

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: P331398-935

Luminaire Tested: **SA2XXDIP-C865D725U935-4F0-1E-UDD-D4**

Issue Date: 10/7/2019

Test Information

Test Method: LM-79-08
Report Number: P331398-935
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-C865D725U935-4F0-1E-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: 5446.1 lumens
Efficiency: N/A
Efficacy: 100.1 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

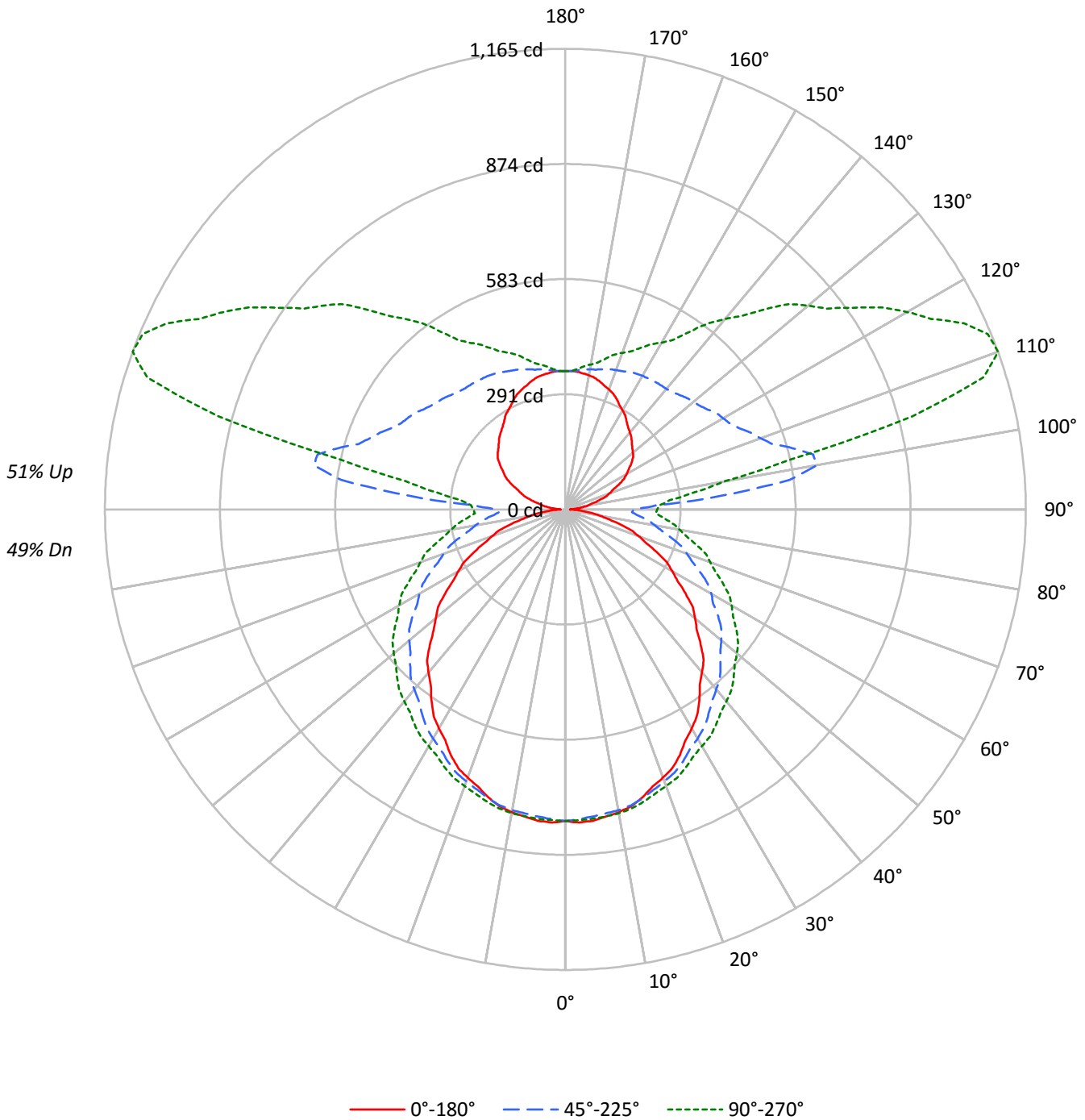
Input Watts (W): 54.4
Input Voltage (V): 120
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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	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°	12728	12728	12728
5°	12790	12252	12205
10°	12710	11890	11756
15°	12535	11506	11284
20°	12312	11097	10828
25°	12095	10701	10415
30°	11786	10293	10000
35°	11474	9900	9708
40°	11147	9566	9415
45°	10835	9267	9165
50°	10500	8995	8920
55°	10150	8703	8668
60°	9721	8403	8403
65°	9278	8047	8088
70°	8774	7666	7748
75°	8132	7293	7435
80°	7126	6912	7117
85°	6164	6582	6872



