

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: P331353-830

Luminaire Tested: **SA2XXDIP-C675D725U830-4F0-1E-UDD-D4**

Issue Date: 10/7/2019

Test Information

Test Method: LM-79-08
Report Number: P331353-830
REPORT IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-1807-864-16,
Test Lab: INNOVATION CENTER
Issue Date: 10/7/2019
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: NEO-RAY
Catalog Number: SA2XXDIP-C675D725U830-4F0-1E-UDD-D4
Description: DEFINE 2 DIRECT-INDIRECT PENDANT LED LUMINAIRE
DOWNLIGHT 675 LUMENS PER FOOT, DROP SATIN WHITE DIFFUSER
UPLIGHT 725 LUMENS PER FOOT, BATWING OPTIC
Light Source: -
Ballast/Driver: ELECTRONIC DRIVER

Summary

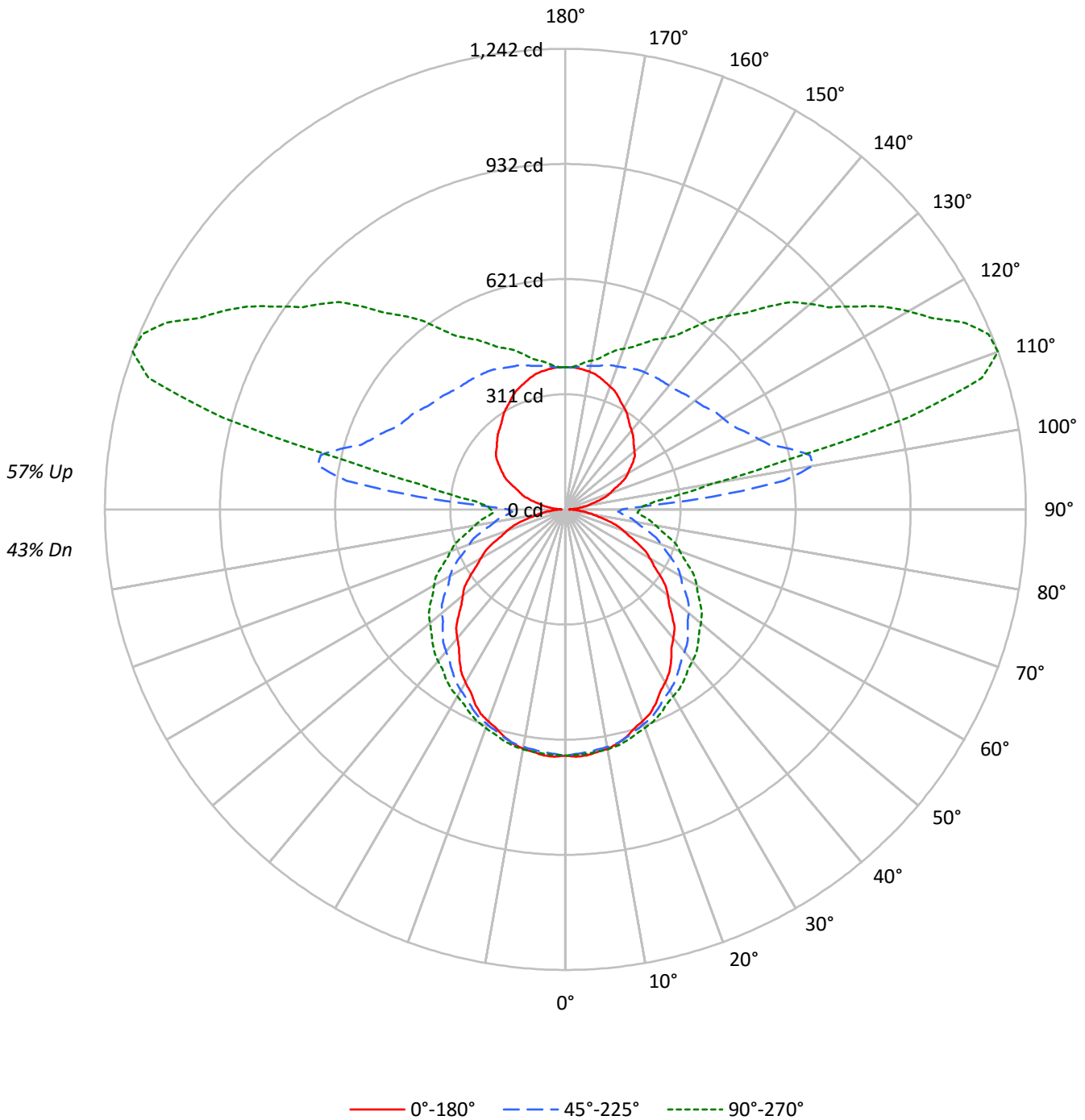
Lumens per Lamp: N/A
Luminaire Lumens: 5202.4 lumens
Efficiency: N/A
Efficacy: 113.3 lumens/watt
Spacing Criteria (0/90/45): 1.21 / 1.32 / 1.42
Luminous Opening: Rectangular w/ Sides (W: 0.17' x L: 4' x H: 0.08')
CIE Type: General Diffuse

