

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: P331654-935

Luminaire Tested: **SA2XXRDIP-C485D530U935-4F0-1E-UDD-F**

Issue Date: 10/7/2019

Test Information

Test Method: LM-79-08
Report Number: P331654-935
REPORT IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-1807-864-2,
Test Lab: INNOVATION CENTER
Issue Date: 10/7/2019
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: NEO-RAY
Catalog Number: SA2XXRDIP-C485D530U935-4F0-1E-UDD-F
Description: DEFINE 2 DIRECT-INDIRECT PENDANT LED LUMINAIRE
DOWNLIGHT 485 LUMENS PER FOOT, FLUSH SATIN WHITE DIFFUSER, REGRESSED
HOUSING
UPLIGHT 530 LUMENS PER FOOT, NO LENS
Light Source: -
Ballast/Driver: ELECTRONIC DRIVER

Summary

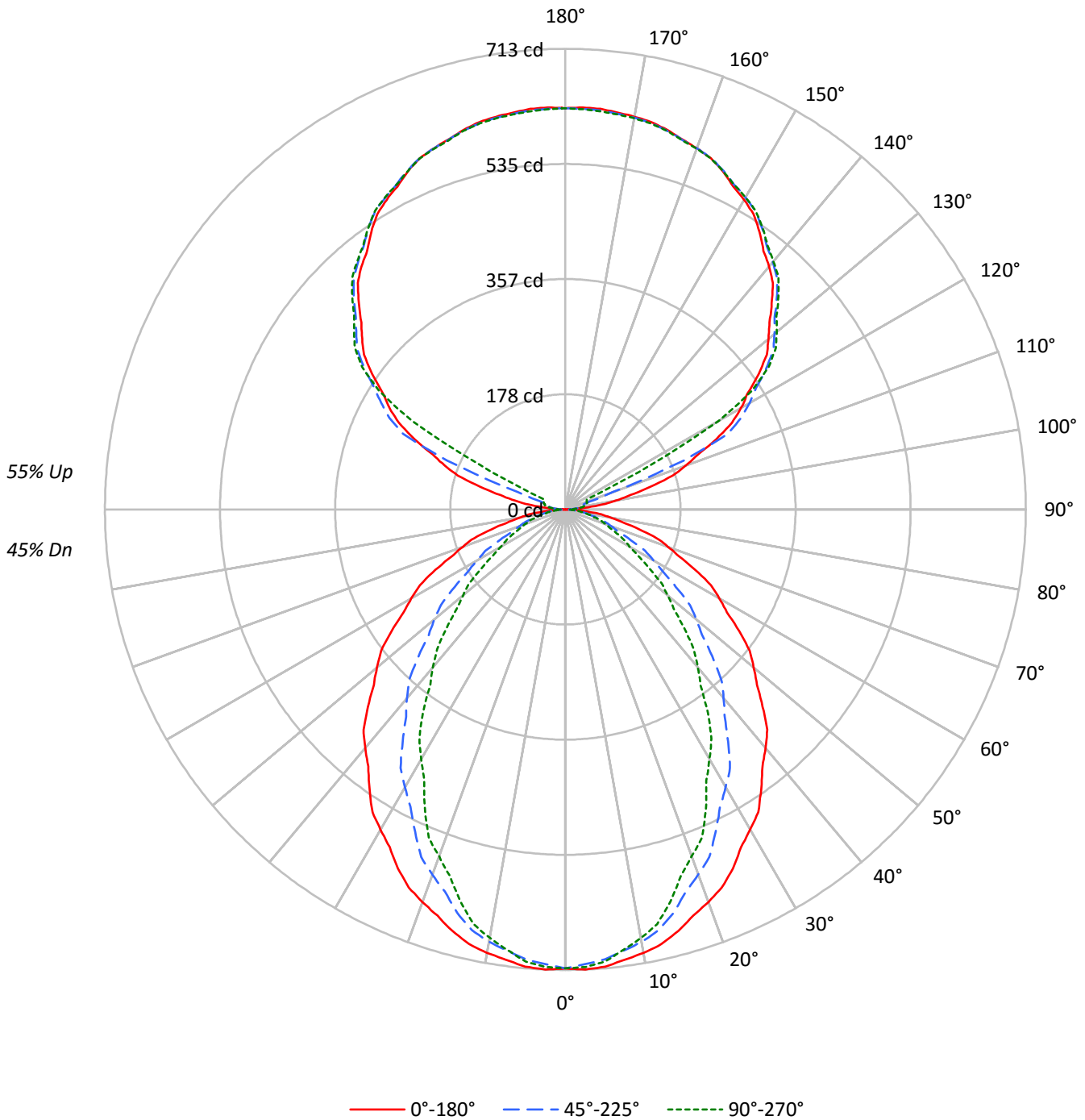
Lumens per Lamp: N/A
Luminaire Lumens: 3282.7 lumens
Efficiency: N/A
Efficacy: 100.1 lumens/watt
Spacing Criteria (0/90/45): 1.2 / 0.99 / 1.16
Luminous Opening: Rectangular (W 0.17' x L: 4' x H: 0')
CIE Type: General Diffuse

