

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: P331398-940

Luminaire Tested: **SA2XXDIP-C865D725U940-4F0-1E-UDD-D4**

Issue Date: 10/7/2019

Test Information

Test Method: LM-79-08
Report Number: P331398-940
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-C865D725U940-4F0-1E-UDD-D4
Description: DEFINE 2 DIRECT-INDIRECT PENDANT LED LUMINAIRE
DOWNLIGHT 865 LUMENS PER FOOT, DROP SATIN WHITE DIFFUSER
UPLIGHT 725 LUMENS PER FOOT, BATWING OPTIC
Light Source: -
Ballast/Driver: ELECTRONIC DRIVER

Summary

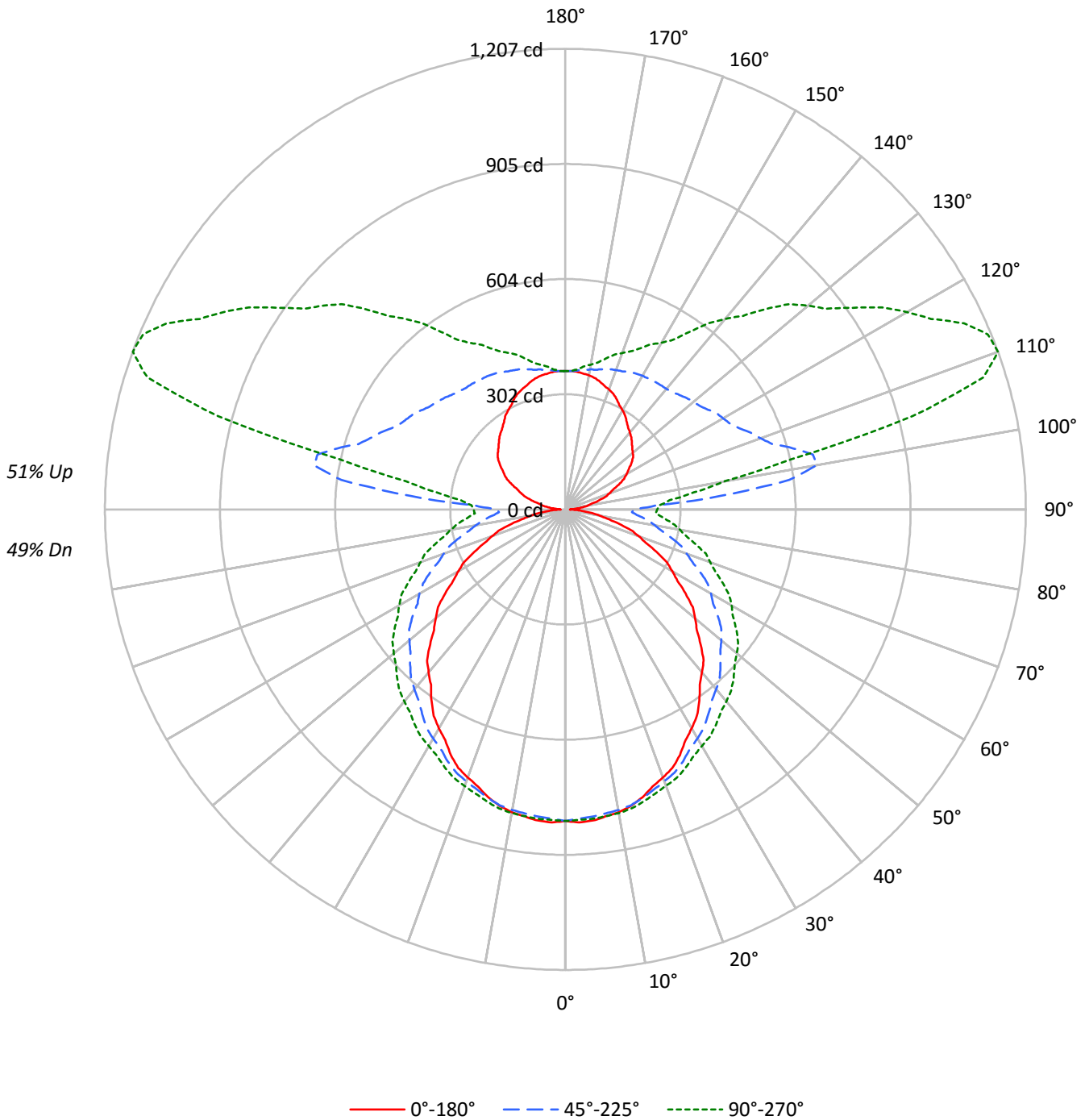
Lumens per Lamp: N/A
Luminaire Lumens: 5640.4 lumens
Efficiency: N/A
Efficacy: 103.7 lumens/watt
Spacing Criteria (0/90/45): 1.21 / 1.32 / 1.42
Luminous Opening: Rectangular w/ Sides (W: 0.17' x L: 4' x H: 0.08')
CIE Type: General Diffuse