Input Watts (W): 45.9
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	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	90	86	82	86	82	79	75	68	65	63	54	53	51	42	41	40	34				
2	86	78	71	66	78	71	66	61	59	54	51	47	44	41	36	34	32	27				
3	78	68	60	54	71	62	55	50	51	46	42	41	37	34	32	29	27	22				
4	71	60	52	45	65	55	48	42	45	40	35	36	32	29	28	25	23	19				
5	65	53	45	39	59	49	41	36	40	35	30	32	28	25	25	22	20	16				
6	60	47	39	33	54	44	36	31	36	30	26	29	25	22	23	20	17	14				
7	55	43	35	29	50	39	32	27	33	27	23	26	22	19	21	18	15	12				
8	51	39	31	25	47	36	29	24	30	24	20	24	20	17	19	16	13	11				
9	48	35	28	22	43	32	26	21	27	22	18	22	18	15	17	14	12	10				
10	44	32	25	20	40	30	23	19	25	20	16	20	16	13	16	13	11	9				

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	10719	10719	10719
5°	10771	10318	10278
10°	10704	10013	9900
15°	10557	9691	9503
20°	10370	9345	9120
25°	10186	9011	8772
30°	9928	8668	8421
35°	9665	8338	8176
40°	9388	8055	7929
45°	9124	7803	7719
50°	8843	7574	7511
55°	8548	7331	7300
60°	8188	7076	7078
65°	7811	6777	6812
70°	7390	6457	6525
75°	6853	6143	6262
80°	6004	5822	5995
85°	5192	5544	5785



