

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: P331498

Luminaire Tested: **S122DIW-S485D435U835-4F0-1E-UDD-D1**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P331498
REPORT IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-1807-864-8,
Test Lab: INNOVATION CENTER
Issue Date: 3/3/2020
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: NEO-RAY
Catalog Number: S122DIW-S485D435U835-4F0-1E-UDD-D1
Description: DEFINE 2 DIRECT-INDIRECT WALL MOUNT LED LUMINAIRE
DOWNLIGHT 485 LUMENS PER FOOT, DROP SATIN WHITE DIFFUSER
UPLIGHT 435 LUMENS PER FOOT, FLUSH SATIN WHITE DIFFUSER
Light Source: -
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 3469.3 lumens
Efficiency: N/A
Efficacy: 114.9 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

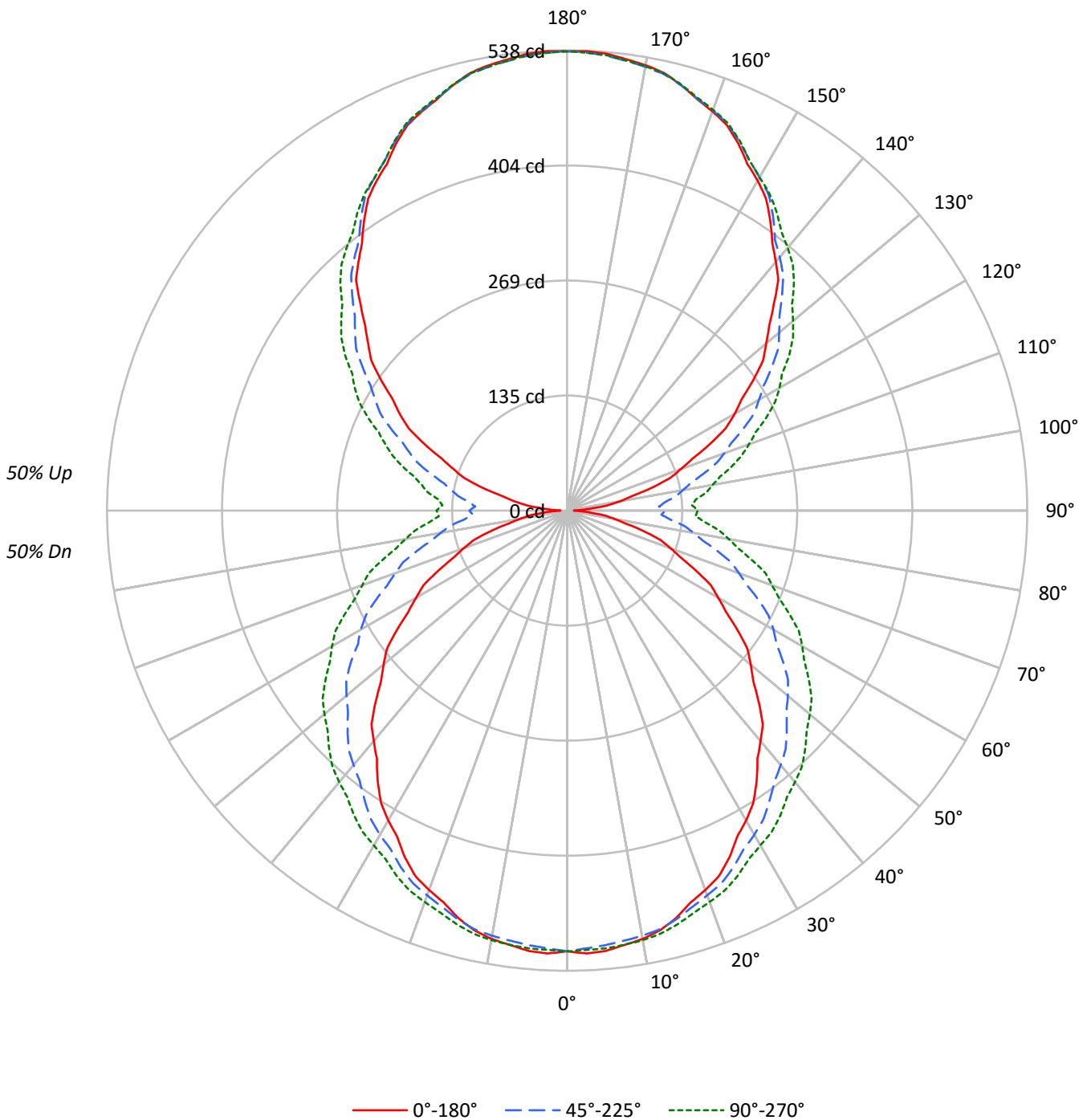
Input Watts (W): 30.2
Input Voltage (V): 120
Input Current (A_{in}): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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	107	107	107	107	99	99	99	99	84	84	84	69	69	69	56	56	56	50				
1	96	91	87	83	89	84	80	77	71	68	65	59	57	55	48	46	45	39				
2	87	79	72	66	80	73	67	62	61	57	53	51	47	45	41	39	36	32				
3	79	69	61	55	72	64	57	51	54	48	44	44	40	37	36	33	30	26				
4	72	61	52	46	66	56	49	43	47	42	37	39	35	31	32	28	26	22				
5	66	54	45	39	60	50	42	36	42	36	32	35	30	27	28	25	22	19				
6	61	48	40	34	56	45	37	31	38	32	27	32	27	23	26	22	19	16				
7	56	43	35	29	51	40	33	27	34	28	24	29	24	20	23	20	17	14				
8	52	39	31	26	48	36	29	24	31	25	21	26	22	18	21	18	15	13				
9	48	36	28	23	44	33	26	21	28	23	19	24	19	16	20	16	14	11				
10	45	33	25	20	42	30	24	19	26	21	17	22	18	15	18	15	12	10				

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	8320	8320	8320
5°	8361	8009	7978
10°	8308	7773	7685
15°	8193	7522	7376
20°	8049	7253	7078
25°	7906	6994	6809
30°	7704	6728	6536
35°	7501	6472	6346
40°	7287	6254	6154
45°	7084	6058	5992
50°	6865	5879	5830
55°	6634	5689	5666
60°	6355	5493	5493
65°	6063	5262	5287
70°	5738	5012	5065
75°	5319	4768	4860
80°	4657	4519	4652
85°	4025	4303	4491



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	48.8	1.4
10°-20°	140.0	4.0
20°-30°	212.2	6.1