Input Watts (W): 32.8
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	65	65	65	51	51	51	45				
1	97	93	89	86	89	85	82	79	71	69	67	58	56	55	46	45	44	38				
2	89	82	76	71	81	75	70	66	63	59	56	51	49	47	41	39	38	33				
3	81	72	65	59	74	66	60	55	56	51	48	46	43	40	37	34	33	28				
4	74	64	56	51	68	59	52	47	50	45	41	41	37	35	33	30	28	25				
5	68	57	49	44	63	53	46	41	45	39	35	37	33	30	30	27	25	22				
6	63	51	44	38	58	48	41	36	40	35	31	34	30	27	27	24	22	19				
7	58	47	39	33	54	43	36	31	37	31	28	31	27	24	25	22	20	17				
8	54	42	35	30	50	39	33	28	34	28	25	28	24	21	23	20	18	16				
9	51	39	31	27	46	36	29	25	31	26	22	26	22	19	21	18	16	14				
10	47	36	29	24	43	33	27	23	28	23	20	24	20	17	20	17	15	13				

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	11472	11472	11472
5°	11515	11329	11391
10°	11429	11144	11049
15°	11296	10813	10502
20°	11115	10340	9821
25°	10929	9805	9164
30°	10670	9257	8321
35°	10419	8657	7579
40°	10163	8037	6721
45°	9866	7341	5948
50°	9560	6636	5184
55°	9250	5883	4453
60°	8887	5089	3694
65°	8478	4271	3366
70°	7983	3522	3097
75°	7380	3206	2888
80°	6518	2864	2631
85°	5113	2260	2260



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	66.5	2.0
10°-20°	182.6	5.6
20°-30°	256.4	7.8
30°-40°	279.6	8.5
40°-50°	257.1	7.8
50°-60°	201.9	6.2
60°-70°	131.7	4.0
70°-80°	67.9	2.1
80°-90°	19.1	0.6
90°-100°	20.7	0.6
100°-110°	76.0	2.3
110°-120°	203.0	6.2
120°-130°	335.2	10.2
130°-140°	356.5	10.9
140°-150°	331.3	10.1
150°-160°	266.4	8.1
160°-170°	171.7	5.2
170°-180°	59.1	1.8
0°-30°	505.6	15.4
0°-40°	785.2	23.9
0°-60°	1244.3	37.9
0°-90°	1462.9	44.6
90°-120°	299.7	9.1
90°-150°	1322.7	40.3
90°-180°	1820.0	55.4
0°-180°	3282.7	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	710	710	710	710	710	
5°	710	707	699	704	703	67
15°	676	668	647	635	628	190
25°	614	592	550	525	514	282
35°	529	494	439	400	384	331
45°	432	388	322	278	260	334
55°	329	277	209	172	158	293
65°	222	169	112	91	88	220
75°	118	75	51	47	46	125
85°	28	15	12	12	12	33
90°	0	5	9	11	12	2
95°	29	15	18	20	19	36
105°	137	143	27	32	34	146
115°	258	266	277	79	37	254
125°	365	371	380	383	384	326
135°	452	459	463	468	467	349
145°	524	524	532	534	532	328
155°	577	574	579	581	578	266
165°	608	606	607	610	607	172
175°	622	619	620	623	619	59
180°	621	621	621	621	621	



