

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: P331924-935

Luminaire Tested: **S123DIP-S560D585U935-4F0-1E-UDD-D4**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P331924-935
REPORT IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-1807-864-17,
Test Lab: INNOVATION CENTER
Issue Date: 3/3/2020
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: NEO-RAY
Catalog Number: S123DIP-S560D585U935-4F0-1E-UDD-D4
Description: DEFINE 3 DIRECT-INDIRECT PENDANT LED LUMINAIRE
DOWNLIGHT 560 LUMENS PER FOOT, DROP SATIN WHITE DIFFUSER
UPLIGHT 585 LUMENS PER FOOT, BATWING OPTIC
Light Source: -
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 3861.7 lumens
Efficiency: N/A
Efficacy: 117.7 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

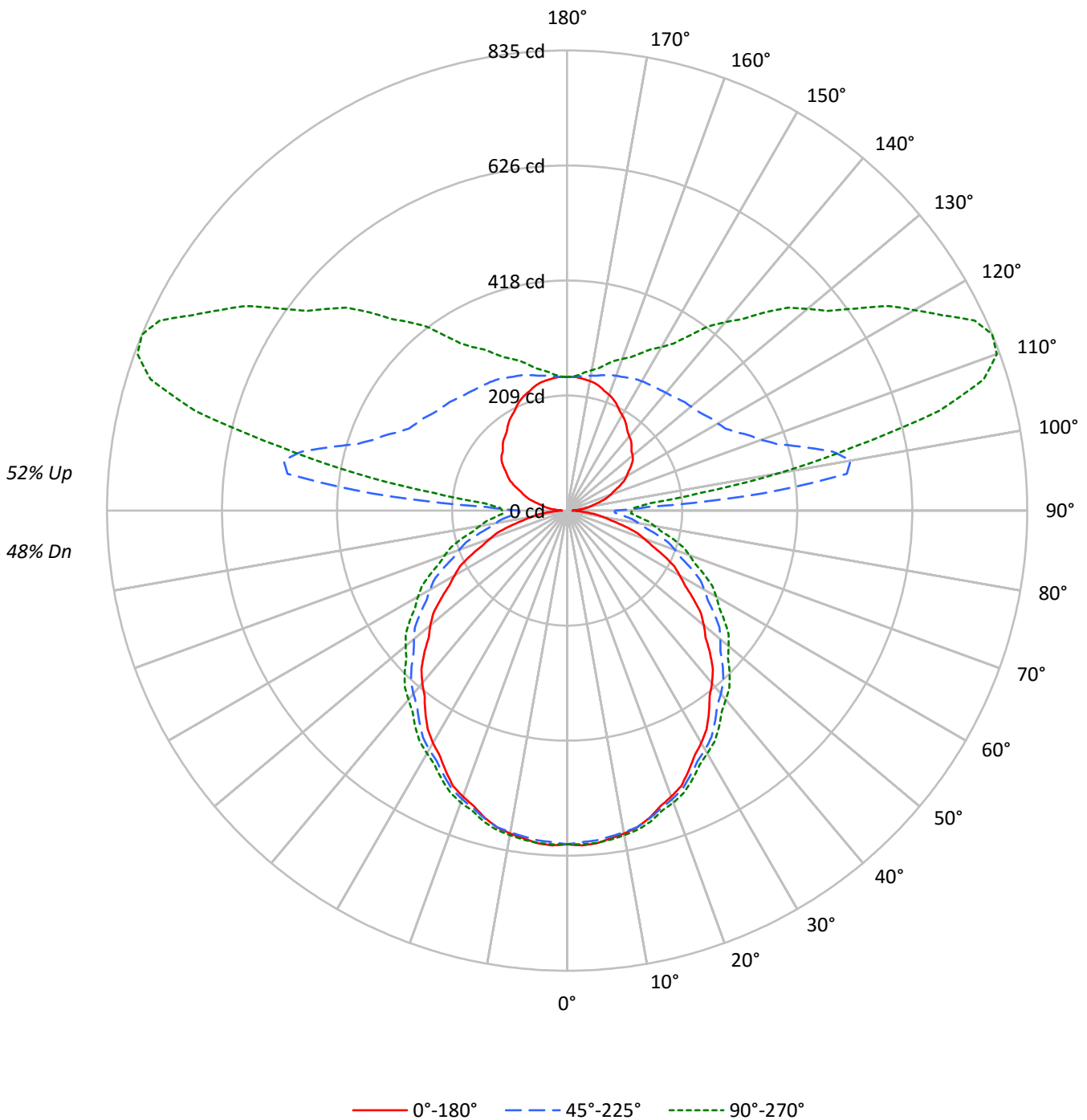
Input Watts (W): 32.8
Input Voltage (V): 120
Input Current (A_{in}): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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	98	98	98	98	82	82	82		68	68	68		55	55	55	48
1	96	92	87	83	88	84	81	77	71	68	65		58	56	54		47	45	44	39
2	87	79	73	67	80	73	67	63	61	57	53		50	47	45		40	38	36	32
3	79	69	62	56	73	64	57	52	54	49	44		44	41	37		35	33	30	26
4	73	61	53	47	66	57	49	44	48	42	38		39	35	32		32	28	26	22
5	66	54	46	40	61	50	43	37	42	37	32		35	31	27		28	25	22	19
6	61	49	40	34	56	45	38	32	38	32	28		32	27	24		26	22	20	17
7	56	44	36	30	52	41	33	28	35	29	25		29	24	21		23	20	17	15
8	52	40	32	26	48	37	30	25	31	26	22		26	22	19		21	18	16	13
9	49	36	29	23	45	34	27	22	29	23	19		24	20	17		20	16	14	12
10	45	33	26	21	42	31	24	20	26	21	17		22	18	15		18	15	13	11

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	6518	6518	6518
5°	6537	6352	6357
10°	6480	6207	6175
15°	6395	6040	5978
20°	6277	5850	5760
25°	6129	5632	5532
30°	5977	5436	5300
35°	5809	5228	5116
40°	5647	5038	4917
45°	5468	4857	4759
50°	5291	4678	4584
55°	5097	4494	4428
60°	4906	4308	4266
65°	4710	4109	4076
70°	4418	3885	3878
75°	4048	3629	3679
80°	3620	3378	3451
85°	3222	3204	3317



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	57.4	1.5
10°-20°	163.6	4.2
20°-30°	244.7	6.3
30°-40°	292.2	7.6
