

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: P332593-930

Luminaire Tested: **SA4XXDIP-C795D590U930-4F0-1E-UDD-D1**

Issue Date: 10/7/2019

Test Information

Test Method: LM-79-08
Report Number: P332593-930
REPORT IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-1807-864-10,
Test Lab: INNOVATION CENTER
Issue Date: 10/7/2019
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: NEO-RAY
Catalog Number: SA4XXDIP-C795D590U930-4F0-1E-UDD-D1
Description: DEFINE 4 DIRECT-INDIRECT PENDANT LED LUMINAIRE
DOWNLIGHT 795 LUMENS PER FOOT, DROP SATIN WHITE DIFFUSER
UPLIGHT 590 LUMENS PER FOOT, FLUSH SATIN WHITE DIFFUSER
Light Source: -
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 4309.8 lumens
Efficiency: N/A
Efficacy: 106.9 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

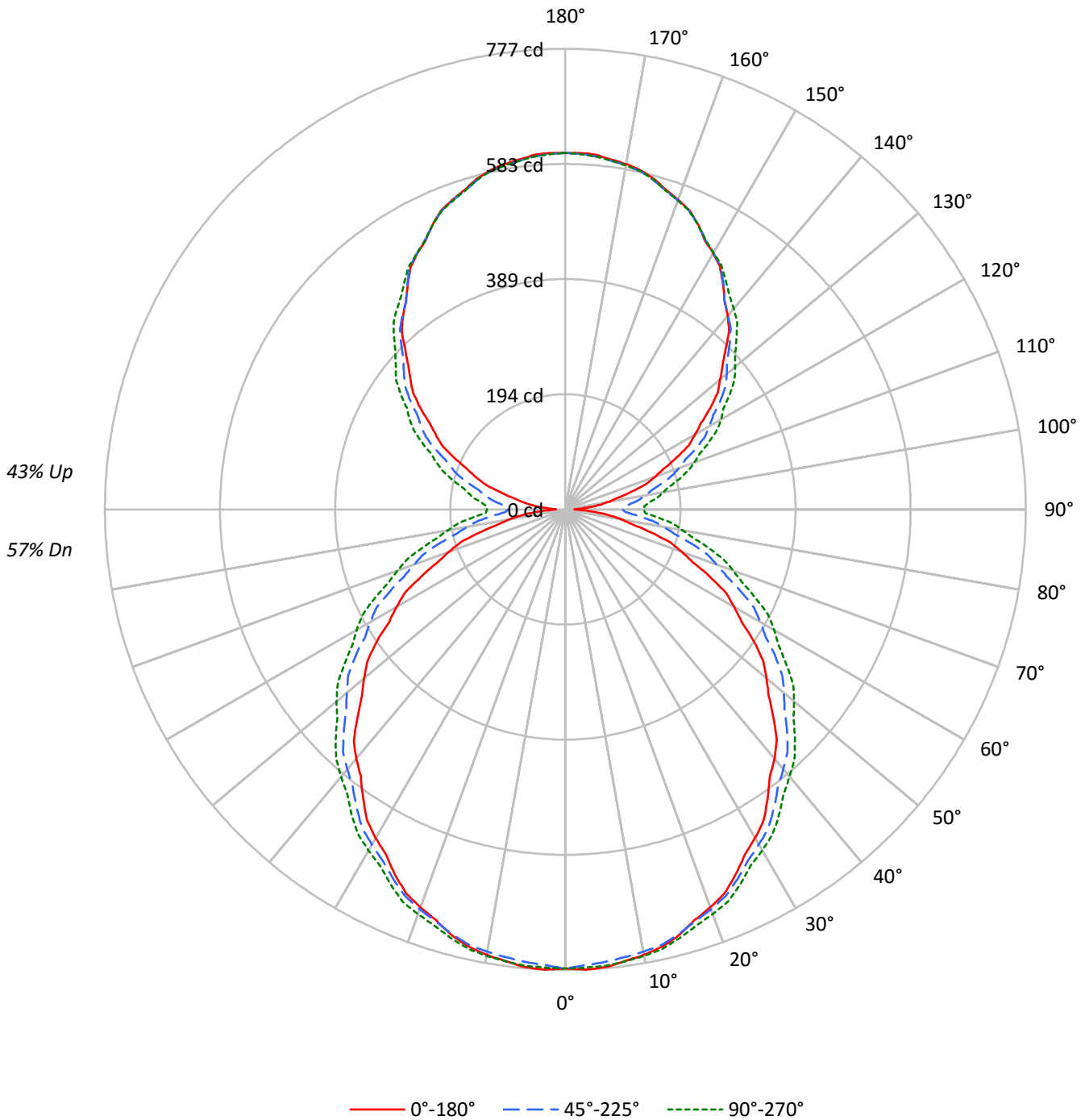
Input Watts (W): 40.3
Input Voltage (V): 120
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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Luminous Intensity Polar Plot





