

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: P331343-840

Luminaire Tested: **SA2XXDIP-C675D530U840-4F0-1E-UDD-D1**

Issue Date: 10/7/2019

**Test Information**

Test Method: LM-79-08  
Report Number: P331343-840  
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-C675D530U840-4F0-1E-UDD-D1  
Description: DEFINE 2 DIRECT-INDIRECT PENDANT LED LUMINAIRE  
DOWNLIGHT 675 LUMENS PER FOOT, DROP SATIN WHITE DIFFUSER  
UPLIGHT 530 LUMENS PER FOOT, FLUSH SATIN WHITE DIFFUSER  
Light Source: -  
Ballast/Driver: ELECTRONIC DRIVER

**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 4624.7 lumens  
Efficiency: N/A  
Efficacy: 114.8 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: General Diffuse

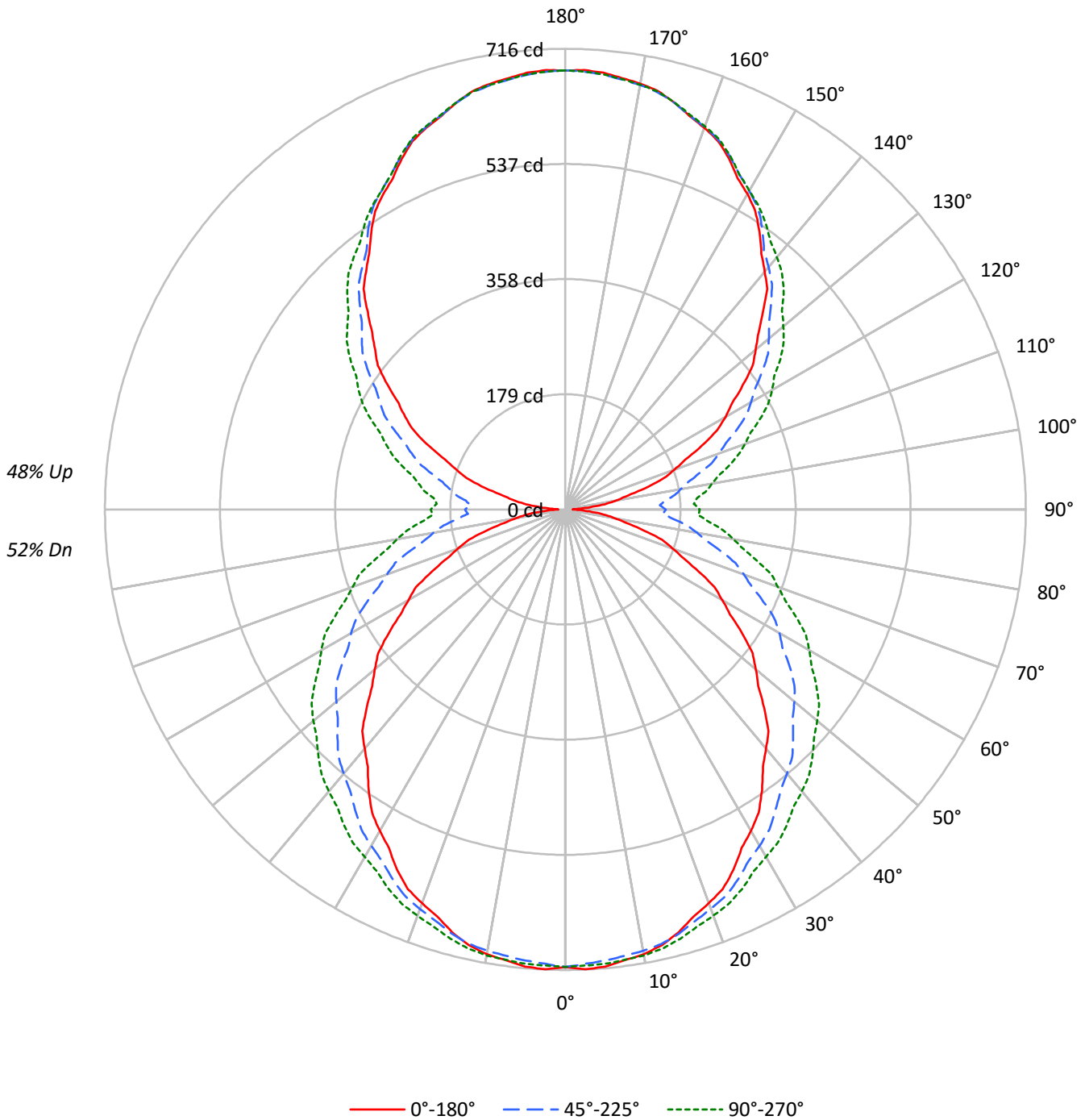
Input Watts (W): 40.3  
Input Voltage (V): 120  
Input Current (Ain): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 25 FT