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	74.7	1.4
10°-20°	214.2	3.9
20°-30°	324.6	6.0
30°-40°	395.4	7.3
40°-50°	425.3	7.8
50°-60°	413.1	7.6
60°-70°	360.7	6.6
70°-80°	277.7	5.1
80°-90°	189.5	3.5
90°-100°	268.3	4.9
100°-110°	568.6	10.4
110°-120°	566.4	10.4
120°-130°	449.9	8.3
130°-140°	348.0	6.4
140°-150°	254.5	4.7
150°-160°	177.1	3.3
160°-170°	104.3	1.9
170°-180°	33.9	0.6
0°-30°	613.5	11.3
0°-40°	1008.9	18.5
0°-60°	1847.2	33.9
0°-90°	2675.1	49.1
90°-120°	1403.3	25.8
90°-150°	2455.7	45.1
90°-180°	2771.0	50.9
0°-180°	5446.1	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	788	788	788	788	788	
5°	791	787	780	787	786	75
15°	754	756	756	766	766	212
25°	686	694	704	717	721	315
35°	591	610	632	656	665	369
45°	484	516	555	589	602	374
55°	371	413	472	512	528	332
65°	254	310	377	422	439	252
75°	140	205	278	325	342	149
85°	41	112	185	231	249	44
90°	12	87	174	217	232	9
95°	33	122	395	273	265	32
105°	88	164	597	1028	909	94
115°	149	202	486	963	1114	148
125°	204	243	440	766	890	182
135°	238	284	409	622	717	184
145°	270	311	394	496	548	170
155°	308	332	383	433	450	141
165°	335	345	367	389	395	94
175°	349	350	353	357	356	33
180°	350	350	350	350	350	