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COEFFICIENT OF UTILIZATION - ZONAL CAVITY METHOD:

RF	20									20									20									20									
RC	80									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	109	109	109	109	101	101	101	101	87	87	87	74	74	74	62	62	62	57																			
1	98	93	89	85	91	87	83	80	75	72	69	63	61	59	53	52	50	45																			
2	89	81	74	68	82	75	69	64	65	60	56	55	52	49	46	44	41	37																			
3	81	71	63	56	75	66	59	53	57	51	47	48	44	41	40	37	35	31																			
4	74	62	54	47	68	58	51	45	50	44	40	43	38	35	36	32	30	26																			
5	68	55	47	40	62	52	44	38	45	39	34	38	33	30	32	29	26	22																			
6	62	50	41	35	58	46	39	33	40	34	29	34	30	26	29	25	22	20																			
7	57	45	36	31	53	42	34	29	36	30	26	31	26	23	27	23	20	17																			
8	53	40	32	27	49	38	31	26	33	27	23	29	24	20	24	21	18	15																			
9	50	37	29	24	46	35	28	23	30	25	20	26	22	18	22	19	16	14																			
10	46	34	26	21	43	32	25	20	28	22	18	24	20	16	21	17	14	12																			

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	6252	6252	6252
5°	6271	6110	6128
10°	6233	6010	6006
15°	6177	5894	5862
20°	6093	5766	5723
25°	5998	5624	5569
30°	5895	5481	5411
35°	5779	5336	5274
40°	5685	5196	5129
45°	5547	5069	5005
50°	5430	4922	4876
55°	5310	4783	4722
60°	5121	4605	4583
65°	4915	4414	4411
70°	4666	4197	4210
75°	4318	3960	4029
80°	3929	3731	3851
85°	3441	3526	3748



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	73.3	1.7
10°-20°	210.1	4.9
20°-30°	317.7	7.4
30°-40°	384.4	8.9
40°-50°	406.4	9.4
50°-60°	382.5	8.9
60°-70°	317.3	7.4
70°-80°	222.9	5.2
80°-90°	127.8	3.0
90°-100°	114.5	2.7
100°-110°	172.9	4.0
110°-120°	236.6	5.5
120°-130°	283.9	6.6
130°-140°	304.3	7.1
140°-150°	292.0	6.8
150°-160°	244.0	5.7
160°-170°	162.4	3.8
170°-180°	56.9	1.3
0°-30°	601.2	13.9
0°-40°	985.6	22.9
0°-60°	1774.4	41.2
0°-90°	2442.4	56.7
90°-120°	523.9	12.2
90°-150°	1404.1	32.6
90°-180°	1867.0	43.3
0°-180°	4309.8	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	774	774	774	774	774	
5°	775	772	767	773	773	74
15°	743	744	741	749	748	209
25°	680	685	688	697	698	313
35°	595	605	614	626	629	372
45°	496	513	529	543	548	383
55°	388	407	433	449	455	346
65°	269	297	326	347	355	266
75°	149	182	218	241	250	159
85°	46	83	121	146	156	49
90°	15	55	96	123	132	11
95°	39	72	111	135	143	40
105°	116	135	168	190	199	124
115°	208	217	243	260	267	205
125°	299	299	319	334	339	266
135°	382	386	391	404	408	296
145°	464	464	465	470	472	290
155°	530	530	530	531	530	244
165°	577	576	575	577	576	163
175°	600	598	598	600	598	57
180°	601	601	601	601	601	



