.9	528.2	527.5
160°	534.4	535.0	535.6	535.5	534.9	534.2	533.6	533.0
162.5°	539.4	540.1	540.6	540.5	539.8	539.0	538.3	537.5
165°	545.5	546.1	546.8	546.8	546.1	545.5	544.9	544.2
167.5°	550.6	551.2	551.9	551.8	550.9	550.2	549.3	548.6
170°	553.2	553.8	554.4	554.3	553.6	552.7	552.0	551.1
172.5°	555.1	555.7	556.4	556.3	555.4	554.7	553.8	553.1
175°	557.2	557.8	558.5	558.4	557.4	556.6	555.6	554.8
177.5°	557.4	557.9	558.5	558.4	557.7	557.0	556.4	555.8
180°	556.8	556.8	556.8	556.8	556.8	556.8	556.8	556.8

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