

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: P331266-830

Luminaire Tested: **S122DIP-S290D725U830-4F0-1E-UDD-F4**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P331266-830
REPORT IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-1807-864-16,
Test Lab: INNOVATION CENTER
Issue Date: 3/3/2020
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: NEO-RAY
Catalog Number: S122DIP-S290D725U830-4F0-1E-UDD-F4
Description: DEFINE 2 DIRECT-INDIRECT PENDANT LED LUMINAIRE
DOWNLIGHT 290 LUMENS PER FOOT, FLUSH SATIN WHITE DIFFUSER
UPLIGHT 725 LUMENS PER FOOT, BATWING OPTIC
Light Source: -
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 3802.4 lumens
Efficiency: N/A
Efficacy: 121.9 lumens/watt
Spacing Criteria (0/90/45): 1.2 / 1.16 / 1.3
Luminous Opening: Rectangular (W 0.17' x L: 4' x H: 0')
CIE Type: Semi-Indirect

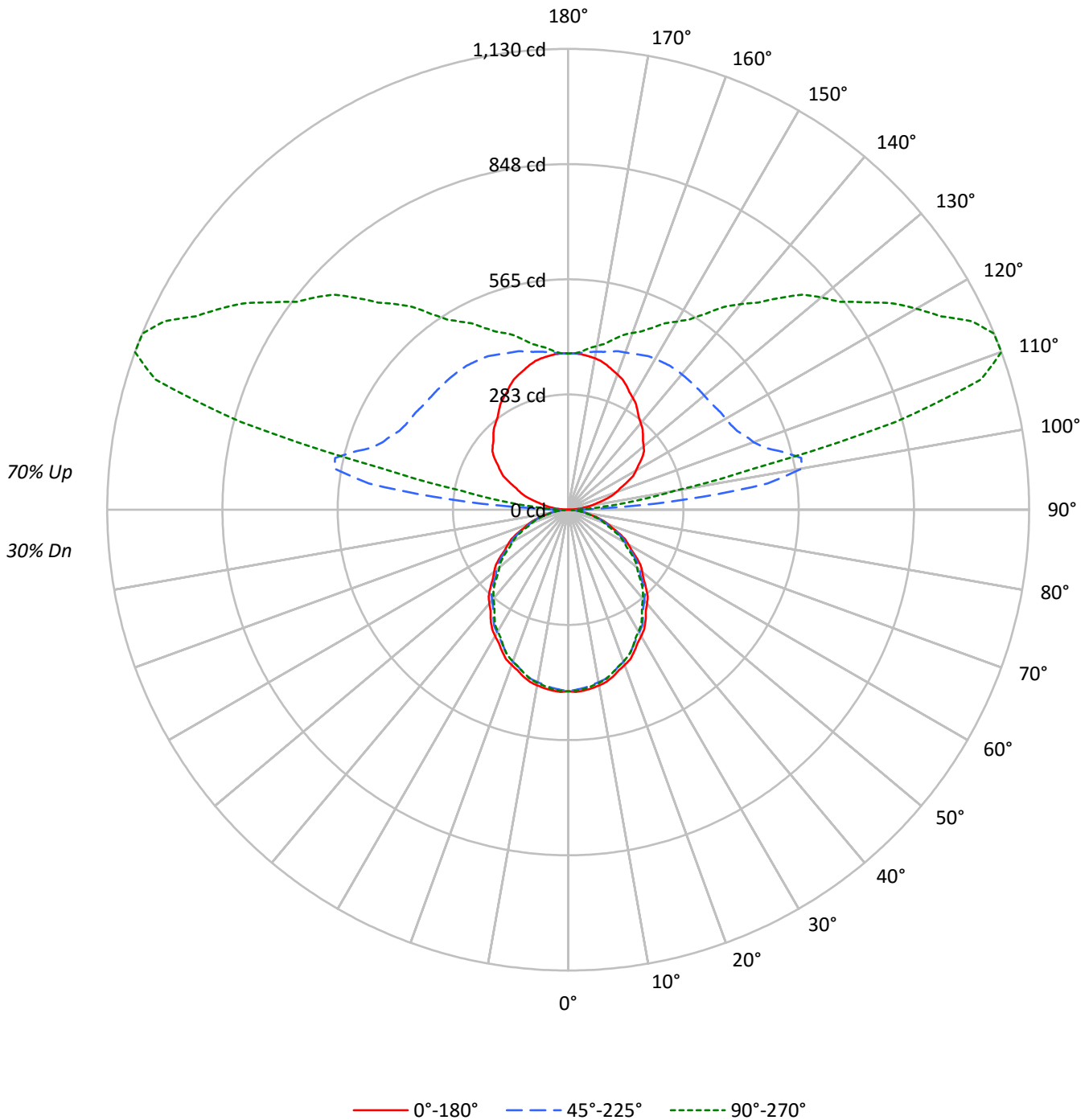
Input Watts (W): 31.2
Input Voltage (V): 120
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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	0
RCR																		
0	102	102	102	102	92	92	92	92	72	72	72	54	54	54	38	38	38	30
1	93	89	85	82	84	80	77	74	63	61	59	48	46	45	33	32	32	25
2	85	78	72	67	76	70	65	61	55	52	49	42	39	37	29	28	27	21
3	77	68	61	56	69	61	55	51	49	44	41	37	34	32	26	24	23	18
4	71	60	53	47	63	54	48	43	43	39	35	33	30	27	23	21	20	15
5	65	54	46	40	58	48	42	37	39	34	30	29	26	23	21	19	17	13
6	60	48	40	34	53	43	37	32	35	30	26	26	23	20	19	17	15	12
7	55	43	35	30	49	39	32	28	31	26	23	24	21	18	17	15	13	10
8	51	39	32	26	46	35	29	24	28	24	20	22	18	16	16	14	12	9
9	47	36	28	23	42	32	26	22	26	21	18	20	17	14	15	12	11	8
10	44	32	25	21	40	29	23	19	24	19	16	19	15	13	13	11	10	8

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	7190	7190	7190
5°	7217	7112	7156
10°	7174	7040	7076
15°	7086	6950	6944
20°	6959	6813	6806
25°	6834	6645	6645
30°	6674	6490	6434
35°	6524	6303	6211
40°	6336	6119	6001
45°	6149	5934	5786
50°	5948	5745	5541
55°	5737	5520	5315
60°	5503	5254	5060
65°	5249	4989	4760
70°	4928	4669	4447
75°	4485	4298	4192
80°	3980	3868	3663
85°	3242	3094	2779



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	41.9	1.1
