

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: P332558-830

Luminaire Tested: **S124DIP-S575D810U830-4F0-1E-UDD-D4**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P332558-830
REPORT IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-1807-864-18,
Test Lab: INNOVATION CENTER
Issue Date: 3/3/2020
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: NEO-RAY
Catalog Number: S124DIP-S575D810U830-4F0-1E-UDD-D4
Description: DEFINE 4 DIRECT-INDIRECT PENDANT LED LUMINAIRE
DOWNLIGHT 575 LUMENS PER FOOT, DROP SATIN WHITE DIFFUSER
UPLIGHT 810 LUMENS PER FOOT, BATWING OPTIC
Light Source: -
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 4963.0 lumens
Efficiency: N/A
Efficacy: 129.2 lumens/watt
Spacing Criteria (0/90/45): 1.23 / 1.28 / 1.39
Luminous Opening: Rectangular w/ Sides (W: 0.33' x L: 4' x H: 0.08')
CIE Type: General Diffuse

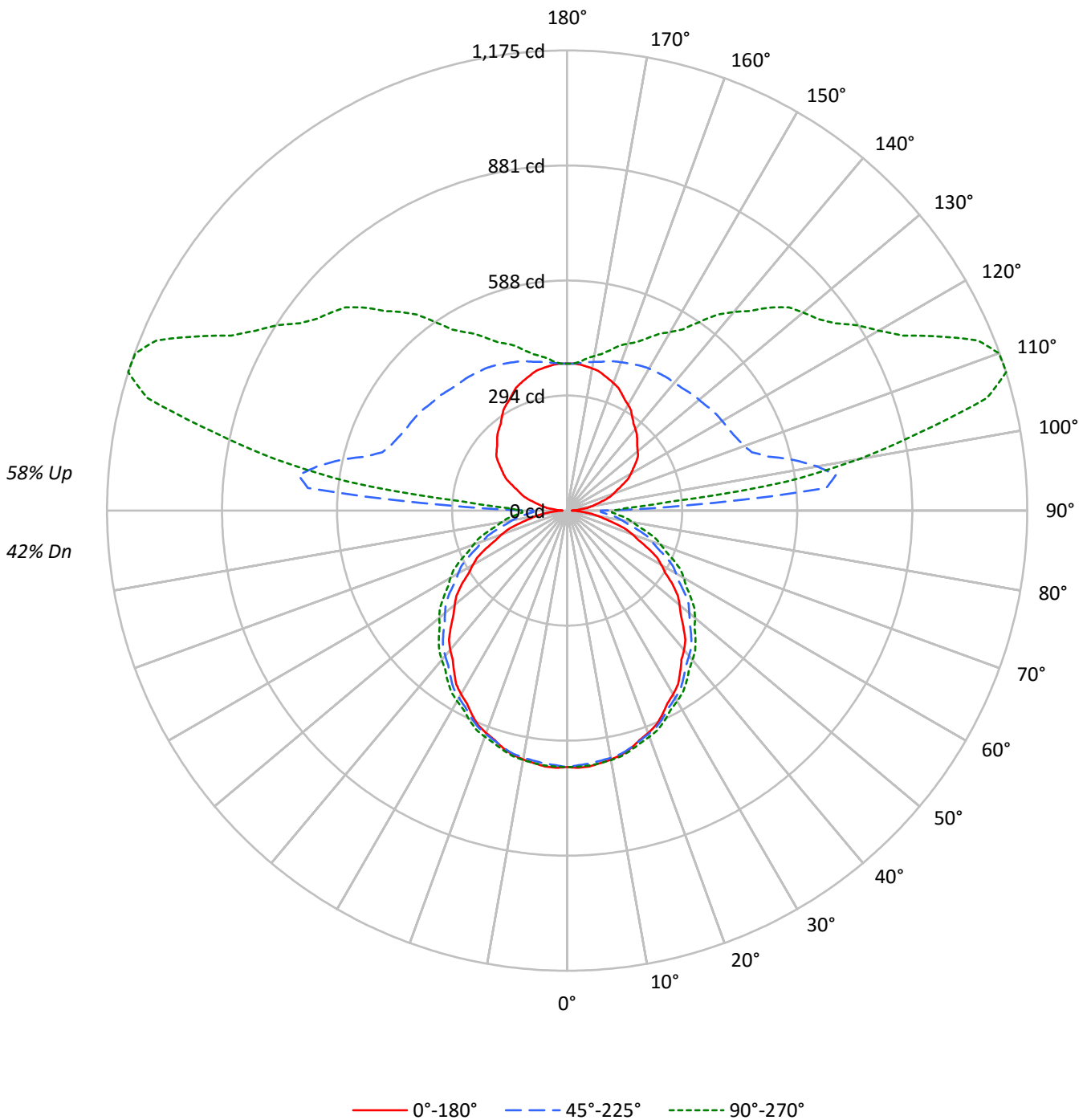
Input Watts (W): 38.4
Input Voltage (V): 120
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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	105	105	105	105	96	96	96	96	79	79	79	63	63	63	48	48	48	42
1	95	90	86	83	86	82	79	76	68	65	63	54	52	51	41	40	39	33
2	86	78	72	67	78	72	66	61	59	55	51	47	44	42	36	34	32	27
3	78	69	61	55	71	63	56	51	52	47	43	41	38	35	32	29	27	23
4	72	60	52	46	65	55	48	43	46	40	36	36	33	29	28	25	23	19
5	66	54	45	39	59	49	42	36	41	35	31	33	29	25	25	22	20	16
6	60	48	40	34	55	44	37	31	36	31	27	29	25	22	23	20	17	14
7	56	43	35	30	50	40	33	27	33	27	23	27	22	19	21	18	15	13
8	52	39	31	26	47	36	29	24	30	24	21	24	20	17	19	16	14	11
9	48	36	28	23	44	33	26	21	27	22	18	22	18	15	17	14	12	10
10	45	33	25	21	41	30	24	19	25	20	16	21	17	14	16	13	11	9

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	5288	5288	5288
5°	5304	5168	5182
10°	5272	5083	5079
15°	5225	4985	4958
20°	5153	4877	4840
25°	5073	4756	4710
30°	4986	4636	4576
35°	4887	4512	4460
40°	4809	4395	4338
45°	4692	4287	4233
50°	4593	4163	4123
55°	4491	4045	3993
60°	4332	3894	3876
65°	4156	3735	3731
70°	3945	3551	3561
75°	3649	3349	3408
80°	3322	3156	3259
85°	2903	2980	3172



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	62.0	1.2
10°-20°	177.7	3.6