30°-40°	258.4	7.4
40°-50°	278.0	8.0
50°-60°	270.0	7.8
60°-70°	235.8	6.8
70°-80°	181.5	5.2
80°-90°	124.0	3.6
90°-100°	117.9	3.4
100°-110°	166.9	4.8
110°-120°	221.1	6.4
120°-130°	260.1	7.5
130°-140°	276.0	8.0
140°-150°	263.0	7.6
150°-160°	219.2	6.3
160°-170°	145.4	4.2
170°-180°	50.8	1.5
0°-30°	401.0	11.6
0°-40°	659.5	19.0
0°-60°	1207.5	34.8
0°-90°	1748.7	50.4
90°-120°	506.0	14.6
90°-150°	1305.1	37.6
90°-180°	1721.0	49.6
0°-180°	3469.3	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	515	515	515	515	515	
5°	517	514	510	514	514	49
15°	493	494	494	501	500	139
25°	448	453	460	469	471	206
35°	386	399	413	429	435	241
45°	317	337	363	385	394	244
55°	243	270	308	334	345	217
65°	166	203	246	276	287	165
75°	92	134	182	212	223	97
85°	27	73	121	151	163	29
90°	8	57	114	142	153	6
95°	30	70	115	142	151	32
105°	101	125	164	190	199	107
115°	184	196	228	249	257	182
125°	265	270	292	310	317	237
135°	342	347	355	370	375	264
145°	414	417	420	425	427	259
155°	473	475	476	478	477	218
165°	515	515	515	518	516	145
175°	536	535	534	537	534	51
180°	537	537	537	537	537	



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CANDELA DISTRIBUTION (FULL):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
0°	515.3	515.3	515.3	515.3	515.3	515.3	515.3	515.3	515.3	515.3	515.3
2.5°	518.3	517.9	517.5	517.1	516.7	516.0	515.1	514.2	513.3	512.3	513.0
5°	516.8	516.3	515.8	515.3	514.8	514.1	513.1	512.1	511.1	510.1	511.1
7.5°	512.2	511.8	511.5	511.2	510.9	510.3	509.5	508.8	508.0	507.2	508.4
10°	508.6	508.3	507.9	507.6	507.3	506.9	506.4	505.9	505.4	504.9	506.2
12.5°	502.6	502.7	502.8	502.8	502.9	502.7	502.4	502.0	501.6	501.3	502.6
15°	492.9	493.2	493.6	493.9	494.2	494.4	494.4	494.4	494.4	494.4	495.9
17.5°	480.4	481.1	481.8	482.5	483.2	483.8	484.3	484.8	485.4	485.9	487.4
20°	472.0	472.8	473.7	474.5	475.3	476.1	476.7	477.4	478.1	478.7	480.5
22.5°	463.0	464.0	465.0	465.9	466.9	467.8	468.8	469.7	470.6	471.6	473.4
25°	448.1	449.3	450.4	451.6	452.7	454.1	455.6	457.1	458.6	460.0	462.0
27.5°	430.2	432.1	434.0	435.9	437.7	439.6	441.3	443.1	444.8	446.6	449.1
30°	418.2	420.4	422.5	424.7	426.9	429.0	431.2	433.3	435.5	437.6	440.3