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### Luminous Intensity Polar Plot





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**COEFFICIENT OF UTILIZATION - ZONAL CAVITY METHOD:**

RF	20				20				20				20				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	108	108	108	108	100	100	100	100	85	85	85	71	71	71	58	58	58	52
1	97	92	87	83	89	85	81	77	72	69	66	60	58	56	49	47	46	41
2	87	79	72	67	80	73	67	62	62	57	54	52	48	45	42	40	37	33
3	79	69	61	55	73	64	57	51	54	49	44	45	41	38	37	34	31	27
4	72	61	52	46	66	56	49	43	48	42	37	40	35	32	33	29	26	23
5	66	54	45	39	61	50	42	37	43	37	32	36	31	27	29	26	23	20
6	61	48	40	34	56	45	37	32	38	32	28	32	27	24	26	23	20	17
7	56	43	35	29	52	40	33	28	35	29	24	29	24	21	24	20	18	15
8	52	39	31	26	48	37	29	24	31	26	21	27	22	18	22	18	16	13
9	49	36	28	23	45	33	26	22	29	23	19	24	20	17	20	17	14	12
10	45	33	25	20	42	31	24	19	26	21	17	23	18	15	19	15	13	11

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

	0°	45°	90°
0°	11485	11485	11485
5°	11541	11055	11013
10°	11469	10729	10608
15°	11310	10384	10181
20°	11112	10013	9772
25°	10913	9655	9399
30°	10635	9288	9023
35°	10355	8933	8760
40°	10057	8630	8496
45°	9777	8361	8270
50°	9476	8116	8048
55°	9160	7855	7822
60°	8770	7583	7583
65°	8367	7262	7299
70°	7917	6920	6990
75°	7339	6581	6708
80°	6436	6238	6424
85°	5566	5939	6199



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	67.4	1.5
10°-20°	193.3	4.2
20°-30°	292.9	6.3
30°-40°	356.7	7.7
40°-50°	383.8	8.3
50°-60°	372.7	8.1
60°-70°	325.4	7.0
70°-80°	250.5	5.4
80°-90°	170.9	3.7
90°-100°	159.1	3.4
100°-110°	218.9	4.7
110°-120°	285.4	6.2
120°-130°	333.1	7.2
130°-140°	351.9	7.6
140°-150°	334.5	7.2
150°-160°	278.7	6.0
160°-170°	184.8	4.0
170°-180°	64.6	1.4
0°-30°	553.6	12.0
0°-40°	910.3	19.7
0°-60°	1666.8	36.0
0°-90°	2413.7	52.2
90°-120°	663.4	14.3
90°-150°	1682.9	36.4
90°-180°	2211.0	47.8
0°-180°	4624.7	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	711	711	711	711	711	
5°	713	710	704	710	709	68
15°	680	682	682	691	691	192
25°	618	626	635	647	651	284
35°	533	551	570	592	600	333
45°	437	465	501	532	543	337
55°	335	373	426	462	476	299
65°	229	280	340	381	396	227
75°	127	185	250	293	308	134
85°	37	101	167	209	225	40
90°	11	78	156	195	209	8
95°	38	93	155	193	206	41
105°	129	162	215	251	264	137
115°	234	251	294	324	334	232
125°	337	344	374	399	408	302
135°	435	441	452	473	480	336
145°	526	530	534	540	543	329
155°	602	604	605	608	606	277
165°	655	654	654	658	655	185
175°	681	680	678	682	679	65
180°	682	682	682	682	682	



