

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: P331787-840

Luminaire Tested: **S122RDIW-S485D435U840-4F0-1E-UDD-F**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P331787-840
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-S485D435U840-4F0-1E-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: 3463.7 lumens
Efficiency: N/A
Efficacy: 114.7 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

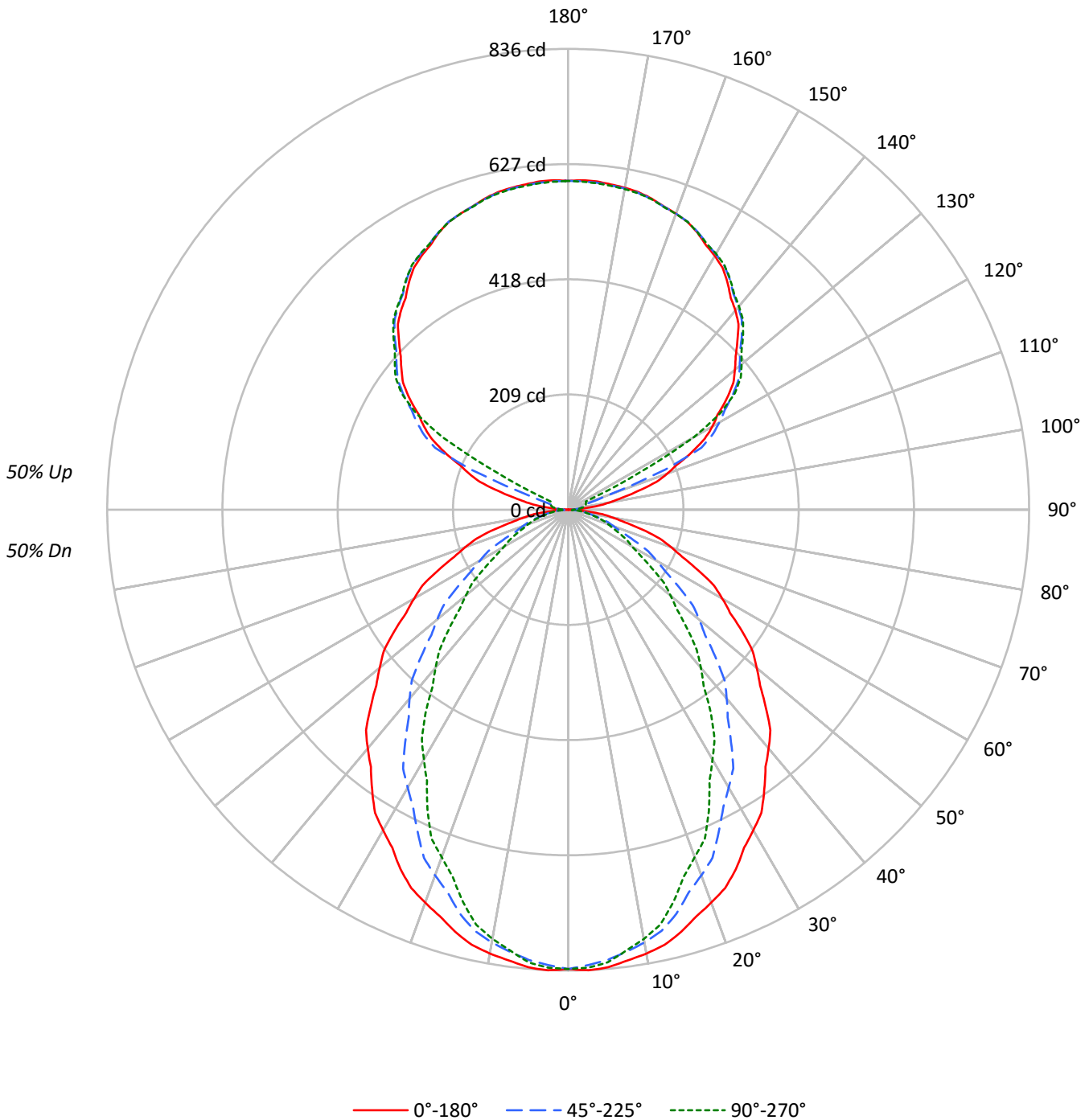
Input Watts (W): 30.2
Input Voltage (V): 120
Input Current (A_{in}): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	13454	13454	13454
5°	13506	13287	13361
10°	13404	13070	12959
15°	13249	12682	12318
20°	13036	12129	11519
25°	12818	11501	10750
30°	12515	10856	9758
35°	12220	10153	8889
40°	11921	9428	7885
45°	11574	8611	6976
50°	11215	7784	6081
55°	10849	6899	5222
60°	10424	5968	4334
65°	9941	5012	3947
70°	9361	4131	3635
75°	8659	3762	3387
80°	7643	3366	3087
85°	6002	2649	2649



