

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: P331291-927

Luminaire Tested: **SA2XXDIP-C485D330U927-4F0-1E-UDD-F**

Issue Date: 10/7/2019

Test Information

Test Method: LM-79-08
Report Number: P331291-927
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: SA2XXDIP-C485D330U927-4F0-1E-UDD-F
Description: DEFINE 2 DIRECT-INDIRECT PENDANT LED LUMINAIRE
DOWNLIGHT 485 LUMENS PER FOOT, FLUSH SATIN WHITE DIFFUSER
UPLIGHT 330 LUMENS PER FOOT, NO LENS
Light Source: -
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 2603.6 lumens
Efficiency: N/A
Efficacy: 94.7 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

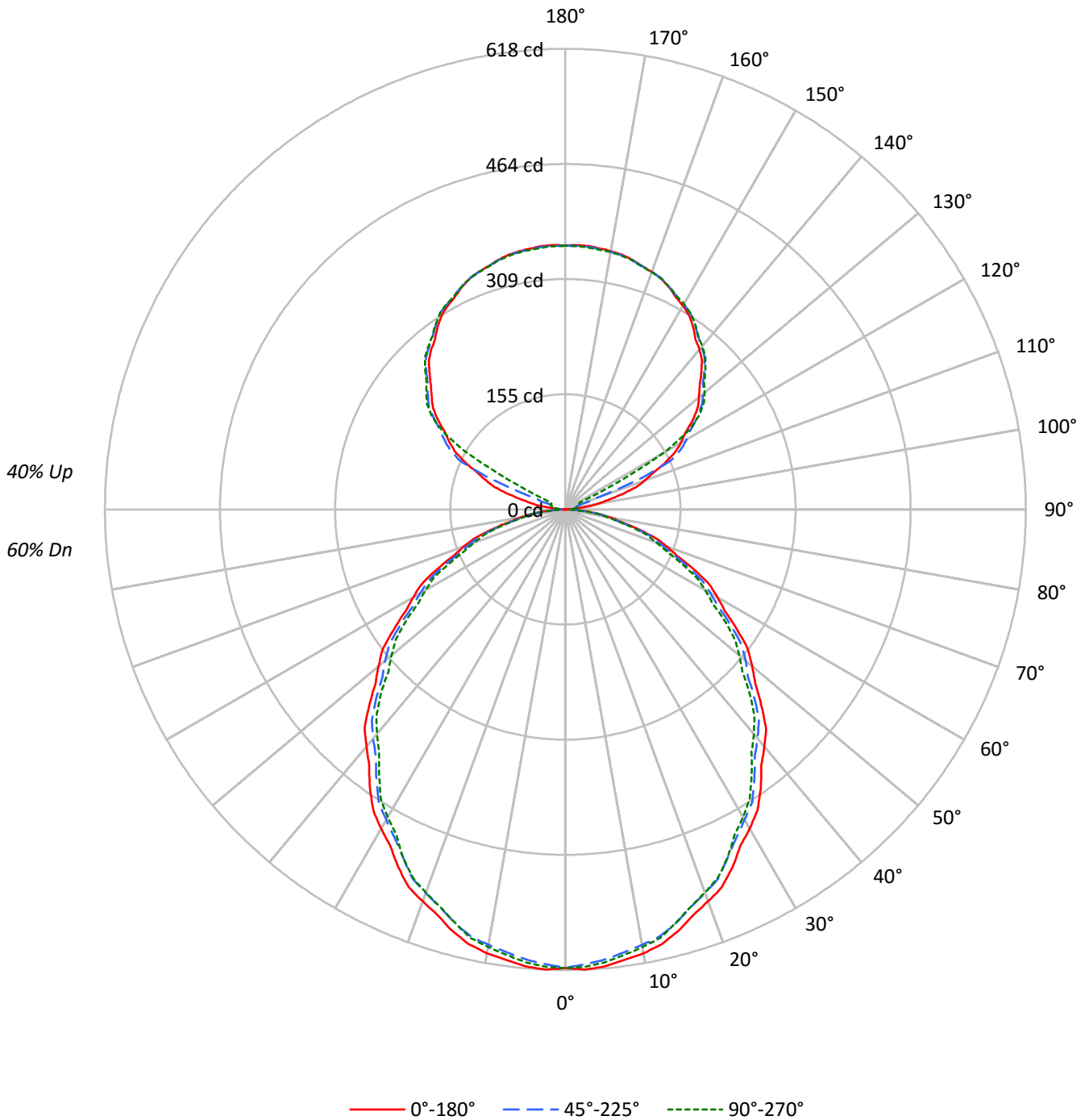
Input Watts (W): 27.5
Input Voltage (V): 120
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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	102	102	102	102	89	89	89	77	77	77	65	65	65	60
1	100	96	92	88	93	90	86	83	78	76	73	68	66	64	58	57	55	51
2	91	84	77	72	85	78	73	68	68	64	61	59	56	53	51	49	47	42
3	83	73	66	60	77	69	62	57	60	55	51	52	49	45	45	42	40	36
4	76	65	57	51	71	61	54	48	54	48	44	47	42	39	40	37	34	31
5	70	58	50	44	65	55	47	42	48	42	38	42	37	34	36	33	30	27
6	64	52	44	38	60	49	42	36	43	37	33	38	33	30	33	29	26	24
7	60	47	39	33	56	44	37	32	39	33	29	35	30	26	30	26	23	21
8	55	43	35	30	52	41	33	28	36	30	26	32	27	23	28	24	21	19
9	52	39	32	26	48	37	30	25	33	27	23	29	24	21	26	22	19	17
10	48	36	29	24	45	34	27	23	30	25	21	27	22	19	24	20	17	15

