

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: P331306-840

Luminaire Tested: **S122DIP-S485D725U840-4F0-1E-UDD-D**

Issue Date: 3/3/2020

**Test Information**

Test Method: LM-79-08  
Report Number: P331306-840  
REPORT IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-1807-864-2,  
Test Lab: INNOVATION CENTER  
Issue Date: 3/3/2020  
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)  
Product Line: NEO-RAY  
Catalog Number: S122DIP-S485D725U840-4F0-1E-UDD-D  
Description: DEFINE 2 DIRECT-INDIRECT PENDANT LED LUMINAIRE  
DOWNLIGHT 485 LUMENS PER FOOT, DROP SATIN WHITE DIFFUSER  
UPLIGHT 725 LUMENS PER FOOT, NO LENS  
Light Source: -  
Ballast/Driver: ELECTRONIC DRIVER

**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 4913.5 lumens  
Efficiency: N/A  
Efficacy: 128.0 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: Semi-Indirect

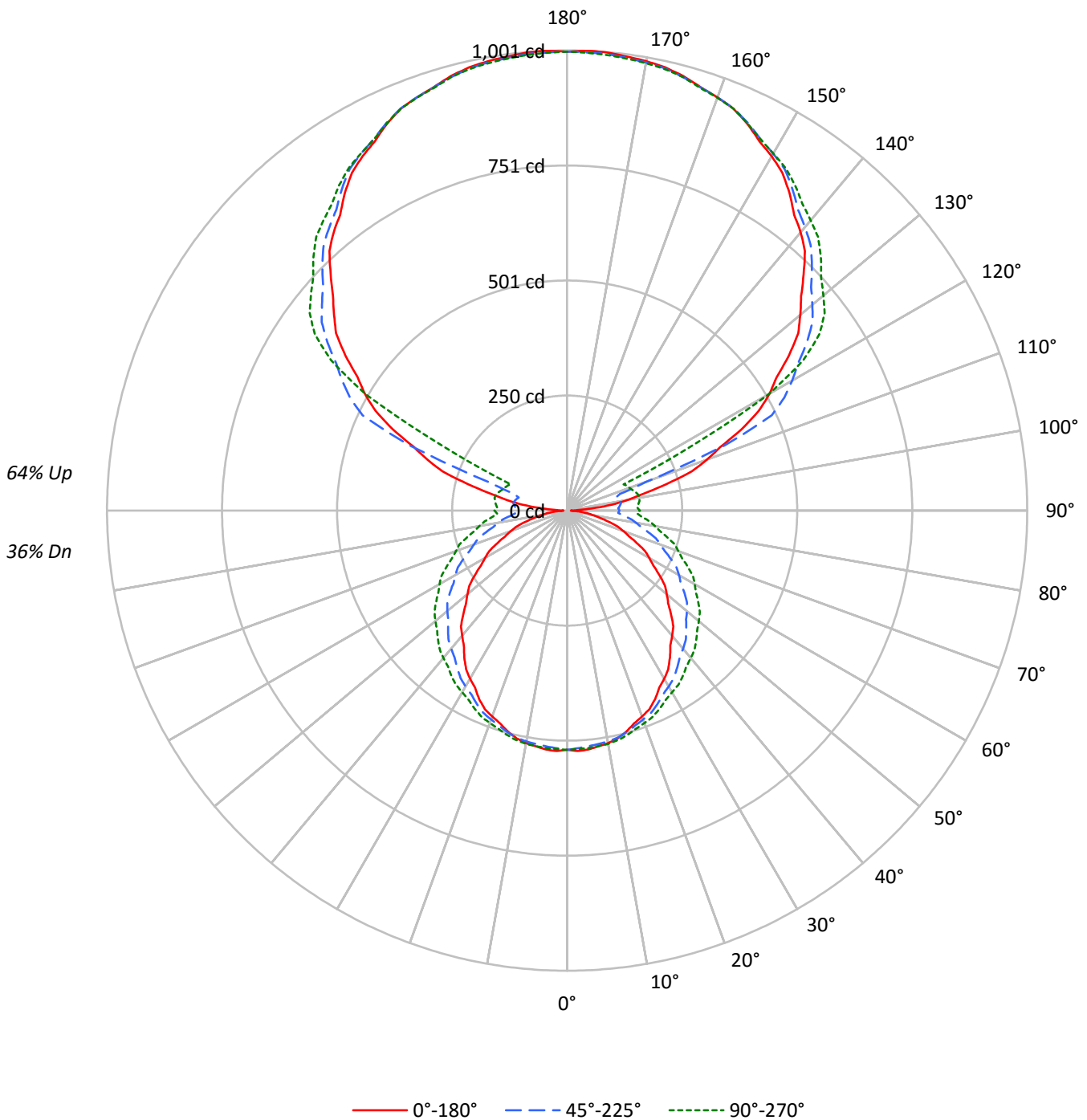
Input Watts (W): 38.4  
Input Voltage (V): 120  
Input Current (Ain): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 25 FT