40°-50°	305.8	7.9
50°-60°	286.9	7.4
60°-70°	239.6	6.2
70°-80°	171.5	4.4
80°-90°	104.1	2.7
90°-100°	199.2	5.2
100°-110°	429.4	11.1
110°-120°	407.6	10.6
120°-130°	318.0	8.2
130°-140°	244.6	6.3
140°-150°	178.3	4.6
150°-160°	123.1	3.2
160°-170°	72.3	1.9
170°-180°	23.5	0.6
0°-30°	465.7	12.1
0°-40°	758.0	19.6
0°-60°	1350.7	35.0
0°-90°	1865.9	48.3
90°-120°	1036.2	26.8
90°-150°	1777.0	46.0
90°-180°	1996.0	51.7
0°-180°	3861.7	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	606	606	606	606	606	
5°	606	605	601	606	606	57
15°	577	579	578	585	584	162
25°	521	527	530	538	538	240
35°	448	459	468	477	480	280
45°	367	383	399	411	417	283
55°	280	302	325	342	348	250
65°	193	219	248	267	274	191
75°	105	136	169	190	198	112
85°	32	65	100	122	129	34
90°	10	47	87	110	118	7
95°	24	88	356	170	149	24
105°	62	106	444	758	698	66
115°	104	138	337	712	816	103
125°	142	168	303	545	639	126
135°	165	197	286	440	509	128
145°	188	214	274	350	388	118
155°	213	229	266	302	315	98
165°	232	239	254	270	274	65
175°	242	242	244	248	247	23
180°	243	243	243	243	243	



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CANDELA DISTRIBUTION (FULL):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
0°	605.5	605.5	605.5	605.5	605.5	605.5	605.5	605.5	605.5	605.5	605.5
2.5°	608.1	607.8	607.4	607.0	606.7	606.1	605.1	604.2	603.2	602.3	603.2
5°	606.1	605.8	605.5	605.3	604.9	604.3	603.5	602.6	601.8	600.8	602.0
7.5°	600.2	600.2	600.3	600.4	600.5	600.0	599.2	598.3	597.4	596.6	598.1
10°	595.0	595.2	595.5	595.8	596.1	595.9	595.1	594.4	593.7	593.0	594.4
12.5°	588.6	589.0	589.4	589.8	590.2	590.2	589.7	589.2	588.7	588.1	589.5
15°	577.1	577.6	578.0	578.4	578.9	579.0	578.9	578.7	578.6	578.4	579.9
17.5°	562.6	563.4	564.4	565.2	566.1	566.5	566.5	566.4	566.4	566.3	567.6
20°	552.1	552.9	553.8	554.7	555.5	556.1	556.5	556.7	557.0	557.3	558.6
22.5°	541.0	541.8	542.7	543.6	544.5	545.1	545.5	546.0	546.4	546.7	548.5
25°	521.1	522.5	524.0	525.5	526.9	527.9	528.3	528.7	529.2	529.6	531.5
27.5°	501.0	502.7	504.4	506.0	507.6	508.9	509.9	510.8	511.8	512.7	514.4
30°	486.7	488.6	490.5	492.5	494.4	495.9	497.1	498.3	499.4	500.6	502.4
