

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: P331649-935

Luminaire Tested: **SA2XXRDIP-C485D330U935-4F0-1E-UDD-F1**

Issue Date: 10/7/2019

**Test Information**

Test Method: LM-79-08  
Report Number: P331649-935  
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: SA2XXRDIP-C485D330U935-4F0-1E-UDD-F1  
Description: DEFINE 2 DIRECT-INDIRECT PENDANT LED LUMINAIRE  
DOWNLIGHT 485 LUMENS PER FOOT, FLUSH SATIN WHITE DIFFUSER, REGRESSED  
HOUSING  
UPLIGHT 330 LUMENS PER FOOT, FLUSH SATIN WHITE DIFFUSER  
Light Source: -  
Ballast/Driver: ELECTRONIC DRIVER

**Summary**

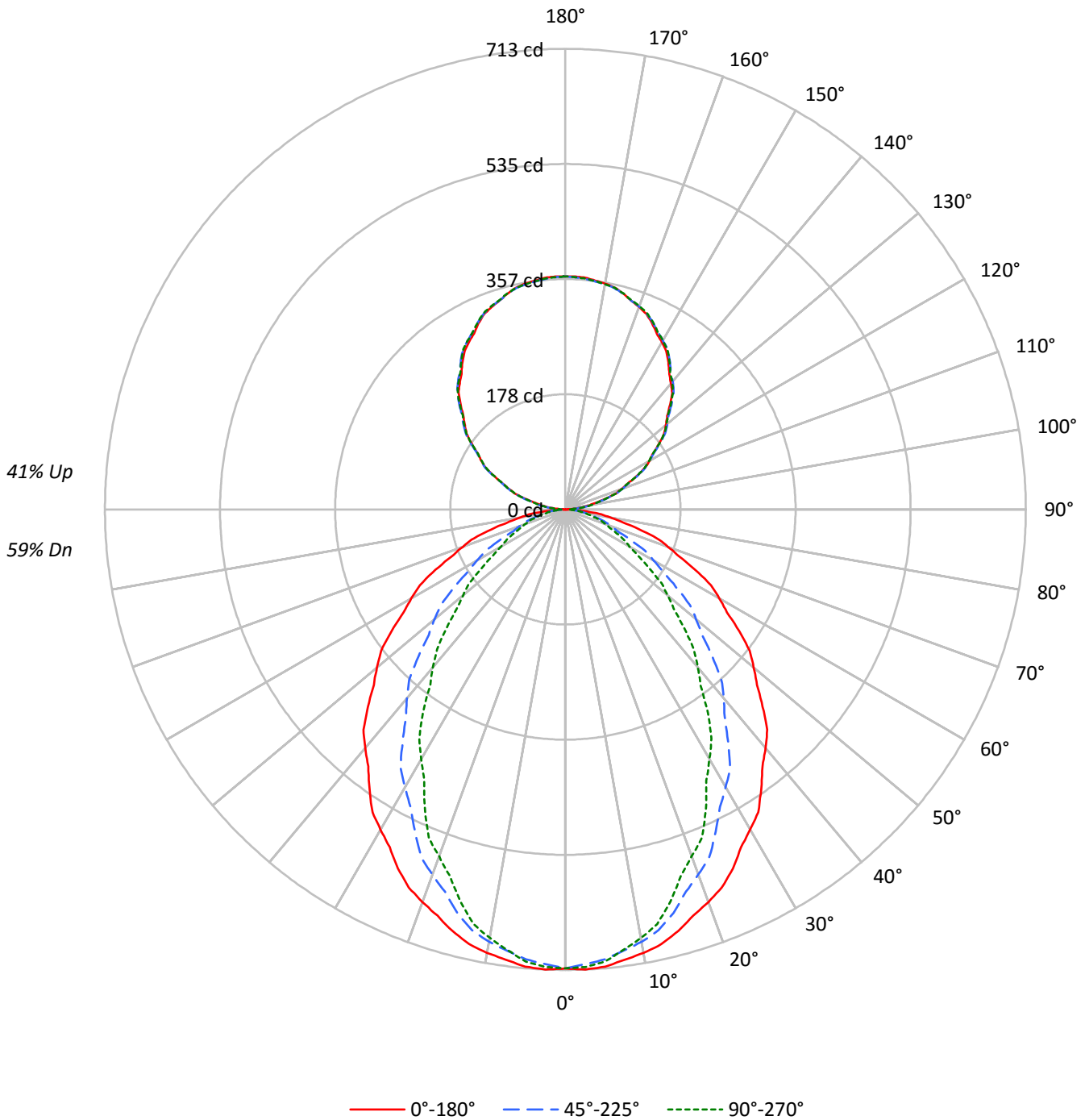
Lumens per Lamp: N/A  
Luminaire Lumens: 2470.8 lumens  
Efficiency: N/A  
Efficacy: 89.8 lumens/watt  
Spacing Criteria (0/90/45): 1.2 / 0.99 / 1.16  
Luminous Opening: Rectangular (W 0.17' x L: 4' x H: 0')  
CIE Type: General Diffuse