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### Luminous Intensity Polar Plot





TEST NUMBER: P331306-840

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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	104	104	104	104	94	94	94	94	76	76	76	59	59	59	43	43	43	36
1	94	89	85	81	84	80	77	74	64	62	60	50	48	47	36	35	34	28
2	85	77	70	65	76	70	64	59	56	52	48	43	40	38	31	30	28	23
3	77	67	60	54	69	61	54	49	49	44	40	38	34	32	27	25	23	19
4	70	59	51	45	63	54	47	41	43	38	34	33	30	27	24	22	20	16
5	64	52	44	38	58	48	40	35	38	33	29	30	26	23	22	19	17	13
6	59	47	39	33	53	43	35	30	34	29	25	27	23	20	20	17	15	12
7	54	42	34	29	49	38	31	26	31	26	22	24	20	17	18	15	13	10
8	50	38	30	25	45	35	28	23	28	23	19	22	18	15	16	14	12	9
9	47	35	27	22	42	32	25	20	26	21	17	20	16	14	15	12	10	8
10	44	32	24	20	39	29	22	18	24	19	15	19	15	12	14	11	9	7

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

	0°	45°	90°
0°	8402	8402	8402
5°	8443	8088	8058
10°	8390	7850	7761
15°	8275	7596	7448
20°	8129	7324	7148
25°	7984	7062	6875
30°	7780	6794	6601
35°	7575	6536	6409
40°	7360	6315	6215
45°	7153	6118	6051
50°	6934	5937	5888
55°	6700	5744	5722
60°	6417	5546	5546
65°	6122	5313	5339
70°	5796	5061	5115
75°	5371	4816	4908
80°	4707	4564	4698
85°	4070	4346	4535



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	49.3	1.0
10°-20°	141.4	2.9
20°-30°	214.3	4.4
30°-40°	261.0	5.3
40°-50°	280.8	5.7
50°-60°	272.7	5.5
60°-70°	238.1	4.8
70°-80°	183.3	3.7
80°-90°	125.5	2.6
90°-100°	118.1	2.4
100°-110°	184.0	3.7
110°-120°	367.3	7.5
120°-130°	561.7	11.4
130°-140°	582.6	11.9
140°-150°	534.3	10.9
150°-160°	428.3	8.7
160°-170°	276.0	5.6
170°-180°	95.0	1.9
0°-30°	405.0	8.2
0°-40°	666.0	13.6
0°-60°	1219.4	24.8
0°-90°	1766.3	35.9
90°-120°	669.4	13.6
90°-150°	2348.0	47.8
90°-180°	3147.0	64.0
0°-180°	4913.5	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	520	520	520	520	520	
5°	522	520	515	519	519	49
15°	498	499	499	506	505	140
25°	452	458	464	473	476	208
35°	390	403	417	433	439	244
45°	320	340	367	389	398	247
55°	245	273	311	338	348	219
65°	167	205	249	279	290	166
75°	93	135	183	214	226	98
85°	27	74	122	153	164	29
90°	8	60	114	146	158	7
95°	53	67	115	146	156	62
105°	223	256	109	142	154	239
115°	418	441	491	194	135	412
125°	589	600	636	661	670	525
135°	728	739	753	775	781	562
145°	843	843	854	864	864	527
155°	928	923	930	934	929	428
165°	978	974	976	980	976	276
175°	1000	996	997	1001	995	95
180°	998	998	998	998	998	