32.5°	470.9	473.0	475.2	477.3	479.5	481.3	482.8	484.3	485.9	487.4	489.3
35°	448.5	450.8	453.1	455.6	457.9	460.0	461.9	463.8	465.7	467.6	469.8
37.5°	424.7	427.4	430.0	432.7	435.3	437.8	440.1	442.5	444.8	447.2	449.7
40°	408.9	411.6	414.2	416.8	419.5	422.2	425.2	428.1	431.0	433.9	436.4
42.5°	391.5	394.8	398.0	401.1	404.4	407.5	410.6	413.6	416.7	419.7	422.5
45°	366.7	370.2	373.8	377.3	380.7	384.4	388.1	391.7	395.4	399.0	401.8
47.5°	340.7	344.7	348.7	352.7	356.6	360.8	365.0	369.1	373.3	377.5	380.6
50°	323.8	328.0	332.0	336.1	340.3	344.6	349.1	353.7	358.2	362.7	366.1
52.5°	305.9	310.2	314.6	318.9	323.2	328.0	332.9	337.9	342.9	348.0	351.5
55°	279.7	284.5	289.3	294.1	299.0	304.0	309.4	314.6	319.9	325.1	329.1
57.5°	254.1	259.1	264.2	269.1	274.2	279.7	285.4	291.2	297.0	302.7	306.7
60°	236.1	241.4	246.7	251.9	257.2	262.9	268.9	274.9	280.9	286.9	291.0
62.5°	219.2	224.6	230.1	235.4	240.8	246.7	253.0	259.4	265.8	272.2	276.2
65°	193.2	199.0	204.7	210.4	216.1	222.2	228.7	235.1	241.5	248.0	252.4
67.5°	166.9	173.0	179.0	185.0	191.1	197.4	204.1	210.6	217.1	223.7	228.5
70°	148.4	154.7	161.0	167.3	173.6	180.3	187.3	194.3	201.4	208.4	213.1
72.5°	131.5	137.8	144.1	150.4	156.7	163.5	170.7	178.1	185.3	192.6	197.4
75°	104.9	111.8	118.6	125.5	132.4	139.6	146.9	154.2	161.5	168.8	173.7
77.5°	81.6	88.6	95.6	102.5	109.4	116.6	124.0	131.4	138.8	146.2	151.3
80°	65.3	72.5	79.6	86.9	94.0	101.4	109.0	116.7	124.3	131.9	136.9
82.5°	51.1	58.4	65.6	72.9	80.2	87.7	95.5	103.2	111.0	118.7	123.7
85°	32.3	39.6	47.0	54.3	61.6	69.1	77.0	84.7	92.5	100.2	105.2
87.5°	17.7	25.2	32.7	40.3	47.8	55.4	63.2	70.9	78.7	86.4	91.4
90°	9.6	17.7	25.9	34.5	42.7	51.0	59.9	68.9	77.8	86.8	91.3
92.5°	14.1	23.6	34.2	44.5	55.1	69.2	89.5	118.0	146.0	145.9	132.2
95°	23.9	31.2	42.3	56.3	74.8	100.4	149.3	229.7	317.5	356.5	306.1
97.5°	35.0	40.6	49.9	62.4	80.2	106.9	153.6	243.0	384.1	511.9	547.8
100°	42.3	47.4	55.6	67.2	83.6	108.5	149.6	229.0	365.0	522.5	623.5
102.5°	50.0	55.1	62.3	73.1	87.9	110.9	148.4	216.7	338.3	493.8	624.1
105°	62.3	67.2	73.7	83.1	95.9	116.1	149.0	205.8	304.9	444.3	589.4
107.5°	74.6	79.0	84.9	93.7	105.5	124.1	153.3	201.3	282.1	400.2	532.1
