

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: P331292-935

Luminaire Tested: **SA2XXDIP-C485D330U935-4F0-1E-UDD-F1**

Issue Date: 10/7/2019

**Test Information**

Test Method: LM-79-08  
Report Number: P331292-935  
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-C485D330U935-4F0-1E-UDD-F1  
Description: DEFINE 2 DIRECT-INDIRECT PENDANT LED LUMINAIRE  
DOWNLIGHT 485 LUMENS PER FOOT, FLUSH SATIN WHITE DIFFUSER  
UPLIGHT 330 LUMENS PER FOOT, FLUSH SATIN WHITE DIFFUSER  
Light Source: -  
Ballast/Driver: ELECTRONIC DRIVER

**Summary**

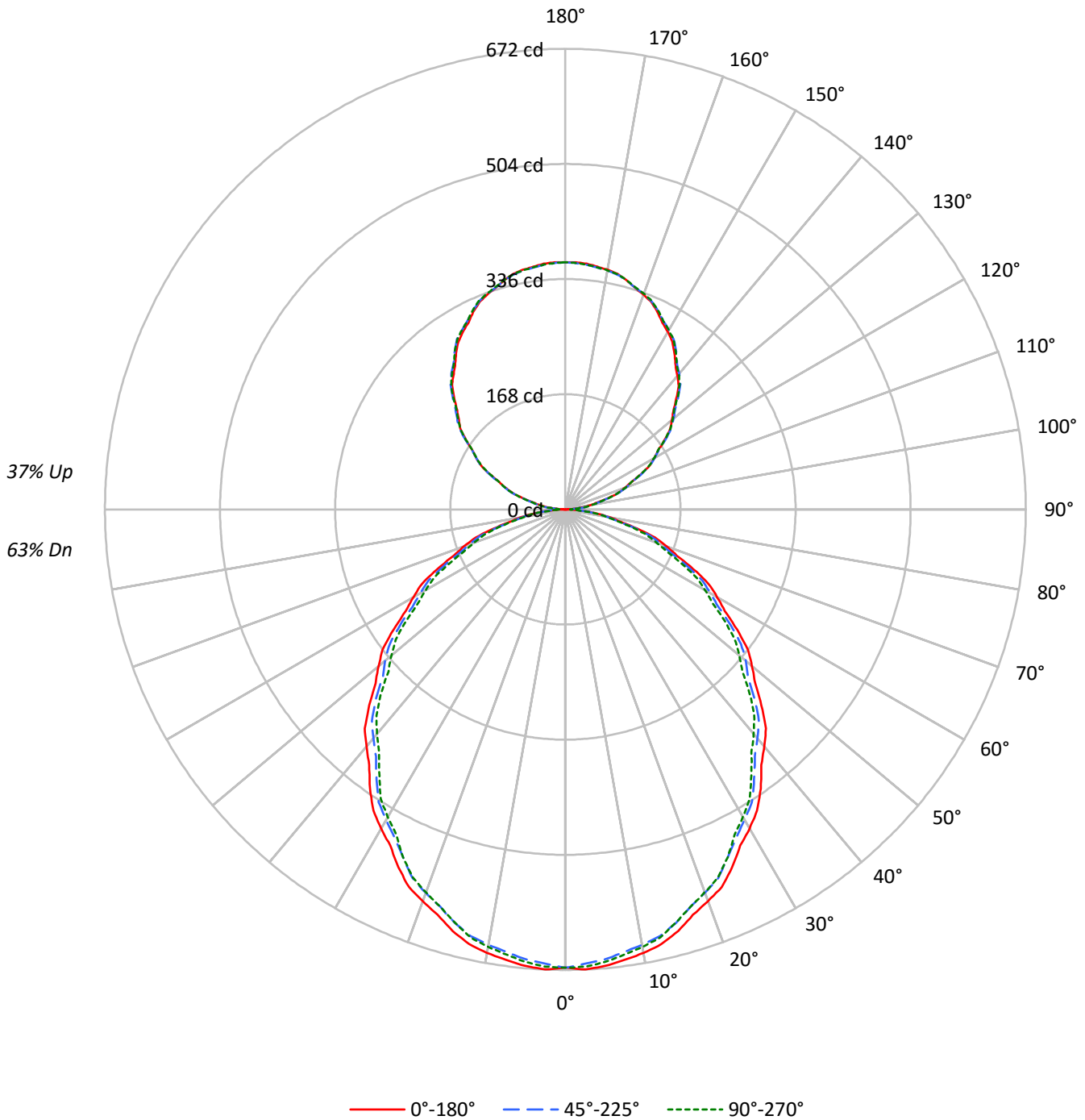
Lumens per Lamp: N/A  
Luminaire Lumens: 2710.7 lumens  
Efficiency: N/A  
Efficacy: 98.6 lumens/watt  
Spacing Criteria (0/90/45): 1.2 / 1.16 / 1.3  
Luminous Opening: Rectangular (W 0.17' x L: 4' x H: 0')  
CIE Type: Semi-Direct