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CATALOG NUMBER: S122DIP-S485D725U840-4F0-1E-UDD-D

**CANDELA DISTRIBUTION (FULL):**

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
0°	520.4	520.4	520.4	520.4	520.4	520.4	520.4	520.4	520.4	520.4	520.4
2.5°	523.4	523.0	522.6	522.2	521.8	521.1	520.2	519.3	518.4	517.4	518.1
5°	521.9	521.4	520.9	520.4	519.9	519.2	518.2	517.2	516.1	515.1	516.1
7.5°	517.3	516.8	516.5	516.2	515.9	515.3	514.5	513.8	513.0	512.2	513.4
10°	513.6	513.3	512.9	512.6	512.3	511.9	511.4	510.9	510.4	509.9	511.2
12.5°	507.6	507.7	507.8	507.8	507.9	507.7	507.4	507.0	506.5	506.2	507.6
15°	497.8	498.1	498.5	498.8	499.1	499.3	499.3	499.3	499.3	499.3	500.8
17.5°	485.1	485.8	486.6	487.3	488.0	488.6	489.1	489.6	490.2	490.7	492.2
20°	476.7	477.5	478.4	479.2	480.0	480.8	481.4	482.1	482.8	483.4	485.2
22.5°	467.6	468.6	469.6	470.5	471.5	472.4	473.4	474.3	475.2	476.3	478.1
25°	452.5	453.7	454.8	456.1	457.2	458.6	460.1	461.6	463.1	464.5	466.6
27.5°	434.4	436.4	438.3	440.2	442.0	443.9	445.7	447.5	449.2	451.0	453.5
30°	422.3	424.5	426.7	428.9	431.1	433.2	435.5	437.6	439.8	441.9	444.6
32.5°	409.1	411.5	413.9	416.5	418.9	421.4	423.9	426.6	429.1	431.7	434.7
35°	389.9	392.7	395.7	398.5	401.3	404.3	407.5	410.7	413.8	417.1	420.7
37.5°	369.1	372.4	375.7	379.0	382.2	386.0	390.1	394.2	398.3	402.4	406.6
40°	355.3	358.9	362.6	366.3	370.0	374.1	378.6	383.1	387.7	392.2	396.6
42.5°	341.9	345.7	349.3	353.0	356.7	361.1	366.4	371.5	376.8	381.9	386.7
45°	319.8	324.3	328.8	333.4	337.9	343.1	348.9	354.8	360.7	366.6	371.7
47.5°	297.9	302.9	307.8	312.7	317.6	323.6	330.4	337.3	344.2	351.0	356.5
50°	282.9	288.0	293.3	298.4	303.6	309.9	317.5	325.1	332.6	340.1	345.9
52.5°	268.3	273.8	279.2	284.8	290.2	296.9	304.9	312.8	320.7	328.7	334.5
55°	245.1	251.2	257.2	263.2	269.2	276.6	285.4	294.1	302.8	311.4	317.5
57.5°	222.2	229.0	235.8	242.6	249.4	257.2	266.1	275.0	283.9	292.8	299.3
60°	205.9	213.1	220.4	227.5	234.7	243.1	252.7	262.2	271.8	281.3	287.7
62.5°	191.4	198.8	206.4	213.9	221.4	229.8	239.3	248.9	258.5	268.0	274.8
65°	167.4	175.6	183.9	192.1	200.3	209.3	219.2	229.1	239.0	248.9	255.8
67.5°	145.4	154.0	162.6	171.2	179.8	189.0	199.2	209.3	219.4	229.5	236.5
70°	129.8	138.5	147.1	155.8	164.6	174.1	184.5	194.9	205.3	215.7	222.9
72.5°	115.2	124.2	133.2	142.2	151.2	161.0	171.5	182.0	192.5	203.0	210.2
75°	92.8	102.2	111.5	120.9	130.3	140.4	151.1	161.8	172.6	183.3	190.5
77.5°	71.1	80.9	90.7	100.5	110.4	120.7	131.6	142.5	153.4	164.3	171.5
80°	56.6	66.8	77.1	87.3	97.5	108.1	119.0	129.8	140.7	151.6	158.6
82.5°	44.5	54.6	64.6	74.7	84.8	95.4	106.4	117.4	128.5	139.6	146.5
85°	27.2	37.6	48.0	58.4	68.7	79.3	90.0	100.7	111.5	122.2	129.3
87.5°	14.9	25.2	35.6	45.9	56.2	67.0	78.0	89.0	99.9	110.9	117.9
90°	8.3	19.8	31.2	42.7	54.2	65.9	78.0	90.0	102.0	114.0	121.5
92.5°	21.5	30.4	39.3	48.2	57.1	67.1	78.0	89.0	99.9	110.9	117.9
95°	53.0	55.5	58.2	60.7	63.3	70.2	81.4	92.5	103.7	114.9	122.1
97.5°	98.5	90.6	82.6	74.7	66.8	69.0	81.2	93.4	105.7	118.0	124.8
100°	133.1	117.3	101.6	85.7	70.0	68.2	80.3	92.4	104.5	116.6	124.1
102.5°	170.7	171.7	172.7	173.7	174.7	168.3	154.6	141.0	127.2	113.5	121.3
105°	223.4	233.1	242.8	252.4	262.1	249.3	214.3	179.2	144.0	109.0	116.5
107.5°	284.4	292.2	299.9	307.7	315.5	297.2	253.0	208.8	164.6	120.4	124.2
110°	323.1	329.7	336.5	343.3	349.9	334.2	296.0	257.8	219.6	181.5	170.8