Input Watts (W): 27.5  
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	109	109	109	109	102	102	102	102	88	88	88	76	76	76	65	65	65	59				
1	100	96	92	89	94	90	87	84	78	76	74	68	66	64	58	57	56	51				
2	92	85	79	74	86	79	74	70	69	65	62	60	57	55	52	50	48	44				
3	84	75	68	62	78	70	64	59	62	57	53	54	50	47	46	44	41	38				
4	77	67	59	53	72	63	56	51	55	50	46	48	44	41	42	39	36	33				
5	71	60	52	46	66	56	49	44	50	44	40	44	39	36	38	35	32	29				
6	66	54	46	40	61	51	44	39	45	39	35	40	35	32	35	31	28	26				
7	61	49	41	36	57	46	39	34	41	35	31	36	32	28	32	28	25	23				
8	57	45	37	32	53	42	35	30	38	32	28	33	29	25	29	26	23	21				
9	53	41	34	29	50	39	32	27	35	29	25	31	26	23	27	24	21	19				
10	50	38	31	26	47	36	29	25	32	27	23	29	24	21	25	22	19	17				

**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	2.7
10°-20°	182.6	7.4
20°-30°	256.4	10.4
30°-40°	279.6	11.3
40°-50°	257.1	10.4
50°-60°	201.9	8.2
60°-70°	131.7	5.3
70°-80°	67.9	2.7
80°-90°	19.1	0.8
90°-100°	22.8	0.9
100°-110°	70.9	2.9
110°-120°	121.3	4.9
120°-130°	159.5	6.5
130°-140°	179.0	7.2
140°-150°	175.5	7.1
150°-160°	147.2	6.0
160°-170°	97.6	4.0
170°-180°	34.1	1.4
0°-30°	505.6	20.5
0°-40°	785.2	31.8
0°-60°	1244.3	50.4
0°-90°	1462.9	59.2
90°-120°	215.0	8.7
90°-150°	729.0	29.5
90°-180°	1008.0	40.8
0°-180°	2470.8	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	4	11	10	10	2
95°	16	19	20	19	19	18
105°	65	66	67	68	68	69
115°	122	123	123	123	122	120
125°	177	180	179	178	178	158
135°	229	232	233	233	232	177
145°	278	280	282	282	281	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°	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°	8.3	7.6	6.8	6.0	5.3	5.1	5.3	5.7	5.9	6.3	6.1
90°	0.3	1.1	1.9	2.8	3.5	4.7	6.2	7.7	9.1	10.7	10.5
92.5°	5.4	6.0	6.6	7.2	7.8	8.3	8.6	9.0	9.3	9.6	9.7
95°	15.8	16.5	17.1	17.8	18.5	18.9	19.0	19.2	19.4	19.5	19.5
97.5°	28.9	29.5	30.0	30.7	31.3	31.7	31.9	32.2	32.5	32.7	32.7
100°	38.7	39.2	39.7	40.3	40.8	41.2	41.3	41.6	41.8	42.0	42.0
102.5°	48.8	49.2	49.7	50.1	50.5	51.0	51.1	51.4	51.7	51.9	52.0
105°	65.4	65.6	65.8	66.0	66.2	66.4	66.6	66.6	66.8	66.9	67.1
107.5°	82.1	82.4	82.7	83.0	83.3	83.4	83.4	83.4	83.4	83.4	83.4
110°	92.8	93.2	93.6	94.0	94.4	94.6	94.6	94.6	94.6	94.6	94.6



