

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: P332129-940

Luminaire Tested: **S123DIW-S560D755U940-4F0-1E-UDD-D1**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P332129-940
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-S560D755U940-4F0-1E-UDD-D1
Description: DEFINE 3 DIRECT-INDIRECT WALL MOUNT LED LUMINAIRE
DOWNLIGHT 560 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: 4444.1 lumens
Efficiency: N/A
Efficacy: 118.2 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

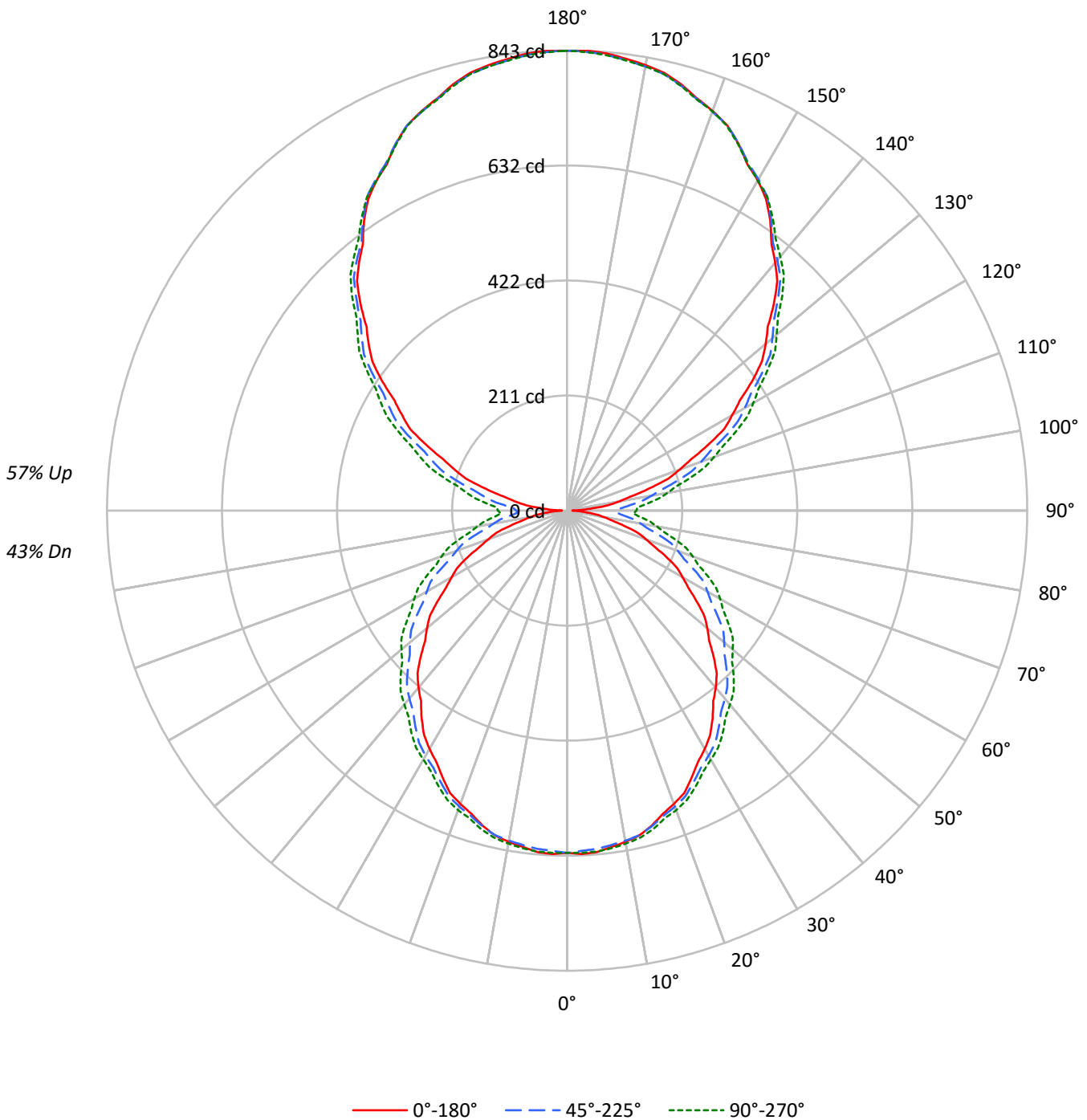
Input Watts (W): 37.6
Input Voltage (V): 120
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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	106	106	106	106	97	97	97	97	80	80	80	64	64	64	50	50	50	43
1	95	91	86	83	87	83	79	76	68	66	63	55	53	52	43	42	40	35
2	86	79	72	67	79	72	66	62	59	55	52	48	45	42	37	35	33	28
3	79	69	61	55	71	63	56	51	52	47	43	42	38	35	33	30	28	24
4	72	61	53	46	65	56	49	43	46	41	36	37	33	30	29	26	24	20
5	66	54	46	39	60	49	42	37	41	36	31	33	29	26	26	23	21	17
6	60	48	40	34	55	44	37	32	37	31	27	30	26	23	24	20	18	15
7	56	43	35	30	51	40	33	28	33	28	24	27	23	20	21	18	16	13
8	52	39	32	26	47	36	29	24	30	25	21	25	21	18	20	17	14	12
9	48	36	28	23	44	33	26	22	28	22	19	23	19	16	18	15	13	11
10	45	33	26	21	41	30	24	19	26	20	17	21	17	14	17	14	12	10

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	6750	6750	6750
5°	6771	6579	6584
10°	6710	6428	6396
15°	6624	6256	6191
20°	6501	6059	5966
25°	6348	5833	5729
30°	6191	5629	5489
35°	6016	5414	5298
40°	5848	5218	5093
45°	5664	5030	4929
50°	5480	4845	4748
55°	5278	4654	4586
60°	5080	4461	4419
65°	4879	4255	4221
70°	4575	4025	4016
75°	4191	3760	3810
80°	3748	3499	3575
85°	3332	3319	3435



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	59.4	1.3
10°-20°	169.5	3.8
20°-30°	253.4	5.7
30°-40°	302.7	6.8
40°-50°	316.7	7.1
50°-60°	297.2	6.7
60°-70°	248.2	5.6
70°-80°	177.6	4.0
80°-90°	108.4	2.4
90°-100°	121.3	2.7
100°-110°	213.1	4.8
110°-120°	312.0	7.0
120°-130°	386.2	8.7
130°-140°	421.5	9.5
140°-150°	407.9	9.2
150°-160°	341.9	7.7
160°-170°	227.6	5.1
