

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: P331379-935

Luminaire Tested: **SA2XXDIP-C865D330U935-4F0-1E-UDD-D1**

Issue Date: 10/7/2019

Test Information

Test Method: LM-79-08
Report Number: P331379-935
REPORT IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-1807-864-8,
Test Lab: INNOVATION CENTER
Issue Date: 10/7/2019
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: NEO-RAY
Catalog Number: SA2XXDIP-C865D330U935-4F0-1E-UDD-D1
Description: DEFINE 2 DIRECT-INDIRECT PENDANT LED LUMINAIRE
DOWNLIGHT 865 LUMENS PER FOOT, DROP SATIN WHITE DIFFUSER
UPLIGHT 330 LUMENS PER FOOT, FLUSH SATIN WHITE DIFFUSER
Light Source: -
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 4016.9 lumens
Efficiency: N/A
Efficacy: 92.3 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: Semi-Direct

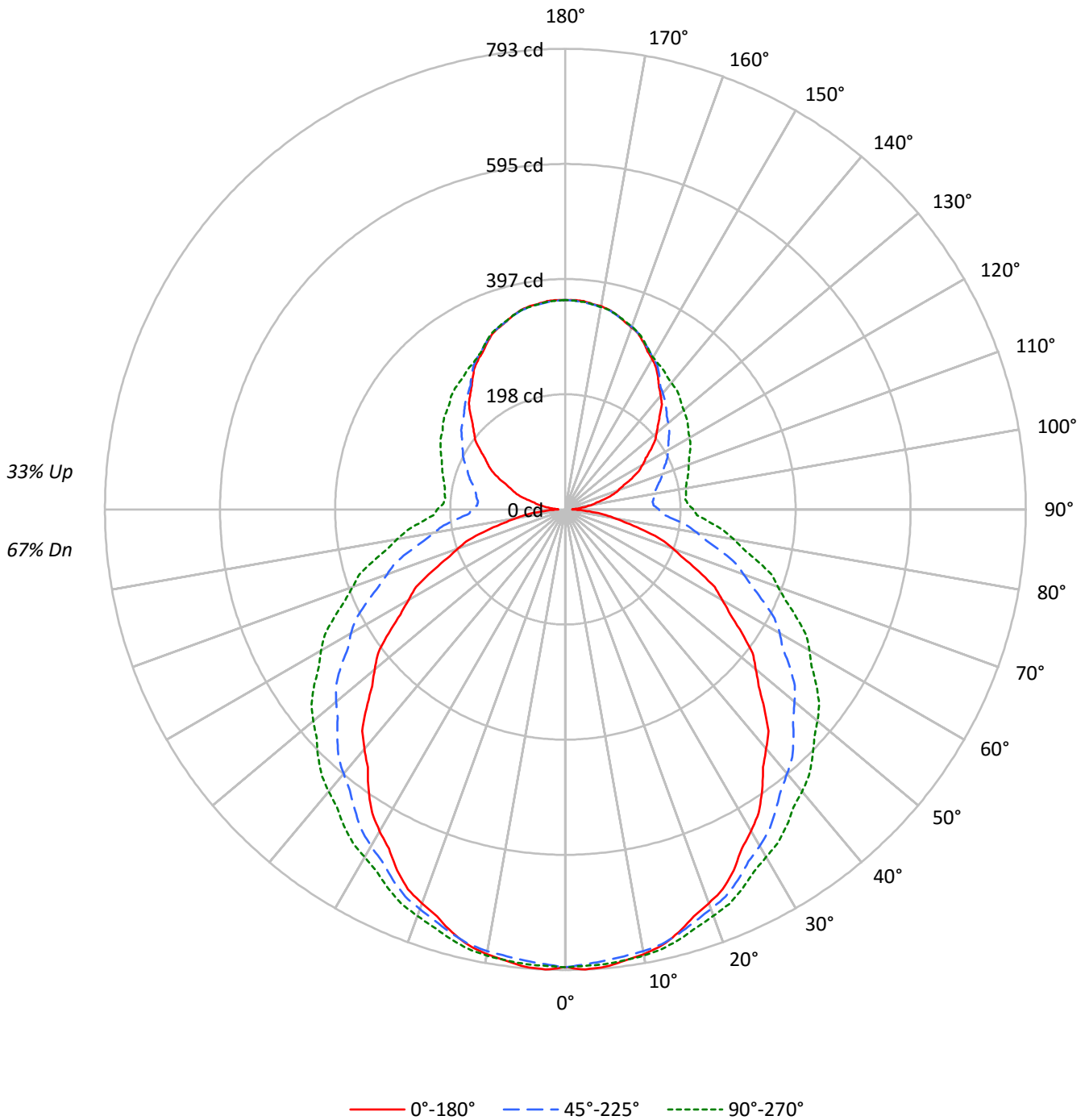
Input Watts (W): 43.5
Input Voltage (V): 120
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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	111	111	111	111	105	105	105	105	93	93	93	81	81	81	71	71	71	67				
1	99	94	89	85	93	89	84	81	78	75	72	69	66	64	60	58	56	52				
2	90	81	74	68	84	76	70	65	67	62	58	59	55	52	52	49	46	42				
3	81	71	62	56	76	67	59	53	59	53	48	52	47	43	45	41	38	35				
4	74	62	53	47	69	59	51	45	52	45	40	46	41	36	40	36	32	29				
5	68	55	46	40	64	52	44	38	46	40	35	41	35	31	36	31	28	25				
6	63	49	41	34	59	47	39	33	42	35	30	37	31	27	32	28	24	22				
7	58	45	36	30	54	42	34	29	38	31	26	33	28	24	29	25	21	19				
8	54	41	32	26	50	38	31	25	34	28	23	31	25	21	27	23	19	17				
9	50	37	29	24	47	35	28	23	31	25	21	28	23	19	25	20	17	15				
10	47	34	26	21	44	32	25	20	29	23	19	26	21	17	23	19	16	14				