32.5°	405.1	407.5	409.9	412.4	414.8	417.3	419.8	422.4	424.9	427.5	430.5
35°	386.1	388.9	391.8	394.6	397.4	400.4	403.5	406.7	409.8	413.0	416.6
37.5°	365.5	368.8	372.0	375.3	378.5	382.2	386.3	390.3	394.4	398.5	402.6
40°	351.8	355.4	359.1	362.7	366.4	370.4	374.9	379.4	383.9	388.4	392.7
42.5°	338.6	342.3	345.9	349.6	353.2	357.6	362.8	367.9	373.1	378.2	382.9
45°	316.7	321.1	325.6	330.1	334.6	339.7	345.5	351.3	357.2	363.0	368.1
47.5°	295.0	299.9	304.8	309.6	314.5	320.4	327.2	334.0	340.8	347.6	353.0
50°	280.1	285.2	290.4	295.5	300.6	306.9	314.4	321.9	329.4	336.8	342.5
52.5°	265.7	271.1	276.5	282.0	287.4	294.0	301.9	309.7	317.6	325.5	331.2
55°	242.7	248.7	254.7	260.6	266.6	273.9	282.6	291.2	299.8	308.4	314.4
57.5°	220.0	226.8	233.5	240.2	247.0	254.7	263.5	272.3	281.1	289.9	296.4
60°	203.9	211.0	218.2	225.3	232.4	240.7	250.2	259.6	269.1	278.6	284.9
62.5°	189.5	196.9	204.4	211.8	219.2	227.6	237.0	246.5	256.0	265.4	272.1
65°	165.8	173.9	182.1	190.2	198.3	207.3	217.1	226.9	236.7	246.5	253.3
67.5°	144.0	152.5	161.0	169.5	178.0	187.2	197.3	207.3	217.3	227.3	234.2
70°	128.5	137.1	145.7	154.3	163.0	172.4	182.7	193.0	203.3	213.6	220.7
72.5°	114.1	123.0	131.9	140.8	149.7	159.4	169.8	180.2	190.6	201.0	208.1
75°	91.9	101.2	110.4	119.7	129.0	139.0	149.6	160.2	170.9	181.5	188.6
77.5°	70.4	80.1	89.8	99.5	109.3	119.5	130.3	141.1	151.9	162.7	169.8
80°	56.0	66.1	76.3	86.4	96.5	107.0	117.8	128.5	139.3	150.1	157.1
82.5°	44.1	54.1	64.0	74.0	84.0	94.5	105.4	116.3	127.2	138.2	145.1
85°	26.9	37.2	47.5	57.8	68.0	78.5	89.1	99.7	110.4	121.0	128.0
87.5°	14.7	24.9	35.0	45.1	55.3	65.9	76.9	88.0	99.1	110.1	116.8
90°	7.9	18.8	29.6	40.4	51.3	63.1	75.9	88.8	101.6	114.4	120.9
92.5°	14.9	24.8	34.6	44.5	54.3	64.6	75.4	86.1	96.9	107.6	114.2
95°	29.5	38.3	47.1	56.0	64.8	74.2	84.4	94.6	104.7	114.9	121.2
97.5°	48.3	56.1	63.9	71.7	79.6	88.4	98.4	108.3	118.3	128.2	134.4
100°	62.8	69.7	76.7	83.6	90.6	98.8	108.4	118.0	127.6	137.2	143.3
102.5°	77.4	83.6	89.9	96.2	102.4	110.2	119.7	129.1	138.5	147.9	154.0
105°	101.1	106.3	111.4	116.5	121.6	128.6	137.4	146.2	155.1	163.9	169.9
107.5°	125.8	130.1	134.4	138.7	143.0	149.3	157.5	165.8	174.1	182.3	188.0
