

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: P332159-930

Luminaire Tested: **S123DIW-S775D755U930-4F0-1E-UDD-D1**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P332159-930
REPORT IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-1807-864-9,
Test Lab: INNOVATION CENTER
Issue Date: 3/3/2020
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: NEO-RAY
Catalog Number: S123DIW-S775D755U930-4F0-1E-UDD-D1
Description: DEFINE 3 DIRECT-INDIRECT WALL MOUNT LED LUMINAIRE
DOWNLIGHT 775 LUMENS PER FOOT, DROP SATIN WHITE DIFFUSER
UPLIGHT 755 LUMENS PER FOOT, FLUSH SATIN WHITE DIFFUSER
Light Source: -
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 4770.1 lumens
Efficiency: N/A
Efficacy: 106.0 lumens/watt
Spacing Criteria (0/90/45): 1.2 / 1.26 / 1.37
Luminous Opening: Rectangular w/ Sides (W: 0.25' x L: 4' x H: 0.08')
CIE Type: General Diffuse

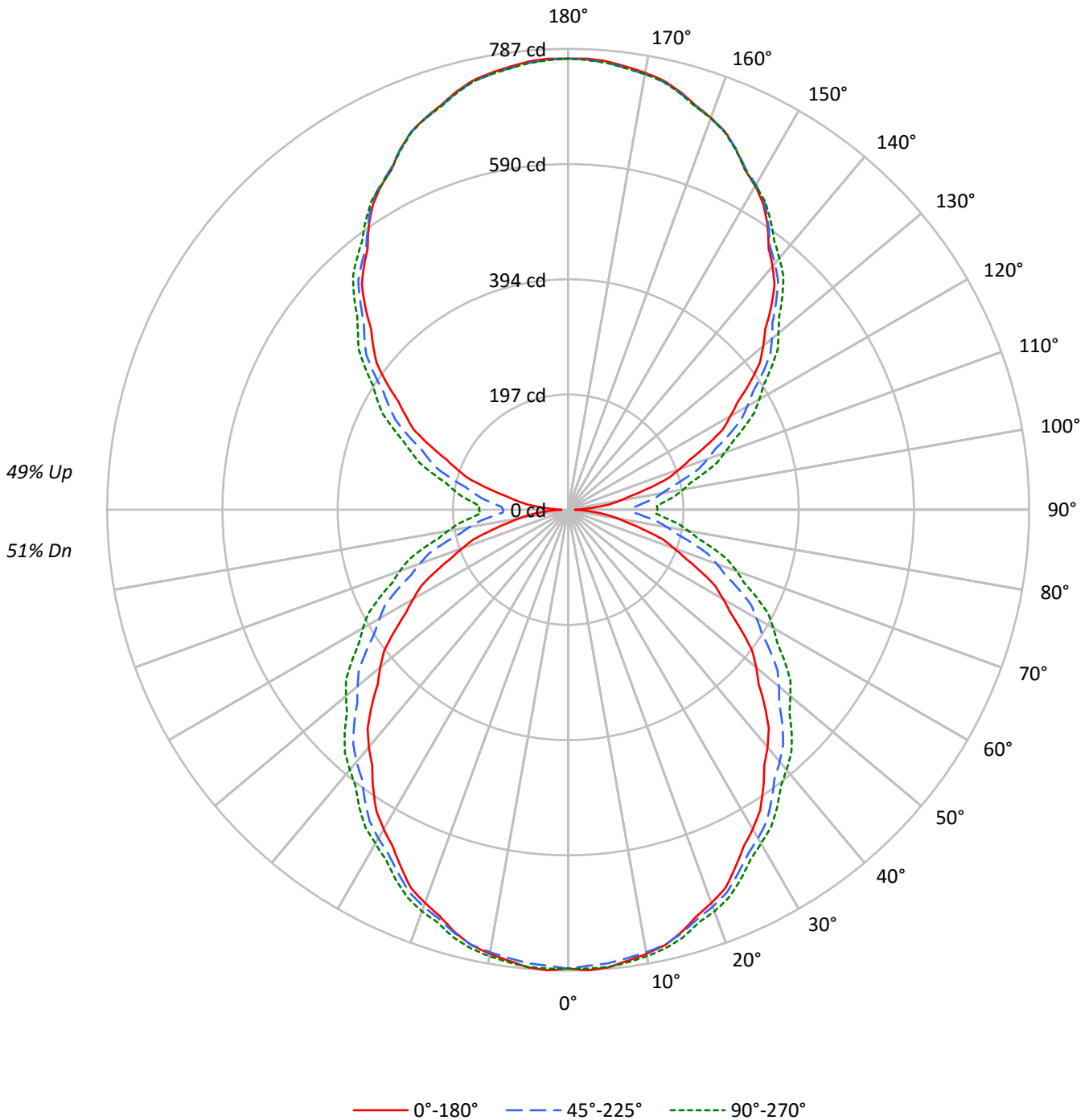
Input Watts (W): 45
Input Voltage (V): 120
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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	0
RCR																		
0	107	107	107	107	99	99	99	99	84	84	84	70	70	70	57	57	57	51
1	97	92	88	84	89	85	81	78	72	69	66	60	58	56	48	47	46	40
2	88	80	73	68	81	74	68	63	62	58	54	52	49	46	42	40	38	33
3	80	70	62	56	73	65	58	52	55	49	45	45	42	38	37	34	32	27
4	73	62	53	47	67	57	50	44	48	43	38	40	36	32	33	30	27	23
5	67	55	46	40	61	51	43	38	43	37	33	36	31	28	29	26	23	20
6	61	49	41	35	56	45	38	32	39	33	28	32	28	24	27	23	20	17
7	57	44	36	30	52	41	34	28	35	29	25	29	25	21	24	21	18	15
8	53	40	32	27	48	37	30	25	32	26	22	27	22	19	22	19	16	14
9	49	36	29	24	45	34	27	22	29	24	20	25	20	17	21	17	15	12
10	46	33	26	21	42	31	24	20	27	21	18	23	18	15	19	16	13	11

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	8436	8436	8436
5°	8462	8223	8228
10°	8386	8033	7993
15°	8278	7819	7738
20°	8123	7573	7456
25°	7933	7290	7160
30°	7737	7036	6861
35°	7518	6767	6621
40°	7310	6522	6365
45°	7079	6288	6161
50°	6848	6055	5934
55°	6597	5818	5731
60°	6352	5577	5522
65°	6098	5319	5274
70°	5718	5030	5022
75°	5236	4699	4763
80°	4684	4372	4467
85°	4170	4150	4296



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	74.3	1.6