110°	83.5	87.6	92.7	100.7	111.8	129.8	157.7	200.9	272.6	375.1	496.4



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CANDELA DISTRIBUTION (continued):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
112.5°	92.1	95.8	100.4	108.0	118.5	135.8	162.0	202.2	265.7	357.1	464.4
115°	104.0	107.7	112.4	119.1	129.2	145.9	169.9	205.1	260.5	337.0	425.4
117.5°	116.3	119.7	123.2	128.8	139.2	154.5	178.0	209.6	257.1	323.0	399.8
120°	124.4	126.7	129.8	135.4	145.5	160.6	183.1	213.4	256.1	316.0	386.2
122.5°	131.9	133.7	136.6	142.2	151.6	167.1	189.0	217.2	256.5	310.6	374.4
125°	142.0	142.9	145.9	151.3	160.6	176.0	197.4	223.3	257.0	303.0	358.6
127.5°	150.1	151.4	154.9	160.2	170.4	185.4	205.5	228.4	258.5	297.3	344.2
130°	155.2	156.5	160.8	166.5	176.7	191.4	210.5	232.1	259.6	293.4	336.0
132.5°	158.6	160.4	165.2	172.3	182.5	196.6	214.7	235.3	259.8	290.4	328.1
135°	165.3	167.1	172.5	179.6	189.8	203.8	220.7	238.9	260.2	285.9	317.5
137.5°	171.7	173.7	178.8	186.6	196.7	209.3	224.9	241.7	260.1	281.6	308.2
140°	175.5	178.0	182.9	190.7	200.5	213.0	227.7	242.9	260.0	279.1	302.5
142.5°	180.2	182.2	187.4	194.3	204.0	215.5	229.4	243.8	259.4	276.2	297.0
145°	187.8	189.1	193.4	200.6	208.8	220.0	232.8	246.1	259.8	274.5	291.4
147.5°	194.8	195.6	200.0	206.4	214.4	224.0	235.7	247.6	259.8	272.7	286.5
150°	199.8	200.4	204.3	210.7	217.6	226.4	237.7	248.0	259.8	271.0	283.4
152.5°	205.0	205.1	209.1	214.6	220.7	229.1	238.8	248.8	258.6	269.1	280.3
155°	212.7	212.7	215.6	220.5	225.9	232.8	241.2	249.0	257.4	265.7	275.5
157.5°	218.7	219.1	221.4	225.8	230.4	235.7	242.4	249.5	255.6	262.6	270.2
160°	223.4	223.4	225.4	229.4	232.8	237.7	243.6	249.5	254.9	260.3	266.7
162.5°	227.0	227.0	228.6	231.7	234.7	238.8	244.0	249.1	253.3	258.0	263.1
165°	232.3	231.8	232.8	235.2	237.2	240.6	244.5	248.0	251.0	254.4	258.3
167.5°	236.3	235.7	236.2	238.1	239.4	241.6	244.4	247.2	248.6	250.8	253.7
170°	238.7	237.7	238.2	239.6	240.6	241.6	244.1	246.1	247.0	248.5	251.0
172.5°	240.2	239.6	239.8	240.8	241.4	242.0	244.1	245.6	245.8	246.5	248.2
175°	242.1	241.6	241.2	242.1	242.1	242.6	243.6	244.5	244.1	244.1	245.0
177.5°	243.0	242.6	242.2	242.6	242.6	242.6	243.0	243.7	243.0	242.6	243.0