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	0
RCR																		
0	110	110	110	110	103	103	103	103	90	90	90	79	79	79	68	68	68	63
1	101	96	92	89	94	90	87	84	79	77	74	69	67	66	60	59	57	53
2	92	84	78	72	86	79	73	69	70	65	62	61	58	55	53	50	48	44
3	84	74	66	60	78	70	63	58	61	56	52	54	50	46	47	44	41	38
4	77	66	57	51	71	62	54	49	55	49	44	48	43	40	42	38	35	32
5	70	58	50	44	66	55	48	42	49	43	38	43	38	35	38	34	31	28
6	65	53	44	38	61	50	42	37	44	38	33	39	34	30	34	30	27	25
7	60	48	39	34	56	45	38	32	40	34	30	36	31	27	31	27	24	22
8	56	43	35	30	52	41	34	29	37	31	26	33	28	24	29	25	22	20
9	52	40	32	27	49	38	30	26	34	28	24	30	25	22	27	23	20	18
10	49	36	29	24	46	35	28	23	31	25	21	28	23	20	25	21	18	16

**AVERAGE LUMINANCE (cd/sqm):**

	0°	45°	90°
0°	10797	10797	10797
5°	10838	10682	10746
10°	10775	10575	10627
15°	10641	10437	10425
20°	10452	10232	10220
25°	10265	9978	9978
30°	10023	9747	9661
35°	9798	9469	9329
40°	9514	9190	9012
45°	9236	8912	8690
50°	8932	8626	8317
55°	8617	8290	7983
60°	8263	7892	7598
65°	7885	7492	7148
70°	7407	7010	6680
75°	6744	6457	6301
80°	5979	5793	5504
85°	4872	4650	4168