10°-20°	211.8	4.4
20°-30°	316.7	6.6
30°-40°	378.3	7.9
40°-50°	395.8	8.3
50°-60°	371.4	7.8
60°-70°	310.2	6.5
70°-80°	221.9	4.7
80°-90°	134.6	2.8
90°-100°	133.2	2.8
100°-110°	211.2	4.4
110°-120°	296.2	6.2
120°-130°	359.3	7.5
130°-140°	388.2	8.1
140°-150°	373.5	7.8
150°-160°	312.6	6.6
160°-170°	208.1	4.4
170°-180°	72.9	1.5
0°-30°	602.8	12.6
0°-40°	981.1	20.6
0°-60°	1748.2	36.6
0°-90°	2415.0	50.6
90°-120°	640.7	13.4
90°-150°	1761.7	36.9
90°-180°	2355.0	49.4
0°-180°	4770.1	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	784	784	784	784	784	
5°	785	783	778	784	784	74
15°	747	749	749	757	756	210
25°	674	683	686	696	697	311
35°	580	594	605	618	622	363
45°	475	495	516	532	540	366
55°	362	390	421	443	451	324
65°	250	284	321	346	355	247
75°	136	176	219	246	257	145
85°	42	85	130	158	167	44
90°	12	60	111	141	152	10
95°	45	83	129	157	167	47
105°	143	166	207	230	240	153
115°	262	274	303	323	330	259
125°	379	382	404	419	423	338
135°	490	493	502	514	518	378
145°	593	594	596	601	603	370
155°	678	678	679	681	677	312
165°	739	737	737	740	736	208
175°	768	766	766	769	766	73
180°	770	770	770	770	770	



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CANDELA DISTRIBUTION (FULL):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
0°	783.7	783.7	783.7	783.7	783.7	783.7	783.7	783.7	783.7	783.7	783.7
2.5°	787.1	786.6	786.2	785.7	785.3	784.4	783.3	782.0	780.8	779.6	780.8
5°	784.6	784.2	783.7	783.4	783.0	782.3	781.1	780.0	778.9	777.7	779.3
7.5°	776.8	776.9	777.0	777.1	777.1	776.7	775.5	774.5	773.3	772.3	774.1
10°	770.1	770.4	770.8	771.2	771.5	771.3	770.3	769.4	768.4	767.4	769.4
12.5°	761.8	762.4	762.9	763.4	763.9	763.9	763.3	762.6	762.0	761.3	763.0
15°	747.0	747.5	748.1	748.7	749.3	749.4	749.3	749.1	748.9	748.7	750.6
17.5°	728.2	729.4	730.5	731.6	732.7	733.3	733.2	733.1	733.0	733.0	734.7
20°	714.5	715.7	716.8	718.0	719.1	719.8	720.2	720.6	721.0	721.4	723.1
22.5°	700.2	701.3	702.5	703.6	704.7	705.6	706.1	706.6	707.2	707.7	709.9
25°	674.4	676.3	678.2	680.1	682.0	683.2	683.8	684.4	684.9	685.5	687.9
27.5°	648.5	650.6	652.8	654.9	657.1	658.8	660.0	661.2	662.4	663.7	665.8
30°	630.0	632.5	635.0	637.4	639.8	641.9	643.4	644.9	646.5	647.9	650.2