110°	141.2	145.1	149.0	152.9	156.9	162.9	171.0	179.2	187.3	195.4	200.7



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CANDELA DISTRIBUTION (continued):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
112.5°	158.6	162.0	165.4	168.7	172.1	177.7	185.3	193.0	200.6	208.3	213.3
115°	184.2	186.6	189.1	191.5	193.9	198.8	206.0	213.3	220.6	227.8	232.7
117.5°	209.0	211.0	213.0	215.0	217.0	221.2	227.5	233.9	240.2	246.5	251.2
120°	226.1	227.5	229.0	230.5	231.9	235.6	241.4	247.2	253.1	258.9	263.6
122.5°	241.6	242.9	244.1	245.3	246.6	250.0	255.7	261.4	267.0	272.7	277.0
125°	265.2	266.1	267.0	267.9	268.8	271.8	276.8	281.8	286.8	291.8	296.0
127.5°	288.8	289.8	290.8	291.8	292.7	295.2	299.1	303.0	307.0	310.9	314.6
130°	303.7	304.8	306.0	307.1	308.3	310.5	313.8	317.0	320.3	323.6	327.4
132.5°	320.4	321.3	322.2	323.1	324.0	325.8	328.5	331.2	334.0	336.7	340.1
135°	341.9	343.0	344.1	345.2	346.3	347.8	349.7	351.5	353.4	355.3	358.6
137.5°	365.4	366.2	367.1	368.0	368.9	369.8	370.8	371.8	372.8	373.8	376.7
140°	379.5	380.2	381.0	381.7	382.5	383.3	384.1	384.9	385.8	386.6	389.2
142.5°	394.0	394.7	395.5	396.2	397.0	397.5	397.9	398.4	398.8	399.2	401.4
145°	414.1	414.8	415.5	416.2	416.9	417.6	418.2	418.8	419.4	420.0	421.1
147.5°	432.7	433.5	434.4	435.2	436.1	436.7	437.1	437.5	437.9	438.3	438.6
150°	445.4	446.0	446.6	447.2	447.8	448.3	448.7	449.1	449.5	449.9	450.2
152.5°	456.6	457.2	457.8	458.4	459.0	459.6	460.0	460.5	461.0	461.5	461.9
155°	473.4	473.7	474.0	474.4	474.7	475.0	475.3	475.6	475.9	476.2	476.7
157.5°	487.9	488.1	488.3	488.5	488.7	488.8	489.0	489.2	489.4	489.6	490.3
160°	496.6	496.8	497.0	497.2	497.4	497.5	497.6	497.7	497.8	497.9	498.5
162.5°	504.5	504.6	504.6	504.6	504.7	504.8	504.9	505.0	505.1	505.2	505.8
165°	515.1	515.0	514.9	514.8	514.7	514.7	514.7	514.7	514.7	514.7	515.4
167.5°	524.0	523.7	523.4	523.1	522.8	522.6	522.6	522.6	522.6	522.6	523.3
170°	528.7	528.4	528.1	527.8	527.5	527.3	527.2	527.1	527.0	526.9	527.6
172.5°	532.0	531.7	531.4	531.1	530.8	530.6	530.5	530.4	530.3	530.2	530.9
175°	536.0	535.7	535.4	535.1	534.8	534.5	534.3	534.1	533.9	533.7	534.4
177.5°	537.6	537.4	537.1	536.9	536.6	536.4	536.3	536.1	535.9	535.8	536.3