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CANDELA DISTRIBUTION (FULL):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
0°	774.5	774.5	774.5	774.5	774.5	774.5	774.5	774.5	774.5	774.5	774.5
2.5°	777.2	776.7	776.2	775.8	775.3	774.5	773.2	772.0	770.8	769.6	770.6
5°	775.3	774.7	774.1	773.6	773.0	772.0	770.6	769.3	767.9	766.6	768.2
7.5°	768.7	768.3	768.0	767.7	767.3	766.5	765.5	764.3	763.2	762.1	763.9
10°	763.1	763.0	762.8	762.5	762.4	761.8	760.8	759.9	758.9	757.9	759.7
12.5°	755.5	755.5	755.5	755.4	755.4	755.0	754.4	753.7	753.0	752.4	754.0
15°	743.2	743.4	743.6	743.8	744.0	743.8	743.2	742.7	742.0	741.4	743.2
17.5°	726.4	726.9	727.5	728.1	728.7	728.9	728.8	728.7	728.6	728.5	730.3
20°	714.6	715.2	715.8	716.3	716.9	717.3	717.5	717.6	717.9	718.0	720.0
22.5°	701.4	702.1	702.9	703.6	704.3	704.9	705.2	705.6	705.9	706.3	708.2
25°	679.9	681.0	682.2	683.4	684.5	685.4	686.0	686.6	687.1	687.7	689.8
27.5°	656.0	657.6	659.3	661.0	662.8	664.1	665.0	665.8	666.7	667.6	669.5
30°	640.0	641.6	643.1	644.7	646.2	647.6	649.0	650.3	651.7	653.0	655.1
32.5°	622.6	624.5	626.4	628.2	630.1	631.7	633.2	634.7	636.3	637.7	640.2
35°	594.9	597.2	599.6	601.9	604.1	606.3	608.2	610.2	612.0	614.0	616.7
37.5°	567.0	569.6	572.3	574.9	577.6	580.2	582.5	584.9	587.3	589.7	592.5
40°	548.9	551.5	553.9	556.4	559.0	561.6	564.3	567.0	569.6	572.3	575.3
42.5°	528.2	530.9	533.8	536.5	539.4	542.3	545.5	548.7	551.9	555.0	558.2
45°	496.0	499.7	503.4	507.0	510.7	514.4	518.0	521.7	525.3	529.0	532.3
47.5°	465.4	469.1	472.9	476.7	480.5	484.5	488.7	492.9	497.2	501.4	504.8
50°	443.1	447.4	451.6	455.8	460.1	464.3	468.6	472.8	477.0	481.3	485.2
52.5°	420.9	425.2	429.4	433.7	437.9	442.5	447.3	452.2	457.1	461.9	465.7
55°	388.5	392.6	396.6	400.6	404.7	409.6	415.4	421.2	427.0	432.8	436.6
57.5°	352.3	357.3	362.3	367.3	372.3	377.6	383.4	389.1	394.9	400.6	405.2
60°	328.6	333.7	338.7	343.7	348.7	354.4	360.8	367.1	373.5	379.8	384.3
62.5°	305.7	311.3	316.7	322.2	327.7	333.6	340.0	346.3	352.7	359.1	363.5
65°	268.8	275.0	281.2	287.3	293.5	299.9	306.4	313.0	319.5	326.0	330.8
67.5°	233.3	239.9	246.4	252.9	259.5	266.3	273.3	280.3	287.3	294.3	299.2
70°	209.0	215.6	222.1	228.7	235.2	242.1	249.5	256.8	264.1	271.4	276.6
72.5°	185.4	192.1	198.9	205.5	212.2	219.5	227.3	235.1	242.9	250.6	255.7
75°	149.2	156.3	163.4	170.6	177.7	185.3	193.4	201.5	209.6	217.7	223.1
77.5°	115.4	122.9	130.4	138.0	145.5	153.6	162.1	170.6	179.0	187.5	193.0
80°	94.5	102.2	109.9	117.6	125.4	133.5	141.9	150.4	158.9	167.4	173.2
82.5°	73.7	81.7	89.8	97.8	105.7	114.1	122.5	131.0	139.5	148.0	153.8
85°	46.0	54.1	62.1	70.3	78.4	86.7	95.4	104.0	112.8	121.4	127.2
87.5°	25.9	34.0	42.2	50.2	58.3	66.7	75.3	83.9	92.5	101.1	106.8
90°	15.2	24.1	32.9	41.8	50.6	59.6	68.7	77.9	87.0	96.1	102.3
92.5°	23.2	31.4	39.6	47.9	56.1	64.7	73.5	82.3	91.2	100.1	105.9
95°	39.1	46.5	53.7	61.1	68.3	76.3	85.0	93.5	102.2	110.8	116.3
97.5°	58.9	65.1	71.4	77.6	83.8	91.3	100.0	108.6	117.3	126.0	131.3
100°	74.6	80.1	85.5	90.9	96.4	103.3	111.7	120.2	128.6	137.1	142.4
102.5°	91.7	96.3	100.9	105.4	110.0	116.3	124.6	132.8	141.0	149.2	154.6
105°	116.2	120.1	124.1	128.0	132.0	137.7	145.3	152.8	160.4	167.9	173.0
107.5°	143.4	146.7	150.0	153.3	156.5	161.6	168.4	175.2	182.1	188.8	193.9
110°	161.3	164.2	167.1	170.1	172.9	177.7	184.3	191.0	197.6	204.3	208.5