32.5°	609.5	612.3	615.1	617.8	620.6	623.0	624.9	627.0	628.9	630.9	633.3
35°	580.5	583.5	586.6	589.6	592.6	595.4	597.9	600.3	602.8	605.3	608.1
37.5°	549.8	553.2	556.6	560.0	563.5	566.6	569.7	572.7	575.8	578.8	582.0
40°	529.3	532.7	536.1	539.6	542.9	546.6	550.3	554.2	557.9	561.7	564.9
42.5°	506.7	510.9	515.1	519.3	523.4	527.5	531.4	535.4	539.3	543.3	546.8
45°	474.7	479.2	483.7	488.3	492.8	497.5	502.2	507.0	511.8	516.5	520.1
47.5°	441.0	446.2	451.3	456.5	461.6	466.9	472.4	477.8	483.2	488.6	492.7
50°	419.1	424.4	429.7	435.1	440.4	446.0	451.9	457.8	463.7	469.5	473.9
52.5°	395.9	401.5	407.2	412.8	418.4	424.4	431.0	437.4	443.9	450.4	454.9
55°	362.0	368.2	374.5	380.7	387.0	393.5	400.4	407.2	414.0	420.9	426.0
57.5°	328.8	335.3	341.9	348.4	355.0	361.9	369.4	376.9	384.3	391.8	397.0
60°	305.7	312.4	319.3	326.1	333.0	340.2	348.1	355.8	363.5	371.4	376.7
62.5°	283.7	290.7	297.7	304.7	311.7	319.3	327.5	335.7	344.0	352.2	357.5
65°	250.1	257.6	264.9	272.3	279.7	287.6	296.0	304.3	312.7	321.0	326.7
67.5°	216.0	223.8	231.7	239.5	247.4	255.6	264.1	272.6	281.0	289.6	295.8
70°	192.1	200.2	208.4	216.5	224.7	233.3	242.5	251.5	260.7	269.8	275.8
72.5°	170.2	178.4	186.5	194.7	202.8	211.7	221.0	230.5	239.9	249.2	255.5
75°	135.7	144.6	153.6	162.5	171.4	180.6	190.0	199.6	209.0	218.6	224.8
77.5°	105.7	114.7	123.7	132.6	141.6	150.9	160.5	170.1	179.6	189.1	195.8
80°	84.5	93.8	103.1	112.4	121.7	131.3	141.1	151.0	160.9	170.7	177.2
82.5°	66.0	75.5	85.0	94.4	103.9	113.6	123.6	133.6	143.7	153.7	160.1
85°	41.8	51.3	60.8	70.3	79.7	89.5	99.6	109.7	119.7	129.8	136.2
87.5°	22.8	32.5	42.2	52.0	61.7	71.6	81.6	91.6	101.7	111.7	118.2
90°	11.7	22.3	33.0	43.6	54.3	65.3	76.7	88.1	99.5	111.0	118.0
92.5°	25.0	34.3	43.6	53.0	62.3	72.2	82.7	93.2	103.7	114.2	121.0
95°	45.1	53.4	61.8	70.1	78.4	87.8	98.2	108.5	119.0	129.3	135.7
97.5°	71.7	79.2	86.5	93.9	101.3	109.8	119.4	129.1	138.8	148.5	154.7
100°	90.0	96.9	103.7	110.6	117.5	125.6	135.0	144.4	153.8	163.2	169.1
102.5°	111.1	117.0	122.9	128.9	134.9	142.6	152.1	161.5	171.0	180.4	186.2
105°	143.0	147.8	152.6	157.4	162.2	169.3	178.7	188.1	197.5	206.8	212.1