180°	536.9	536.9	536.9	536.9	536.9	536.9	536.9	536.9	536.9	536.9	536.9



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CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
0°	515.3	515.3	515.3	515.3	515.3	515.3	515.3	515.3
2.5°	513.7	514.3	515.0	515.2	514.9	514.7	514.4	514.1
5°	512.1	513.1	514.1	514.5	514.3	514.2	514.0	513.8
7.5°	509.6	510.8	512.0	512.5	512.4	512.2	512.0	511.9
10°	507.5	508.8	510.2	510.8	510.6	510.4	510.3	510.1
12.5°	503.9	505.3	506.6	507.2	507.0	506.8	506.7	506.5
15°	497.4	498.9	500.4	501.0	500.9	500.7	500.5	500.4
17.5°	489.0	490.6	492.1	492.9	492.9	492.9	492.9	492.9
20°	482.4	484.2	486.0	486.9	486.9	486.9	486.9	486.9
22.5°	475.2	477.0	478.9	479.9	480.2	480.4	480.7	481.0
25°	464.0	466.0	468.0	469.3	469.8	470.3	470.8	471.3
27.5°	451.7	454.2	456.7	458.1	458.5	458.9	459.2	459.6
30°	443.0	445.6	448.3	449.8	450.3	450.8	451.3	451.8
32.5°	433.6	436.6	439.7	441.7	442.6	443.5	444.4	445.3
35°	420.3	424.0	427.6	430.0	431.2	432.3	433.5	434.7
37.5°	406.6	410.7	414.7	417.3	418.6	419.8	421.0	422.3
40°	397.0	401.3	405.6	408.5	410.0	411.5	413.0	414.5
42.5°	387.6	392.3	397.0	400.2	401.6	403.1	404.6	406.1
45°	373.3	378.4	383.5	386.9	388.6	390.3	391.9	393.6
47.5°	358.3	363.7	369.1	372.7	374.5	376.3	378.2	380.0
50°	348.1	353.7	359.4	363.1	365.0	366.8	368.6	370.4
52.5°	337.0	342.8	348.6	352.4	354.4	356.4	358.3	360.3
55°	320.4	326.4	332.3	336.4	338.6	340.7	342.9	345.0
57.5°	302.8	309.2	315.7	320.0	322.2	324.4	326.6	328.8
60°	291.2	297.5	303.8	308.1	310.4	312.8	315.1	317.4
62.5°	278.8	285.5	292.2	296.7	298.9	301.1	303.3	305.5
65°	260.1	266.9	273.7	278.2	280.3	282.5	284.6	286.8
67.5°	241.1	247.9	254.8	259.4	261.6	263.9	266.2	268.4
70°	227.9	235.0	242.1	246.7	248.7	250.7	252.7	254.7
72.5°	215.1	222.1	229.1	233.8	236.1	238.5	240.9	243.3
75°	195.8	202.9	210.0	214.7	216.8	219.0	221.1	223.3
77.5°	176.9	184.0	191.1	195.8	198.1	200.4	202.8	205.1
80°	164.1	171.0	178.0	182.6	185.0	187.3	189.6	191.9
82.5°	152.1	159.1	166.0	170.6	172.8	175.0	177.2	179.4
85°	134.9	141.9	148.9	153.5	155.8	158.2	160.5	162.8
87.5°	123.6	130.3	137.0	141.5	143.6	145.8	147.9	150.1
90°	127.3	133.8	140.2	144.5	146.5	148.6	150.7	152.8