20°-30°	268.7	5.4
30°-40°	325.1	6.6
40°-50°	343.7	6.9
50°-60°	323.5	6.5
60°-70°	268.4	5.4
70°-80°	188.5	3.8
80°-90°	108.6	2.2
90°-100°	334.2	6.7
100°-110°	610.8	12.3
110°-120°	536.5	10.8
120°-130°	442.6	8.9
130°-140°	361.9	7.3
140°-150°	272.2	5.5
150°-160°	190.2	3.8
160°-170°	111.9	2.3
170°-180°	36.4	0.7
0°-30°	508.4	10.2
0°-40°	833.5	16.8
0°-60°	1500.7	30.2
0°-90°	2066.2	41.6
90°-120°	1481.5	29.9
90°-150°	2558.2	51.5
90°-180°	2897.0	58.4
0°-180°	4963.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	655	655	655	655	655	
5°	656	653	648	654	654	62
15°	629	629	627	633	633	177
25°	575	579	582	589	590	265
35°	503	512	519	529	532	315
45°	420	433	447	459	464	324
55°	329	344	366	380	385	293
65°	227	251	276	293	300	225
75°	126	153	184	204	211	134
85°	39	70	103	124	132	41
90°	12	47	86	108	115	9
95°	34	111	664	380	270	35
105°	93	147	532	1107	1110	99
115°	156	202	466	878	1051	155
125°	214	255	450	739	833	191
135°	253	301	432	644	733	196
145°	290	332	423	532	587	182
155°	329	356	411	466	486	152
165°	359	370	394	418	424	101
175°	374	375	378	383	382	36
180°	375	375	375	375	375	



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CANDELA DISTRIBUTION (FULL):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
0°	655.0	655.0	655.0	655.0	655.0	655.0	655.0	655.0	655.0	655.0	655.0
2.5°	657.3	657.0	656.6	656.1	655.7	655.1	654.0	653.0	651.9	650.8	651.8
5°	655.7	655.3	654.7	654.2	653.7	652.9	651.8	650.6	649.5	648.4	649.7
7.5°	650.2	649.8	649.5	649.2	648.9	648.4	647.4	646.5	645.5	644.5	646.0
10°	645.5	645.3	645.1	645.0	644.8	644.3	643.5	642.6	641.9	641.0	642.5
12.5°	638.9	638.9	638.9	638.9	638.9	638.6	638.0	637.4	636.9	636.3	637.6
15°	628.6	628.8	628.9	629.1	629.2	629.1	628.6	628.1	627.5	627.1	628.6
17.5°	614.3	614.8	615.3	615.8	616.3	616.5	616.4	616.3	616.2	616.1	617.6
20°	604.4	604.8	605.3	605.9	606.3	606.6	606.8	607.0	607.1	607.3	608.9
22.5°	593.2	593.8	594.5	595.0	595.7	596.2	596.4	596.7	597.0	597.3	599.0
25°	575.0	576.0	577.0	578.0	578.9	579.7	580.1	580.6	581.2	581.6	583.4
27.5°	554.8	556.2	557.6	559.1	560.5	561.6	562.3	563.1	563.8	564.6	566.3
30°	541.3	542.6	543.8	545.2	546.5	547.7	548.8	550.0	551.1	552.3	554.1
