

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: P331326-927

Luminaire Tested: **S122DIP-S485D1080U927-4F0-1E-UDD-D4**

Issue Date: 3/3/2020

**Test Information**

Test Method: LM-79-08  
Report Number: P331326-927  
REPORT IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-1807-864-16,  
Test Lab: INNOVATION CENTER  
Issue Date: 3/3/2020  
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)  
Product Line: NEO-RAY  
Catalog Number: S122DIP-S485D1080U927-4F0-1E-UDD-D4  
Description: DEFINE 2 DIRECT-INDIRECT PENDANT LED LUMINAIRE  
DOWNLIGHT 485 LUMENS PER FOOT, DROP SATIN WHITE DIFFUSER  
UPLIGHT 1080 LUMENS PER FOOT, BATWING OPTIC  
Light Source: -  
Ballast/Driver: ELECTRONIC DRIVER

**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 4891.7 lumens  
Efficiency: N/A  
Efficacy: 99.0 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

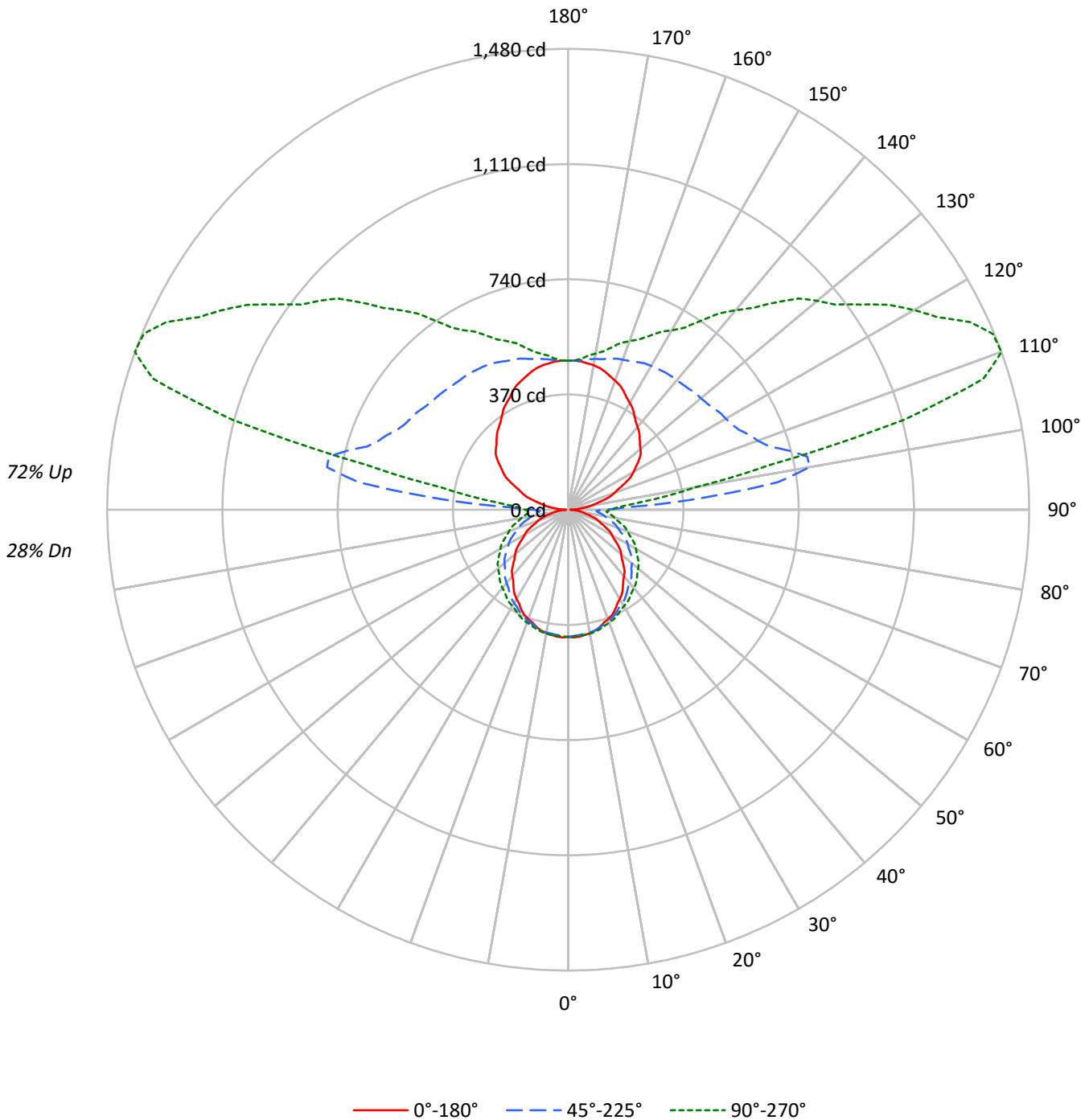
Input Watts (W): 49.4  
Input Voltage (V): 120  
Input Current (Ain): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 25 FT