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**CANDELA DISTRIBUTION (continued):**

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
112.5°	360.0	365.9	371.6	377.4	383.2	384.3	380.6	377.0	373.3	369.7	316.5
115°	418.4	422.9	427.6	432.1	436.7	444.7	456.3	467.9	479.4	491.0	421.6
117.5°	469.8	474.0	478.3	482.6	486.9	493.8	503.5	513.3	523.0	532.7	519.8
120°	508.0	511.0	514.1	517.2	520.3	526.5	536.1	545.7	555.3	564.9	571.6
122.5°	540.3	543.1	545.9	548.8	551.5	557.6	567.1	576.5	586.0	595.4	601.2
125°	588.9	590.9	593.0	595.1	597.1	602.4	610.9	619.2	627.6	636.0	641.7
127.5°	633.5	635.6	637.7	639.9	642.1	646.4	653.0	659.6	666.2	672.8	678.6
130°	661.8	664.2	666.6	668.9	671.4	675.2	680.5	685.8	691.1	696.4	702.2
132.5°	690.6	692.7	694.7	696.7	698.7	702.0	706.5	710.9	715.4	719.9	725.3
135°	727.5	730.0	732.7	735.2	737.7	740.6	743.8	746.8	749.9	753.1	758.2
137.5°	765.5	767.2	769.0	770.7	772.5	774.6	777.0	779.3	781.7	784.1	788.8
140°	790.3	791.4	792.5	793.7	794.8	796.4	798.5	800.6	802.7	804.8	808.9
142.5°	811.1	812.1	813.1	814.1	815.1	816.6	818.7	820.8	822.9	825.0	828.5
145°	843.0	842.8	842.7	842.5	842.4	843.6	846.4	849.1	851.8	854.5	856.7
147.5°	871.5	870.9	870.3	869.7	869.1	870.1	872.8	875.5	878.2	880.9	881.8
150°	890.0	888.9	887.8	886.7	885.4	886.3	888.8	891.3	893.9	896.5	897.5
152.5°	905.5	904.3	903.1	901.8	900.6	901.2	903.6	906.1	908.5	910.9	911.9
155°	928.3	926.9	925.3	923.9	922.5	922.7	924.6	926.6	928.5	930.4	931.4
157.5°	946.0	944.8	943.6	942.4	941.2	941.2	942.6	943.9	945.2	946.6	947.8
160°	956.4	955.4	954.5	953.5	952.6	952.6	953.5	954.5	955.4	956.4	957.5
162.5°	965.7	964.7	963.8	962.8	961.8	961.8	962.6	963.4	964.3	965.1	966.2
165°	978.2	977.1	976.2	975.2	974.2	974.0	974.5	975.0	975.4	975.9	977.0
167.5°	987.3	986.4	985.4	984.5	983.5	983.2	983.7	984.1	984.6	985.0	986.1
170°	992.6	991.6	990.7	989.7	988.8	988.4	988.8	989.1	989.4	989.7	990.8
172.5°	996.0	995.0	994.1	993.1	992.2	991.9	992.2	992.5	992.8	993.1	994.3
175°	1000.5	999.4	998.3	997.1	996.0	995.6	995.9	996.2	996.5	996.9	998.0
177.5°	1001.3	1000.4	999.5	998.6	997.6	997.2	997.3	997.5	997.6	997.7	998.7
180°	998.4	998.4	998.4	998.4	998.4	998.4	998.4	998.4	998.4	998.4	998.4