32.5°	526.6	528.2	529.7	531.3	532.9	534.3	535.6	536.9	538.1	539.4	541.4
35°	503.1	505.1	507.1	509.0	511.0	512.7	514.3	516.0	517.6	519.2	521.6
37.5°	479.6	481.7	484.0	486.3	488.5	490.7	492.7	494.7	496.7	498.7	501.1
40°	464.3	466.4	468.5	470.6	472.8	474.9	477.2	479.5	481.8	484.1	486.5
42.5°	446.7	449.0	451.4	453.8	456.2	458.7	461.4	464.0	466.7	469.4	472.1
45°	419.5	422.6	425.7	428.9	431.9	435.0	438.1	441.2	444.3	447.4	450.2
47.5°	393.6	396.7	399.9	403.1	406.3	409.7	413.3	416.9	420.5	424.0	427.0
50°	374.8	378.3	381.9	385.6	389.2	392.8	396.3	399.9	403.5	407.1	410.3
52.5°	356.0	359.6	363.2	366.7	370.3	374.2	378.3	382.4	386.5	390.6	393.9
55°	328.6	332.0	335.5	338.8	342.2	346.4	351.3	356.2	361.1	366.0	369.3
57.5°	297.9	302.2	306.4	310.7	314.9	319.4	324.2	329.1	334.0	338.8	342.7
60°	278.0	282.2	286.4	290.7	294.9	299.7	305.1	310.5	315.8	321.2	325.0
62.5°	258.6	263.3	267.9	272.5	277.1	282.1	287.5	292.8	298.3	303.7	307.4
65°	227.3	232.6	237.8	243.0	248.3	253.6	259.1	264.7	270.2	275.8	279.8
67.5°	197.3	202.8	208.4	214.0	219.4	225.2	231.1	237.0	243.0	248.9	253.1
70°	176.7	182.3	187.8	193.4	199.0	204.8	210.9	217.2	223.4	229.6	233.9
72.5°	156.8	162.5	168.1	173.8	179.5	185.6	192.2	198.8	205.4	212.0	216.2
75°	126.1	132.1	138.2	144.2	150.2	156.7	163.5	170.4	177.3	184.1	188.7
77.5°	97.6	104.0	110.4	116.7	123.1	129.9	137.0	144.2	151.4	158.5	163.2
80°	79.9	86.4	93.0	99.5	106.0	112.8	120.1	127.2	134.4	141.6	146.5
82.5°	62.3	69.1	75.9	82.7	89.4	96.4	103.6	110.7	117.9	125.2	130.2
85°	38.8	45.7	52.6	59.4	66.3	73.3	80.7	88.0	95.4	102.6	107.5
87.5°	21.9	28.8	35.9	42.7	49.5	56.4	64.4	71.5	79.0	86.4	91.0
90°	12.4	20.5	29.2	36.5	43.7	50.5	61.9	68.9	77.4	85.9	89.8
92.5°	19.5	29.2	42.0	56.9	73.5	95.3	139.8	204.0	266.6	302.8	268.4
95°	33.8	41.5	54.2	69.2	92.2	129.2	200.0	327.5	510.4	664.5	685.8
97.5°	52.3	56.9	67.9	81.3	101.1	132.7	188.7	295.1	476.8	691.9	839.4
100°	64.1	68.3	77.8	90.8	109.1	137.9	187.8	277.4	434.1	648.3	841.3
102.5°	75.9	80.8	89.1	101.0	118.2	145.5	191.1	270.6	404.7	595.2	794.1
105°	92.8	98.3	105.3	117.3	133.8	159.9	201.3	268.5	377.7	531.9	709.2
107.5°	113.0	117.2	123.6	135.6	151.0	176.3	214.4	275.8	369.7	494.6	640.0