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**CANDELA DISTRIBUTION (FULL):**

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
0°	711.3	711.3	711.3	711.3	711.3	711.3	711.3	711.3	711.3	711.3	711.3
2.5°	715.5	714.9	714.4	713.8	713.3	712.4	711.0	709.7	708.5	707.2	708.1
5°	713.4	712.7	712.1	711.3	710.6	709.6	708.2	706.9	705.5	704.1	705.5
7.5°	707.0	706.5	706.1	705.6	705.2	704.4	703.4	702.3	701.3	700.2	701.9
10°	702.1	701.6	701.1	700.6	700.2	699.6	698.9	698.3	697.6	696.9	698.7
12.5°	693.8	693.9	694.0	694.1	694.2	694.0	693.5	693.0	692.5	692.0	693.8
15°	680.4	680.9	681.4	681.8	682.3	682.5	682.5	682.5	682.5	682.5	684.5
17.5°	663.1	664.1	665.0	666.0	666.9	667.8	668.5	669.2	669.9	670.8	672.9
20°	651.6	652.7	653.8	655.0	656.1	657.1	658.0	659.0	659.9	660.9	663.4
22.5°	639.1	640.5	641.9	643.2	644.5	645.8	647.1	648.3	649.6	651.0	653.5
25°	618.5	620.2	621.8	623.4	625.0	626.8	628.8	631.0	633.0	635.0	637.8
27.5°	593.8	596.4	599.1	601.7	604.3	606.8	609.3	611.7	614.1	616.5	620.0
30°	577.3	580.3	583.3	586.2	589.3	592.2	595.2	598.1	601.2	604.1	607.7
32.5°	559.2	562.5	565.8	569.2	572.6	576.0	579.6	583.0	586.5	590.1	594.3
35°	533.0	536.8	540.8	544.6	548.6	552.7	557.0	561.4	565.7	570.1	575.1
37.5°	504.5	509.1	513.5	518.0	522.5	527.6	533.2	538.9	544.4	550.1	555.7
40°	485.5	490.6	495.6	500.7	505.7	511.3	517.6	523.7	529.9	536.0	542.0
42.5°	467.5	472.4	477.5	482.5	487.6	493.6	500.8	507.9	514.9	522.1	528.6
45°	437.1	443.3	449.5	455.7	461.8	469.0	477.0	485.0	493.0	501.0	508.2
47.5°	407.2	413.9	420.7	427.4	434.1	442.2	451.6	461.0	470.4	479.8	487.3
50°	386.6	393.7	400.8	407.9	415.0	423.7	434.0	444.3	454.6	464.9	472.7
52.5°	366.8	374.3	381.7	389.2	396.7	405.9	416.7	427.6	438.4	449.3	457.3
55°	335.1	343.3	351.5	359.8	368.0	378.1	390.0	401.9	413.8	425.8	434.0
57.5°	303.7	313.1	322.3	331.6	340.9	351.6	363.8	375.9	388.1	400.2	409.1
60°	281.4	291.2	301.1	311.0	320.8	332.3	345.4	358.4	371.4	384.6	393.2
62.5°	261.7	271.9	282.1	292.3	302.6	314.2	327.2	340.2	353.4	366.4	375.7
65°	228.8	240.0	251.4	262.6	273.8	286.1	299.6	313.2	326.7	340.2	349.6
67.5°	198.7	210.5	222.3	234.0	245.7	258.4	272.3	286.1	299.9	313.8	323.3
70°	177.3	189.2	201.2	213.1	225.0	238.0	252.3	266.4	280.6	294.9	304.7
72.5°	157.5	169.8	182.1	194.4	206.6	219.9	234.4	248.7	263.2	277.5	287.2
75°	126.8	139.7	152.5	165.3	178.1	191.9	206.5	221.2	235.8	250.5	260.3
77.5°	97.1	110.6	124.0	137.3	150.8	165.0	179.9	194.8	209.6	224.5	234.4
80°	77.4	91.3	105.2	119.3	133.2	147.6	162.6	177.4	192.3	207.2	216.8
82.5°	60.8	74.6	88.4	102.2	116.0	130.4	145.5	160.6	175.6	190.8	200.4
85°	37.2	51.3	65.5	79.7	93.9	108.4	123.0	137.6	152.4	167.0	176.6
87.5°	20.3	34.2	48.3	62.2	76.1	90.8	105.9	121.2	136.4	151.7	161.0
90°	10.9	25.8	40.5	55.3	70.2	86.3	103.8	121.3	138.8	156.2	165.1
92.5°	19.7	33.2	46.8	60.2	73.7	87.9	102.6	117.4	132.2	146.9	156.0
95°	38.2	50.2	62.3	74.3	86.3	99.4	113.4	127.4	141.4	155.4	164.1
97.5°	61.9	72.6	83.3	94.0	104.7	116.9	130.6	144.3	157.9	171.7	180.2
100°	80.4	89.9	99.4	108.9	118.4	129.7	142.9	156.1	169.4	182.6	191.1
102.5°	98.9	107.4	116.0	124.5	133.1	143.9	156.8	169.8	182.7	195.7	204.1
105°	129.0	136.0	143.0	150.1	157.0	166.6	178.8	191.0	203.2	215.3	223.6
107.5°	160.4	166.2	172.1	177.9	183.8	192.5	203.9	215.3	226.7	238.1	245.9
110°	179.8	185.1	190.5	195.8	201.2	209.4	220.7	231.9	243.2	254.4	261.7