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**CANDELA DISTRIBUTION (continued):**

	55°	60°	65°	70°	75°	80°	85°	90°
0°	520.4	520.4	520.4	520.4	520.4	520.4	520.4	520.4
2.5°	518.8	519.4	520.1	520.3	520.0	519.8	519.5	519.2
5°	517.2	518.2	519.2	519.6	519.4	519.3	519.1	518.9
7.5°	514.6	515.8	517.1	517.6	517.5	517.3	517.1	516.9
10°	512.5	513.8	515.2	515.8	515.6	515.4	515.3	515.1
12.5°	508.9	510.3	511.6	512.2	512.0	511.8	511.7	511.5
15°	502.3	503.8	505.3	505.9	505.8	505.6	505.4	505.3
17.5°	493.8	495.4	497.0	497.8	497.8	497.8	497.8	497.8
20°	487.2	489.0	490.8	491.7	491.7	491.7	491.7	491.7
22.5°	479.9	481.7	483.6	484.6	484.9	485.1	485.4	485.7
25°	468.6	470.6	472.6	473.9	474.4	474.9	475.4	475.9
27.5°	456.2	458.7	461.2	462.6	463.0	463.4	463.7	464.1
30°	447.4	450.0	452.7	454.2	454.7	455.2	455.8	456.3
32.5°	437.9	440.9	444.0	446.1	447.0	447.9	448.8	449.7
35°	424.4	428.2	431.8	434.2	435.5	436.6	437.8	439.0
37.5°	410.6	414.8	418.8	421.4	422.7	423.9	425.2	426.5
40°	400.9	405.3	409.6	412.5	414.0	415.6	417.1	418.6
42.5°	391.4	396.2	400.9	404.1	405.6	407.1	408.6	410.1
45°	377.0	382.1	387.3	390.7	392.4	394.2	395.8	397.5
47.5°	361.8	367.3	372.7	376.4	378.2	380.0	381.9	383.7
50°	351.5	357.2	362.9	366.7	368.6	370.4	372.2	374.1
52.5°	340.3	346.2	352.0	355.9	357.9	359.9	361.8	363.9
55°	323.6	329.6	335.6	339.7	341.9	344.1	346.3	348.4
57.5°	305.8	312.3	318.8	323.2	325.4	327.6	329.8	332.0
60°	294.1	300.4	306.8	311.1	313.5	315.9	318.2	320.5
62.5°	281.6	288.3	295.1	299.6	301.8	304.1	306.3	308.5
65°	262.7	269.5	276.4	280.9	283.1	285.3	287.4	289.6
67.5°	243.5	250.3	257.3	262.0	264.2	266.5	268.8	271.0
70°	230.1	237.3	244.5	249.1	251.2	253.2	255.2	257.2
72.5°	217.2	224.3	231.4	236.1	238.4	240.9	243.3	245.7
75°	197.7	204.9	212.1	216.8	218.9	221.2	223.3	225.5
77.5°	178.6	185.8	193.0	197.7	200.1	202.4	204.8	207.1
80°	165.7	172.7	179.8	184.4	186.8	189.1	191.5	193.8
82.5°	153.6	160.7	167.6	172.3	174.5	176.7	178.9	181.2
85°	136.2	143.3	150.4	155.0	157.3	159.8	162.1	164.4
87.5°	124.9	131.9	138.9	143.5	145.7	147.9	150.2	152.3
90°	129.1	136.5	144.0	149.0	151.3	153.6	155.9	158.2
92.5°	124.8	131.9	138.9	143.4	145.6	147.8	150.1	152.3
95°	129.3	136.4	143.6	148.1	150.0	151.8	153.7	155.5
97.5°	131.7	138.5	145.3	149.9	152.0	154.2	156.3	158.5
100°	131.6	139.1	146.5	151.4	153.5	155.7	157.8	160.1
102.5°	129.0	136.7	144.5	149.5	151.8	154.1	156.3	158.6
105°	124.2	131.8	139.5	144.5	147.0	149.5	152.0	154.4
107.5°	128.1	131.9	135.7	138.9	141.4	143.8	146.3	148.9
110°	160.1	149.4	138.8	134.6	137.1	139.6	142.1	144.5