10°-20°	117.8	3.1
20°-30°	173.2	4.6
30°-40°	201.2	5.3
40°-50°	200.9	5.3
50°-60°	175.2	4.6
60°-70°	129.6	3.4
70°-80°	73.4	1.9
80°-90°	23.2	0.6
90°-100°	153.2	4.0
100°-110°	519.8	13.7
110°-120°	552.3	14.5
120°-130°	454.6	12.0
130°-140°	365.1	9.6
140°-150°	275.9	7.3
150°-160°	193.9	5.1
160°-170°	114.1	3.0
170°-180°	37.1	1.0
0°-30°	332.9	8.8
0°-40°	534.0	14.0
0°-60°	910.2	23.9
0°-90°	1136.3	29.9
90°-120°	1225.3	32.2
90°-150°	2320.9	61.0
90°-180°	2666.0	70.1
0°-180°	3802.4	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	445	445	445	445	445	
5°	445	443	439	442	442	42
15°	424	421	416	417	415	119
25°	384	380	373	374	373	176
35°	331	327	320	317	315	207
45°	269	266	260	255	253	208
55°	204	201	196	191	189	182
65°	137	135	131	127	125	136
75°	72	71	69	66	67	77
85°	18	17	17	16	15	20
90°	1	10	25	24	24	2
95°	26	63	289	109	84	27
105°	90	136	546	976	830	96
115°	158	200	457	943	1093	157
125°	221	262	439	764	886	196
135°	259	310	434	642	735	200
145°	296	340	432	536	586	186
155°	337	364	419	474	493	155
165°	367	378	402	426	432	103
175°	382	383	386	391	390	36
180°	383	383	383	383	383	



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CANDELA DISTRIBUTION (FULL):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
0°	445.3	445.3	445.3	445.3	445.3	445.3	445.3	445.3	445.3	445.3	445.3
2.5°	447.3	447.0	446.6	446.2	445.8	445.3	444.4	443.6	442.7	441.9	442.6
5°	445.3	444.9	444.5	444.1	443.7	443.1	442.1	441.0	439.9	438.8	439.6
7.5°	441.4	440.7	440.2	439.6	439.0	438.2	437.2	436.0	435.0	433.9	434.7
10°	437.6	437.0	436.3	435.6	434.9	434.0	432.9	431.8	430.6	429.4	430.2
12.5°	432.4	431.9	431.3	430.6	430.1	429.2	428.1	427.0	425.8	424.7	425.2
15°	423.9	423.3	422.7	422.2	421.6	420.8	419.4	418.2	417.0	415.8	416.1
17.5°	412.9	412.4	411.8	411.2	410.7	409.7	408.5	407.2	406.0	404.7	405.1
20°	405.0	404.4	403.9	403.3	402.7	401.8	400.5	399.2	397.8	396.5	396.8
22.5°	397.2	396.3	395.6	394.7	394.0	392.9	391.7	390.4	389.2	388.0	388.0
25°	383.6	382.9	382.1	381.4	380.6	379.4	377.8	376.2	374.6	373.0	373.2
27.5°	368.3	367.6	366.8	366.2	365.5	364.5	363.3	361.9	360.7	359.4	359.1