110°	126.0	129.8	135.7	146.8	162.4	186.2	224.4	281.7	368.4	481.1	604.9



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CANDELA DISTRIBUTION (continued):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
112.5°	138.4	141.9	148.2	158.4	173.7	197.4	234.0	288.1	369.4	472.8	583.6
115°	156.2	159.9	166.5	175.4	190.9	214.1	248.7	298.2	371.9	465.6	562.0
117.5°	175.5	178.5	183.9	192.9	206.9	230.5	263.3	308.8	375.1	460.4	549.8
120°	187.9	189.9	195.5	204.2	217.2	240.3	273.1	316.1	377.7	457.5	542.6
122.5°	199.7	201.2	206.5	214.1	228.0	250.2	282.8	323.2	380.3	454.0	535.0
125°	214.4	217.3	221.5	229.4	243.3	265.9	296.5	334.4	384.9	449.5	523.3
127.5°	228.0	230.2	235.4	244.5	258.9	281.2	309.9	344.2	387.9	443.5	508.3
130°	235.1	237.9	243.6	254.5	268.3	291.0	318.6	350.0	390.1	439.9	498.9
132.5°	242.8	245.0	252.4	262.8	277.8	299.0	326.1	356.3	392.5	437.0	490.5
135°	252.8	255.7	263.1	275.6	291.2	310.9	336.3	364.0	395.3	431.9	477.2
137.5°	263.5	266.2	274.1	285.9	301.8	320.3	343.6	368.8	396.2	428.3	465.9
140°	271.2	273.2	281.2	293.6	308.9	326.6	348.8	372.6	397.8	425.9	459.8
142.5°	278.9	281.1	288.5	300.5	315.3	332.3	353.7	375.5	399.3	424.8	454.8
145°	290.4	292.4	299.6	309.8	323.7	339.8	358.9	378.8	400.2	423.0	447.6
147.5°	303.5	304.1	310.4	320.8	332.3	346.9	364.9	382.2	401.0	420.4	441.3
150°	311.7	312.4	318.0	326.8	337.6	351.6	367.8	384.0	401.0	418.6	437.1
152.5°	318.9	319.0	324.8	333.0	342.9	355.7	370.1	385.1	399.7	415.7	432.3
155°	329.4	330.2	334.6	342.0	350.1	361.1	373.6	386.2	397.9	411.2	425.3
157.5°	339.9	339.9	344.0	349.8	356.8	365.5	376.2	386.2	396.1	406.7	418.0
160°	346.4	346.4	349.3	354.5	360.4	368.5	377.3	386.2	394.3	403.1	412.7
162.5°	352.3	351.7	354.0	358.6	363.9	370.2	378.5	386.2	392.6	399.6	408.0
165°	358.9	358.9	360.4	364.1	367.8	372.2	378.8	384.7	389.2	394.3	400.2
167.5°	365.5	364.9	365.5	368.3	370.4	373.8	378.7	383.0	385.6	389.0	393.1
170°	368.5	367.8	368.5	370.7	372.2	374.4	378.1	381.7	383.2	385.4	388.4
172.5°	371.5	370.7	370.9	372.5	373.3	374.9	377.5	380.6	380.9	381.9	384.3
175°	374.4	373.6	373.6	374.4	375.1	375.1	376.6	378.8	378.1	378.1	379.6
177.5°	375.7	375.1	374.6	375.1	375.1	375.1	375.7	376.9	375.7	375.7	376.3