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	78.0	2.3
10°-20°	214.2	6.2
20°-30°	300.8	8.7
30°-40°	328.0	9.5
40°-50°	301.6	8.7
50°-60°	236.8	6.8
60°-70°	154.4	4.5
70°-80°	79.6	2.3
80°-90°	22.1	0.6
90°-100°	19.9	0.6
100°-110°	73.0	2.1
110°-120°	195.0	5.6
120°-130°	322.0	9.3
130°-140°	342.4	9.9
140°-150°	318.3	9.2
150°-160°	255.9	7.4
160°-170°	164.9	4.8
170°-180°	56.8	1.6
0°-30°	593.0	17.1
0°-40°	921.0	26.6
0°-60°	1459.4	42.1
0°-90°	1715.5	49.5
90°-120°	287.9	8.3
90°-150°	1270.6	36.7
90°-180°	1748.0	50.5
0°-180°	3463.7	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	833	833	833	833	833	
5°	833	829	820	826	824	79
15°	793	783	759	745	737	223
25°	720	694	646	616	603	331
35°	620	580	515	469	451	388
45°	507	455	377	326	306	391
55°	385	325	245	202	186	344
65°	260	199	131	107	103	258
75°	139	87	60	55	54	147
85°	32	17	14	14	14	38
90°	0	5	9	11	12	3
95°	28	15	17	19	19	34
105°	131	137	26	31	33	140
115°	248	256	266	76	35	244
125°	351	357	365	368	369	313
135°	434	441	445	449	448	335
145°	504	504	511	513	512	315
155°	555	551	556	558	555	255
165°	584	582	583	586	583	165
175°	598	595	596	598	594	57
180°	596	596	596	596	596	