107.5°	179.2	183.3	187.3	191.4	195.3	201.5	209.7	217.9	226.2	234.4	239.9
110°	201.8	205.5	209.1	212.9	216.5	222.3	230.2	238.0	245.9	253.7	259.2



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CANDELA DISTRIBUTION (continued):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
112.5°	226.0	228.9	232.0	234.9	237.9	243.0	250.4	257.7	265.1	272.4	277.8
115°	261.5	264.2	266.8	269.5	272.1	276.8	283.3	289.9	296.4	303.0	307.7
117.5°	297.8	299.5	301.2	302.9	304.5	308.4	314.5	320.5	326.6	332.6	337.1
120°	319.9	321.6	323.4	325.1	326.9	330.6	336.1	341.8	347.4	352.9	357.2
122.5°	343.6	344.7	345.8	346.9	348.0	351.3	356.9	362.6	368.1	373.7	377.6
125°	379.0	379.4	379.8	380.2	380.6	383.4	388.7	393.9	399.1	404.3	407.7
127.5°	412.4	413.0	413.7	414.4	415.1	417.5	421.8	426.0	430.3	434.6	437.6
130°	434.6	435.5	436.4	437.3	438.1	440.3	443.7	447.1	450.5	453.9	457.0
132.5°	456.2	457.3	458.3	459.3	460.4	462.3	465.0	467.7	470.5	473.2	476.1
135°	490.1	490.6	491.3	492.0	492.5	493.8	495.8	497.7	499.7	501.7	504.5
137.5°	521.4	521.9	522.4	522.9	523.4	524.5	526.0	527.5	529.0	530.6	533.0
140°	542.5	543.2	543.8	544.5	545.2	545.8	546.6	547.2	548.0	548.6	551.4
142.5°	562.3	562.8	563.4	563.9	564.4	564.8	565.2	565.6	565.9	566.2	568.7
145°	593.3	593.4	593.5	593.5	593.6	593.9	594.3	594.7	595.1	595.5	596.9
147.5°	619.5	620.0	620.5	621.0	621.5	621.9	622.3	622.6	623.1	623.5	623.9
150°	638.5	638.7	639.0	639.3	639.5	639.8	640.0	640.3	640.6	640.8	640.8
152.5°	654.0	654.3	654.7	655.1	655.4	655.7	655.8	656.0	656.2	656.3	656.6
155°	678.4	678.4	678.4	678.4	678.4	678.4	678.6	678.7	678.8	679.0	679.6
157.5°	699.2	699.0	698.9	698.7	698.5	698.5	698.6	698.7	698.9	699.0	699.5
160°	712.2	712.0	711.8	711.4	711.2	711.0	711.0	711.0	711.0	711.0	711.8
162.5°	723.9	723.5	723.1	722.8	722.4	722.3	722.4	722.4	722.6	722.7	723.3
165°	738.9	738.5	738.1	737.7	737.3	737.0	737.0	737.0	737.0	737.0	737.8
167.5°	750.9	750.3	749.8	749.3	748.7	748.5	748.6	748.7	748.9	748.9	749.7
170°	757.7	757.1	756.6	756.0	755.5	755.2	755.2	755.2	755.2	755.2	756.2
172.5°	763.0	762.5	761.9	761.3	760.8	760.5	760.5	760.5	760.5	760.5	761.4
175°	768.5	768.0	767.4	767.0	766.4	766.1	766.1	766.1	766.1	766.1	767.0