30°	358.0	357.2	356.5	355.7	354.9	353.8	352.4	351.0	349.5	348.1	347.8
32.5°	346.9	346.4	345.8	345.2	344.6	343.5	342.0	340.5	339.0	337.5	337.0
35°	331.0	330.0	329.0	328.1	327.2	325.9	324.4	322.9	321.4	319.8	319.2
37.5°	312.9	312.1	311.2	310.4	309.5	308.4	306.9	305.4	303.8	302.3	301.6
40°	300.6	299.8	299.1	298.3	297.6	296.4	294.8	293.3	291.8	290.3	289.5
42.5°	288.6	287.9	287.1	286.3	285.6	284.4	282.9	281.3	279.8	278.3	277.4
45°	269.3	268.6	268.0	267.3	266.6	265.6	264.2	262.8	261.4	259.9	258.8
47.5°	250.2	249.5	248.9	248.3	247.6	246.6	245.1	243.6	242.1	240.6	239.5
50°	236.8	236.3	235.8	235.4	234.9	233.9	232.6	231.3	230.0	228.7	227.3
52.5°	223.8	223.1	222.5	221.9	221.2	220.3	219.0	217.8	216.5	215.3	214.1
55°	203.8	203.2	202.6	202.1	201.5	200.7	199.5	198.4	197.3	196.1	194.9
57.5°	183.8	183.3	182.9	182.4	181.9	181.1	179.8	178.6	177.3	176.1	174.9
60°	170.4	170.0	169.7	169.3	168.9	168.1	166.7	165.4	164.0	162.7	161.6
62.5°	157.4	156.7	156.2	155.6	155.0	154.1	153.1	152.1	151.1	150.1	149.0
65°	137.4	136.9	136.3	135.7	135.2	134.4	133.5	132.5	131.6	130.6	129.7
67.5°	117.2	116.7	116.2	115.7	115.4	114.7	113.8	112.9	112.1	111.2	110.6
70°	104.4	104.1	103.7	103.3	102.9	102.4	101.5	100.7	99.7	98.9	98.2
72.5°	91.4	91.0	90.7	90.3	89.9	89.4	88.9	88.4	87.8	87.3	86.6
75°	71.9	71.7	71.5	71.4	71.2	70.9	70.4	69.8	69.4	68.9	68.3
77.5°	54.5	54.1	53.8	53.5	53.2	52.9	52.7	52.5	52.3	52.1	51.8
80°	42.8	42.7	42.6	42.5	42.4	42.3	42.1	41.9	41.8	41.6	41.3
82.5°	31.9	31.9	31.9	31.8	31.8	31.7	31.6	31.5	31.4	31.3	30.9
85°	17.5	17.4	17.3	17.2	17.2	17.1	17.0	16.9	16.8	16.7	16.4
87.5°	6.3	6.6	7.1	7.2	7.4	7.6	8.2	9.0	9.8	9.8	9.4
90°	0.8	2.9	5.9	7.4	8.9	11.0	14.7	19.9	24.3	25.1	24.3
92.5°	9.0	13.0	18.3	21.5	26.5	33.5	50.1	73.5	94.4	95.8	80.9
95°	25.8	28.7	36.1	42.7	54.5	72.2	106.1	170.2	255.7	288.8	252.7
97.5°	42.0	46.0	53.8	63.8	77.4	97.4	140.0	229.3	371.4	493.0	517.3
100°	56.7	58.9	65.6	77.4	92.1	112.7	151.7	241.7	400.8	582.0	688.2
102.5°	70.3	71.9	78.5	90.3	105.7	126.3	162.4	242.2	389.6	585.0	751.8
105°	89.9	92.8	98.0	109.1	125.3	145.9	180.5	246.1	367.7	545.9	742.0
107.5°	111.1	113.5	118.5	128.7	144.7	165.5	199.1	256.3	356.8	504.1	677.2