Input Watts (W): 54.4
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	107	107	107	107	99	99	99	99	83	83	83	68	68	68	55	55	55	49
1	96	91	87	83	88	84	80	77	70	68	65	58	56	54	47	45	44	38
2	87	79	72	66	80	73	67	62	61	56	53	50	47	44	40	38	36	31
3	79	69	61	55	72	63	56	51	53	48	44	44	40	37	35	32	30	26
4	72	60	52	46	66	56	48	43	47	41	37	39	34	31	31	28	25	21
5	66	54	45	39	60	50	42	36	42	36	31	35	30	26	28	24	22	18
6	61	48	40	33	55	44	37	31	38	32	27	31	27	23	25	22	19	16
7	56	43	35	29	51	40	33	27	34	28	24	28	24	20	23	19	17	14
8	52	39	31	26	48	36	29	24	31	25	21	26	21	18	21	17	15	12
9	48	36	28	23	44	33	26	21	28	23	19	24	19	16	19	16	13	11
10	45	33	25	20	41	30	24	19	26	21	17	22	17	14	18	15	12	10

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	13183	13183	13183
5°	13247	12690	12640
10°	13163	12315	12177
15°	12982	11917	11686
20°	12752	11492	11215
25°	12527	11082	10786
30°	12206	10661	10357
35°	11884	10253	10054
40°	11544	9907	9750
45°	11222	9597	9493
50°	10875	9317	9238
55°	10513	9015	8977
60°	10070	8702	8703
65°	9607	8336	8376
70°	9087	7940	8025
75°	8422	7553	7701
80°	7376	7159	7372
85°	6374	6817	7118



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	77.4	1.4
10°-20°	221.8	3.9
20°-30°	336.2	6.0
30°-40°	409.5	7.3
40°-50°	440.5	7.8
50°-60°	427.8	7.6
60°-70°	373.5	6.6
70°-80°	287.6	5.1
80°-90°	196.3	3.5
90°-100°	277.9	4.9
100°-110°	588.9	10.4
110°-120°	586.6	10.4
120°-130°	465.9	8.3
130°-140°	360.4	6.4
140°-150°	263.6	4.7
150°-160°	183.4	3.3
160°-170°	108.0	1.9
170°-180°	35.1	0.6
0°-30°	635.4	11.3
0°-40°	1044.8	18.5
0°-60°	1913.1	33.9
0°-90°	2770.5	49.1
90°-120°	1453.4	25.8
90°-150°	2543.3	45.1
90°-180°	2870.0	50.9
0°-180°	5640.4	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	816	816	816	816	816	
5°	819	815	808	815	814	78
15°	781	783	783	793	793	220
25°	710	718	729	742	747	326
35°	612	632	654	679	689	382
45°	502	534	575	610	624	387
55°	385	428	489	530	547	344
65°	263	321	390	437	454	261
75°	146	212	288	336	354	154
85°	43	116	192	240	258	46
90°	13	90	180	224	241	9
95°	34	126	409	282	275	33
105°	91	170	618	1065	942	97
115°	155	209	503	997	1153	153
125°	212	252	456	794	921	188
135°	247	295	424	644	742	191
145°	280	322	408	514	568	176
155°	318	344	397	449	466	147
165°	347	358	380	403	409	98
175°	362	362	365	370	369	34
180°	362	362	362	362	362	