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CANDELA DISTRIBUTION (FULL):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
0°	710.5	710.5	710.5	710.5	710.5	710.5	710.5	710.5	710.5	710.5	710.5
2.5°	713.1	712.6	712.0	711.4	710.8	709.9	708.7	707.4	706.1	704.9	706.0
5°	710.5	709.8	709.1	708.4	707.7	706.4	704.6	702.7	700.9	699.0	700.3
7.5°	703.2	702.3	701.5	700.5	699.6	698.1	695.9	693.8	691.6	689.5	689.8
10°	697.1	696.0	695.0	694.1	693.0	691.1	688.3	685.4	682.5	679.7	679.2
12.5°	689.3	688.1	686.8	685.6	684.4	682.0	678.3	674.7	671.0	667.4	666.6
15°	675.8	674.2	672.7	671.1	669.5	666.3	661.4	656.6	651.8	646.9	644.2
17.5°	659.3	656.9	654.4	652.0	649.6	645.3	639.1	632.8	626.6	620.4	617.2
20°	646.9	644.0	641.2	638.3	635.4	630.4	623.3	616.1	609.0	601.8	598.3
22.5°	633.5	630.3	627.1	623.9	620.7	615.1	607.0	598.9	590.9	582.8	578.2
25°	613.5	608.9	604.3	599.7	595.1	588.1	578.7	569.3	559.8	550.4	544.6
27.5°	589.3	584.3	579.3	574.4	569.4	561.5	551.0	540.3	529.7	519.0	512.2
30°	572.3	566.9	561.5	556.0	550.6	542.2	530.7	519.3	507.8	496.5	489.1
32.5°	555.9	549.5	543.1	536.8	530.5	521.4	509.8	498.1	486.5	474.8	466.5
35°	528.6	521.2	514.0	506.7	499.4	489.5	476.9	464.3	451.8	439.2	430.2
37.5°	501.3	493.3	485.3	477.3	469.3	458.6	445.2	431.8	418.4	405.0	395.0
40°	482.2	473.7	465.1	456.6	448.0	436.8	422.9	409.1	395.2	381.3	371.2
42.5°	462.7	453.7	444.6	435.7	426.6	414.9	400.6	386.2	372.0	357.7	347.2
45°	432.1	422.6	412.9	403.4	393.8	381.5	366.5	351.5	336.5	321.5	311.3
47.5°	402.3	392.1	382.0	371.9	361.7	348.9	333.4	317.9	302.4	286.9	276.8
50°	380.6	370.5	360.4	350.3	340.1	327.2	311.4	295.8	280.0	264.2	254.4
52.5°	359.6	349.0	338.4	327.8	317.2	304.2	288.8	273.5	258.0	242.7	233.2
55°	328.6	317.5	306.3	295.2	284.0	270.7	255.3	239.9	224.4	209.0	200.4
57.5°	296.8	285.4	274.0	262.5	251.1	238.0	223.2	208.3	193.5	178.7	170.7
60°	275.2	263.8	252.4	240.9	229.5	216.5	201.7	187.0	172.3	157.6	150.2
62.5°	254.1	242.7	231.3	219.8	208.4	195.7	181.7	167.6	153.6	139.6	132.6
65°	221.9	210.3	198.7	187.1	175.6	163.3	150.5	137.6	124.8	111.8	107.0
67.5°	190.7	179.3	167.7	156.3	144.7	133.2	121.7	110.1	98.5	87.0	84.7
70°	169.1	158.0	146.8	135.7	124.5	114.0	104.2	94.3	84.5	74.6	73.2
72.5°	148.5	137.8	127.2	116.5	105.8	96.5	88.6	80.7	72.8	64.8	63.6
75°	118.3	108.3	98.3	88.3	78.3	70.9	66.0	61.1	56.3	51.4	50.5
77.5°	88.6	79.8	71.0	62.3	53.6	48.0	45.6	43.3	40.9	38.6	38.0
80°	70.1	62.8	55.5	48.2	40.9	36.6	35.1	33.8	32.3	30.8	30.3
82.5°	53.1	47.4	41.8	36.1	30.4	27.0	26.1	25.1	24.1	23.2	22.8
85°	27.6	24.6	21.6	18.7	15.7	13.9	13.5	13.1	12.7	12.2	12.2
87.5°	8.4	7.7	6.9	6.2	5.5	5.3	5.4	5.6	5.8	5.9	5.9
90°	0.4	1.5	2.7	3.7	4.8	5.8	6.6	7.4	8.2	9.0	9.5
92.5°	9.0	9.0	8.9	8.8	8.7	8.9	9.2	9.6	10.0	10.4	10.7
95°	29.2	25.9	22.6	19.3	16.0	14.7	15.4	16.1	16.8	17.6	18.0
97.5°	57.9	48.6	39.4	30.1	20.8	17.0	18.6	20.2	21.9	23.4	23.8
100°	79.6	65.9	52.2	38.5	24.8	18.9	20.5	22.2	23.9	25.6	26.4
102.5°	103.2	100.4	97.5	94.5	91.7	83.1	69.0	54.8	40.6	26.3	27.4
105°	136.6	139.6	142.6	145.6	148.6	136.5	109.2	82.0	54.7	27.4	28.5
107.5°	174.6	177.0	179.4	181.8	184.3	169.1	136.5	103.8	71.0	38.4	37.3
110°	199.1	201.1	203.3	205.3	207.4	194.1	165.2	136.4	107.5	78.6	68.6