177.5°	770.9	770.4	770.0	769.6	769.2	768.9	768.9	768.9	768.9	768.9	769.6
180°	770.4	770.4	770.4	770.4	770.4	770.4	770.4	770.4	770.4	770.4	770.4



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CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
0°	783.7	783.7	783.7	783.7	783.7	783.7	783.7	783.7
2.5°	782.0	783.3	784.4	785.0	784.8	784.6	784.5	784.4
5°	780.7	782.3	783.7	784.4	784.2	784.1	783.9	783.7
7.5°	776.0	778.0	779.8	780.6	780.4	780.2	780.0	779.8
10°	771.3	773.1	775.0	775.8	775.4	775.0	774.7	774.3
12.5°	764.8	766.5	768.3	769.0	768.6	768.3	767.8	767.4
15°	752.4	754.4	756.3	757.1	756.9	756.8	756.5	756.4
17.5°	736.4	738.1	739.8	740.5	740.3	740.0	739.7	739.5
20°	724.8	726.5	728.2	729.1	729.4	729.5	729.7	729.9
22.5°	712.0	714.2	716.3	717.4	717.3	717.1	717.1	716.9
25°	690.5	692.9	695.4	696.6	696.6	696.6	696.6	696.6
27.5°	667.9	670.0	672.1	673.3	673.4	673.6	673.8	673.9
30°	652.5	654.8	657.0	658.2	658.2	658.2	658.2	658.2
32.5°	635.7	638.1	640.6	642.0	642.5	642.9	643.4	643.8
35°	611.0	613.8	616.6	618.5	619.2	620.0	620.7	621.5
37.5°	585.2	588.5	591.7	593.6	594.2	594.8	595.4	596.1
40°	568.2	571.4	574.6	576.6	577.4	578.1	578.9	579.7
42.5°	550.3	553.8	557.4	559.7	560.8	561.8	562.9	563.9
45°	523.7	527.3	530.9	533.5	535.0	536.5	538.0	539.6
47.5°	496.8	500.8	504.9	507.5	508.7	509.9	511.0	512.2
50°	478.3	482.6	487.0	489.8	491.1	492.4	493.8	495.1
52.5°	459.4	464.0	468.5	471.6	473.2	474.8	476.5	478.1
55°	431.1	436.3	441.3	444.7	446.2	447.7	449.2	450.8
57.5°	402.2	407.3	412.5	416.0	417.8	419.6	421.3	423.1
60°	382.0	387.3	392.6	396.3	398.4	400.5	402.6	404.6
62.5°	362.9	368.2	373.5	377.1	379.0	381.0	382.9	384.8
65°	332.4	338.0	343.7	347.6	349.4	351.3	353.3	355.1
67.5°	302.0	308.3	314.5	318.4	319.9	321.6	323.2	324.7
70°	281.9	288.0	294.1	298.0	299.9	301.8	303.7	305.7
72.5°	261.7	267.9	274.2	278.3	280.1	282.0	283.9	285.8
75°	231.1	237.3	243.6	247.9	250.1	252.4	254.7	257.0
77.5°	202.4	209.0	215.6	219.7	221.5	223.2	225.0	226.7
80°	183.6	190.0	196.6	200.7	202.6	204.5	206.4	208.3
82.5°	166.6	173.0	179.4	183.6	185.6	187.4	189.3	191.2
85°	142.7	149.1	155.6	159.7	161.6	163.5	165.4	167.3
87.5°	124.7	131.3	137.9	142.2	144.1	146.0	148.0	149.9