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	62.9	1.2
10°-20°	180.4	3.5
20°-30°	273.4	5.3
30°-40°	333.0	6.4
40°-50°	358.2	6.9
50°-60°	347.9	6.7
60°-70°	303.7	5.8
70°-80°	233.8	4.5
80°-90°	160.4	3.1
90°-100°	261.3	5.0
100°-110°	598.8	11.5
110°-120°	604.4	11.6
120°-130°	483.7	9.3
130°-140°	377.3	7.3
140°-150°	278.0	5.3
150°-160°	193.9	3.7
160°-170°	114.1	2.2
170°-180°	37.1	0.7
0°-30°	516.7	9.9
0°-40°	849.6	16.3
0°-60°	1555.7	29.9
0°-90°	2253.7	43.3
90°-120°	1464.5	28.2
90°-150°	2603.5	50.0
90°-180°	2949.0	56.7
0°-180°	5202.4	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	664	664	664	664	664	
5°	666	663	657	663	662	63
15°	635	637	637	645	645	179
25°	577	584	593	604	607	265
35°	498	514	532	552	560	311
45°	408	434	468	496	507	315
55°	313	348	397	431	444	279
65°	214	261	318	356	370	212
75°	118	173	234	274	288	125
85°	35	94	156	195	210	37
90°	10	76	152	188	201	8
95°	34	117	399	255	243	33
105°	95	170	629	1091	957	101
115°	162	216	514	1028	1190	160
125°	223	265	472	821	954	198
135°	260	311	445	672	773	201
145°	296	340	432	542	597	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°	663.9	663.9	663.9	663.9	663.9	663.9	663.9	663.9	663.9	663.9	663.9
2.5°	667.8	667.2	666.8	666.2	665.7	664.9	663.6	662.4	661.3	660.1	660.9
5°	665.8	665.2	664.6	663.9	663.3	662.3	661.0	659.8	658.5	657.1	658.5
7.5°	659.9	659.4	659.0	658.6	658.2	657.4	656.5	655.4	654.5	653.6	655.1
10°	655.3	654.8	654.4	653.9	653.6	653.0	652.3	651.8	651.1	650.4	652.1
12.5°	647.5	647.6	647.7	647.8	647.9	647.7	647.2	646.8	646.3	645.8	647.5
15°	635.1	635.5	635.9	636.3	636.8	637.0	637.0	637.0	637.0	637.0	638.9
17.5°	618.9	619.8	620.7	621.6	622.5	623.3	624.0	624.6	625.3	626.0	628.0
20°	608.1	609.2	610.2	611.3	612.4	613.3	614.2	615.1	616.0	616.8	619.2
22.5°	596.5	597.8	599.1	600.3	601.5	602.8	604.0	605.1	606.3	607.6	609.9
25°	577.3	578.8	580.3	581.8	583.3	585.0	586.9	588.9	590.8	592.7	595.3
27.5°	554.2	556.7	559.1	561.6	564.0	566.4	568.6	570.9	573.2	575.4	578.6
30°	538.9	541.6	544.4	547.1	550.0	552.7	555.5	558.3	561.1	563.8	567.2
32.5°	521.9	525.0	528.1	531.2	534.4	537.6	540.9	544.1	547.4	550.7	554.7
35°	497.5	501.1	504.7	508.3	512.0	515.9	519.9	524.0	528.0	532.1	536.8
37.5°	470.9	475.1	479.3	483.4	487.7	492.4	497.7	502.9	508.1	513.4	518.7
40°	453.2	457.9	462.6	467.3	472.0	477.2	483.1	488.8	494.6	500.3	505.9
42.5°	436.3	440.9	445.6	450.3	455.1	460.7	467.4	474.0	480.6	487.3	493.3
45°	407.9	413.8	419.5	425.3	431.0	437.7	445.2	452.7	460.1	467.6	474.3
47.5°	380.0	386.3	392.7	398.9	405.2	412.7	421.5	430.3	439.0	447.8	454.8
50°	360.8	367.5	374.1	380.7	387.3	395.5	405.1	414.7	424.3	433.9	441.2
52.5°	342.3	349.3	356.3	363.3	370.2	378.8	388.9	399.1	409.2	419.3	426.8
55°	312.7	320.4	328.1	335.8	343.5	352.9	364.0	375.1	386.3	397.4	405.1
57.5°	283.4	292.2	300.9	309.5	318.2	328.2	339.5	350.8	362.2	373.5	381.8
60°	262.7	271.8	281.1	290.3	299.4	310.2	322.3	334.5	346.7	358.9	367.0
62.5°	244.2	253.7	263.3	272.8	282.4	293.2	305.4	317.5	329.8	342.0	350.6
65°	213.6	224.0	234.6	245.1	255.5	267.0	279.7	292.3	304.9	317.5	326.3
67.5°	185.5	196.4	207.5	218.4	229.3	241.2	254.1	267.0	279.9	292.8	301.7
70°	165.5	176.6	187.8	198.9	210.0	222.2	235.4	248.6	261.9	275.2	284.4
72.5°	147.0	158.4	169.9	181.4	192.8	205.3	218.8	232.1	245.6	259.0	268.1
75°	118.4	130.4	142.3	154.3	166.3	179.1	192.7	206.4	220.1	233.8	243.0
77.5°	90.7	103.2	115.7	128.2	140.7	154.0	167.9	181.8	195.7	209.5	218.8
80°	72.2	85.2	98.2	111.3	124.3	137.8	151.7	165.6	179.5	193.4	202.4
82.5°	56.7	69.7	82.5	95.4	108.3	121.7	135.8	149.9	163.9	178.0	187.0
85°	34.7	47.9	61.2	74.4	87.7	101.1	114.8	128.5	142.2	155.9	164.9
87.5°	19.0	32.2	45.5	58.5	71.6	85.3	99.7	114.4	128.9	142.8	151.4
90°	10.4	25.0	40.3	54.2	68.1	83.3	100.7	119.5	137.6	152.0	159.9
92.5°	17.8	33.4	50.2	65.0	81.5	100.9	130.6	167.3	201.3	215.8	209.3
95°	33.5	46.5	63.9	80.6	102.5	131.6	178.2	255.1	353.5	399.4	371.5
97.5°	48.7	61.6	78.4	97.4	119.9	150.5	205.4	307.1	461.4	595.4	627.5
100°	63.4	73.6	88.1	107.8	130.4	161.1	212.1	314.0	485.0	678.3	792.3
102.5°	76.3	85.1	99.0	118.0	140.5	170.6	218.3	309.8	468.8	675.8	850.4
105°	94.7	103.9	115.2	132.4	154.9	184.2	229.9	306.6	439.3	628.7	832.2
107.5°	115.7	123.0	133.0	148.2	169.2	197.7	242.0	309.8	420.9	579.0	759.3
110°	129.1	136.3	145.1	158.9	178.6	207.4	250.2	313.8	414.2	554.3	713.7