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CANDELA DISTRIBUTION (FULL):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
0°	816.5	816.5	816.5	816.5	816.5	816.5	816.5	816.5	816.5	816.5	816.5
2.5°	821.2	820.6	819.9	819.3	818.7	817.6	816.1	814.7	813.2	811.7	812.8
5°	818.8	818.1	817.3	816.5	815.6	814.5	812.9	811.3	809.8	808.2	809.8
7.5°	811.5	810.9	810.4	809.9	809.4	808.5	807.3	806.1	804.9	803.7	805.6
10°	805.8	805.3	804.8	804.2	803.7	803.1	802.3	801.5	800.7	799.9	802.0
12.5°	796.3	796.5	796.6	796.7	796.7	796.5	795.9	795.3	794.8	794.2	796.3
15°	781.0	781.5	782.0	782.6	783.0	783.3	783.3	783.3	783.3	783.3	785.7
17.5°	761.1	762.1	763.3	764.4	765.4	766.4	767.3	768.1	769.0	769.8	772.3
20°	747.8	749.1	750.5	751.8	753.0	754.3	755.3	756.3	757.4	758.5	761.3
22.5°	733.6	735.1	736.6	738.2	739.7	741.2	742.7	744.1	745.6	747.1	750.0
25°	710.0	711.8	713.6	715.5	717.3	719.4	721.8	724.2	726.5	728.9	732.0
27.5°	681.5	684.6	687.5	690.5	693.6	696.4	699.2	702.0	704.8	707.6	711.6
30°	662.6	666.0	669.5	672.9	676.3	679.8	683.1	686.5	690.0	693.4	697.6
32.5°	641.8	645.6	649.4	653.4	657.2	661.1	665.1	669.2	673.2	677.3	682.2
35°	611.7	616.2	620.7	625.2	629.6	634.4	639.4	644.4	649.3	654.3	660.1
37.5°	579.1	584.2	589.4	594.5	599.7	605.5	612.0	618.5	624.9	631.4	637.8
40°	557.3	563.1	568.9	574.7	580.4	586.9	594.0	601.1	608.2	615.3	622.1
42.5°	536.5	542.2	548.0	553.8	559.6	566.6	574.7	582.9	591.0	599.2	606.6
45°	501.7	508.8	515.9	523.0	530.1	538.2	547.4	556.7	565.9	575.1	583.2
47.5°	467.3	475.1	482.9	490.6	498.3	507.6	518.4	529.1	539.9	550.7	559.2
50°	443.7	451.8	460.0	468.1	476.4	486.3	498.1	510.0	521.8	533.7	542.6
52.5°	421.0	429.5	438.2	446.7	455.3	465.8	478.3	490.7	503.2	515.7	524.8
55°	384.6	394.0	403.5	413.0	422.4	434.0	447.6	461.4	475.0	488.7	498.1
57.5°	348.6	359.3	370.0	380.6	391.3	403.6	417.5	431.5	445.4	459.3	469.6
60°	323.1	334.3	345.6	357.0	368.3	381.4	396.4	411.3	426.3	441.4	451.4
62.5°	300.3	312.0	323.8	335.5	347.2	360.6	375.6	390.6	405.6	420.5	431.1
65°	262.7	275.5	288.5	301.3	314.2	328.4	343.9	359.4	375.0	390.5	401.3
67.5°	228.1	241.6	255.0	268.5	282.0	296.7	312.5	328.4	344.3	360.2	371.0
70°	203.5	217.2	230.9	244.5	258.2	273.2	289.5	305.8	322.1	338.4	349.7
72.5°	180.8	194.9	209.0	223.1	237.2	252.4	269.0	285.5	302.0	318.5	329.7
75°	145.5	160.2	175.0	189.8	204.5	220.3	237.0	253.9	270.7	287.5	298.8
77.5°	111.5	126.9	142.3	157.7	173.1	189.3	206.4	223.6	240.6	257.7	268.9
80°	88.7	104.8	120.8	136.9	152.9	169.4	186.5	203.7	220.7	237.8	248.9
82.5°	69.8	85.6	101.5	117.3	133.1	149.7	167.0	184.3	201.6	218.9	230.0
85°	42.6	58.9	75.2	91.5	107.8	124.4	141.2	158.0	174.9	191.7	202.8
87.5°	23.4	39.4	55.6	71.6	87.6	104.2	121.7	139.6	157.2	174.2	184.8
90°	12.6	29.9	47.9	64.6	81.2	99.3	119.7	141.3	162.4	179.9	189.7
92.5°	19.4	37.4	56.5	73.8	92.7	114.5	146.5	184.9	220.9	238.3	234.5
95°	33.9	49.0	68.3	86.9	110.5	141.2	189.1	265.6	362.2	409.3	385.1
97.5°	48.0	62.8	81.1	101.7	125.5	157.5	212.9	312.5	462.1	592.4	625.0
100°	62.0	73.7	89.8	110.7	134.3	166.0	217.8	317.5	482.8	669.0	779.1
102.5°	73.8	84.3	99.4	119.5	142.9	174.0	222.4	312.3	466.0	665.1	832.5
105°	91.0	101.4	113.9	132.0	154.9	185.1	231.5	307.2	436.0	618.3	812.9
107.5°	110.8	119.1	129.9	145.7	167.0	196.3	241.1	308.3	416.5	569.0	741.6
110°	123.2	131.3	140.7	155.1	175.0	204.2	247.8	310.9	408.8	544.3	697.1