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**CANDELA DISTRIBUTION (continued):**

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
112.5°	201.9	206.5	211.1	215.7	220.4	227.9	238.5	249.1	259.6	270.2	277.2
115°	234.5	237.7	241.1	244.3	247.6	254.3	264.4	274.4	284.5	294.5	301.2
117.5°	265.9	268.6	271.2	274.0	276.6	282.4	291.1	300.0	308.8	317.6	324.1
120°	287.6	289.5	291.4	293.4	295.3	300.3	308.5	316.7	324.8	333.0	339.3
122.5°	307.4	309.0	310.5	312.1	313.8	318.5	326.4	334.3	342.2	350.1	356.0
125°	337.2	338.4	339.5	340.6	341.8	345.9	352.8	359.8	366.7	373.7	379.5
127.5°	367.3	368.5	369.7	370.9	372.2	375.6	381.0	386.5	391.9	397.4	402.5
130°	386.2	387.6	389.0	390.5	391.9	394.9	399.5	404.0	408.6	413.1	418.4
132.5°	407.4	408.5	409.6	410.7	411.8	414.3	418.1	421.8	425.6	429.4	434.1
135°	434.6	436.1	437.5	438.9	440.3	442.2	444.8	447.4	449.9	452.4	457.2
137.5°	464.5	465.5	466.7	467.8	468.9	470.1	471.5	472.8	474.1	475.5	479.6
140°	482.4	483.4	484.3	485.2	486.1	487.2	488.3	489.4	490.5	491.5	495.2
142.5°	500.9	501.8	502.7	503.6	504.5	505.3	505.8	506.3	506.9	507.5	510.5
145°	526.3	527.3	528.2	529.1	530.0	530.8	531.5	532.3	533.1	533.8	535.3
147.5°	550.0	551.0	552.1	553.2	554.2	555.0	555.5	556.0	556.5	557.1	557.5
150°	566.1	566.8	567.6	568.4	569.2	569.8	570.3	570.8	571.3	571.9	572.2
152.5°	580.4	581.2	581.9	582.7	583.4	584.1	584.7	585.3	585.9	586.6	587.0
155°	601.8	602.2	602.6	602.9	603.3	603.7	604.1	604.5	604.8	605.2	605.9
157.5°	620.1	620.4	620.6	620.9	621.2	621.4	621.6	621.9	622.1	622.3	623.2
160°	631.2	631.4	631.7	631.9	632.2	632.4	632.5	632.6	632.8	632.9	633.7
162.5°	641.3	641.4	641.4	641.5	641.5	641.6	641.7	641.9	642.0	642.1	643.0
165°	654.8	654.6	654.5	654.4	654.3	654.2	654.2	654.2	654.2	654.2	655.1
167.5°	666.0	665.7	665.3	664.9	664.5	664.3	664.3	664.3	664.2	664.2	665.1
170°	672.1	671.7	671.3	670.9	670.6	670.2	670.1	669.9	669.8	669.7	670.7
172.5°	676.2	675.8	675.4	675.0	674.7	674.4	674.3	674.2	674.0	673.9	674.8
175°	681.3	680.9	680.4	680.1	679.7	679.4	679.1	678.9	678.6	678.3	679.2
177.5°	683.4	683.0	682.7	682.4	682.1	681.9	681.7	681.5	681.3	681.1	681.7
180°	682.4	682.4	682.4	682.4	682.4	682.4	682.4	682.4	682.4	682.4	682.4