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CANDELA DISTRIBUTION (continued):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
112.5°	142.0	148.6	157.2	169.8	188.2	217.0	258.2	318.3	409.9	535.9	680.0
115°	162.2	168.3	175.0	186.2	203.3	229.2	270.5	325.1	406.1	514.5	637.3
117.5°	182.2	186.7	192.7	202.0	217.7	243.6	281.7	332.8	404.4	499.7	607.3
120°	195.2	199.0	204.2	211.8	227.3	252.7	289.9	338.3	403.6	491.0	590.5
122.5°	207.5	210.3	215.0	222.6	237.7	263.1	298.1	343.0	403.6	484.0	575.7
125°	223.0	225.2	229.6	238.5	253.2	277.2	310.6	350.6	403.1	471.8	553.5
127.5°	235.9	238.7	244.6	254.1	268.1	291.9	323.3	358.5	403.9	462.4	532.8
130°	243.6	246.3	253.4	263.5	278.1	300.9	331.1	363.6	405.0	456.6	519.2
132.5°	250.6	254.0	261.7	272.4	287.6	309.8	337.9	368.7	406.0	451.4	507.4
135°	260.3	263.3	272.1	283.1	300.1	321.8	347.5	375.4	407.1	444.6	491.1
137.5°	270.3	273.8	282.7	294.4	311.1	330.7	355.0	379.9	407.6	438.8	478.0
140°	278.0	280.7	289.4	301.0	316.9	336.2	358.7	382.0	407.5	435.2	470.2
142.5°	285.7	287.8	295.9	307.5	322.8	340.7	362.3	384.7	408.0	433.6	463.9
145°	296.1	299.2	306.5	317.5	332.2	348.5	368.4	389.0	409.6	431.8	456.7
147.5°	308.6	310.8	317.8	328.0	340.3	354.7	373.4	391.5	410.3	429.1	449.9
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°	663.9	663.9	663.9	663.9	663.9	663.9	663.9	663.9
2.5°	661.8	662.6	663.5	663.7	663.4	663.1	662.7	662.4
5°	659.8	661.0	662.3	662.9	662.6	662.4	662.2	661.9
7.5°	656.6	658.2	659.7	660.3	660.2	659.9	659.7	659.5
10°	653.8	655.5	657.3	658.0	657.8	657.6	657.4	657.1
12.5°	649.2	650.9	652.7	653.4	653.2	653.0	652.8	652.5
15°	640.8	642.7	644.7	645.5	645.4	645.1	644.9	644.7
17.5°	630.0	632.1	634.0	635.1	635.1	635.1	635.1	635.1
20°	621.5	623.9	626.1	627.4	627.4	627.4	627.4	627.4
22.5°	612.3	614.6	616.9	618.3	618.6	619.0	619.3	619.6
25°	597.9	600.4	602.9	604.5	605.2	605.9	606.5	607.2
27.5°	581.9	585.1	588.4	590.2	590.7	591.2	591.6	592.1
30°	570.7	574.1	577.5	579.6	580.2	580.9	581.5	582.1
32.5°	558.6	562.6	566.5	569.0	570.2	571.4	572.5	573.6
35°	541.5	546.2	550.9	554.0	555.5	557.0	558.5	560.0
37.5°	523.9	529.0	534.3	537.7	539.3	540.8	542.4	544.0
40°	511.4	517.0	522.5	526.3	528.2	530.2	532.1	534.0
42.5°	499.4	505.5	511.5	515.6	517.5	519.4	521.3	523.2
45°	480.9	487.5	494.2	498.5	500.7	502.8	504.9	507.1
47.5°	461.7	468.6	475.5	480.1	482.5	484.8	487.2	489.6
50°	448.5	455.7	463.1	467.9	470.2	472.6	474.9	477.2
52.5°	434.2	441.7	449.1	454.1	456.6	459.1	461.7	464.2
55°	412.7	420.5	428.2	433.4	436.2	438.9	441.8	444.5
57.5°	390.1	398.4	406.7	412.3	415.1	417.9	420.8	423.6
60°	375.1	383.2	391.4	397.0	399.9	402.9	406.0	409.0
62.5°	359.2	367.9	376.5	382.3	385.0	387.9	390.7	393.5
65°	335.1	343.8	352.6	358.4	361.2	363.9	366.7	369.5
67.5°	310.6	319.4	328.3	334.2	337.1	340.0	342.9	345.8
70°	293.6	302.7	312.0	317.8	320.4	323.0	325.6	328.1
72.5°	277.1	286.1	295.1	301.1	304.3	307.4	310.4	313.5
75°	252.2	261.4	270.6	276.5	279.4	282.1	284.9	287.7
77.5°	227.9	237.0	246.2	252.2	255.2	258.3	261.2	264.2
80°	211.3	220.4	229.3	235.4	238.3	241.3	244.3	247.3
82.5°	196.0	204.9	214.0	219.8	222.6	225.5	228.3	231.1
85°	173.8	182.9	191.8	197.7	200.8	203.8	206.8	209.7
87.5°	159.9	168.3	177.4	183.2	186.1	188.8	191.5	194.3
90°	167.7	174.7	184.8	191.1	193.7	196.2	198.8	201.3
92.5°	201.1	200.4	202.6	203.4	205.4	205.7	208.8	210.2
95°	319.9	283.1	260.3	249.4	242.4	239.1	239.5	242.8
97.5°	568.6	494.6	422.8	374.8	342.1	326.6	318.3	314.6
100°	784.8	701.3	608.2	524.2	465.4	436.1	417.1	406.1
102.5°	924.6	911.7	845.6	756.2	692.1	640.4	616.0	600.4
105°	992.9	1083.6	1100.7	1081.3	1038.0	994.7	965.4	957.3
107.5°	929.1	1061.6	1145.4	1185.8	1193.9	1193.8	1189.8	1178.5
110°	876.0	1014.7	1115.9	1180.8	1214.9	1231.2	1240.2	1241.8