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CANDELA DISTRIBUTION (continued):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
112.5°	222.1	223.9	225.8	227.6	229.5	226.9	219.7	212.6	205.4	198.4	161.9
115°	258.4	260.0	261.7	263.5	265.2	267.3	269.8	272.2	274.7	277.2	231.0
117.5°	290.8	292.7	294.6	296.5	298.4	300.2	302.0	303.7	305.4	307.0	295.9
120°	314.5	316.0	317.5	319.0	320.6	322.2	324.0	325.8	327.5	329.3	330.5
122.5°	334.7	336.2	337.9	339.4	341.0	342.8	344.7	346.6	348.6	350.6	351.3
125°	365.3	366.6	367.9	369.2	370.5	372.1	374.0	375.9	377.8	379.7	380.4
127.5°	393.0	394.5	396.0	397.4	398.8	400.3	401.7	403.1	404.5	406.0	406.9
130°	410.7	412.2	413.9	415.5	417.1	418.4	419.6	420.6	421.7	422.8	424.0
132.5°	428.7	430.0	431.4	432.7	434.1	435.3	436.4	437.6	438.6	439.7	440.7
135°	452.0	453.7	455.2	456.8	458.4	459.7	460.5	461.5	462.4	463.2	464.3
137.5°	475.7	476.7	477.9	479.0	480.1	481.2	482.2	483.3	484.2	485.3	486.3
140°	491.1	491.9	492.8	493.5	494.3	495.2	496.4	497.5	498.5	499.6	500.6
142.5°	504.0	504.8	505.5	506.2	507.0	507.9	509.2	510.4	511.7	513.0	513.8
145°	524.3	524.3	524.2	524.1	524.0	524.8	526.5	528.1	529.9	531.6	532.3
147.5°	542.1	541.7	541.3	541.0	540.5	541.2	542.9	544.6	546.2	547.9	548.5
150°	553.5	552.8	552.2	551.5	550.8	551.2	552.8	554.4	556.0	557.6	558.2
152.5°	563.3	562.5	561.7	560.9	560.2	560.5	562.1	563.6	565.1	566.6	567.2
155°	577.4	576.5	575.6	574.7	573.8	573.9	575.1	576.4	577.6	578.8	579.4
157.5°	588.4	587.7	586.9	586.2	585.4	585.5	586.3	587.1	588.0	588.8	589.4
160°	595.0	594.3	593.7	593.1	592.5	592.5	593.1	593.7	594.3	595.0	595.6
162.5°	600.6	600.0	599.4	598.8	598.3	598.2	598.7	599.3	599.8	600.3	601.0
165°	608.4	607.8	607.2	606.6	606.0	605.9	606.1	606.4	606.7	607.0	607.8
167.5°	614.2	613.5	612.9	612.3	611.7	611.6	611.8	612.2	612.4	612.7	613.4
170°	617.3	616.8	616.2	615.6	615.0	614.8	615.0	615.2	615.4	615.6	616.3
172.5°	619.6	619.0	618.4	617.8	617.2	616.9	617.2	617.3	617.5	617.8	618.5
175°	622.3	621.6	621.0	620.3	619.5	619.3	619.5	619.7	619.8	620.1	620.8
177.5°	622.8	622.2	621.6	621.1	620.5	620.3	620.4	620.4	620.5	620.6	621.2
180°	621.0	621.0	621.0	621.0	621.0	621.0	621.0	621.0	621.0	621.0	621.0