180°	242.6	242.6	242.6	242.6	242.6	242.6	242.6	242.6	242.6	242.6	242.6



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CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
0°	605.5	605.5	605.5	605.5	605.5	605.5	605.5	605.5
2.5°	604.2	605.1	606.1	606.5	606.3	606.2	606.1	606.0
5°	603.2	604.3	605.5	606.1	605.9	605.7	605.6	605.5
7.5°	599.5	601.0	602.5	603.1	603.0	602.8	602.6	602.4
10°	595.9	597.4	598.8	599.3	599.1	598.8	598.5	598.2
12.5°	590.9	592.2	593.6	594.1	593.8	593.5	593.2	593.0
15°	581.3	582.8	584.3	585.0	584.8	584.6	584.5	584.4
17.5°	568.9	570.2	571.5	572.1	571.9	571.7	571.5	571.3
20°	560.0	561.3	562.6	563.4	563.4	563.6	563.8	563.9
22.5°	550.1	551.8	553.5	554.2	554.1	554.1	554.0	553.9
25°	533.4	535.4	537.3	538.2	538.2	538.2	538.2	538.2
27.5°	516.0	517.6	519.3	520.2	520.3	520.4	520.6	520.6
30°	504.1	505.8	507.6	508.5	508.5	508.5	508.5	508.5
32.5°	491.1	493.0	494.9	496.0	496.4	496.7	497.1	497.4
35°	472.0	474.2	476.4	477.8	478.4	479.0	479.6	480.2
37.5°	452.1	454.6	457.1	458.7	459.1	459.5	460.0	460.5
40°	438.9	441.4	443.9	445.5	446.1	446.7	447.2	447.8
42.5°	425.2	427.9	430.7	432.4	433.3	434.0	434.9	435.7
45°	404.6	407.3	410.2	412.2	413.3	414.5	415.7	416.8
47.5°	383.8	386.9	390.0	392.1	393.0	393.9	394.9	395.7
50°	369.5	372.9	376.3	378.4	379.4	380.5	381.5	382.5
52.5°	355.0	358.4	362.0	364.3	365.6	366.8	368.1	369.4
55°	333.0	337.0	341.0	343.5	344.7	345.9	347.1	348.3
57.5°	310.7	314.7	318.7	321.3	322.7	324.1	325.5	326.8
60°	295.2	299.2	303.3	306.2	307.8	309.4	311.0	312.6
62.5°	280.3	284.5	288.5	291.4	292.8	294.3	295.8	297.3
65°	256.8	261.1	265.6	268.5	270.0	271.5	272.9	274.4
67.5°	233.3	238.2	243.0	246.0	247.2	248.4	249.7	250.9
70°	217.8	222.5	227.2	230.2	231.7	233.2	234.6	236.1
72.5°	202.2	207.0	211.8	215.0	216.5	217.9	219.4	220.8
75°	178.5	183.4	188.2	191.5	193.2	195.0	196.7	198.5
77.5°	156.4	161.4	166.5	169.8	171.2	172.5	173.8	175.2
80°	141.9	146.9	151.9	155.1	156.5	158.0	159.5	160.9
82.5°	128.7	133.6	138.6	141.9	143.4	144.8	146.3	147.7
85°	110.2	115.2	120.2	123.4	124.8	126.3	127.8	129.2
87.5°	96.4	101.5	106.6	110.0	111.4	113.0	114.5	115.9
90°	96.8	102.3	107.7	111.9	112.9	114.9	116.8	117.8