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	1.9
10°-20°	214.2	5.3
20°-30°	324.6	8.1
30°-40°	395.4	9.8
40°-50°	425.3	10.6
50°-60°	413.1	10.3
60°-70°	360.7	9.0
70°-80°	277.7	6.9
80°-90°	187.8	4.7
90°-100°	151.2	3.8
100°-110°	164.7	4.1
110°-120°	183.2	4.6
120°-130°	194.0	4.8
130°-140°	193.5	4.8
140°-150°	178.0	4.4
150°-160°	147.2	3.7
160°-170°	97.6	2.4
170°-180°	34.1	0.8
0°-30°	613.5	15.3
0°-40°	1008.9	25.1
0°-60°	1847.2	46.0
0°-90°	2673.4	66.6
90°-120°	499.1	12.4
90°-150°	1064.6	26.5
90°-180°	1344.0	33.5
0°-180°	4016.9	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	82	161	205	221	8
95°	25	82	151	193	207	25
105°	71	107	165	204	218	76
115°	126	143	192	224	237	124
125°	179	184	218	247	258	161
135°	230	234	246	268	278	178
145°	278	280	282	289	294	174
155°	318	319	320	321	320	146
165°	346	346	346	347	346	98
175°	360	359	358	360	359	34
180°	360	360	360	360	360	



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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°	22.5	37.7	53.0	68.4	83.6	99.5	116.1	132.7	149.2	165.7	176.1
90°	11.7	27.3	42.8	58.4	73.9	90.5	108.2	126.0	143.7	161.4	171.5
92.5°	15.9	30.2	44.5	58.8	73.2	88.3	104.3	120.3	136.3	152.2	162.2
95°	25.0	37.5	50.2	62.8	75.4	89.4	104.8	120.1	135.5	150.8	160.5
97.5°	36.9	48.1	59.3	70.5	81.7	94.8	109.7	124.5	139.4	154.3	163.7
100°	46.7	56.6	66.5	76.5	86.4	98.6	113.0	127.4	141.8	156.3	165.7
102.5°	56.0	64.9	74.0	83.0	92.0	103.5	117.6	131.6	145.8	159.8	169.0
105°	71.1	78.7	86.3	93.8	101.3	111.8	125.2	138.5	151.9	165.1	174.2
107.5°	87.6	93.8	100.0	106.1	112.3	121.7	134.4	147.0	159.6	172.3	180.9
110°	97.4	102.8	108.3	113.8	119.2	128.2	140.7	153.1	165.6	178.0	186.1



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CANDELA DISTRIBUTION (continued):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
112.5°	109.0	113.7	118.4	123.0	127.7	136.0	147.7	159.5	171.3	183.0	191.0
115°	126.2	129.4	132.7	135.9	139.1	146.3	157.6	168.8	180.1	191.5	199.0
117.5°	142.2	144.6	147.0	149.4	151.7	158.0	168.2	178.4	188.6	198.7	206.1
120°	153.7	155.2	156.8	158.3	159.9	165.5	175.1	184.8	194.3	204.0	211.1
122.5°	164.2	165.2	166.3	167.3	168.4	173.5	182.7	191.8	201.0	210.2	216.9
125°	179.3	179.9	180.6	181.2	181.8	186.1	194.0	201.9	209.8	217.7	224.4
127.5°	195.2	195.7	196.2	196.7	197.3	200.7	207.0	213.3	219.6	225.9	232.0
130°	205.2	205.8	206.5	207.1	207.7	210.6	215.8	221.0	226.2	231.4	237.4
132.5°	216.4	216.8	217.3	217.7	218.3	220.5	224.6	228.8	233.0	237.1	242.7
135°	230.2	230.9	231.7	232.5	233.2	234.9	237.5	240.2	242.9	245.6	250.8
137.5°	246.0	246.5	247.1	247.6	248.2	249.1	250.4	251.7	253.0	254.3	258.9
140°	255.5	255.8	256.1	256.5	256.8	257.4	258.3	259.2	260.0	260.9	264.9
142.5°	265.2	265.5	265.9	266.2	266.6	266.9	267.3	267.6	267.9	268.3	271.6
145°	278.0	278.5	279.0	279.5	279.9	280.3	280.8	281.2	281.5	282.0	283.6
147.5°	290.5	291.1	291.6	292.2	292.7	293.2	293.4	293.8	294.0	294.3	294.6
150°	299.0	299.5	299.8	300.2	300.7	301.0	301.3	301.5	301.8	302.0	302.3
152.5°	306.6	306.9	307.4	307.8	308.2	308.6	308.8	309.2	309.5	309.9	310.1
155°	317.9	318.1	318.3	318.5	318.7	318.9	319.1	319.3	319.5	319.7	320.0
157.5°	327.5	327.7	327.8	328.0	328.1	328.2	328.4	328.5	328.6	328.7	329.2
160°	333.4	333.6	333.6	333.8	333.9	334.1	334.1	334.2	334.2	334.3	334.7
162.5°	338.7	338.8	338.8	338.8	338.9	338.9	339.0	339.1	339.1	339.1	339.7
165°	345.9	345.8	345.7	345.7	345.6	345.5	345.5	345.5	345.5	345.5	346.0
167.5°	351.8	351.6	351.5	351.2	351.0	350.9	350.9	350.9	350.9	350.9	351.3
170°	355.0	354.8	354.6	354.4	354.2	354.0	354.0	353.9	353.9	353.8	354.2
172.5°	357.1	357.0	356.8	356.5	356.4	356.2	356.2	356.1	356.0	355.9	356.5
175°	359.9	359.6	359.5	359.2	359.0	358.9	358.8	358.6	358.4	358.3	358.8
177.5°	360.9	360.8	360.6	360.5	360.3	360.2	360.1	360.0	359.8	359.7	360.1
180°	360.5	360.5	360.5	360.5	360.5	360.5	360.5	360.5	360.5	360.5	360.5