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### Luminous Intensity Polar Plot





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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	102	102	102	102	91	91	91	91	71	71	71	53	53	53	36	36	36	28
1	92	88	83	80	82	78	75	72	61	59	57	45	44	42	31	30	29	22
2	83	76	70	64	74	68	63	58	53	49	46	39	37	35	26	25	24	18
3	76	66	59	53	67	59	53	48	46	42	38	34	31	29	23	21	20	15
4	69	58	51	45	61	52	46	40	41	36	32	30	27	24	20	18	17	12
5	63	52	44	38	56	46	40	34	36	31	28	27	24	21	18	16	14	11
6	58	46	38	32	52	42	35	30	33	28	24	24	21	18	17	14	13	9
7	54	42	34	28	48	37	31	26	29	24	21	22	18	16	15	13	11	8
8	50	37	30	25	44	34	27	22	27	22	18	20	17	14	14	11	10	7
9	46	34	27	22	41	31	24	20	24	20	16	18	15	12	13	10	9	6
10	43	31	24	19	38	28	22	18	22	18	14	17	13	11	12	9	8	6

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

	0°	45°	90°
0°	6591	6591	6591
5°	6623	6345	6320
10°	6581	6158	6088
15°	6491	5959	5843
20°	6376	5745	5607
25°	6263	5540	5394
30°	6103	5330	5178
35°	5943	5127	5028
40°	5773	4954	4876
45°	5612	4799	4746
50°	5439	4657	4618
55°	5257	4507	4488
60°	5033	4351	4351
65°	4802	4169	4189
70°	4546	3970	4013
75°	4214	3778	3850
80°	3692	3579	3685
85°	3187	3410	3559



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	38.7	0.8
10°-20°	110.9	2.3
20°-30°	168.1	3.4
30°-40°	204.7	4.2
40°-50°	220.3	4.5
50°-60°	213.9	4.4
60°-70°	186.8	3.8
70°-80°	143.8	2.9
80°-90°	100.8	2.1
90°-100°	257.8	5.3
100°-110°	697.8	14.3
110°-120°	721.8	14.8
120°-130°	585.7	12.0
130°-140°	463.5	9.5
140°-150°	345.9	7.1
150°-160°	242.2	5.0
160°-170°	142.6	2.9
170°-180°	46.4	0.9
0°-30°	317.7	6.5
0°-40°	522.4	10.7
0°-60°	956.6	19.6
0°-90°	1387.9	28.4
90°-120°	1677.5	34.3
90°-150°	3072.6	62.8
90°-180°	3504.0	71.6
0°-180°	4891.7	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	408	408	408	408	408	
5°	409	408	404	407	407	39
15°	390	392	392	397	396	110
25°	355	359	364	371	373	163
35°	306	316	327	340	344	191
45°	251	267	288	305	312	194
55°	192	214	244	265	273	172
65°	131	161	195	219	227	130
75°	73	106	144	168	177	77
85°	21	58	96	120	129	23
90°	7	53	109	131	139	6
95°	37	112	429	226	203	38
105°	115	190	733	1290	1115	123
115°	200	260	606	1230	1424	198
125°	277	329	568	989	1148	246
135°	325	387	548	820	941	251
145°	370	425	539	673	739	232
155°	421	454	524	592	616	193
165°	458	472	502	532	540	129
175°	478	478	482	488	487	45
180°	479	479	479	479	479	



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**CANDELA DISTRIBUTION (FULL):**