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	9935	9935	9935
5°	9972	9828	9887
10°	9914	9729	9778
15°	9790	9603	9593
20°	9617	9414	9402
25°	9444	9180	9180
30°	9221	8968	8889
35°	9014	8712	8584
40°	8753	8456	8292
45°	8499	8200	7996
50°	8219	7935	7654
55°	7927	7626	7344
60°	7601	7259	6991
65°	7255	6896	6575
70°	6812	6453	6146
75°	6201	5939	5795
80°	5504	5337	5058
85°	4483	4279	3835



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	57.9	2.2
10°-20°	162.8	6.3
20°-30°	239.3	9.2
30°-40°	278.0	10.7
40°-50°	277.7	10.7
50°-60°	242.1	9.3
60°-70°	179.0	6.9
70°-80°	101.4	3.9
80°-90°	28.1	1.1
90°-100°	11.8	0.5
100°-110°	43.3	1.7
110°-120°	115.7	4.4
120°-130°	191.1	7.3
130°-140°	203.2	7.8
140°-150°	188.9	7.3
150°-160°	151.8	5.8
160°-170°	97.8	3.8
170°-180°	33.7	1.3
0°-30°	459.9	17.7
0°-40°	737.9	28.3
0°-60°	1257.7	48.3
0°-90°	1566.3	60.2
90°-120°	170.8	6.6
90°-150°	754.0	29.0
90°-180°	1037.0	39.8
0°-180°	2603.6	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	615	615	615	615	615	
5°	615	613	606	611	610	58
15°	586	582	574	577	574	165
25°	530	525	515	516	515	244
35°	457	451	442	438	436	285
45°	372	368	359	353	350	287
55°	282	278	271	264	261	252
65°	190	186	180	175	172	188
75°	99	98	95	92	93	106
85°	24	24	23	21	21	28
90°	0	3	5	6	7	2
95°	17	9	10	11	11	20
105°	78	81	16	18	20	83
115°	147	152	158	45	21	145
125°	208	212	216	218	219	186
135°	258	262	264	266	266	199
145°	299	299	303	305	304	187
155°	329	327	330	331	329	152
165°	347	345	346	348	346	98
175°	355	353	354	355	353	34
180°	354	354	354	354	354	