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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°	186.4	196.7	207.1	213.9	217.1	220.4	223.7	226.9
90°	181.5	191.5	201.6	208.1	211.2	214.3	217.5	220.6
92.5°	172.2	182.2	192.2	198.7	201.7	204.8	207.8	210.9
95°	170.1	179.8	189.4	195.7	198.6	201.6	204.5	207.4
97.5°	173.1	182.4	191.8	198.0	201.0	204.1	207.0	210.0
100°	175.0	184.4	193.8	199.8	202.6	205.3	208.0	210.8
102.5°	178.3	187.5	196.8	202.8	205.5	208.2	210.9	213.7
105°	183.2	192.3	201.3	207.2	210.0	212.8	215.5	218.3
107.5°	189.5	198.0	206.6	212.2	214.6	217.1	219.6	222.1
110°	194.2	202.4	210.5	215.9	218.4	221.0	223.6	226.2



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CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
112.5°	199.0	206.9	214.9	220.2	222.8	225.5	228.2	230.7
115°	206.6	214.1	221.6	226.7	229.3	231.9	234.5	237.0
117.5°	213.4	220.8	228.2	233.0	235.4	237.8	240.2	242.5
120°	218.2	225.3	232.4	237.3	239.9	242.5	245.0	247.6
122.5°	223.7	230.4	237.1	241.6	243.8	246.1	248.3	250.6
125°	231.0	237.6	244.4	248.7	251.0	253.2	255.4	257.6
127.5°	238.0	244.1	250.1	254.2	256.1	258.2	260.2	262.3
130°	243.3	249.3	255.2	259.1	260.8	262.6	264.3	266.1
132.5°	248.3	253.8	259.4	263.1	265.0	266.8	268.6	270.4
135°	256.1	261.4	266.7	270.2	272.0	273.8	275.7	277.5
137.5°	263.6	268.1	272.8	275.8	277.2	278.7	280.2	281.6
140°	269.0	273.0	277.1	279.7	281.0	282.2	283.5	284.7
142.5°	274.9	278.2	281.5	283.7	284.7	285.8	286.8	287.8
145°	285.2	286.8	288.3	289.6	290.7	291.6	292.7	293.6
147.5°	295.0	295.3	295.7	296.0	296.4	296.7	297.1	297.5
150°	302.5	302.6	302.9	302.9	302.6	302.5	302.3	302.0
152.5°	310.4	310.6	310.9	310.9	310.6	310.4	310.1	309.9
155°	320.4	320.7	321.1	321.2	320.9	320.7	320.6	320.3
157.5°	329.6	330.1	330.5	330.6	330.3	329.9	329.7	329.3
160°	335.1	335.5	336.0	336.0	335.7	335.4	335.2	334.9
162.5°	340.1	340.5	341.0	341.0	340.8	340.4	340.1	339.8
165°	346.5	347.0	347.4	347.5	347.2	346.8	346.5	346.2
167.5°	351.8	352.2	352.8	352.8	352.5	352.1	351.7	351.4
170°	354.7	355.2	355.7	355.7	355.3	354.9	354.5	354.0
172.5°	356.9	357.4	357.8	357.9	357.5	357.1	356.7	356.3
175°	359.3	359.7	360.2	360.2	359.9	359.5	359.0	358.6
177.5°	360.4	360.7	361.0	361.0	360.7	360.4	360.1	359.7
180°	360.5	360.5	360.5	360.5	360.5	360.5	360.5	360.5

(END OF REPORT)