110°	125.3	128.2	132.6	142.2	157.7	179.1	211.4	264.5	354.4	484.1	636.6



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CANDELA DISTRIBUTION (continued):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
112.5°	138.2	141.2	146.2	155.1	170.0	192.0	223.3	273.3	355.0	471.1	608.3
115°	158.4	162.1	166.5	175.3	190.1	210.0	241.7	286.6	358.1	456.9	573.3
117.5°	179.4	182.3	186.7	194.5	208.7	229.3	258.6	300.8	363.4	449.9	551.1
120°	192.3	195.3	199.6	206.3	221.0	241.7	270.4	310.2	366.9	445.7	539.3
122.5°	204.7	207.1	211.4	218.7	233.4	254.7	281.6	318.5	371.1	443.4	529.3
125°	221.0	223.3	227.6	236.5	251.3	271.8	298.4	331.6	377.2	439.1	515.0
127.5°	234.0	237.0	243.2	252.9	267.0	288.2	314.1	343.7	383.6	436.6	501.7
130°	241.7	244.6	251.9	262.3	277.0	297.7	323.5	351.5	388.3	435.5	492.9
132.5°	248.7	252.3	260.2	271.2	286.4	307.1	331.7	359.1	393.0	434.9	485.9
135°	259.4	262.3	271.2	282.2	299.2	319.8	343.4	369.1	398.6	433.9	476.0
137.5°	269.4	272.9	281.7	293.5	310.4	329.5	352.8	376.8	403.6	433.9	469.0
140°	277.0	279.9	288.8	300.6	316.8	336.0	358.1	380.9	406.0	433.2	465.0
142.5°	284.6	287.1	295.3	307.1	322.7	340.7	362.2	384.5	407.7	433.2	460.8
145°	296.1	299.2	306.5	317.5	332.2	348.5	368.4	389.0	409.6	431.8	455.3
147.5°	308.6	310.8	317.8	328.0	340.3	354.7	373.4	391.5	410.3	429.1	449.8
150°	316.8	319.1	324.9	334.5	345.5	358.8	375.8	392.7	409.6	427.3	445.0
152.5°	325.1	326.1	332.0	340.4	350.8	363.0	378.1	393.3	408.5	424.4	440.9
155°	336.7	337.4	341.9	350.0	358.1	369.1	381.6	394.2	406.7	419.2	433.2
157.5°	346.5	347.1	350.7	357.8	364.3	373.5	384.2	394.2	403.3	414.0	426.0
160°	352.9	353.6	356.6	362.5	368.4	376.5	385.3	394.2	401.5	410.4	420.8
162.5°	359.4	358.9	361.9	366.6	371.9	378.2	386.0	393.6	399.8	407.5	415.9
165°	366.9	366.2	367.7	372.1	375.8	380.2	386.8	392.0	396.4	401.5	408.2
167.5°	373.2	372.2	373.5	376.4	379.0	381.8	386.6	391.0	393.0	396.4	400.5
170°	377.2	375.8	376.5	378.7	380.2	382.4	386.1	389.7	391.2	393.4	396.4
172.5°	379.6	378.7	378.2	380.5	381.4	383.0	385.5	388.0	388.9	389.9	392.3
175°	382.4	381.6	380.9	382.4	382.4	383.1	384.6	386.1	385.3	386.1	386.8