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CANDELA DISTRIBUTION (FULL):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
0°	788.3	788.3	788.3	788.3	788.3	788.3	788.3	788.3	788.3	788.3	788.3
2.5°	792.9	792.3	791.7	791.1	790.5	789.5	788.0	786.6	785.1	783.8	784.8
5°	790.6	789.9	789.1	788.3	787.6	786.4	784.9	783.3	781.9	780.3	781.9
7.5°	783.5	783.0	782.5	782.0	781.5	780.7	779.5	778.3	777.1	776.0	777.8
10°	778.1	777.6	777.1	776.5	776.0	775.4	774.6	773.9	773.1	772.3	774.4
12.5°	768.9	769.0	769.1	769.2	769.3	769.0	768.5	767.9	767.4	766.8	768.9
15°	754.1	754.6	755.1	755.6	756.0	756.3	756.3	756.3	756.3	756.3	758.6
17.5°	734.9	735.9	737.0	738.0	739.1	740.0	740.9	741.7	742.5	743.3	745.7
20°	722.0	723.3	724.6	725.9	727.1	728.3	729.3	730.3	731.3	732.4	735.1
22.5°	708.3	709.8	711.3	712.7	714.2	715.7	717.1	718.5	720.0	721.3	724.2
25°	685.5	687.3	689.1	690.9	692.6	694.7	696.9	699.2	701.5	703.8	706.8
27.5°	658.1	661.0	663.8	666.8	669.7	672.4	675.1	677.9	680.5	683.2	687.1
30°	639.8	643.1	646.4	649.7	653.0	656.3	659.6	662.9	666.2	669.5	673.6
32.5°	619.7	623.4	627.1	630.9	634.6	638.3	642.2	646.2	650.1	653.9	658.7
35°	590.6	595.0	599.3	603.6	608.0	612.5	617.3	622.2	627.0	631.8	637.4
37.5°	559.1	564.1	569.1	574.0	579.0	584.6	590.9	597.2	603.4	609.7	615.9
40°	538.1	543.7	549.3	554.9	560.4	566.7	573.5	580.4	587.3	594.1	600.7
42.5°	518.0	523.6	529.2	534.8	540.4	547.1	554.9	562.8	570.7	578.6	585.7
45°	484.4	491.3	498.1	505.0	511.9	519.7	528.6	537.5	546.4	555.3	563.1
47.5°	451.3	458.7	466.2	473.7	481.1	490.1	500.5	510.9	521.3	531.8	539.9
50°	428.4	436.3	444.2	452.0	459.9	469.6	481.0	492.4	503.9	515.3	523.9
52.5°	406.5	414.7	423.1	431.4	439.6	449.8	461.8	473.8	485.9	497.9	506.7
55°	371.3	380.5	389.6	398.7	407.9	419.0	432.2	445.5	458.7	471.8	481.0
57.5°	336.6	346.9	357.2	367.5	377.8	389.7	403.1	416.6	430.1	443.5	453.4
60°	311.9	322.8	333.7	344.7	355.6	368.2	382.7	397.2	411.6	426.2	435.8
62.5°	290.0	301.3	312.6	323.9	335.3	348.2	362.7	377.1	391.6	406.0	416.3
65°	253.7	266.0	278.5	290.9	303.4	317.1	332.1	347.1	362.1	377.0	387.4
67.5°	220.2	233.2	246.2	259.2	272.2	286.5	301.8	317.1	332.4	347.8	358.3
70°	196.5	209.7	222.9	236.1	249.3	263.8	279.6	295.2	311.0	326.7	337.7
72.5°	174.6	188.2	201.8	215.4	229.0	243.7	259.8	275.7	291.6	307.5	318.3
75°	140.5	154.7	168.9	183.2	197.4	212.7	228.9	245.1	261.4	277.6	288.5
77.5°	107.6	122.5	137.4	152.2	167.1	182.8	199.3	215.9	232.3	248.8	259.7
80°	85.7	101.2	116.7	132.2	147.7	163.6	180.1	196.7	213.1	229.6	240.3
82.5°	67.4	82.7	98.0	113.2	128.5	144.6	161.3	178.0	194.7	211.4	222.1
85°	41.2	56.9	72.6	88.3	104.1	120.1	136.3	152.6	168.8	185.1	195.8
87.5°	22.6	38.1	53.7	69.1	84.6	100.7	117.5	134.7	151.8	168.2	178.4
90°	12.1	28.8	46.2	62.3	78.4	95.9	115.5	136.5	156.8	173.7	183.1
92.5°	18.7	36.1	54.6	71.3	89.5	110.6	141.5	178.5	213.3	230.1	226.4
95°	32.7	47.4	66.0	83.9	106.7	136.4	182.6	256.4	349.7	395.2	371.9
97.5°	46.3	60.6	78.4	98.2	121.1	152.1	205.6	301.8	446.2	572.0	603.5
100°	59.8	71.2	86.7	106.9	129.7	160.3	210.3	306.6	466.1	645.9	752.3
102.5°	71.3	81.4	96.0	115.4	137.9	168.0	214.7	301.5	450.0	642.2	803.8
105°	87.8	97.9	109.9	127.4	149.6	178.7	223.5	296.6	420.9	597.0	784.9
107.5°	106.9	115.0	125.4	140.7	161.3	189.5	232.8	297.6	402.2	549.4	716.1
110°	119.0	126.7	135.9	149.7	168.9	197.2	239.3	300.1	394.7	525.6	673.0