170°-180°	79.7	1.8
0°-30°	482.3	10.9
0°-40°	785.0	17.7
0°-60°	1398.8	31.5
0°-90°	1933.0	43.5
90°-120°	646.5	14.5
90°-150°	1862.0	41.9
90°-180°	2511.0	56.5
0°-180°	4444.1	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	627	627	627	627	627	
5°	628	626	622	627	627	59
15°	598	600	599	605	605	168
25°	540	546	548	557	557	249
35°	464	475	484	494	497	290
45°	380	396	413	426	432	293
55°	290	312	337	354	361	259
65°	200	227	257	277	284	198
75°	109	141	175	197	206	116
85°	33	68	104	126	134	35
90°	10	50	93	118	127	8
95°	46	78	117	140	147	50
105°	154	173	207	226	234	165
115°	285	296	318	334	340	282
125°	414	417	434	445	448	369
135°	536	539	546	555	557	413
145°	649	649	651	656	656	405
155°	742	742	743	745	741	341
165°	808	806	806	810	806	228
175°	840	838	838	841	837	80
180°	843	843	843	843	843	



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CANDELA DISTRIBUTION (FULL):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
0°	627.1	627.1	627.1	627.1	627.1	627.1	627.1	627.1	627.1	627.1	627.1
2.5°	629.8	629.5	629.1	628.7	628.3	627.7	626.7	625.7	624.7	623.8	624.7
5°	627.8	627.4	627.1	626.9	626.5	625.9	625.0	624.1	623.2	622.2	623.5
7.5°	621.6	621.6	621.7	621.8	621.9	621.4	620.5	619.6	618.8	617.9	619.4
10°	616.2	616.4	616.7	617.1	617.3	617.2	616.4	615.6	614.8	614.1	615.6
12.5°	609.6	610.0	610.5	610.8	611.3	611.3	610.7	610.2	609.7	609.1	610.6
15°	597.7	598.2	598.6	599.1	599.5	599.7	599.5	599.3	599.2	599.1	600.6
17.5°	582.6	583.5	584.5	585.4	586.3	586.7	586.7	586.6	586.6	586.5	587.8
20°	571.8	572.7	573.5	574.4	575.3	576.0	576.3	576.6	576.8	577.2	578.5
22.5°	560.3	561.2	562.0	563.0	563.9	564.5	565.0	565.4	565.9	566.2	568.0
25°	539.7	541.2	542.7	544.2	545.7	546.7	547.2	547.6	548.0	548.5	550.5
27.5°	518.9	520.6	522.4	524.1	525.8	527.1	528.1	529.1	530.0	531.0	532.7
30°	504.1	506.0	508.0	510.1	512.0	513.6	514.8	516.0	517.2	518.4	520.3
32.5°	487.7	489.9	492.1	494.4	496.6	498.5	500.1	501.6	503.2	504.8	506.8
35°	464.5	466.9	469.3	471.8	474.2	476.4	478.4	480.4	482.3	484.3	486.6
37.5°	439.9	442.6	445.3	448.1	450.8	453.4	455.8	458.3	460.7	463.2	465.7