177.5°	383.7	382.6	381.9	383.1	383.1	383.1	383.7	384.9	383.7	383.1	383.7
180°	383.1	383.1	383.1	383.1	383.1	383.1	383.1	383.1	383.1	383.1	383.1



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CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
0°	445.3	445.3	445.3	445.3	445.3	445.3	445.3	445.3
2.5°	443.4	444.1	444.9	445.3	445.1	444.9	444.8	444.6
5°	440.5	441.2	442.0	442.2	442.1	441.9	441.7	441.5
7.5°	435.5	436.2	437.0	437.2	437.1	436.8	436.6	436.4
10°	431.0	431.8	432.5	432.7	432.4	432.2	431.9	431.6
12.5°	425.7	426.2	426.8	427.0	426.8	426.5	426.3	426.1
15°	416.5	416.9	417.3	417.3	416.8	416.3	415.8	415.4
17.5°	405.6	406.0	406.4	406.4	406.0	405.6	405.1	404.6
20°	397.1	397.4	397.7	397.6	397.2	396.8	396.4	396.1
22.5°	388.0	388.1	388.1	388.0	387.9	387.6	387.4	387.2
25°	373.3	373.5	373.7	373.7	373.5	373.3	373.2	373.0
27.5°	358.8	358.5	358.3	357.9	357.4	356.9	356.6	356.1
30°	347.5	347.2	346.9	346.7	346.3	345.9	345.5	345.1
32.5°	336.5	335.9	335.5	335.0	334.6	334.2	333.8	333.5
35°	318.7	318.1	317.5	317.1	316.6	316.1	315.7	315.1
37.5°	300.9	300.2	299.4	298.9	298.4	297.9	297.6	297.1
40°	288.6	287.8	286.9	286.3	285.9	285.5	285.1	284.7
42.5°	276.4	275.5	274.6	273.8	273.3	272.8	272.3	271.7
45°	257.8	256.7	255.7	255.0	254.6	254.2	253.8	253.4
47.5°	238.5	237.3	236.2	235.4	234.9	234.3	233.8	233.2
50°	226.0	224.6	223.3	222.4	222.0	221.5	221.0	220.6
52.5°	213.1	212.0	210.8	210.0	209.3	208.8	208.1	207.5
55°	193.8	192.7	191.5	190.8	190.3	189.7	189.3	188.8
57.5°	173.8	172.7	171.5	170.8	170.5	170.1	169.8	169.4
60°	160.6	159.6	158.5	157.9	157.6	157.3	157.0	156.7
62.5°	148.1	147.1	146.2	145.5	145.2	144.8	144.4	144.0
65°	128.8	128.0	127.1	126.5	126.0	125.5	125.1	124.6
67.5°	109.9	109.2	108.6	108.0	107.6	107.3	106.9	106.5
70°	97.6	96.9	96.2	95.8	95.4	94.9	94.5	94.2
72.5°	86.0	85.3	84.6	84.1	83.8	83.5	83.2	82.8
75°	67.8	67.2	66.6	66.4	66.6	66.8	67.0	67.2
77.5°	51.6	51.3	51.0	50.7	50.4	50.2	50.0	49.7
80°	41.0	40.7	40.4	40.2	40.0	39.8	39.6	39.4
82.5°	30.5	30.2	29.8	29.6	29.6	29.5	29.5	29.5
85°	16.1	15.8	15.6	15.4	15.3	15.2	15.1	15.0
87.5°	9.0	8.6	8.6	8.6	8.5	8.5	8.4	8.3
90°	23.6	22.1	23.6	24.3	24.3	24.3	24.3	24.3