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**CANDELA DISTRIBUTION (continued):**

	55°	60°	65°	70°	75°	80°	85°	90°
112.5°	263.3	210.1	156.9	131.5	133.8	136.2	138.6	140.9
115°	352.3	283.1	213.8	174.3	164.5	154.8	145.1	135.4
117.5°	506.8	493.7	480.7	456.1	419.8	383.4	347.2	310.9
120°	578.1	584.8	591.5	584.8	565.0	545.2	525.3	505.5
122.5°	606.8	612.6	618.3	619.9	617.2	614.6	612.0	609.4
125°	647.3	653.0	658.6	662.5	664.5	666.4	668.4	670.4
127.5°	684.4	690.2	696.0	699.6	701.3	702.9	704.4	706.0
130°	707.9	713.8	719.5	723.0	724.2	725.4	726.5	727.7
132.5°	730.7	736.1	741.4	744.8	746.0	747.1	748.3	749.5
135°	763.4	768.4	773.6	776.7	777.7	778.7	779.7	780.7
137.5°	793.5	798.1	802.7	805.4	806.0	806.6	807.2	807.7
140°	813.0	817.2	821.3	823.4	823.6	823.8	824.0	824.3
142.5°	831.9	835.4	838.8	840.6	840.7	840.7	840.8	840.9
145°	858.9	861.0	863.1	864.1	864.2	864.2	864.3	864.3
147.5°	882.8	883.8	884.7	885.1	884.8	884.5	884.3	884.0
150°	898.4	899.4	900.3	900.4	899.6	898.8	898.0	897.2
152.5°	912.8	913.8	914.8	914.7	913.7	912.6	911.6	910.5
155°	932.4	933.3	934.3	934.1	932.8	931.6	930.3	929.0
157.5°	948.8	949.9	951.0	950.9	949.7	948.4	947.2	945.9
160°	958.4	959.4	960.3	960.2	959.1	958.0	956.8	955.7
162.5°	967.2	968.4	969.5	969.4	968.0	966.5	965.2	963.8
165°	978.2	979.4	980.5	980.5	979.4	978.2	977.0	975.9
167.5°	987.3	988.5	989.6	989.4	988.0	986.5	985.0	983.6
170°	991.9	993.0	994.2	994.0	992.6	991.1	989.7	988.3
172.5°	995.4	996.5	997.6	997.4	996.0	994.6	993.1	991.7
175°	999.2	1000.3	1001.4	1001.2	999.6	997.9	996.3	994.7
177.5°	999.6	1000.5	1001.4	1001.3	1000.1	999.0	997.7	996.6
180°	998.4	998.4	998.4	998.4	998.4	998.4	998.4	998.4

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