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CANDELA DISTRIBUTION (continued):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
112.5°	130.9	137.8	146.6	159.1	176.9	205.1	245.5	303.1	389.4	507.4	640.8
115°	149.3	155.4	162.3	173.1	189.4	214.6	255.0	307.5	384.3	485.9	599.8
117.5°	167.2	171.8	177.6	186.6	201.4	226.4	263.7	312.8	380.6	470.1	570.2
120°	179.1	182.8	187.9	194.9	209.4	233.8	270.3	316.8	378.8	460.9	553.5
122.5°	190.4	193.0	197.4	204.4	218.3	242.6	276.8	320.0	377.6	453.2	538.6
125°	204.2	206.2	210.3	218.3	231.8	254.7	287.1	325.5	375.3	440.0	516.2
127.5°	216.0	218.5	223.9	232.5	245.2	267.7	297.8	331.6	374.4	429.5	495.2
130°	223.1	225.5	232.0	241.2	254.3	275.7	304.6	335.5	374.5	422.9	481.5
132.5°	229.5	232.5	239.5	249.2	262.9	283.7	310.3	339.5	374.5	416.9	469.3
135°	238.1	240.7	248.8	258.9	274.4	294.5	318.6	344.7	374.1	409.0	452.7
137.5°	247.2	250.4	258.4	269.1	284.4	302.5	324.9	347.9	373.5	402.3	439.1
140°	254.2	256.7	264.5	275.0	289.6	307.2	327.9	349.2	372.6	398.0	431.0
142.5°	261.2	263.1	270.4	280.9	294.9	311.3	331.1	351.5	372.8	396.2	424.6
145°	270.5	273.3	280.0	290.1	303.5	318.3	336.6	355.3	374.2	394.4	417.5
147.5°	281.9	283.9	290.3	299.6	310.8	324.0	341.1	357.7	374.8	392.0	411.0
150°	289.4	291.4	296.8	305.6	315.6	327.8	343.3	358.7	374.2	390.4	406.5
152.5°	297.0	297.9	303.2	310.9	320.5	331.6	345.4	359.3	373.2	387.7	402.8
155°	307.5	308.2	312.3	319.7	327.1	337.2	348.6	360.1	371.5	383.0	395.7
157.5°	316.5	317.1	320.4	326.8	332.8	341.2	350.9	360.1	368.4	378.2	389.2
160°	322.4	323.0	325.7	331.1	336.6	343.9	352.0	360.1	366.8	374.9	384.4
162.5°	328.3	327.9	330.6	334.9	339.8	345.5	352.6	359.6	365.2	372.2	380.0
165°	335.2	334.5	335.9	339.9	343.3	347.3	353.4	358.1	362.1	366.8	372.9
167.5°	340.9	340.0	341.2	343.8	346.2	348.8	353.2	357.1	359.0	362.1	365.8
170°	344.6	343.3	343.9	345.9	347.3	349.3	352.7	356.0	357.4	359.4	362.1
172.5°	346.7	345.9	345.5	347.6	348.4	349.8	352.1	354.4	355.2	356.2	358.3
175°	349.3	348.6	347.9	349.3	349.3	350.0	351.3	352.7	352.0	352.7	353.4
177.5°	350.5	349.5	348.9	350.0	350.0	350.0	350.5	351.6	350.5	350.0	350.5
180°	350.0	350.0	350.0	350.0	350.0	350.0	350.0	350.0	350.0	350.0	350.0



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CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
0°	788.3	788.3	788.3	788.3	788.3	788.3	788.3	788.3
2.5°	785.7	786.8	787.8	788.2	787.7	787.3	786.9	786.5
5°	783.3	784.9	786.4	787.0	786.8	786.5	786.3	786.0
7.5°	779.6	781.4	783.3	784.1	783.9	783.6	783.3	783.1
10°	776.4	778.4	780.5	781.4	781.1	780.8	780.6	780.3
12.5°	770.9	772.9	775.0	775.8	775.6	775.3	775.1	774.8
15°	760.9	763.2	765.5	766.5	766.2	765.9	765.7	765.5
17.5°	748.1	750.4	752.9	754.1	754.1	754.1	754.1	754.1
20°	738.0	740.7	743.5	744.9	744.9	744.9	744.9	744.9
22.5°	726.9	729.8	732.5	734.2	734.5	734.9	735.4	735.8
25°	709.9	712.9	716.0	717.9	718.6	719.4	720.1	720.9
27.5°	691.0	694.8	698.6	700.9	701.5	702.0	702.6	703.1
30°	677.6	681.7	685.8	688.2	688.9	689.7	690.4	691.2
32.5°	663.3	668.0	672.6	675.7	677.0	678.4	679.8	681.1
35°	643.0	648.6	654.2	657.8	659.6	661.4	663.1	665.0
37.5°	622.0	628.2	634.4	638.4	640.3	642.2	644.1	646.0
40°	607.3	613.9	620.5	624.9	627.2	629.5	631.8	634.1
42.5°	593.0	600.2	607.4	612.2	614.4	616.7	619.0	621.3
45°	571.0	578.9	586.8	591.9	594.5	597.0	599.6	602.1
47.5°	548.2	556.4	564.6	570.2	572.9	575.8	578.5	581.3
50°	532.5	541.1	549.8	555.5	558.3	561.1	563.9	566.7
52.5°	515.6	524.4	533.2	539.2	542.2	545.2	548.1	551.1
55°	490.2	499.3	508.4	514.6	517.9	521.2	524.5	527.8
57.5°	463.2	473.0	482.9	489.6	492.8	496.2	499.6	502.9
60°	445.5	455.1	464.8	471.3	474.9	478.5	482.0	485.6
62.5°	426.5	436.8	447.0	453.9	457.2	460.5	463.9	467.3
65°	397.9	408.3	418.7	425.5	428.8	432.1	435.4	438.7
67.5°	368.8	379.3	389.9	396.8	400.3	403.7	407.2	410.6
70°	348.6	359.5	370.4	377.4	380.5	383.5	386.6	389.6
72.5°	329.0	339.7	350.4	357.6	361.3	364.9	368.6	372.2
75°	299.5	310.4	321.3	328.4	331.7	335.0	338.3	341.6
77.5°	270.6	281.5	292.3	299.5	303.1	306.6	310.2	313.7
80°	251.0	261.7	272.3	279.4	282.9	286.5	290.1	293.6
82.5°	232.7	243.3	254.0	261.1	264.4	267.7	271.0	274.4
85°	206.4	217.1	227.7	234.9	238.4	241.9	245.5	249.1
87.5°	188.6	198.7	209.3	216.3	219.6	222.8	226.0	229.3
90°	192.7	201.5	213.0	220.2	223.3	226.4	229.4	232.5
92.5°	221.2	222.8	227.0	229.4	232.0	232.8	236.4	238.3
95°	327.0	295.6	277.0	268.5	262.9	260.5	261.5	265.3
97.5°	551.8	486.4	423.0	380.6	351.4	337.9	331.0	328.4
100°	747.5	673.5	590.6	515.3	462.3	436.1	419.4	410.0
102.5°	873.7	864.1	805.8	725.6	667.6	621.0	599.4	585.8
105°	933.8	1018.7	1036.4	1019.9	981.0	942.1	915.9	909.3
107.5°	873.1	996.2	1074.7	1112.9	1120.9	1121.5	1118.5	1108.8
110°	823.2	951.7	1046.0	1106.7	1138.4	1154.0	1162.9	1165.0