92.5°	120.7	127.3	133.8	138.1	140.1	142.1	144.1	146.1
95°	127.5	133.8	140.1	144.2	145.9	147.7	149.5	151.3
97.5°	140.5	146.6	152.8	156.8	158.8	160.7	162.6	164.6
100°	149.5	155.6	161.8	165.7	167.4	169.2	170.9	172.6
102.5°	160.1	166.1	172.2	176.1	177.9	179.6	181.3	183.0
105°	175.9	181.9	187.9	191.9	193.7	195.5	197.3	199.2
107.5°	193.6	199.3	205.0	208.5	209.8	211.2	212.6	213.9
110°	206.0	211.4	216.7	220.1	221.6	223.1	224.7	226.2



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CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
112.5°	218.4	223.5	228.5	231.9	233.5	235.1	236.7	238.3
115°	237.6	242.5	247.4	250.6	252.1	253.6	255.1	256.7
117.5°	255.9	260.6	265.2	268.3	269.7	271.0	272.4	273.8
120°	268.2	272.9	277.5	280.6	282.1	283.6	285.2	286.7
122.5°	281.3	285.5	289.8	292.6	294.0	295.3	296.6	298.0
125°	300.1	304.3	308.5	311.3	312.7	314.1	315.5	316.9
127.5°	318.4	322.1	325.9	328.3	329.5	330.6	331.8	332.9
130°	331.2	334.9	338.7	341.1	342.0	342.9	343.9	344.8
132.5°	343.5	346.9	350.3	352.5	353.5	354.5	355.5	356.5
135°	362.0	365.4	368.8	371.0	372.0	373.1	374.1	375.1
137.5°	379.7	382.7	385.7	387.5	388.2	389.0	389.7	390.4
140°	391.9	394.6	397.2	398.8	399.4	400.0	400.6	401.2
142.5°	403.6	405.8	408.0	409.3	409.8	410.2	410.7	411.2
145°	422.2	423.3	424.4	425.1	425.6	426.0	426.4	426.8
147.5°	439.0	439.4	439.7	439.9	439.9	439.9	439.9	440.0
150°	450.5	450.8	451.1	451.1	450.8	450.5	450.2	449.9
152.5°	462.2	462.6	463.0	463.0	462.6	462.2	461.9	461.5
155°	477.2	477.7	478.2	478.3	478.0	477.7	477.4	477.1
157.5°	490.9	491.6	492.3	492.4	491.9	491.4	491.0	490.5
160°	499.1	499.7	500.3	500.4	500.0	499.6	499.2	498.8
162.5°	506.5	507.2	507.9	508.0	507.5	507.0	506.5	506.1
165°	516.1	516.8	517.5	517.6	517.1	516.6	516.1	515.6
167.5°	524.0	524.7	525.4	525.5	524.9	524.4	523.9	523.4
170°	528.3	529.0	529.7	529.8	529.2	528.6	528.0	527.4
172.5°	531.6	532.3	533.0	533.0	532.4	531.8	531.2	530.6
175°	535.1	535.8	536.5	536.6	536.0	535.4	534.8	534.2
177.5°	536.8	537.2	537.7	537.7	537.2	536.8	536.3	535.8
180°	536.9	536.9	536.9	536.9	536.9	536.9	536.9	536.9

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