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CANDELA DISTRIBUTION (FULL):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
0°	833.3	833.3	833.3	833.3	833.3	833.3	833.3	833.3	833.3	833.3	833.3
2.5°	836.4	835.8	835.1	834.4	833.7	832.6	831.2	829.7	828.2	826.8	828.1
5°	833.3	832.5	831.7	830.9	830.0	828.5	826.4	824.2	822.0	819.8	821.3
7.5°	824.8	823.7	822.7	821.6	820.6	818.8	816.3	813.7	811.2	808.7	809.1
10°	817.6	816.4	815.2	814.1	812.8	810.6	807.3	803.9	800.5	797.2	796.7
12.5°	808.5	807.1	805.6	804.2	802.7	799.9	795.6	791.3	787.0	782.7	781.8
15°	792.6	790.8	789.0	787.1	785.3	781.5	775.8	770.1	764.5	758.7	755.6
17.5°	773.3	770.4	767.6	764.8	761.9	756.9	749.6	742.3	735.0	727.6	723.9
20°	758.7	755.4	752.0	748.7	745.3	739.4	731.0	722.7	714.3	705.9	701.8
22.5°	743.1	739.3	735.5	731.7	728.0	721.4	712.0	702.5	693.1	683.6	678.2
25°	719.5	714.2	708.8	703.4	698.0	689.8	678.7	667.7	656.6	645.6	638.7
27.5°	691.2	685.3	679.4	673.7	667.8	658.6	646.2	633.7	621.3	608.7	600.8
30°	671.3	664.9	658.5	652.2	645.8	635.9	622.5	609.0	595.6	582.3	573.7
32.5°	652.0	644.5	637.0	629.7	622.2	611.6	597.9	584.2	570.6	556.9	547.1
35°	620.0	611.4	602.9	594.3	585.7	574.1	559.4	544.6	529.9	515.1	504.5
37.5°	587.9	578.6	569.2	559.8	550.5	537.9	522.2	506.4	490.7	475.0	463.3
40°	565.6	555.6	545.5	535.5	525.4	512.3	496.0	479.8	463.5	447.3	435.4
42.5°	542.7	532.1	521.5	511.0	500.4	486.7	469.9	453.0	436.3	419.5	407.2
45°	506.9	495.6	484.3	473.1	461.9	447.5	429.9	412.3	394.7	377.1	365.2
47.5°	471.8	459.9	448.1	436.2	424.2	409.2	391.0	372.8	354.7	336.5	324.7
50°	446.5	434.5	422.7	410.8	398.9	383.7	365.3	346.9	328.4	309.9	298.4
52.5°	421.7	409.3	396.9	384.5	372.0	356.8	338.7	320.7	302.7	284.7	273.5
55°	385.4	372.3	359.2	346.2	333.2	317.5	299.4	281.3	263.2	245.1	235.1
57.5°	348.1	334.8	321.3	307.9	294.5	279.1	261.8	244.3	226.9	209.5	200.3
60°	322.8	309.4	296.0	282.6	269.1	253.9	236.6	219.3	202.1	184.8	176.2
62.5°	298.0	284.7	271.2	257.8	244.4	229.5	213.1	196.6	180.2	163.7	155.5
65°	260.2	246.6	233.1	219.4	205.9	191.6	176.5	161.4	146.3	131.2	125.5
67.5°	223.7	210.3	196.7	183.3	169.8	156.2	142.7	129.2	115.5	102.0	99.4
70°	198.3	185.3	172.2	159.2	146.0	133.7	122.2	110.6	99.1	87.5	85.8
72.5°	174.2	161.7	149.2	136.6	124.1	113.2	103.9	94.6	85.3	76.0	74.6
75°	138.8	127.0	115.3	103.6	91.8	83.1	77.5	71.7	66.0	60.3	59.2
77.5°	103.9	93.6	83.3	73.0	62.8	56.2	53.5	50.8	48.0	45.2	44.5
80°	82.2	73.6	65.1	56.6	48.0	42.9	41.2	39.6	37.9	36.2	35.5
82.5°	62.3	55.6	49.0	42.3	35.6	31.7	30.6	29.4	28.3	27.2	26.8
85°	32.4	28.9	25.3	21.9	18.4	16.4	15.9	15.3	14.8	14.3	14.3
87.5°	9.7	8.9	8.0	7.2	6.3	6.0	6.1	6.3	6.4	6.6	6.6
90°	0.4	1.5	2.5	3.6	4.6	5.6	6.4	7.1	7.9	8.6	9.1
92.5°	8.7	8.6	8.5	8.4	8.4	8.5	8.9	9.3	9.6	10.0	10.3
95°	28.1	24.8	21.7	18.6	15.3	14.1	14.8	15.5	16.2	16.9	17.3
97.5°	55.6	46.8	37.9	28.9	20.0	16.4	17.9	19.4	21.0	22.5	22.9
100°	76.4	63.2	50.1	37.0	23.8	18.1	19.7	21.3	22.9	24.6	25.3
102.5°	99.2	96.4	93.6	90.9	88.1	79.9	66.2	52.6	39.0	25.2	26.3
105°	131.2	134.1	136.9	139.9	142.7	131.1	104.9	78.7	52.5	26.4	27.4
107.5°	167.7	170.1	172.4	174.7	177.0	162.5	131.1	99.7	68.3	36.9	35.7
110°	191.2	193.2	195.2	197.2	199.2	186.4	158.6	131.0	103.2	75.5	65.9