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CANDELA DISTRIBUTION (FULL):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
0°	615.3	615.3	615.3	615.3	615.3	615.3	615.3	615.3	615.3	615.3	615.3
2.5°	618.1	617.6	617.1	616.6	616.0	615.2	614.0	612.9	611.7	610.5	611.6
5°	615.3	614.7	614.3	613.7	613.2	612.2	610.8	609.3	607.8	606.4	607.4
7.5°	609.8	609.0	608.2	607.4	606.6	605.5	604.0	602.5	601.0	599.5	600.6
10°	604.7	603.7	602.8	601.9	600.9	599.7	598.1	596.6	595.0	593.4	594.5
12.5°	597.5	596.8	595.9	595.1	594.3	593.1	591.5	589.9	588.4	586.8	587.5
15°	585.7	584.9	584.2	583.4	582.6	581.3	579.6	577.9	576.2	574.5	575.0
17.5°	570.5	569.8	569.0	568.2	567.4	566.2	564.4	562.7	560.9	559.2	559.8
20°	559.7	558.9	558.1	557.3	556.5	555.2	553.3	551.5	549.7	547.9	548.3
22.5°	548.8	547.7	546.6	545.5	544.4	543.0	541.2	539.5	537.7	536.0	536.1
25°	530.1	529.0	528.0	527.0	525.9	524.3	522.0	519.8	517.5	515.3	515.6
27.5°	508.8	507.9	506.9	506.0	505.0	503.7	501.9	500.1	498.4	496.6	496.2
30°	494.6	493.5	492.5	491.5	490.4	488.9	486.9	485.0	483.0	481.0	480.6
32.5°	479.4	478.6	477.8	476.9	476.1	474.6	472.5	470.5	468.4	466.4	465.6
35°	457.3	456.0	454.7	453.4	452.1	450.4	448.3	446.2	444.0	442.0	441.2
37.5°	432.4	431.2	430.1	428.9	427.7	426.1	424.0	421.9	419.8	417.7	416.7
40°	415.3	414.2	413.2	412.2	411.1	409.6	407.4	405.4	403.2	401.2	400.0
42.5°	398.8	397.7	396.6	395.6	394.6	393.0	390.9	388.8	386.7	384.5	383.3
45°	372.2	371.2	370.3	369.4	368.4	367.0	365.0	363.1	361.1	359.1	357.7
47.5°	345.6	344.8	343.9	343.0	342.1	340.7	338.7	336.6	334.5	332.5	331.0
50°	327.2	326.5	325.8	325.2	324.6	323.3	321.5	319.6	317.7	315.9	314.1
52.5°	309.2	308.3	307.4	306.6	305.7	304.4	302.7	301.0	299.2	297.5	296.0
55°	281.6	280.8	280.0	279.2	278.5	277.3	275.7	274.1	272.5	270.9	269.4
57.5°	253.9	253.3	252.6	252.1	251.4	250.3	248.5	246.8	245.0	243.3	241.7
60°	235.4	235.0	234.4	233.9	233.4	232.2	230.4	228.5	226.6	224.8	223.4
62.5°	217.5	216.7	215.8	214.9	214.1	213.0	211.6	210.2	208.7	207.3	206.0
65°	189.9	189.1	188.3	187.5	186.8	185.7	184.4	183.1	181.7	180.5	179.3
67.5°	161.8	161.2	160.6	159.9	159.3	158.4	157.2	156.1	154.9	153.7	152.8
70°	144.3	143.9	143.3	142.8	142.3	141.4	140.2	139.0	137.8	136.7	135.8
72.5°	126.4	125.9	125.3	124.8	124.3	123.7	122.9	122.1	121.4	120.6	119.6
75°	99.4	99.1	98.9	98.6	98.3	97.9	97.2	96.6	95.9	95.2	94.4
77.5°	75.3	74.8	74.4	73.9	73.4	73.1	72.9	72.6	72.3	72.1	71.7
80°	59.2	59.0	58.9	58.8	58.6	58.5	58.1	57.9	57.7	57.4	57.0
82.5°	44.0	44.0	44.0	44.0	43.9	43.8	43.6	43.5	43.3	43.2	42.7
85°	24.2	24.2	24.0	23.8	23.8	23.6	23.4	23.4	23.2	23.1	22.7
87.5°	8.6	8.5	8.4	8.3	8.2	8.2	8.0	7.9	7.8	7.7	7.4
90°	0.2	0.9	1.5	2.1	2.8	3.3	3.7	4.2	4.7	5.1	5.4
92.5°	5.1	5.1	5.1	5.0	4.9	5.1	5.2	5.5	5.7	5.9	6.1
95°	16.6	14.7	12.9	11.0	9.1	8.4	8.8	9.2	9.6	10.0	10.3
97.5°	33.0	27.7	22.4	17.2	11.9	9.7	10.6	11.5	12.4	13.4	13.6
100°	45.3	37.5	29.7	21.9	14.2	10.7	11.7	12.7	13.6	14.6	15.1
102.5°	58.9	57.2	55.5	53.9	52.3	47.4	39.3	31.2	23.1	15.0	15.6
105°	77.9	79.5	81.3	83.0	84.7	77.8	62.3	46.7	31.1	15.6	16.2
107.5°	99.5	100.9	102.3	103.7	105.0	96.4	77.8	59.2	40.5	21.9	21.2
110°	113.4	114.6	115.9	117.1	118.3	110.6	94.2	77.7	61.2	44.8	39.1