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	62.9	2.3
10°-20°	176.9	6.5
20°-30°	260.1	9.6
30°-40°	302.1	11.1
40°-50°	301.8	11.1
50°-60°	263.2	9.7
60°-70°	194.6	7.2
70°-80°	110.2	4.1
80°-90°	31.1	1.1
90°-100°	22.8	0.8
100°-110°	70.9	2.6
110°-120°	121.3	4.5
120°-130°	159.5	5.9
130°-140°	179.0	6.6
140°-150°	175.5	6.5
150°-160°	147.2	5.4
160°-170°	97.6	3.6
170°-180°	34.1	1.3
0°-30°	499.9	18.4
0°-40°	802.0	29.6
0°-60°	1366.9	50.4
0°-90°	1702.8	62.8
90°-120°	215.0	7.9
90°-150°	729.0	26.9
90°-180°	1008.0	37.2
0°-180°	2710.7	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	669	669	669	669	669	
5°	669	666	659	664	663	63
15°	637	632	624	627	624	179
25°	576	571	560	561	560	265
35°	497	490	480	476	473	310
45°	404	400	390	384	381	312
55°	306	302	294	287	284	274
65°	206	202	196	190	187	204
75°	108	107	104	100	101	115
85°	26	26	25	23	22	30
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°	668.7	668.7	668.7	668.7	668.7	668.7	668.7	668.7	668.7	668.7	668.7
2.5°	671.8	671.2	670.7	670.1	669.5	668.7	667.4	666.2	664.9	663.6	664.8
5°	668.7	668.1	667.6	667.0	666.5	665.4	663.8	662.3	660.6	659.1	660.2
7.5°	662.8	661.9	661.1	660.1	659.3	658.1	656.4	654.9	653.2	651.6	652.8
10°	657.2	656.2	655.1	654.2	653.2	651.8	650.1	648.4	646.7	645.0	646.1
12.5°	649.5	648.6	647.6	646.8	645.9	644.6	642.9	641.2	639.5	637.7	638.5
15°	636.6	635.8	634.9	634.0	633.2	631.8	629.9	628.1	626.2	624.4	624.9
17.5°	620.1	619.3	618.5	617.6	616.7	615.4	613.5	611.6	609.7	607.8	608.5
20°	608.3	607.4	606.6	605.7	604.9	603.5	601.4	599.4	597.4	595.5	595.9
22.5°	596.5	595.3	594.1	592.9	591.7	590.1	588.2	586.3	584.4	582.6	582.6
25°	576.2	575.0	573.9	572.7	571.6	569.8	567.4	564.9	562.5	560.1	560.3
27.5°	553.0	552.0	551.0	549.9	548.9	547.4	545.5	543.5	541.7	539.8	539.3
30°	537.6	536.4	535.3	534.2	533.0	531.3	529.2	527.1	525.0	522.8	522.4
32.5°	521.1	520.2	519.3	518.3	517.5	515.8	513.6	511.3	509.1	506.9	506.1
35°	497.1	495.6	494.2	492.8	491.4	489.5	487.2	484.9	482.6	480.4	479.5
37.5°	469.9	468.6	467.4	466.1	464.9	463.1	460.8	458.6	456.2	454.0	452.9
40°	451.4	450.2	449.1	448.0	446.9	445.1	442.8	440.6	438.2	436.0	434.7
42.5°	433.4	432.2	431.1	430.0	428.9	427.1	424.8	422.6	420.3	417.9	416.6
45°	404.5	403.5	402.4	401.5	400.5	398.9	396.7	394.6	392.4	390.3	388.7
47.5°	375.7	374.7	373.8	372.8	371.9	370.3	368.1	365.8	363.6	361.4	359.7
50°	355.6	354.9	354.1	353.4	352.8	351.4	349.4	347.4	345.3	343.4	341.4
52.5°	336.0	335.1	334.2	333.2	332.3	330.9	329.0	327.1	325.2	323.3	321.7
55°	306.1	305.2	304.4	303.5	302.6	301.4	299.6	297.9	296.2	294.5	292.8
57.5°	276.0	275.3	274.6	274.0	273.3	272.0	270.1	268.2	266.3	264.4	262.7
60°	255.9	255.4	254.8	254.2	253.7	252.4	250.4	248.3	246.3	244.4	242.8