40°	423.5	426.2	429.0	431.7	434.4	437.3	440.3	443.4	446.4	449.4	452.0
42.5°	405.5	408.8	412.1	415.4	418.8	422.0	425.3	428.4	431.6	434.7	437.6
45°	379.8	383.4	387.1	390.7	394.3	398.1	401.9	405.6	409.5	413.2	416.2
47.5°	352.8	357.0	361.1	365.2	369.3	373.6	378.0	382.3	386.6	391.0	394.2
50°	335.4	339.7	343.8	348.1	352.4	356.9	361.6	366.3	371.0	375.7	379.2
52.5°	316.8	321.3	325.8	330.3	334.7	339.7	344.8	350.0	355.2	360.4	364.0
55°	289.6	294.6	299.6	304.6	309.7	314.9	320.4	325.8	331.3	336.7	340.8
57.5°	263.1	268.3	273.6	278.7	284.0	289.6	295.6	301.6	307.6	313.5	317.6
60°	244.5	250.0	255.5	260.9	266.4	272.2	278.5	284.7	290.9	297.1	301.4
62.5°	227.0	232.6	238.3	243.8	249.4	255.5	262.1	268.7	275.3	281.9	286.1
65°	200.1	206.1	212.0	217.9	223.8	230.2	236.8	243.4	250.1	256.8	261.4
67.5°	172.8	179.1	185.4	191.6	198.0	204.5	211.3	218.1	224.9	231.7	236.7
70°	153.7	160.2	166.7	173.3	179.8	186.7	193.9	201.3	208.6	215.9	220.7
72.5°	136.2	142.8	149.3	155.8	162.3	169.3	176.8	184.4	191.9	199.5	204.5
75°	108.6	115.7	122.9	130.0	137.1	144.5	152.1	159.7	167.3	174.9	179.9
77.5°	84.5	91.8	99.0	106.1	113.3	120.7	128.4	136.1	143.7	151.4	156.7
80°	67.6	75.1	82.5	90.0	97.4	105.0	112.9	120.8	128.8	136.6	141.8
82.5°	52.9	60.5	67.9	75.5	83.1	90.9	98.9	106.9	114.9	123.0	128.1
85°	33.4	41.0	48.7	56.3	63.8	71.6	79.7	87.7	95.8	103.8	109.0
87.5°	18.3	26.1	34.0	41.8	49.8	57.7	65.8	73.9	82.0	90.2	95.5
90°	9.5	18.5	27.4	36.3	45.2	54.5	64.1	73.7	83.4	93.1	98.8
92.5°	24.3	32.1	39.8	47.4	55.2	63.4	72.1	80.8	89.5	98.3	103.7
95°	46.5	53.5	60.5	67.4	74.4	82.1	90.8	99.3	108.0	116.6	121.9
97.5°	76.1	82.1	88.3	94.3	100.5	107.5	115.5	123.4	131.3	139.4	144.5
100°	96.1	101.9	107.6	113.3	119.1	125.8	133.6	141.2	149.0	156.8	161.6
102.5°	119.4	124.3	129.2	134.1	139.0	145.4	153.3	161.0	168.9	176.7	181.5
105°	154.4	158.3	162.3	166.2	170.1	176.0	183.9	191.7	199.6	207.4	211.7
107.5°	194.3	197.6	200.9	204.1	207.4	212.4	219.2	225.9	232.6	239.3	243.9
110°	219.2	222.2	225.2	228.3	231.3	236.0	242.4	248.7	255.1	261.4	266.0



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CANDELA DISTRIBUTION (continued):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