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CANDELA DISTRIBUTION (continued):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
112.5°	126.6	127.6	128.7	129.8	130.8	129.3	125.2	121.2	117.1	113.0	92.3
115°	147.3	148.2	149.2	150.2	151.1	152.3	153.8	155.2	156.6	158.0	131.7
117.5°	165.8	166.8	167.9	169.1	170.1	171.1	172.1	173.1	174.0	175.1	168.7
120°	179.3	180.1	181.0	181.9	182.7	183.6	184.7	185.7	186.7	187.7	188.5
122.5°	190.8	191.7	192.6	193.5	194.4	195.4	196.5	197.6	198.8	199.9	200.3
125°	208.3	209.0	209.7	210.5	211.2	212.1	213.2	214.3	215.3	216.4	216.8
127.5°	224.0	224.9	225.7	226.6	227.4	228.1	228.9	229.8	230.6	231.4	232.0
130°	234.1	235.0	235.9	236.9	237.7	238.5	239.2	239.8	240.4	241.1	241.6
132.5°	244.4	245.1	245.9	246.7	247.5	248.1	248.7	249.4	250.0	250.6	251.2
135°	257.7	258.6	259.5	260.4	261.3	262.1	262.5	263.1	263.6	264.1	264.7
137.5°	271.2	271.8	272.4	273.1	273.7	274.3	274.9	275.4	276.1	276.6	277.2
140°	280.0	280.4	280.8	281.3	281.8	282.3	283.0	283.6	284.2	284.8	285.3
142.5°	287.3	287.7	288.1	288.6	289.0	289.5	290.3	291.0	291.7	292.4	292.9
145°	298.9	298.9	298.8	298.7	298.7	299.1	300.1	301.1	302.1	303.0	303.4
147.5°	309.0	308.8	308.6	308.3	308.2	308.5	309.4	310.5	311.4	312.4	312.6
150°	315.5	315.1	314.7	314.3	313.9	314.3	315.1	316.1	317.0	317.9	318.2
152.5°	321.1	320.7	320.2	319.7	319.3	319.5	320.4	321.2	322.1	323.0	323.3
155°	329.2	328.6	328.1	327.6	327.1	327.2	327.9	328.5	329.2	329.9	330.3
157.5°	335.4	335.0	334.5	334.1	333.7	333.7	334.2	334.7	335.2	335.6	336.0
160°	339.1	338.8	338.4	338.1	337.8	337.8	338.1	338.4	338.8	339.1	339.5
162.5°	342.4	342.1	341.7	341.4	341.0	341.0	341.3	341.6	341.9	342.2	342.6
165°	346.8	346.5	346.1	345.8	345.5	345.4	345.5	345.7	345.9	346.0	346.4
167.5°	350.1	349.7	349.4	349.0	348.7	348.6	348.8	349.0	349.1	349.3	349.7
170°	352.0	351.6	351.3	350.9	350.5	350.5	350.5	350.7	350.8	350.9	351.3
172.5°	353.2	352.8	352.4	352.1	351.8	351.6	351.8	351.9	352.0	352.1	352.5
175°	354.7	354.3	353.9	353.6	353.2	353.0	353.2	353.2	353.4	353.5	353.9
177.5°	355.0	354.7	354.3	354.0	353.7	353.6	353.6	353.7	353.7	353.8	354.1
180°	353.9	353.9	353.9	353.9	353.9	353.9	353.9	353.9	353.9	353.9	353.9