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CANDELA DISTRIBUTION (continued):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
112.5°	179.9	182.4	184.8	187.3	189.7	194.0	200.3	206.5	212.8	219.1	223.3
115°	208.0	209.7	211.4	213.1	214.9	218.7	224.7	230.6	236.6	242.6	246.7
117.5°	235.1	236.3	237.3	238.5	239.6	243.0	248.6	254.1	259.8	265.4	269.0
120°	252.7	253.6	254.6	255.6	256.6	259.8	265.1	270.3	275.6	280.9	284.2
122.5°	271.7	271.9	272.1	272.5	272.7	275.5	280.6	285.8	290.9	296.0	299.5
125°	298.7	298.6	298.4	298.2	298.0	300.3	304.9	309.7	314.4	319.1	322.5
127.5°	324.0	324.1	324.2	324.3	324.4	326.3	329.8	333.3	336.9	340.4	343.6
130°	341.1	341.2	341.4	341.4	341.6	343.2	346.3	349.4	352.5	355.6	358.8
132.5°	359.4	359.4	359.4	359.5	359.5	360.7	363.1	365.5	367.9	370.2	373.3
135°	382.5	383.2	383.8	384.4	385.1	386.0	387.3	388.7	390.1	391.4	394.3
137.5°	408.8	408.9	409.0	409.1	409.2	409.6	410.5	411.3	412.1	412.9	415.5
140°	426.3	426.3	426.3	426.3	426.3	426.5	426.6	426.8	427.1	427.2	429.6
142.5°	441.6	441.7	441.9	442.1	442.3	442.2	442.1	441.8	441.6	441.5	443.6
145°	463.6	463.7	464.0	464.2	464.4	464.6	464.7	464.8	464.9	465.0	466.0
147.5°	485.5	485.8	486.1	486.4	486.7	486.8	486.7	486.7	486.6	486.5	486.6
150°	498.9	499.1	499.3	499.5	499.8	499.9	499.9	499.9	499.9	499.9	499.9
152.5°	510.9	511.0	511.3	511.4	511.7	511.8	511.9	512.0	512.1	512.2	512.4
155°	530.1	530.1	530.1	530.1	530.1	530.0	529.9	529.9	529.8	529.6	530.0
157.5°	546.5	546.3	546.1	545.9	545.8	545.6	545.6	545.6	545.6	545.5	545.8
160°	556.1	556.0	556.0	555.9	555.7	555.6	555.5	555.5	555.3	555.2	555.5
162.5°	565.1	564.8	564.5	564.3	564.0	563.8	563.7	563.6	563.5	563.4	563.9
165°	577.1	576.7	576.4	576.2	575.8	575.6	575.4	575.2	574.9	574.8	575.4
167.5°	586.3	585.9	585.4	585.0	584.6	584.3	584.3	584.4	584.4	584.4	585.1
170°	591.5	591.0	590.4	590.0	589.4	589.2	589.3	589.4	589.5	589.6	590.3
172.5°	595.2	594.8	594.4	593.9	593.5	593.3	593.3	593.3	593.3	593.4	594.0
175°	600.3	599.8	599.3	598.8	598.3	597.9	597.9	597.8	597.6	597.5	598.3
177.5°	602.0	601.6	601.2	600.8	600.3	600.1	600.1	600.1	600.1	600.1	600.7
180°	601.3	601.3	601.3	601.3	601.3	601.3	601.3	601.3	601.3	601.3	601.3