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CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
112.5°	827.0	960.4	1068.0	1141.9	1188.3	1214.1	1229.0	1235.3
115°	765.3	885.2	988.2	1068.5	1123.1	1159.3	1180.8	1189.9
117.5°	716.9	822.8	916.7	992.1	1047.6	1085.6	1108.1	1115.8
120°	691.5	788.9	873.0	944.2	998.2	1035.1	1058.9	1068.6
122.5°	670.7	760.3	840.0	904.5	952.7	988.8	1009.8	1018.0
125°	639.6	721.2	791.8	850.9	895.6	925.6	945.9	953.7
127.5°	608.9	682.9	749.3	803.9	843.0	871.2	888.9	895.5
130°	589.2	657.7	721.0	773.1	810.9	837.6	854.0	861.7
132.5°	570.0	633.7	692.1	741.1	778.4	805.1	820.4	827.5
135°	543.4	596.5	649.7	694.0	727.5	753.5	768.4	773.1
137.5°	520.9	565.5	608.1	646.8	677.1	699.5	712.6	718.4
140°	506.8	545.6	583.0	617.7	642.5	663.0	675.3	681.1
142.5°	495.7	528.5	560.3	589.5	612.9	631.4	642.4	644.4
145°	480.7	506.3	530.5	553.0	571.7	585.3	593.8	597.1
147.5°	469.6	488.9	506.9	522.8	537.9	548.5	553.9	555.8
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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