112.5°	245.7	248.1	250.5	253.0	255.4	259.5	265.4	271.3	277.2	283.1	287.6
115°	284.7	287.0	289.3	291.5	293.7	297.5	302.6	307.8	313.0	318.2	321.9
117.5°	324.6	326.0	327.3	328.8	330.2	333.3	338.0	342.8	347.6	352.3	355.9
120°	348.9	350.5	352.1	353.8	355.4	358.4	362.7	366.9	371.2	375.5	378.9
122.5°	374.9	375.9	376.9	378.0	379.0	381.7	386.1	390.5	394.8	399.2	402.3
125°	413.8	414.2	414.6	415.1	415.5	417.8	421.9	426.0	430.1	434.2	436.8
127.5°	450.2	451.0	451.8	452.6	453.4	455.5	458.8	462.1	465.5	468.8	470.9
130°	474.7	475.6	476.7	477.7	478.8	480.5	483.1	485.7	488.3	490.9	493.2
132.5°	498.5	499.5	500.7	501.9	503.0	504.6	506.8	508.8	511.0	513.1	515.1
135°	535.5	536.2	537.0	537.7	538.4	539.6	541.1	542.6	544.1	545.6	547.8
137.5°	569.8	570.4	571.0	571.6	572.2	573.2	574.5	575.9	577.2	578.5	580.2
140°	593.1	593.8	594.5	595.2	596.0	596.6	597.3	597.9	598.4	599.1	601.2
142.5°	614.7	615.4	616.0	616.6	617.2	617.7	618.0	618.4	618.8	619.1	621.0
145°	648.6	648.8	648.9	649.1	649.3	649.5	650.0	650.4	650.9	651.3	652.4
147.5°	677.6	678.1	678.7	679.2	679.8	680.2	680.6	681.0	681.4	681.9	682.2
150°	698.3	698.6	698.8	699.2	699.5	699.7	700.0	700.3	700.6	700.9	700.9
152.5°	715.2	715.6	716.0	716.5	716.8	717.1	717.3	717.5	717.6	717.8	718.1
155°	742.0	742.0	742.0	742.0	742.0	742.0	742.2	742.3	742.4	742.6	743.2
157.5°	764.7	764.6	764.4	764.2	764.0	764.0	764.1	764.2	764.4	764.5	765.1
160°	779.0	778.7	778.5	778.1	777.8	777.7	777.7	777.7	777.7	777.7	778.5
162.5°	791.8	791.3	790.9	790.5	790.1	790.0	790.1	790.1	790.3	790.4	791.1
165°	808.2	807.7	807.3	806.8	806.4	806.1	806.1	806.1	806.1	806.1	807.0
167.5°	821.3	820.6	820.1	819.5	818.9	818.7	818.8	818.9	819.0	819.1	820.0
170°	828.7	828.0	827.5	826.9	826.3	826.0	826.0	826.0	826.0	826.0	827.1
172.5°	834.5	833.9	833.3	832.7	832.1	831.8	831.8	831.8	831.8	831.8	832.8
175°	840.5	840.0	839.4	838.8	838.2	837.9	837.9	837.9	837.9	837.9	838.8
177.5°	843.1	842.6	842.1	841.7	841.2	841.0	841.0	841.0	841.0	841.0	841.7
180°	842.6	842.6	842.6	842.6	842.6	842.6	842.6	842.6	842.6	842.6	842.6