62.5°	236.3	235.5	234.5	233.6	232.7	231.5	230.0	228.4	226.9	225.3	223.9
65°	206.4	205.5	204.7	203.8	203.0	201.8	200.4	199.0	197.5	196.1	194.8
67.5°	175.9	175.2	174.5	173.8	173.1	172.2	170.9	169.6	168.3	167.0	166.1
70°	156.9	156.4	155.8	155.2	154.6	153.7	152.4	151.1	149.8	148.5	147.6
72.5°	137.3	136.8	136.2	135.6	135.1	134.4	133.5	132.7	131.9	131.0	130.0
75°	108.1	107.7	107.5	107.2	106.9	106.4	105.6	105.0	104.3	103.5	102.6
77.5°	81.8	81.3	80.8	80.3	79.8	79.5	79.2	78.9	78.6	78.4	77.9
80°	64.3	64.1	64.1	63.9	63.7	63.5	63.2	62.9	62.7	62.3	61.9
82.5°	47.9	47.8	47.8	47.8	47.7	47.6	47.4	47.3	47.1	46.9	46.4
85°	26.3	26.3	26.1	25.9	25.8	25.7	25.5	25.4	25.2	25.1	24.6
87.5°	9.3	9.2	9.2	9.1	9.0	9.0	9.1	9.2	9.3	9.3	9.0
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°	668.7	668.7	668.7	668.7	668.7	668.7	668.7	668.7
2.5°	665.9	667.0	668.1	668.7	668.4	668.1	668.0	667.7
5°	661.4	662.5	663.7	664.1	663.8	663.5	663.2	663.0
7.5°	653.9	655.0	656.3	656.6	656.3	656.0	655.7	655.4
10°	647.2	648.4	649.5	649.9	649.5	649.0	648.6	648.2
12.5°	639.4	640.2	640.9	641.2	640.8	640.6	640.2	639.9
15°	625.5	626.1	626.6	626.5	625.9	625.2	624.5	623.7
17.5°	609.1	609.8	610.4	610.4	609.7	609.1	608.4	607.7
20°	596.3	596.8	597.2	597.1	596.5	595.9	595.4	594.8
22.5°	582.7	582.8	582.9	582.8	582.5	582.1	581.8	581.4
25°	560.7	560.9	561.2	561.2	560.9	560.7	560.3	560.1
27.5°	538.9	538.5	538.0	537.5	536.8	536.1	535.5	534.8
30°	521.9	521.5	521.1	520.6	520.0	519.4	518.8	518.2
32.5°	505.3	504.5	503.8	503.1	502.5	502.0	501.4	500.8
35°	478.6	477.8	476.9	476.1	475.4	474.7	474.0	473.3
37.5°	451.9	450.8	449.8	448.8	448.2	447.5	446.8	446.2
40°	433.4	432.1	430.8	429.9	429.3	428.8	428.2	427.6
42.5°	415.2	413.8	412.3	411.3	410.4	409.7	408.9	408.0
45°	387.2	385.6	384.0	383.0	382.4	381.9	381.3	380.6
47.5°	358.1	356.4	354.7	353.5	352.7	351.9	351.0	350.2
50°	339.4	337.3	335.4	334.0	333.3	332.6	331.8	331.1
52.5°	320.0	318.3	316.7	315.4	314.4	313.5	312.5	311.6
55°	291.1	289.4	287.7	286.5	285.7	285.0	284.3	283.6
57.5°	261.1	259.3	257.7	256.6	256.0	255.5	254.9	254.3
60°	241.2	239.6	238.1	237.0	236.6	236.2	235.7	235.3
62.5°	222.4	220.9	219.5	218.5	217.9	217.4	216.9	216.3
65°	193.6	192.3	191.0	189.9	189.2	188.6	187.9	187.1
67.5°	165.1	164.0	163.1	162.3	161.7	161.1	160.6	160.0
70°	146.5	145.5	144.6	143.8	143.2	142.6	142.1	141.5
72.5°	129.1	128.0	127.1	126.3	125.9	125.4	124.9	124.5
75°	101.8	101.0	100.1	99.8	100.1	100.4	100.7	101.0
77.5°	77.5	77.1	76.6	76.2	75.8	75.4	75.0	74.6
80°	61.5	61.0	60.7	60.3	60.0	59.8	59.4	59.2
82.5°	45.9	45.3	44.8	44.4	44.4	44.3	44.3	44.3
85°	24.2	23.8	23.3	23.1	22.9	22.8	22.6	22.5
87.5°	8.6	8.2	7.8	7.6	7.5	7.4	7.3	7.2
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)