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CANDELA DISTRIBUTION (continued):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
112.5°	135.5	142.7	151.9	164.8	183.2	212.4	254.2	313.9	403.3	525.5	663.6
115°	154.6	161.0	168.1	179.3	196.2	222.3	264.1	318.5	398.0	503.2	621.2
117.5°	173.2	177.9	184.0	193.2	208.6	234.4	273.1	324.0	394.1	486.9	590.5
120°	185.5	189.3	194.6	201.9	216.9	242.2	279.9	328.1	392.3	477.3	573.2
122.5°	197.2	199.8	204.5	211.7	226.0	251.3	286.7	331.4	391.1	469.4	557.9
125°	211.5	213.6	217.8	226.1	240.0	263.8	297.3	337.1	388.7	455.7	534.6
127.5°	223.7	226.3	231.8	240.8	254.0	277.2	308.4	343.4	387.8	444.8	512.9
130°	231.0	233.5	240.2	249.8	263.4	285.5	315.5	347.5	387.9	438.0	498.6
132.5°	237.7	240.8	248.1	258.1	272.3	293.8	321.4	351.6	387.9	431.8	486.1
135°	246.6	249.3	257.7	268.1	284.2	305.1	329.9	357.0	387.4	423.6	468.9
137.5°	256.0	259.3	267.6	278.7	294.5	313.3	336.4	360.3	386.8	416.6	454.8
140°	263.2	265.8	273.9	284.8	299.9	318.2	339.6	361.7	385.9	412.2	446.4
142.5°	270.5	272.5	280.0	291.0	305.4	322.4	342.9	364.0	386.1	410.4	439.8
145°	280.2	283.0	290.0	300.4	314.3	329.7	348.6	368.0	387.5	408.5	432.4
147.5°	291.9	294.0	300.7	310.3	321.9	335.6	353.3	370.4	388.2	406.0	425.7
150°	299.7	301.8	307.4	316.5	326.9	339.5	355.5	371.5	387.5	404.3	421.0
152.5°	307.6	308.5	314.1	322.0	331.9	343.4	357.8	372.1	386.5	401.5	417.1
155°	318.5	319.2	323.4	331.1	338.8	349.2	361.1	372.9	384.8	396.6	409.8
157.5°	327.8	328.4	331.8	338.5	344.6	353.4	363.5	372.9	381.6	391.6	403.1
160°	333.9	334.6	337.3	343.0	348.6	356.1	364.5	372.9	379.9	388.3	398.1
162.5°	340.0	339.6	342.4	346.9	351.9	357.8	365.2	372.4	378.3	385.5	393.5
165°	347.1	346.4	347.9	352.0	355.5	359.7	366.0	370.9	375.1	379.9	386.2
167.5°	353.0	352.1	353.4	356.1	358.6	361.2	365.8	369.9	371.8	375.1	378.9
170°	356.9	355.5	356.1	358.3	359.7	361.8	365.2	368.7	370.1	372.2	375.1
172.5°	359.1	358.3	357.8	360.0	360.8	362.3	364.7	367.0	367.9	368.9	371.1
175°	361.8	361.1	360.3	361.8	361.8	362.5	363.8	365.2	364.5	365.2	366.0
177.5°	363.0	361.9	361.3	362.5	362.5	362.5	363.0	364.2	363.0	362.5	363.0
180°	362.5	362.5	362.5	362.5	362.5	362.5	362.5	362.5	362.5	362.5	362.5