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CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
0°	615.3	615.3	615.3	615.3	615.3	615.3	615.3	615.3
2.5°	612.7	613.7	614.7	615.2	615.0	614.7	614.6	614.3
5°	608.6	609.6	610.6	611.0	610.8	610.5	610.2	610.0
7.5°	601.7	602.7	603.8	604.1	603.9	603.6	603.2	603.0
10°	595.5	596.6	597.6	597.9	597.5	597.1	596.8	596.4
12.5°	588.3	589.0	589.7	589.9	589.6	589.4	589.1	588.7
15°	575.5	576.1	576.6	576.5	575.8	575.2	574.6	573.9
17.5°	560.4	561.0	561.7	561.6	560.9	560.4	559.8	559.1
20°	548.7	549.1	549.5	549.4	548.8	548.3	547.8	547.2
22.5°	536.1	536.2	536.3	536.2	535.9	535.6	535.3	535.0
25°	515.9	516.1	516.3	516.3	516.1	515.9	515.6	515.3
27.5°	495.8	495.4	495.0	494.6	493.9	493.3	492.7	492.0
30°	480.2	479.8	479.4	479.0	478.4	477.9	477.4	476.8
32.5°	464.9	464.2	463.5	462.9	462.3	461.8	461.3	460.7
35°	440.4	439.6	438.8	438.1	437.4	436.7	436.1	435.5
37.5°	415.7	414.8	413.8	413.0	412.3	411.7	411.1	410.5
40°	398.8	397.6	396.4	395.5	395.0	394.5	394.0	393.4
42.5°	382.0	380.7	379.4	378.4	377.6	376.9	376.2	375.4
45°	356.2	354.8	353.3	352.4	351.8	351.3	350.8	350.2
47.5°	329.5	327.9	326.4	325.3	324.5	323.8	323.0	322.2
50°	312.3	310.4	308.6	307.3	306.7	306.0	305.3	304.7
52.5°	294.5	292.9	291.4	290.2	289.3	288.4	287.6	286.7
55°	267.8	266.3	264.7	263.6	262.8	262.2	261.6	260.9
57.5°	240.2	238.6	237.1	236.1	235.5	235.0	234.6	234.0
60°	221.9	220.5	219.0	218.1	217.7	217.3	216.9	216.5
62.5°	204.6	203.3	201.9	201.1	200.5	200.0	199.6	199.0
65°	178.1	176.9	175.7	174.8	174.1	173.5	172.9	172.1
67.5°	151.9	150.9	150.0	149.3	148.8	148.2	147.7	147.2
70°	134.8	133.9	133.0	132.3	131.7	131.2	130.7	130.2
72.5°	118.7	117.8	116.9	116.2	115.8	115.3	114.9	114.5
75°	93.6	92.9	92.1	91.8	92.1	92.4	92.6	92.9
77.5°	71.3	70.9	70.5	70.1	69.7	69.4	69.0	68.6
80°	56.6	56.2	55.8	55.5	55.2	55.0	54.7	54.4
82.5°	42.2	41.7	41.2	40.9	40.9	40.8	40.7	40.7
85°	22.3	21.9	21.5	21.2	21.1	21.0	20.8	20.7
87.5°	7.1	6.9	6.7	6.4	6.3	6.3	6.2	6.1
90°	5.7	5.9	6.3	6.5	6.6	6.7	6.8	6.9
92.5°	6.3	6.4	6.5	6.7	6.7	6.8	6.8	6.9
95°	10.5	10.9	11.1	11.2	11.2	11.1	11.1	11.0
97.5°	13.9	14.0	14.3	14.4	14.5	14.6	14.7	14.7
100°	15.5	16.0	16.4	16.7	16.8	17.0	17.0	17.2
102.5°	16.2	16.8	17.3	17.7	17.9	18.1	18.2	18.4
105°	16.9	17.5	18.1	18.5	18.8	19.0	19.3	19.5
107.5°	20.6	20.0	19.3	19.1	19.3	19.6	19.8	20.0
110°	33.4	27.7	22.0	19.3	19.6	19.8	20.0	20.2