92.5°	121.4	117.7	118.7	119.3	119.8	119.7	121.5	121.9
95°	251.2	198.7	177.3	162.6	154.7	151.8	149.8	149.3
97.5°	510.0	426.6	367.6	311.9	277.1	256.4	244.6	241.9
100°	644.9	609.3	556.1	489.3	441.1	406.7	389.1	391.0
102.5°	687.4	690.3	660.9	619.6	582.4	555.5	541.0	531.2
105°	696.1	749.3	762.8	752.7	731.4	714.0	699.6	698.5
107.5°	652.5	736.1	783.1	803.1	804.9	799.9	795.8	792.6
110°	612.6	706.8	772.5	809.3	824.2	829.4	829.6	829.7



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CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
112.5°	572.7	668.7	741.8	788.4	814.9	828.4	833.4	834.8
115°	519.8	608.8	684.5	740.4	778.3	801.2	812.2	815.8
117.5°	480.1	557.3	625.7	682.3	721.9	747.7	763.0	767.5
120°	458.7	528.4	590.7	642.5	682.3	710.8	723.7	727.6
122.5°	441.3	504.6	562.5	610.7	646.2	671.9	686.0	690.7
125°	417.7	474.3	524.5	565.8	598.3	621.0	634.2	638.7
127.5°	396.5	447.1	492.6	530.2	559.2	578.7	590.8	595.0
130°	383.0	430.0	472.5	507.7	534.7	553.2	564.4	569.2
132.5°	370.3	413.6	453.3	487.0	512.5	531.2	541.2	545.0
135°	353.0	390.5	425.1	454.8	479.6	495.0	504.6	508.8
137.5°	337.2	368.0	397.9	423.6	444.6	460.3	468.5	471.5
140°	327.7	355.0	380.7	403.3	422.8	437.2	445.8	446.0
142.5°	318.5	341.9	364.3	384.0	400.7	413.6	421.4	421.6
145°	308.3	325.7	342.6	357.7	370.6	381.4	386.0	387.5
147.5°	300.1	313.3	326.3	336.9	346.7	354.2	358.5	359.4
150°	294.6	305.9	316.2	325.7	333.4	339.1	342.3	342.6
152.5°	290.3	300.1	309.2	317.0	322.9	327.9	329.8	329.8
155°	283.9	291.7	299.1	305.0	309.4	313.3	314.3	314.8
157.5°	277.0	283.5	289.3	293.9	297.7	300.7	301.4	301.4
160°	273.0	278.4	283.4	286.8	290.2	293.2	293.2	292.7
162.5°	268.4	272.9	277.5	280.5	282.8	285.3	285.3	284.8
165°	262.3	265.2	268.6	271.0	273.0	275.0	274.5	274.5
167.5°	256.9	259.2	261.1	262.9	263.8	265.2	264.7	264.7
170°	253.4	254.9	256.8	257.8	258.3	259.3	258.8	258.8
172.5°	250.3	251.3	252.9	253.5	253.6	254.6	253.7	253.3
175°	246.1	246.5	247.5	247.5	247.5	248.0	247.5	247.0
177.5°	243.4	243.7	244.2	244.2	243.7	244.2	243.4	243.4
180°	242.6	242.6	242.6	242.6	242.6	242.6	242.6	242.6

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