180°	375.1	375.1	375.1	375.1	375.1	375.1	375.1	375.1	375.1	375.1	375.1



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CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
0°	655.0	655.0	655.0	655.0	655.0	655.0	655.0	655.0
2.5°	652.7	653.6	654.5	654.9	654.8	654.6	654.5	654.4
5°	651.0	652.2	653.6	654.1	654.0	653.8	653.7	653.5
7.5°	647.5	648.9	650.4	651.1	650.9	650.7	650.5	650.4
10°	643.9	645.5	646.9	647.5	647.4	647.2	647.1	646.9
12.5°	639.0	640.4	641.7	642.3	642.3	642.2	642.2	642.2
15°	630.0	631.5	632.9	633.6	633.5	633.3	633.1	632.9
17.5°	619.1	620.6	622.1	622.7	622.6	622.5	622.4	622.3
20°	610.6	612.2	613.8	614.6	614.6	614.6	614.6	614.6
22.5°	600.6	602.2	603.8	604.8	605.0	605.3	605.6	605.9
25°	585.2	587.0	588.8	589.7	589.9	590.1	590.2	590.4
27.5°	568.0	569.6	571.3	572.2	572.4	572.6	572.8	573.0
30°	555.9	557.7	559.5	560.5	560.8	561.2	561.5	561.8
32.5°	543.5	545.5	547.6	548.7	549.1	549.4	549.8	550.1
35°	523.9	526.1	528.4	529.8	530.3	530.7	531.2	531.8
37.5°	503.4	505.7	508.0	509.4	509.9	510.5	511.0	511.5
40°	489.0	491.4	493.9	495.4	496.1	496.7	497.4	498.0
42.5°	474.9	477.5	480.2	481.8	482.4	482.9	483.4	483.9
45°	453.0	455.7	458.5	460.2	461.1	461.9	462.7	463.5
47.5°	429.8	432.7	435.5	437.4	438.5	439.4	440.5	441.4
50°	413.6	416.9	420.1	422.3	423.2	424.1	425.2	426.1
52.5°	397.2	400.4	403.7	405.8	406.8	407.7	408.7	409.7
55°	372.5	375.8	379.0	381.2	382.1	383.1	384.1	385.0
57.5°	346.6	350.5	354.4	356.8	357.7	358.5	359.5	360.4
60°	328.8	332.5	336.2	338.7	340.1	341.4	342.7	344.0
62.5°	311.1	314.9	318.7	321.1	322.4	323.8	325.1	326.4
65°	283.9	288.0	292.1	294.7	296.1	297.4	298.7	300.0
67.5°	257.2	261.4	265.5	268.2	269.5	270.7	272.0	273.2
70°	238.4	242.8	247.1	250.0	251.1	252.2	253.4	254.5
72.5°	220.5	224.8	229.0	231.8	233.1	234.3	235.6	236.9
75°	193.2	197.7	202.4	205.4	206.8	208.3	209.8	211.2
77.5°	167.9	172.5	177.1	180.2	181.7	183.3	184.8	186.4
80°	151.4	156.2	161.1	164.2	165.5	166.8	168.1	169.5
82.5°	135.2	140.2	145.2	148.5	149.9	151.3	152.7	154.2
85°	112.4	117.3	122.2	125.5	127.1	128.8	130.4	132.1
87.5°	95.9	100.8	105.7	108.7	110.3	111.9	113.1	114.6
90°	95.3	100.8	106.2	109.2	111.3	113.4	114.0	115.2