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**CANDELA DISTRIBUTION (continued):**

	55°	60°	65°	70°	75°	80°	85°	90°
0°	711.3	711.3	711.3	711.3	711.3	711.3	711.3	711.3
2.5°	709.0	709.9	710.8	711.1	710.7	710.4	710.0	709.7
5°	706.9	708.2	709.6	710.2	709.9	709.7	709.5	709.2
7.5°	703.5	705.2	706.8	707.5	707.3	707.0	706.8	706.6
10°	700.5	702.4	704.3	705.0	704.8	704.6	704.4	704.1
12.5°	695.6	697.4	699.3	700.0	699.8	699.6	699.4	699.1
15°	686.6	688.6	690.7	691.7	691.5	691.2	690.9	690.7
17.5°	675.0	677.2	679.3	680.4	680.4	680.4	680.4	680.4
20°	665.9	668.4	670.9	672.2	672.2	672.2	672.2	672.2
22.5°	656.0	658.5	661.0	662.5	662.8	663.2	663.6	663.9
25°	640.6	643.3	646.0	647.7	648.4	649.1	649.8	650.6
27.5°	623.5	626.9	630.5	632.4	632.9	633.4	633.9	634.4
30°	611.5	615.1	618.7	621.0	621.7	622.4	623.0	623.7
32.5°	598.5	602.8	606.9	609.7	611.0	612.2	613.4	614.6
35°	580.2	585.2	590.3	593.6	595.2	596.8	598.3	600.0
37.5°	561.3	566.8	572.5	576.1	577.8	579.5	581.2	582.9
40°	548.0	553.9	559.9	563.9	565.9	568.0	570.1	572.2
42.5°	535.0	541.6	548.1	552.4	554.4	556.5	558.6	560.6
45°	515.2	522.3	529.5	534.1	536.4	538.8	541.0	543.3
47.5°	494.6	502.1	509.5	514.4	516.9	519.5	522.0	524.5
50°	480.5	488.3	496.1	501.3	503.8	506.3	508.8	511.3
52.5°	465.2	473.2	481.2	486.6	489.2	491.9	494.6	497.4
55°	442.2	450.5	458.8	464.3	467.4	470.3	473.3	476.3
57.5°	418.0	426.9	435.8	441.7	444.7	447.8	450.8	453.8
60°	401.9	410.6	419.4	425.4	428.5	431.7	434.9	438.2
62.5°	384.9	394.2	403.4	409.6	412.5	415.6	418.6	421.6
65°	359.0	368.4	377.8	384.0	387.0	389.9	392.9	395.9
67.5°	332.8	342.2	351.7	358.1	361.1	364.3	367.4	370.5
70°	314.6	324.4	334.3	340.5	343.3	346.1	348.8	351.5
72.5°	296.9	306.5	316.2	322.7	326.0	329.3	332.5	335.9
75°	270.2	280.0	289.9	296.3	299.3	302.3	305.3	308.2
77.5°	244.2	254.0	263.8	270.2	273.5	276.7	279.8	283.1
80°	226.4	236.1	245.7	252.2	255.3	258.5	261.8	265.0
82.5°	210.0	219.5	229.2	235.5	238.5	241.6	244.6	247.6
85°	186.2	195.9	205.5	211.9	215.1	218.3	221.6	224.7
87.5°	170.3	179.6	188.8	195.0	197.9	200.9	203.9	206.8
90°	174.1	183.0	191.9	197.7	200.7	203.5	206.4	209.2
92.5°	165.0	174.1	183.1	189.0	191.8	194.6	197.3	200.1
95°	172.8	181.6	190.3	195.8	198.3	200.9	203.3	205.8
97.5°	188.6	197.1	205.6	211.2	213.8	216.5	219.1	221.9
100°	199.5	208.0	216.5	221.9	224.3	226.7	229.0	231.5
102.5°	212.5	220.9	229.2	234.7	237.0	239.4	241.9	244.2
105°	231.9	240.1	248.4	253.9	256.4	258.9	261.5	263.9
107.5°	253.7	261.6	269.3	274.2	276.1	278.0	279.9	281.9
110°	269.0	276.3	283.7	288.4	290.5	292.7	294.8	297.0