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CANDELA DISTRIBUTION (continued):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
112.5°	213.3	215.1	216.9	218.6	220.5	217.9	211.1	204.2	197.3	190.6	155.5
115°	248.2	249.8	251.5	253.1	254.7	256.7	259.1	261.6	263.9	266.3	221.9
117.5°	279.3	281.1	283.0	284.8	286.6	288.4	290.0	291.6	293.4	295.0	284.3
120°	302.2	303.6	305.0	306.5	307.9	309.5	311.2	313.0	314.7	316.4	317.5
122.5°	321.4	323.0	324.5	326.0	327.5	329.2	331.1	333.0	334.9	336.8	337.5
125°	350.9	352.1	353.5	354.7	355.9	357.4	359.3	361.1	362.9	364.8	365.4
127.5°	377.6	379.0	380.3	381.7	383.1	384.5	385.9	387.2	388.6	389.9	390.9
130°	394.6	396.1	397.6	399.1	400.6	401.9	403.0	404.0	405.2	406.2	407.2
132.5°	411.8	413.0	414.3	415.7	417.0	418.2	419.2	420.3	421.3	422.4	423.3
135°	434.2	435.8	437.3	438.8	440.4	441.5	442.4	443.3	444.1	445.0	446.0
137.5°	457.0	458.0	459.1	460.2	461.2	462.2	463.2	464.2	465.1	466.2	467.1
140°	471.8	472.5	473.3	474.0	474.8	475.7	476.9	477.9	478.9	480.0	480.8
142.5°	484.2	484.9	485.5	486.3	487.0	488.0	489.1	490.3	491.5	492.7	493.5
145°	503.7	503.6	503.5	503.4	503.3	504.1	505.7	507.4	509.0	510.6	511.3
147.5°	520.7	520.4	520.0	519.7	519.3	519.9	521.5	523.1	524.7	526.3	526.8
150°	531.8	531.1	530.4	529.8	529.1	529.5	531.1	532.6	534.1	535.6	536.2
152.5°	541.1	540.4	539.6	538.9	538.1	538.5	539.9	541.4	542.8	544.3	544.8
155°	554.6	553.8	552.9	552.1	551.2	551.4	552.5	553.6	554.8	555.9	556.5
157.5°	565.2	564.5	563.8	563.1	562.4	562.4	563.2	564.0	564.8	565.6	566.2
160°	571.5	570.9	570.4	569.8	569.2	569.2	569.8	570.4	570.9	571.5	572.1
162.5°	577.0	576.4	575.8	575.3	574.7	574.7	575.1	575.6	576.1	576.6	577.3
165°	584.4	583.9	583.3	582.7	582.1	582.0	582.3	582.6	582.9	583.1	583.8
167.5°	590.0	589.4	588.9	588.2	587.6	587.5	587.7	588.0	588.3	588.5	589.3
170°	593.1	592.5	591.9	591.4	590.8	590.6	590.8	591.0	591.2	591.4	592.0
172.5°	595.1	594.6	594.0	593.4	592.8	592.7	592.8	593.0	593.2	593.4	594.1
175°	597.8	597.1	596.4	595.8	595.1	594.9	595.1	595.3	595.4	595.6	596.3
177.5°	598.2	597.7	597.1	596.6	596.1	595.8	595.9	596.0	596.1	596.1	596.7
180°	596.5	596.5	596.5	596.5	596.5	596.5	596.5	596.5	596.5	596.5	596.5



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CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
0°	833.3	833.3	833.3	833.3	833.3	833.3	833.3	833.3
2.5°	829.4	830.8	832.1	832.6	832.4	832.1	831.8	831.6
5°	822.8	824.4	825.9	826.4	825.9	825.4	824.9	824.4
7.5°	809.5	809.9	810.4	810.2	809.3	808.4	807.6	806.7
10°	796.2	795.7	795.2	794.5	793.5	792.4	791.4	790.4
12.5°	780.9	780.0	779.1	777.8	776.1	774.5	772.7	771.1
15°	752.3	749.2	746.0	743.6	741.8	740.2	738.5	736.9
17.5°	720.0	716.3	712.5	709.1	706.3	703.4	700.5	697.6
20°	697.5	693.4	689.1	685.2	681.6	677.8	674.2	670.4
22.5°	672.8	667.4	662.1	657.9	655.2	652.5	649.7	646.9
25°	631.9	625.0	618.1	613.4	610.9	608.3	605.9	603.4
27.5°	592.8	584.7	576.7	570.8	566.7	562.8	558.8	554.8
30°	565.1	556.6	548.1	541.5	536.9	532.5	528.0	523.4
32.5°	537.3	527.7	517.9	510.9	506.6	502.4	498.1	493.8
35°	494.0	483.4	472.9	465.7	462.1	458.4	454.7	451.0
37.5°	451.7	440.1	428.5	420.5	416.4	412.1	407.9	403.6
40°	423.4	411.5	399.6	391.5	387.2	382.8	378.4	374.1
42.5°	394.9	382.5	370.3	362.0	357.8	353.6	349.3	345.1
45°	353.3	341.4	329.5	321.5	317.5	313.5	309.4	305.5
47.5°	312.9	301.0	289.2	281.4	277.8	274.2	270.4	266.8
50°	286.8	275.3	263.7	256.2	252.7	249.1	245.6	242.1
52.5°	262.3	251.2	239.9	232.8	229.5	226.3	223.0	219.7
55°	225.0	214.9	204.9	198.2	195.1	191.9	188.7	185.5
57.5°	191.1	181.9	172.7	166.7	164.0	161.4	158.6	155.9
60°	167.6	159.2	150.6	145.0	142.3	139.6	136.9	134.2
62.5°	147.3	139.3	131.1	126.2	124.6	123.0	121.4	119.8
65°	119.9	114.1	108.5	105.3	104.8	104.3	103.8	103.3
67.5°	96.7	94.1	91.5	90.0	89.4	88.9	88.4	87.8
70°	84.1	82.5	80.8	79.6	79.0	78.3	77.6	77.0
72.5°	73.2	71.8	70.4	69.5	69.1	68.7	68.3	67.9
75°	58.0	56.9	55.6	54.9	54.8	54.6	54.4	54.3
77.5°	43.9	43.2	42.6	42.1	41.8	41.6	41.3	41.0
80°	34.8	34.2	33.5	33.2	33.2	33.2	33.2	33.2
82.5°	26.4	26.0	25.5	25.3	25.3	25.3	25.3	25.3
85°	14.3	14.3	14.3	14.3	14.3	14.3	14.3	14.3
87.5°	6.5	6.5	6.4	6.4	6.5	6.5	6.6	6.6
90°	9.6	10.1	10.5	10.9	11.1	11.3	11.5	11.6
92.5°	10.5	10.8	11.0	11.2	11.3	11.4	11.5	11.6
95°	17.8	18.3	18.8	19.0	18.9	18.8	18.7	18.6
97.5°	23.3	23.7	24.0	24.3	24.4	24.5	24.6	24.7
100°	26.2	26.9	27.7	28.2	28.4	28.6	28.7	28.9
102.5°	27.3	28.3	29.3	29.9	30.2	30.5	30.7	31.0
105°	28.5	29.5	30.6	31.3	31.6	32.0	32.4	32.8
107.5°	34.7	33.6	32.5	32.2	32.6	33.0	33.3	33.7
110°	56.4	46.8	37.2	32.5	32.9	33.3	33.7	34.1