92.5°	223.0	191.8	174.2	162.4	155.0	152.3	151.1	152.4
95°	618.7	508.9	414.5	346.0	311.3	289.9	278.1	270.0
97.5°	874.7	836.5	768.6	694.6	643.1	600.1	579.4	565.4
100°	953.4	972.5	940.8	889.0	826.0	782.2	761.3	756.5
102.5°	946.0	1023.4	1038.1	1018.2	980.1	948.9	926.8	923.4
105°	882.0	1013.6	1090.6	1123.5	1126.2	1121.7	1112.7	1109.6
107.5°	793.4	933.2	1039.9	1108.2	1145.8	1163.9	1172.4	1175.4
110°	739.9	871.1	981.8	1065.4	1119.0	1151.2	1165.8	1173.7



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CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
112.5°	699.6	815.9	920.5	1004.0	1064.7	1103.4	1123.3	1135.4
115°	657.8	752.1	841.8	914.9	974.3	1019.6	1044.4	1051.4
117.5°	634.7	713.1	784.3	846.7	897.6	936.0	961.3	967.1
120°	623.2	695.0	757.2	811.9	855.2	888.9	909.4	918.8
122.5°	613.2	682.7	739.6	787.7	824.3	853.3	870.6	879.9
125°	597.2	663.6	717.6	760.2	790.6	812.9	827.9	833.4
127.5°	577.7	641.2	694.8	735.4	766.1	786.2	799.1	804.6
130°	563.0	624.2	677.2	718.2	749.4	768.8	781.6	786.9
132.5°	548.0	605.5	657.2	698.1	728.8	750.5	762.7	768.1
135°	526.2	576.7	624.3	663.0	693.4	715.0	727.8	733.2
137.5°	506.9	549.9	590.1	625.0	653.4	674.6	685.1	691.3
140°	495.8	532.5	567.9	600.3	626.9	643.9	655.1	661.8
142.5°	485.9	518.2	548.6	576.6	600.1	615.9	625.7	630.6
145°	472.1	498.2	521.3	542.7	561.8	575.0	583.1	587.4
147.5°	460.9	480.9	498.7	515.3	529.3	540.6	546.8	548.6
150°	454.7	471.6	486.4	499.6	511.5	521.0	525.5	526.2
152.5°	448.3	462.8	476.4	487.3	497.3	505.1	507.7	508.5
155°	438.5	450.3	461.4	470.2	477.6	483.4	485.7	485.7
157.5°	428.0	437.9	447.2	454.3	459.9	464.3	465.6	465.6
160°	421.6	429.7	437.8	443.7	448.1	452.5	453.3	453.3
162.5°	415.1	422.0	428.4	433.7	436.9	441.3	442.1	441.5
165°	406.0	410.5	415.7	419.3	422.3	425.3	424.5	423.8
167.5°	397.4	400.8	404.9	407.1	408.6	410.5	410.4	409.7
170°	392.1	394.3	397.3	399.4	401.0	401.6	401.0	401.0
172.5°	387.4	389.0	390.8	392.4	393.2	394.0	393.2	392.1
175°	381.1	381.7	383.2	383.2	383.2	384.7	383.2	381.7
177.5°	376.9	377.5	377.5	378.1	377.5	378.1	376.9	375.7
180°	375.1	375.1	375.1	375.1	375.1	375.1	375.1	375.1

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