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CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
0°	710.5	710.5	710.5	710.5	710.5	710.5	710.5	710.5
2.5°	707.1	708.3	709.5	709.9	709.7	709.5	709.2	709.0
5°	701.5	702.8	704.1	704.6	704.1	703.7	703.3	702.8
7.5°	690.2	690.5	691.0	690.8	690.0	689.2	688.5	687.8
10°	678.8	678.4	678.0	677.3	676.5	675.6	674.8	673.9
12.5°	665.8	665.0	664.3	663.1	661.7	660.3	658.8	657.5
15°	641.4	638.8	636.0	634.0	632.5	631.1	629.6	628.3
17.5°	613.9	610.7	607.4	604.6	602.2	599.7	597.3	594.8
20°	594.7	591.2	587.5	584.2	581.1	577.9	574.8	571.6
22.5°	573.6	569.0	564.5	560.9	558.6	556.3	554.0	551.6
25°	538.7	532.9	527.0	523.0	520.8	518.7	516.6	514.4
27.5°	505.4	498.5	491.7	486.6	483.2	479.8	476.4	473.0
30°	481.8	474.6	467.3	461.7	457.8	454.0	450.1	446.3
32.5°	458.1	449.9	441.5	435.6	432.0	428.3	424.6	421.0
35°	421.2	412.2	403.2	397.1	394.0	390.8	387.7	384.5
37.5°	385.1	375.2	365.3	358.5	355.0	351.4	347.8	344.1
40°	361.0	350.9	340.7	333.8	330.1	326.4	322.6	318.9
42.5°	336.7	326.1	315.7	308.7	305.1	301.4	297.8	294.2
45°	301.2	291.1	280.9	274.1	270.7	267.3	263.8	260.5
47.5°	266.7	256.7	246.6	240.0	236.9	233.8	230.6	227.5
50°	244.5	234.7	224.8	218.4	215.4	212.4	209.4	206.4
52.5°	223.6	214.1	204.6	198.5	195.7	193.0	190.1	187.4
55°	191.8	183.2	174.7	169.0	166.3	163.6	160.9	158.2
57.5°	162.9	155.1	147.2	142.2	139.8	137.6	135.3	132.9
60°	142.9	135.7	128.4	123.6	121.3	119.0	116.8	114.4
62.5°	125.6	118.7	111.8	107.6	106.2	104.9	103.5	102.1
65°	102.2	97.3	92.5	89.8	89.4	88.9	88.5	88.1
67.5°	82.5	80.2	78.0	76.7	76.2	75.8	75.3	74.8
70°	71.7	70.3	68.9	67.8	67.3	66.7	66.1	65.6
72.5°	62.4	61.2	60.0	59.2	58.9	58.5	58.2	57.9
75°	49.4	48.5	47.4	46.8	46.8	46.6	46.4	46.3
77.5°	37.5	36.9	36.3	35.9	35.6	35.5	35.2	35.0
80°	29.7	29.2	28.6	28.3	28.3	28.3	28.3	28.3
82.5°	22.5	22.1	21.8	21.6	21.6	21.6	21.6	21.6
85°	12.2	12.2	12.2	12.2	12.2	12.2	12.2	12.2
87.5°	5.9	5.9	5.9	5.9	5.9	5.9	6.0	6.0
90°	10.0	10.5	11.0	11.4	11.5	11.7	12.0	12.1
92.5°	10.9	11.2	11.5	11.6	11.8	11.9	12.1	12.1
95°	18.5	19.0	19.5	19.7	19.6	19.5	19.5	19.3
97.5°	24.3	24.6	25.1	25.3	25.4	25.6	25.7	25.8
100°	27.2	28.0	28.8	29.3	29.5	29.7	29.9	30.1
102.5°	28.4	29.4	30.5	31.2	31.4	31.7	31.9	32.3
105°	29.6	30.7	31.8	32.5	33.0	33.3	33.8	34.2
107.5°	36.2	35.0	33.9	33.6	33.9	34.4	34.7	35.1
110°	58.6	48.6	38.7	33.9	34.3	34.7	35.1	35.5