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CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
112.5°	120.6	85.5	50.6	33.2	33.5	33.8	34.1	34.4
115°	177.5	133.1	88.7	63.0	56.1	49.2	42.3	35.3
117.5°	273.5	262.8	252.0	235.3	212.6	189.9	167.2	144.5
120°	318.7	319.8	321.0	315.1	302.2	289.2	276.2	263.3
122.5°	338.1	338.8	339.5	338.6	336.1	333.6	331.0	328.5
125°	366.1	366.8	367.4	367.9	368.2	368.5	368.8	369.0
127.5°	391.9	392.8	393.8	394.4	394.5	394.5	394.6	394.6
130°	408.3	409.3	410.4	410.9	410.8	410.7	410.6	410.5
132.5°	424.2	425.1	426.0	426.4	426.3	426.2	426.2	426.1
135°	447.0	447.9	448.9	449.2	449.1	448.9	448.7	448.5
137.5°	468.1	469.0	469.9	470.2	469.9	469.6	469.3	468.9
140°	481.7	482.6	483.4	483.6	483.1	482.6	482.2	481.7
142.5°	494.3	495.1	495.9	496.0	495.5	495.1	494.6	494.1
145°	512.0	512.6	513.3	513.4	512.9	512.4	512.0	511.5
147.5°	527.4	527.9	528.4	528.4	528.0	527.6	527.1	526.7
150°	536.8	537.3	538.0	538.1	537.6	537.0	536.5	536.1
152.5°	545.4	546.0	546.6	546.5	545.9	545.3	544.6	544.0
155°	557.1	557.6	558.3	558.2	557.3	556.6	555.8	555.1
157.5°	566.9	567.5	568.3	568.2	567.4	566.6	565.9	565.2
160°	572.6	573.2	573.8	573.7	573.1	572.4	571.7	571.1
162.5°	577.9	578.7	579.3	579.2	578.3	577.5	576.7	575.9
165°	584.5	585.1	585.8	585.8	585.1	584.5	583.8	583.1
167.5°	590.0	590.6	591.3	591.2	590.3	589.5	588.5	587.7
170°	592.7	593.4	594.0	593.9	593.1	592.2	591.4	590.5
172.5°	594.7	595.4	596.1	596.0	595.1	594.3	593.4	592.6
175°	597.0	597.6	598.3	598.2	597.2	596.3	595.3	594.4
177.5°	597.2	597.7	598.3	598.2	597.5	596.8	596.1	595.5
180°	596.5	596.5	596.5	596.5	596.5	596.5	596.5	596.5

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