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CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
0°	627.1	627.1	627.1	627.1	627.1	627.1	627.1	627.1
2.5°	625.7	626.7	627.7	628.1	627.9	627.9	627.8	627.6
5°	624.7	625.9	627.1	627.7	627.5	627.3	627.2	627.1
7.5°	620.9	622.4	624.0	624.6	624.5	624.3	624.1	623.9
10°	617.2	618.7	620.2	620.7	620.5	620.2	619.8	619.6
12.5°	612.0	613.3	614.7	615.3	615.0	614.7	614.4	614.1
15°	602.1	603.6	605.1	605.8	605.6	605.5	605.4	605.2
17.5°	589.2	590.6	591.9	592.5	592.3	592.1	591.9	591.7
20°	580.0	581.3	582.6	583.4	583.5	583.7	583.9	584.0
22.5°	569.7	571.5	573.2	574.0	573.9	573.8	573.7	573.6
25°	552.4	554.5	556.4	557.4	557.4	557.4	557.4	557.4
27.5°	534.4	536.1	537.8	538.8	538.9	539.0	539.1	539.2
30°	522.1	523.9	525.8	526.6	526.6	526.6	526.6	526.6
32.5°	508.6	510.6	512.6	513.7	514.1	514.4	514.8	515.1
35°	488.8	491.2	493.4	494.8	495.4	496.1	496.7	497.3
37.5°	468.2	470.8	473.4	475.0	475.5	475.9	476.4	476.9
40°	454.6	457.2	459.8	461.4	462.0	462.6	463.2	463.8
42.5°	440.3	443.2	446.0	447.8	448.7	449.5	450.4	451.2
45°	419.0	421.9	424.8	426.9	428.0	429.3	430.5	431.7
47.5°	397.5	400.7	403.9	406.1	407.0	408.0	408.9	409.8
50°	382.6	386.2	389.7	391.9	393.0	394.0	395.1	396.2
52.5°	367.7	371.2	374.9	377.3	378.6	379.9	381.2	382.5
55°	344.9	349.0	353.1	355.8	357.0	358.2	359.4	360.7
57.5°	321.8	325.9	330.0	332.8	334.2	335.6	337.1	338.5
60°	305.7	309.9	314.1	317.1	318.8	320.4	322.1	323.8
62.5°	290.3	294.6	298.8	301.8	303.3	304.8	306.4	307.9
65°	265.9	270.5	275.1	278.1	279.6	281.2	282.7	284.2
67.5°	241.7	246.6	251.6	254.8	256.0	257.3	258.6	259.8
70°	225.6	230.4	235.3	238.4	240.0	241.5	243.0	244.5
72.5°	209.4	214.4	219.4	222.7	224.2	225.7	227.2	228.7
75°	184.9	189.9	194.9	198.3	200.1	202.0	203.8	205.6
77.5°	161.9	167.2	172.5	175.8	177.3	178.6	180.0	181.5
80°	147.0	152.1	157.3	160.6	162.1	163.6	165.1	166.7
82.5°	133.3	138.4	143.6	147.0	148.5	150.0	151.5	153.0
85°	114.1	119.3	124.5	127.8	129.3	130.8	132.3	133.8
87.5°	100.8	106.0	111.3	114.8	116.3	117.9	119.5	121.0
90°	104.6	110.3	116.1	119.8	121.6	123.5	125.3	127.1
92.5°	109.2	114.8	120.3	123.7	124.8	126.1	127.3	128.5