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CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
112.5°	71.5	50.8	30.0	19.7	19.9	20.0	20.3	20.4
115°	105.4	79.0	52.6	37.4	33.3	29.2	25.1	21.0
117.5°	162.3	155.9	149.6	139.7	126.2	112.7	99.3	85.8
120°	189.1	189.8	190.4	187.0	179.3	171.6	163.9	156.2
122.5°	200.7	201.1	201.5	200.9	199.5	198.0	196.5	195.0
125°	217.2	217.6	218.0	218.3	218.5	218.6	218.8	219.0
127.5°	232.6	233.1	233.7	234.0	234.1	234.1	234.1	234.2
130°	242.2	242.9	243.5	243.8	243.8	243.7	243.7	243.6
132.5°	251.8	252.2	252.8	253.0	252.9	252.9	252.9	252.8
135°	265.2	265.8	266.3	266.6	266.5	266.3	266.3	266.1
137.5°	277.7	278.3	278.8	279.0	278.8	278.7	278.5	278.3
140°	285.8	286.4	286.8	287.0	286.7	286.5	286.1	285.8
142.5°	293.3	293.8	294.3	294.4	294.1	293.8	293.5	293.2
145°	303.8	304.2	304.6	304.7	304.4	304.1	303.8	303.5
147.5°	312.9	313.2	313.5	313.5	313.3	313.1	312.8	312.6
150°	318.5	318.9	319.2	319.2	319.0	318.7	318.4	318.1
152.5°	323.7	324.0	324.3	324.3	323.9	323.6	323.2	322.8
155°	330.6	330.9	331.3	331.2	330.7	330.3	329.9	329.4
157.5°	336.4	336.8	337.2	337.2	336.7	336.3	335.8	335.4
160°	339.8	340.2	340.5	340.5	340.1	339.7	339.3	338.9
162.5°	342.9	343.3	343.7	343.7	343.2	342.7	342.2	341.7
165°	346.8	347.2	347.6	347.6	347.2	346.8	346.4	346.0
167.5°	350.1	350.5	350.9	350.8	350.3	349.7	349.3	348.7
170°	351.7	352.1	352.5	352.4	352.0	351.4	350.9	350.4
172.5°	352.9	353.3	353.7	353.7	353.2	352.7	352.1	351.6
175°	354.3	354.7	355.1	355.0	354.4	353.9	353.2	352.7
177.5°	354.4	354.7	355.1	355.0	354.6	354.2	353.8	353.4
180°	353.9	353.9	353.9	353.9	353.9	353.9	353.9	353.9

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