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**CANDELA DISTRIBUTION (continued):**

	55°	60°	65°	70°	75°	80°	85°	90°
112.5°	284.3	291.3	298.3	303.0	305.2	307.4	309.6	311.9
115°	308.0	314.8	321.4	325.9	328.1	330.2	332.3	334.5
117.5°	330.5	337.0	343.6	347.7	349.7	351.6	353.6	355.6
120°	345.8	352.1	358.6	362.8	365.0	367.2	369.3	371.4
122.5°	361.9	367.9	373.8	377.7	379.6	381.4	383.3	385.2
125°	385.3	391.0	396.9	400.7	402.6	404.7	406.6	408.5
127.5°	407.8	413.0	418.2	421.6	423.2	424.9	426.5	428.1
130°	423.6	428.9	434.0	437.4	438.7	440.0	441.3	442.6
132.5°	438.9	443.6	448.4	451.4	452.9	454.3	455.8	457.2
135°	461.8	466.5	471.2	474.2	475.7	477.2	478.6	480.1
137.5°	483.7	487.9	491.9	494.5	495.5	496.7	497.7	498.7
140°	498.9	502.5	506.2	508.5	509.4	510.2	511.1	511.9
142.5°	513.5	516.5	519.6	521.4	522.1	522.8	523.4	524.1
145°	536.8	538.4	539.9	540.9	541.6	542.2	542.8	543.4
147.5°	558.1	558.5	559.0	559.3	559.3	559.4	559.4	559.5
150°	572.6	573.0	573.4	573.4	573.0	572.6	572.2	571.9
152.5°	587.5	588.0	588.5	588.5	588.0	587.5	587.0	586.6
155°	606.5	607.1	607.8	607.9	607.5	607.1	606.7	606.4
157.5°	624.0	624.9	625.8	625.9	625.3	624.7	624.1	623.4
160°	634.4	635.2	635.9	636.1	635.6	635.1	634.5	634.0
162.5°	643.8	644.7	645.6	645.7	645.1	644.5	643.9	643.3
165°	656.0	656.9	657.7	657.9	657.2	656.6	656.0	655.3
167.5°	666.0	666.9	667.8	667.9	667.2	666.6	665.9	665.2
170°	671.6	672.5	673.3	673.4	672.6	671.9	671.1	670.3
172.5°	675.7	676.6	677.4	677.5	676.8	676.0	675.2	674.5
175°	680.1	681.1	682.0	682.1	681.3	680.4	679.7	678.9
177.5°	682.3	682.9	683.5	683.5	682.9	682.3	681.7	681.1
180°	682.4	682.4	682.4	682.4	682.4	682.4	682.4	682.4

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