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CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
112.5°	125.4	89.0	52.6	34.6	34.9	35.2	35.6	35.8
115°	184.8	138.5	92.3	65.6	58.4	51.2	44.0	36.9
117.5°	284.7	273.5	262.3	245.0	221.3	197.7	174.1	150.4
120°	331.7	332.9	334.2	328.0	314.5	301.1	287.6	274.1
122.5°	352.0	352.8	353.4	352.5	349.9	347.2	344.7	342.0
125°	381.1	381.8	382.5	383.0	383.3	383.6	383.9	384.2
127.5°	407.9	409.0	410.0	410.5	410.6	410.7	410.7	410.8
130°	425.0	426.1	427.2	427.7	427.6	427.5	427.4	427.3
132.5°	441.6	442.6	443.5	443.8	443.8	443.7	443.6	443.5
135°	465.3	466.2	467.3	467.7	467.4	467.3	467.1	466.8
137.5°	487.2	488.2	489.2	489.5	489.1	488.8	488.5	488.2
140°	501.4	502.3	503.3	503.4	502.9	502.5	502.0	501.4
142.5°	514.6	515.4	516.3	516.4	515.9	515.4	514.9	514.4
145°	533.0	533.6	534.3	534.4	534.0	533.5	533.0	532.4
147.5°	549.0	549.5	550.0	550.0	549.7	549.2	548.8	548.4
150°	558.8	559.4	560.0	560.1	559.6	559.0	558.5	558.1
152.5°	567.8	568.4	569.0	568.9	568.3	567.7	567.0	566.4
155°	580.0	580.6	581.2	581.0	580.2	579.5	578.7	577.8
157.5°	590.1	590.8	591.5	591.5	590.6	589.9	589.1	588.3
160°	596.1	596.7	597.3	597.3	596.6	595.9	595.1	594.4
162.5°	601.7	602.4	603.0	603.0	602.1	601.2	600.4	599.5
165°	608.5	609.2	609.8	609.8	609.2	608.5	607.8	607.0
167.5°	614.1	614.8	615.5	615.4	614.5	613.6	612.7	611.8
170°	617.0	617.7	618.4	618.3	617.3	616.5	615.6	614.7
172.5°	619.1	619.8	620.5	620.4	619.6	618.6	617.8	616.8
175°	621.5	622.2	622.8	622.8	621.7	620.7	619.7	618.7
177.5°	621.7	622.3	622.8	622.8	622.1	621.3	620.6	619.9
180°	621.0	621.0	621.0	621.0	621.0	621.0	621.0	621.0

(END OF REPORT)