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CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
0°	774.5	774.5	774.5	774.5	774.5	774.5	774.5	774.5
2.5°	771.7	772.8	773.9	774.4	774.2	774.0	773.9	773.7
5°	769.7	771.3	772.7	773.5	773.2	773.1	772.9	772.7
7.5°	765.6	767.3	769.1	769.8	769.6	769.4	769.2	769.1
10°	761.4	763.1	764.9	765.6	765.5	765.2	765.1	764.9
12.5°	755.5	757.2	758.7	759.5	759.5	759.4	759.4	759.3
15°	744.9	746.7	748.4	749.2	749.0	748.8	748.6	748.4
17.5°	732.0	733.8	735.6	736.4	736.2	736.1	735.9	735.7
20°	721.9	723.8	725.8	726.8	726.8	726.8	726.8	726.8
22.5°	710.1	712.0	714.0	715.1	715.4	715.7	716.0	716.3
25°	691.9	694.1	696.2	697.3	697.5	697.7	697.9	698.1
27.5°	671.5	673.4	675.5	676.5	676.8	677.0	677.3	677.4
30°	657.2	659.3	661.5	662.8	663.2	663.5	663.9	664.3
32.5°	642.6	645.1	647.4	648.9	649.2	649.6	650.0	650.4
35°	619.4	622.1	624.8	626.4	627.0	627.5	628.2	628.8
37.5°	595.2	597.9	600.6	602.3	602.9	603.6	604.1	604.8
40°	578.1	581.1	583.9	585.7	586.5	587.3	588.1	588.8
42.5°	561.4	564.6	567.8	569.7	570.3	571.0	571.6	572.2
45°	535.6	538.8	542.1	544.2	545.2	546.2	547.1	548.0
47.5°	508.2	511.6	515.0	517.2	518.4	519.6	520.7	521.9
50°	489.0	492.8	496.7	499.2	500.3	501.6	502.7	503.9
52.5°	469.6	473.4	477.3	479.8	480.9	482.1	483.2	484.5
55°	440.4	444.3	448.2	450.7	451.8	453.0	454.1	455.3
57.5°	409.9	414.4	419.0	421.8	422.9	424.0	425.1	426.2
60°	388.7	393.1	397.5	400.6	402.1	403.7	405.2	406.8
62.5°	367.9	372.3	376.7	379.8	381.3	382.9	384.3	385.9
65°	335.7	340.6	345.4	348.5	350.1	351.6	353.1	354.7
67.5°	304.1	309.0	313.9	317.1	318.6	320.1	321.6	323.1
70°	281.8	287.1	292.3	295.5	296.9	298.2	299.5	300.9
72.5°	260.7	265.8	270.8	274.1	275.6	277.1	278.6	280.1
75°	228.4	233.8	239.3	242.8	244.6	246.3	248.0	249.7
77.5°	198.4	203.9	209.4	213.0	214.9	216.7	218.6	220.5
80°	179.0	184.7	190.5	194.1	195.7	197.2	198.8	200.3
82.5°	159.8	165.8	171.7	175.5	177.2	178.9	180.6	182.3
85°	133.0	138.8	144.6	148.4	150.3	152.2	154.2	156.1
87.5°	112.5	118.2	123.9	127.7	129.4	131.1	132.9	134.6
90°	108.5	114.7	120.9	124.9	126.6	128.4	130.1	131.9
92.5°	111.7	117.5	123.4	127.1	128.7	130.4	132.1	133.7
95°	121.8	127.3	132.8	136.5	138.2	139.9	141.7	143.4
97.5°	136.8	142.2	147.7	151.2	152.9	154.5	156.1	157.8
100°	147.9	153.3	158.7	162.1	163.4	164.8	166.2	167.5
102.5°	159.9	165.3	170.6	174.0	175.6	177.2	178.8	180.3
105°	178.1	183.3	188.4	191.9	193.8	195.6	197.5	199.3
107.5°	198.9	203.9	209.0	212.1	213.5	214.9	216.2	217.6
110°	212.7	217.0	221.2	224.2	226.1	228.0	229.8	231.6