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CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
0°	816.5	816.5	816.5	816.5	816.5	816.5	816.5	816.5
2.5°	813.8	814.8	815.9	816.3	815.8	815.4	814.9	814.6
5°	811.3	812.9	814.5	815.1	814.8	814.6	814.3	814.0
7.5°	807.4	809.3	811.3	812.1	811.8	811.5	811.3	811.0
10°	804.1	806.2	808.3	809.2	809.0	808.7	808.4	808.2
12.5°	798.4	800.5	802.6	803.5	803.3	803.0	802.7	802.5
15°	788.0	790.4	792.8	793.8	793.5	793.3	793.0	792.8
17.5°	774.8	777.2	779.7	781.0	781.0	781.0	781.0	781.0
20°	764.3	767.1	770.0	771.5	771.5	771.5	771.5	771.5
22.5°	752.9	755.8	758.7	760.4	760.7	761.2	761.6	762.1
25°	735.2	738.3	741.5	743.5	744.2	745.0	745.8	746.6
27.5°	715.6	719.6	723.5	725.9	726.5	727.0	727.6	728.2
30°	701.8	706.0	710.2	712.7	713.5	714.3	715.1	715.9
32.5°	687.0	691.8	696.6	699.8	701.2	702.6	704.0	705.4
35°	665.9	671.7	677.5	681.3	683.1	685.0	686.8	688.7
37.5°	644.2	650.6	657.0	661.2	663.2	665.1	667.1	669.1
40°	628.9	635.8	642.7	647.2	649.6	651.9	654.3	656.7
42.5°	614.1	621.6	629.1	634.0	636.3	638.7	641.1	643.5
45°	591.4	599.5	607.7	613.1	615.7	618.3	621.0	623.6
47.5°	567.8	576.2	584.8	590.5	593.3	596.3	599.1	602.1
50°	551.5	560.4	569.4	575.3	578.2	581.1	584.0	586.9
52.5°	534.0	543.1	552.2	558.4	561.5	564.6	567.7	570.8
55°	507.7	517.1	526.6	533.0	536.4	539.8	543.2	546.6
57.5°	479.7	489.9	500.2	507.0	510.4	513.9	517.4	520.8
60°	461.4	471.4	481.3	488.1	491.9	495.5	499.2	502.9
62.5°	441.8	452.4	463.0	470.1	473.5	477.0	480.5	483.9
65°	412.1	422.8	433.6	440.7	444.1	447.5	450.9	454.3
67.5°	381.9	392.8	403.8	411.0	414.6	418.1	421.7	425.3
70°	361.1	372.3	383.6	390.8	394.0	397.2	400.4	403.5
72.5°	340.7	351.8	362.9	370.3	374.2	377.9	381.7	385.5
75°	310.1	321.5	332.8	340.1	343.6	347.0	350.4	353.8
77.5°	280.3	291.5	302.7	310.2	313.9	317.5	321.3	324.9
80°	259.9	271.0	282.0	289.4	293.0	296.8	300.4	304.1
82.5°	241.0	252.0	263.1	270.4	273.8	277.2	280.7	284.2
85°	213.7	224.8	235.9	243.3	246.9	250.6	254.2	258.0
87.5°	195.4	205.8	216.8	224.0	227.4	230.8	234.1	237.5
90°	199.6	208.7	220.6	228.1	231.2	234.4	237.6	240.8
92.5°	229.1	230.8	235.1	237.6	240.2	241.1	244.9	246.8
95°	338.7	306.1	286.9	278.1	272.2	269.7	270.8	274.7
97.5°	571.5	503.7	438.1	394.1	363.9	349.9	342.8	340.1
100°	774.2	697.5	611.7	533.7	478.8	451.7	434.4	424.6
102.5°	904.9	894.9	834.6	751.4	691.4	643.2	620.8	606.7
105°	967.1	1055.1	1073.4	1056.3	1016.0	975.7	948.6	941.7
107.5°	904.2	1031.7	1113.0	1152.6	1160.9	1161.5	1158.4	1148.3
110°	852.6	985.7	1083.3	1146.2	1179.0	1195.2	1204.3	1206.6