95°	127.2	132.5	137.8	141.2	142.7	144.2	145.7	147.2
97.5°	149.7	155.0	160.2	163.5	165.0	166.4	167.8	169.3
100°	166.4	171.2	176.1	179.4	181.2	183.1	184.9	186.6
102.5°	186.2	190.9	195.6	198.7	200.2	201.6	203.1	204.6
105°	216.0	220.2	224.4	227.4	229.1	230.7	232.4	234.0
107.5°	248.4	252.9	257.4	260.3	261.4	262.6	263.8	264.9
110°	270.5	275.1	279.6	282.3	283.3	284.2	285.1	286.1



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CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
112.5°	292.1	296.7	301.2	304.1	305.4	306.7	307.9	309.2
115°	325.7	329.5	333.3	335.7	336.8	337.9	338.9	340.0
117.5°	359.4	363.0	366.6	368.8	369.6	370.3	371.1	371.9
120°	382.2	385.6	388.9	390.9	391.7	392.4	393.2	394.0
122.5°	405.2	408.2	411.2	413.0	413.7	414.3	415.0	415.6
125°	439.4	442.0	444.6	446.1	446.6	447.1	447.5	448.0
127.5°	473.1	475.3	477.5	478.8	479.1	479.5	479.8	480.2
130°	495.5	497.8	500.1	501.1	501.1	501.0	500.8	500.7
132.5°	517.2	519.2	521.3	522.5	522.6	522.9	523.2	523.3
135°	549.9	552.1	554.2	555.5	556.0	556.4	556.9	557.4
137.5°	582.0	583.8	585.6	586.6	586.8	587.0	587.2	587.4
140°	603.3	605.5	607.6	608.5	608.2	608.0	607.7	607.4
142.5°	622.9	624.8	626.7	627.6	627.6	627.5	627.5	627.5
145°	653.4	654.5	655.6	656.1	656.1	656.1	656.1	656.1
147.5°	682.6	683.0	683.3	683.3	683.0	682.7	682.3	682.0
150°	700.9	700.9	700.9	700.6	700.1	699.5	698.9	698.3
152.5°	718.4	718.5	718.8	718.5	717.8	717.1	716.5	715.8
155°	743.8	744.4	744.9	744.8	743.7	742.7	741.6	740.7
157.5°	765.7	766.3	767.0	766.8	766.0	765.2	764.4	763.5
160°	779.2	779.9	780.6	780.7	780.2	779.5	778.9	778.4
162.5°	791.8	792.6	793.4	793.3	792.3	791.4	790.4	789.4
165°	807.9	808.8	809.7	809.6	808.6	807.5	806.6	805.5
167.5°	820.9	821.9	822.8	822.8	821.9	820.9	820.0	819.1
170°	828.0	829.1	830.1	830.1	829.1	828.0	827.1	826.0
172.5°	833.7	834.6	835.4	835.4	834.4	833.4	832.3	831.3
175°	839.7	840.5	841.4	841.4	840.3	839.3	838.3	837.2
177.5°	842.4	843.1	843.8	843.7	842.9	842.0	841.2	840.4
180°	842.6	842.6	842.6	842.6	842.6	842.6	842.6	842.6

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