92.5°	64.3	55.1	48.9	44.4	43.7	41.4	42.0	40.8
95°	193.0	148.1	117.2	100.9	91.3	85.5	83.2	84.0
97.5°	450.4	368.5	288.8	235.6	200.4	182.3	171.5	165.3
100°	672.7	581.4	480.4	391.2	330.1	298.4	277.0	263.7
102.5°	818.3	797.7	723.8	629.3	562.9	508.8	482.1	464.2
105°	895.2	978.5	988.1	963.7	918.0	872.3	840.7	830.4
107.5°	839.8	965.2	1041.8	1077.5	1083.3	1080.7	1074.4	1060.6
110°	792.0	924.0	1018.2	1078.6	1110.3	1124.4	1131.0	1130.2



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CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
112.5°	748.5	875.0	975.8	1045.1	1089.1	1112.6	1125.1	1129.1
115°	694.7	808.2	904.7	980.6	1032.9	1066.9	1086.0	1092.7
117.5°	654.4	754.0	841.6	912.8	966.1	1001.9	1022.1	1027.7
120°	634.3	725.8	803.8	870.9	922.5	957.1	978.5	985.8
122.5°	618.5	702.2	776.1	836.7	883.0	917.0	936.0	942.2
125°	595.3	671.2	736.0	791.3	834.1	862.0	880.4	886.4
127.5°	572.5	641.1	702.3	753.3	790.6	816.8	832.7	837.4
130°	557.7	621.1	679.3	727.9	764.0	789.1	803.8	809.7
132.5°	543.6	602.3	655.7	701.4	737.0	762.0	775.5	780.8
135°	523.9	572.5	621.1	662.3	694.1	718.4	731.6	734.6
137.5°	508.1	548.7	587.4	623.3	652.2	673.2	684.8	689.2
140°	498.0	533.5	567.3	599.7	623.3	642.4	653.6	658.0
142.5°	489.8	519.9	549.0	576.2	598.6	616.0	625.8	626.7
145°	478.2	502.5	525.4	546.7	564.4	576.9	584.3	586.4
147.5°	469.2	488.3	506.1	521.8	536.4	546.4	551.4	552.7
150°	462.7	478.9	494.4	507.7	518.7	527.5	532.0	532.7
152.5°	456.2	471.3	484.4	495.9	504.5	512.2	515.5	515.6
155°	447.2	459.0	470.0	478.2	486.3	491.4	494.4	492.9
157.5°	436.8	446.7	455.9	462.2	468.0	472.3	473.6	473.6
160°	430.3	438.4	446.5	451.7	456.9	460.5	461.2	461.2
162.5°	423.8	430.7	437.6	441.7	446.8	449.3	450.1	449.4
165°	414.1	419.2	424.4	427.3	430.3	433.2	433.2	432.5
167.5°	404.8	408.8	412.3	415.0	416.3	417.9	417.7	416.9
170°	400.1	402.3	405.2	406.7	407.5	409.6	408.9	407.5
172.5°	394.7	396.4	398.8	399.6	400.4	401.4	400.7	399.8
175°	389.0	389.7	390.5	391.2	391.2	392.0	391.2	389.7
177.5°	384.9	384.9	385.5	385.5	385.5	385.5	384.9	383.7
180°	383.1	383.1	383.1	383.1	383.1	383.1	383.1	383.1

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