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CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
112.5°	804.7	932.8	1036.6	1107.8	1152.4	1177.4	1192.1	1198.8
115°	744.1	859.3	958.5	1035.7	1088.1	1123.0	1144.1	1153.2
117.5°	696.0	798.0	888.6	961.2	1014.3	1050.9	1072.6	1080.7
120°	670.5	764.3	845.5	914.1	965.8	1001.5	1024.6	1034.4
122.5°	649.3	735.7	812.8	874.9	921.1	955.8	976.3	984.6
125°	617.7	696.5	765.0	822.0	864.8	893.7	913.5	921.4
127.5°	586.4	657.8	722.2	774.9	812.4	839.6	856.9	863.7
130°	566.3	632.6	693.9	744.1	780.4	806.2	822.2	829.9
132.5°	546.8	608.4	665.1	712.5	748.1	773.9	788.9	796.0
135°	519.7	571.2	622.7	665.6	697.7	722.7	737.4	742.3
137.5°	496.5	539.8	581.2	618.5	647.6	669.2	682.0	688.0
140°	482.0	519.7	555.9	589.5	613.4	633.1	645.1	650.9
142.5°	470.6	502.4	533.4	561.4	584.0	601.8	612.5	614.7
145°	455.6	480.1	503.3	525.0	543.1	556.2	564.5	567.8
147.5°	444.3	462.6	479.7	494.9	509.3	519.4	524.9	526.7
150°	437.7	453.1	467.7	480.3	490.7	499.1	503.3	504.0
152.5°	431.6	445.9	458.3	469.1	477.3	484.6	487.7	487.8
155°	423.1	434.3	444.7	452.4	460.0	464.9	467.7	466.4
157.5°	413.2	422.6	431.3	437.3	442.7	446.8	448.1	448.1
160°	407.1	414.7	422.4	427.3	432.2	435.7	436.3	436.3
162.5°	400.9	407.5	414.0	417.9	422.7	425.1	425.8	425.2
165°	391.7	396.6	401.5	404.3	407.1	409.8	409.8	409.2
167.5°	383.0	386.7	390.0	392.6	393.9	395.4	395.2	394.4
170°	378.5	380.6	383.3	384.8	385.5	387.5	386.8	385.5
172.5°	373.4	375.1	377.3	378.1	378.8	379.8	379.1	378.3
175°	368.0	368.7	369.4	370.1	370.1	370.9	370.1	368.7
177.5°	364.2	364.2	364.7	364.7	364.7	364.7	364.2	363.0
180°	362.5	362.5	362.5	362.5	362.5	362.5	362.5	362.5

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