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CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
112.5°	227.6	231.7	235.9	238.9	240.5	242.1	243.7	245.3
115°	250.9	254.9	259.1	261.8	263.0	264.3	265.5	266.8
117.5°	272.6	276.3	280.0	282.5	283.8	285.2	286.5	287.8
120°	287.6	290.9	294.2	296.8	298.5	300.3	302.0	303.8
122.5°	303.0	306.5	310.0	312.3	313.3	314.3	315.3	316.3
125°	326.0	329.5	332.9	335.1	336.1	337.0	337.9	338.9
127.5°	346.9	350.2	353.4	355.6	356.8	357.9	359.1	360.2
130°	362.1	365.3	368.6	370.6	371.3	372.1	372.8	373.6
132.5°	376.4	379.5	382.7	384.7	385.7	386.7	387.7	388.7
135°	397.2	400.1	402.9	404.8	405.6	406.5	407.3	408.2
137.5°	418.0	420.5	423.1	424.9	425.9	427.0	428.0	429.0
140°	432.0	434.4	436.8	438.5	439.3	440.2	441.0	441.9
142.5°	445.8	448.0	450.1	451.7	452.4	453.2	454.0	454.8
145°	467.1	468.1	469.2	469.9	470.4	470.9	471.3	471.8
147.5°	486.7	486.7	486.8	487.1	487.5	488.1	488.6	489.1
150°	499.9	499.9	499.9	499.9	499.7	499.6	499.5	499.5
152.5°	512.7	512.9	513.1	513.1	512.9	512.6	512.3	512.1
155°	530.4	530.8	531.3	531.3	530.8	530.4	530.0	529.6
157.5°	546.2	546.5	546.8	546.7	546.4	546.1	545.7	545.4
160°	555.9	556.1	556.4	556.4	555.9	555.3	554.8	554.3
162.5°	564.5	565.1	565.7	565.7	565.2	564.6	564.1	563.6
165°	576.0	576.6	577.2	577.3	576.9	576.5	576.1	575.7
167.5°	585.6	586.3	586.9	586.9	586.3	585.6	585.0	584.3
170°	590.8	591.5	592.1	592.1	591.3	590.6	589.9	589.1
172.5°	594.8	595.5	596.1	596.1	595.4	594.7	593.9	593.3
175°	599.0	599.7	600.4	600.4	599.7	599.0	598.3	597.5
177.5°	601.3	601.9	602.4	602.4	601.8	601.1	600.4	599.7
180°	601.3	601.3	601.3	601.3	601.3	601.3	601.3	601.3

(END OF REPORT)