90°	125.0	131.9	138.9	143.5	145.7	147.8	150.0	152.2
92.5°	127.7	134.4	141.1	145.3	146.9	148.5	150.1	151.6
95°	142.1	148.5	155.0	159.1	161.0	162.9	164.9	166.7
97.5°	161.0	167.3	173.5	177.6	179.4	181.2	183.1	185.0
100°	175.0	180.9	186.9	190.9	193.1	195.2	197.4	199.6
102.5°	191.9	197.7	203.4	207.2	209.1	210.9	212.8	214.6
105°	217.4	222.7	228.1	231.7	233.7	235.7	237.7	239.6
107.5°	245.4	250.9	256.4	260.0	261.5	263.0	264.5	266.0
110°	264.6	270.1	275.6	279.0	280.2	281.4	282.7	284.0



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CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
112.5°	283.2	288.7	294.1	297.6	299.2	300.8	302.5	304.1
115°	312.4	317.1	321.8	324.8	326.2	327.6	329.0	330.4
117.5°	341.6	346.1	350.6	353.4	354.5	355.6	356.7	357.8
120°	361.4	365.7	369.9	372.5	373.6	374.6	375.7	376.7
122.5°	381.5	385.3	389.2	391.6	392.6	393.5	394.4	395.4
125°	411.2	414.7	418.1	420.2	421.0	421.8	422.6	423.4
127.5°	440.6	443.5	446.5	448.4	449.1	449.7	450.4	451.1
130°	460.0	463.1	466.2	467.8	468.0	468.1	468.4	468.6
132.5°	478.8	481.7	484.5	486.2	486.7	487.2	487.8	488.4
135°	507.4	510.3	513.1	514.9	515.6	516.2	517.0	517.6
137.5°	535.4	537.9	540.3	541.8	542.2	542.6	543.1	543.5
140°	554.1	556.8	559.5	560.8	560.8	560.8	560.8	560.9
142.5°	571.0	573.5	575.8	577.2	577.4	577.6	577.9	578.1
145°	598.3	599.7	601.0	601.8	602.0	602.3	602.4	602.7
147.5°	624.4	624.8	625.3	625.4	625.3	625.2	625.0	624.9
150°	640.8	640.8	640.8	640.7	640.2	639.8	639.4	639.0
152.5°	656.8	657.0	657.2	657.0	656.4	655.7	655.1	654.5
155°	680.0	680.6	681.1	680.9	680.0	679.1	678.1	677.2
157.5°	700.1	700.7	701.2	701.1	700.3	699.6	698.9	698.1
160°	712.4	713.1	713.7	713.8	713.3	712.7	712.2	711.7
162.5°	724.0	724.7	725.4	725.3	724.4	723.6	722.7	721.8
165°	738.7	739.5	740.3	740.2	739.3	738.3	737.4	736.5
167.5°	750.6	751.5	752.3	752.3	751.5	750.6	749.7	748.9
170°	757.1	758.1	759.0	759.0	758.1	757.1	756.2	755.2
172.5°	762.2	763.0	763.9	763.9	762.9	762.0	761.0	760.1
175°	767.8	768.5	769.3	769.3	768.3	767.4	766.5	765.5
177.5°	770.2	770.9	771.5	771.4	770.7	769.9	769.2	768.4
180°	770.4	770.4	770.4	770.4	770.4	770.4	770.4	770.4

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