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CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
112.5°	777.0	900.7	1000.9	1069.6	1112.7	1136.9	1151.1	1157.5
115°	718.5	829.7	925.5	1000.1	1050.6	1084.3	1104.7	1113.5
117.5°	672.0	770.5	858.0	928.1	979.4	1014.7	1035.7	1043.4
120°	647.4	738.0	816.4	882.6	932.5	967.0	989.3	998.8
122.5°	627.0	710.3	784.8	844.8	889.4	922.9	942.7	950.7
125°	596.4	672.5	738.7	793.7	835.0	862.9	882.0	889.7
127.5°	566.2	635.2	697.3	748.2	784.5	810.7	827.4	834.0
130°	546.8	610.8	670.0	718.5	753.5	778.4	793.9	801.3
132.5°	528.0	587.5	642.2	687.9	722.4	747.3	761.7	768.6
135°	501.8	551.6	601.2	642.7	673.6	697.8	712.0	716.7
137.5°	479.4	521.2	561.2	597.2	625.3	646.2	658.5	664.3
140°	465.4	501.8	536.7	569.2	592.3	611.3	622.8	628.4
142.5°	454.4	485.1	515.1	542.1	563.9	581.1	591.4	593.5
145°	439.9	463.6	485.9	506.9	524.3	537.0	545.0	548.3
147.5°	429.0	446.7	463.2	477.9	491.8	501.5	506.8	508.6
150°	422.7	437.5	451.6	463.7	473.8	481.9	485.9	486.6
152.5°	416.7	430.5	442.5	453.0	460.9	467.9	470.9	471.0
155°	408.5	419.3	429.4	436.8	444.2	448.9	451.6	450.3
157.5°	399.0	408.0	416.5	422.2	427.5	431.4	432.7	432.7
160°	393.0	400.5	407.9	412.6	417.3	420.7	421.3	421.3
162.5°	387.1	393.5	399.8	403.5	408.1	410.4	411.1	410.5
165°	378.2	383.0	387.7	390.4	393.0	395.7	395.7	395.1
167.5°	369.8	373.4	376.6	379.1	380.3	381.8	381.6	380.8
170°	365.5	367.5	370.1	371.5	372.2	374.2	373.5	372.2
172.5°	360.6	362.1	364.3	365.1	365.8	366.7	366.0	365.2
175°	355.3	356.0	356.7	357.4	357.4	358.1	357.4	356.0
177.5°	351.6	351.6	352.1	352.1	352.1	352.1	351.6	350.5
180°	350.0	350.0	350.0	350.0	350.0	350.0	350.0	350.0

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