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**CANDELA DISTRIBUTION (continued):**

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
112.5°	104.4	104.9	105.3	105.6	106.1	106.2	106.2	106.2	106.1	106.1	105.9
115°	121.7	122.1	122.5	122.9	123.3	123.5	123.3	123.1	123.0	122.9	122.9
117.5°	138.8	139.4	139.9	140.4	141.0	141.1	140.7	140.3	139.9	139.6	139.4
120°	150.2	150.8	151.4	151.9	152.4	152.4	151.9	151.4	150.8	150.2	150.2
122.5°	160.7	161.4	162.0	162.6	163.3	163.5	163.1	162.7	162.3	162.0	161.8
125°	177.0	177.6	178.2	178.8	179.4	179.7	179.4	179.3	179.1	178.8	178.7
127.5°	193.0	193.7	194.5	195.2	196.0	196.2	196.0	195.8	195.5	195.3	195.0
130°	202.9	203.8	204.7	205.5	206.4	206.8	206.6	206.6	206.4	206.2	206.1
132.5°	214.1	214.8	215.5	216.2	217.0	217.3	217.3	217.4	217.4	217.4	217.1
135°	229.0	229.8	230.6	231.3	232.0	232.5	232.6	232.7	232.9	233.0	232.9
137.5°	244.8	245.4	246.0	246.7	247.3	247.6	247.8	248.0	248.1	248.3	248.3
140°	254.3	254.9	255.5	256.1	256.8	257.2	257.5	257.9	258.2	258.6	258.6
142.5°	264.1	264.7	265.3	265.9	266.5	266.9	267.1	267.3	267.6	267.8	267.9
145°	278.0	278.5	279.0	279.5	279.9	280.3	280.8	281.2	281.5	282.0	282.1
147.5°	290.5	291.1	291.6	292.2	292.7	293.2	293.4	293.8	294.0	294.3	294.5
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°	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	5.7	5.6	5.6	5.7	5.7	5.7
90°	10.4	10.2	10.1	10.1	10.2	10.2	10.2	10.3
92.5°	9.7	9.7	9.8	9.8	9.8	9.8	9.8	9.8
95°	19.5	19.5	19.5	19.4	19.3	19.1	19.0	18.9
97.5°	32.7	32.7	32.7	32.7	32.7	32.7	32.7	32.6
100°	42.0	42.0	42.0	41.9	41.8	41.8	41.8	41.7
102.5°	52.1	52.1	52.2	52.2	52.1	52.0	52.0	51.9
105°	67.2	67.3	67.5	67.5	67.5	67.5	67.5	67.5
107.5°	83.5	83.6	83.6	83.5	83.2	82.9	82.6	82.2
110°	94.6	94.6	94.6	94.5	94.3	94.1	93.9	93.7





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**CANDELA DISTRIBUTION (continued):**

	55°	60°	65°	70°	75°	80°	85°	90°
112.5°	105.7	105.6	105.4	105.2	105.1	105.0	104.8	104.6
115°	122.8	122.7	122.6	122.5	122.3	122.1	121.9	121.7
117.5°	139.2	139.1	138.9	138.7	138.5	138.4	138.1	137.9
120°	150.2	150.2	150.2	150.2	150.0	149.7	149.6	149.4
122.5°	161.6	161.4	161.3	161.2	161.0	160.8	160.7	160.6
125°	178.5	178.2	178.1	177.9	177.9	177.8	177.7	177.6
127.5°	194.8	194.6	194.3	194.1	193.9	193.6	193.5	193.2
130°	206.0	205.9	205.7	205.5	205.3	204.9	204.7	204.4
132.5°	216.8	216.5	216.3	216.0	215.8	215.6	215.3	215.2
135°	232.9	232.8	232.7	232.6	232.4	232.2	232.0	231.8
137.5°	248.2	248.1	248.1	248.0	247.7	247.5	247.2	246.8
140°	258.6	258.6	258.6	258.4	258.1	257.9	257.6	257.4
142.5°	267.9	267.9	268.0	267.9	267.7	267.3	267.1	266.8
145°	282.1	282.1	282.2	282.1	281.9	281.6	281.4	281.0
147.5°	294.5	294.7	294.9	294.8	294.5	294.3	294.0	293.8
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)