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
0°	408.2	408.2	408.2	408.2	408.2	408.2	408.2	408.2	408.2	408.2	408.2
2.5°	410.6	410.3	410.0	409.6	409.3	408.8	408.1	407.3	406.6	405.8	406.4
5°	409.4	409.0	408.6	408.2	407.8	407.3	406.5	405.7	404.9	404.1	404.9
7.5°	405.8	405.4	405.2	405.0	404.7	404.3	403.6	403.1	402.4	401.8	402.7
10°	402.9	402.7	402.3	402.1	401.9	401.6	401.2	400.8	400.4	400.0	401.0
12.5°	398.2	398.2	398.3	398.3	398.4	398.2	398.0	397.7	397.4	397.1	398.2
15°	390.5	390.7	391.0	391.3	391.5	391.7	391.7	391.7	391.7	391.7	392.8
17.5°	380.6	381.1	381.7	382.2	382.8	383.3	383.7	384.0	384.5	384.9	386.1
20°	373.9	374.5	375.3	375.9	376.5	377.2	377.6	378.2	378.7	379.2	380.6
22.5°	366.8	367.6	368.4	369.1	369.9	370.6	371.4	372.1	372.8	373.6	375.0
25°	355.0	355.9	356.8	357.7	358.6	359.7	360.9	362.1	363.3	364.4	366.0
27.5°	340.8	342.3	343.8	345.3	346.7	348.2	349.6	351.0	352.4	353.8	355.8
30°	331.3	333.0	334.7	336.4	338.2	339.8	341.6	343.3	345.0	346.7	348.8
32.5°	320.9	322.8	324.7	326.7	328.6	330.6	332.6	334.6	336.6	338.7	341.0
35°	305.9	308.1	310.4	312.6	314.8	317.2	319.6	322.2	324.6	327.2	330.0
37.5°	289.5	292.2	294.7	297.3	299.8	302.8	306.0	309.2	312.4	315.7	318.9
40°	278.7	281.5	284.5	287.3	290.3	293.4	297.0	300.6	304.1	307.7	311.1
42.5°	268.2	271.2	274.0	276.9	279.8	283.3	287.4	291.4	295.6	299.6	303.3
45°	250.9	254.4	257.9	261.5	265.1	269.1	273.7	278.3	283.0	287.6	291.6
47.5°	233.7	237.6	241.5	245.3	249.1	253.8	259.2	264.6	270.0	275.4	279.6
50°	221.9	225.9	230.0	234.1	238.1	243.1	249.1	255.0	260.9	266.8	271.3
52.5°	210.5	214.8	219.0	223.4	227.7	232.9	239.2	245.3	251.6	257.9	262.4
55°	192.3	197.0	201.8	206.4	211.2	217.0	223.9	230.7	237.5	244.3	249.1
57.5°	174.3	179.7	185.0	190.3	195.7	201.8	208.7	215.7	222.7	229.7	234.8
60°	161.5	167.2	172.9	178.5	184.1	190.7	198.2	205.7	213.2	220.7	225.7
62.5°	150.1	156.0	161.9	167.8	173.6	180.3	187.7	195.3	202.8	210.2	215.6
65°	131.3	137.8	144.3	150.7	157.1	164.2	172.0	179.7	187.5	195.3	200.7
67.5°	114.1	120.8	127.5	134.3	141.0	148.3	156.3	164.2	172.1	180.1	185.5
70°	101.8	108.6	115.4	122.2	129.1	136.6	144.7	152.9	161.1	169.2	174.8
72.5°	90.4	97.4	104.5	111.5	118.6	126.3	134.5	142.8	151.0	159.2	164.9
75°	72.8	80.2	87.5	94.8	102.2	110.1	118.5	126.9	135.4	143.8	149.4
77.5°	55.8	63.5	71.1	78.8	86.6	94.7	103.2	111.8	120.3	128.9	134.5
80°	44.4	52.4	60.4	68.4	76.4	84.8	93.3	101.8	110.4	118.9	124.5
82.5°	34.9	42.9	50.7	58.6	66.5	74.9	83.5	92.1	100.8	109.5	114.9
85°	21.3	29.5	37.6	45.8	53.9	62.2	70.6	79.0	87.5	95.9	101.4
87.5°	11.8	20.2	28.8	36.9	45.2	53.8	63.1	72.9	82.4	90.9	96.2
90°	6.8	17.2	28.5	38.0	47.5	58.2	71.3	86.1	100.1	109.4	113.8
92.5°	16.6	28.8	42.5	53.6	66.9	83.3	112.1	149.5	183.7	193.5	180.1
95°	36.9	46.8	62.2	76.7	97.5	126.7	176.9	264.8	379.5	428.8	388.6
97.5°	56.6	67.1	82.3	100.3	122.8	154.3	215.1	334.2	519.2	678.8	713.8
100°	75.0	82.6	95.8	115.3	138.6	170.5	226.6	346.3	552.4	786.2	923.5
102.5°	91.5	97.9	110.7	129.8	153.4	185.0	237.2	344.1	535.4	786.6	999.7
105°	115.3	122.7	133.0	150.6	174.7	205.7	255.8	344.6	503.3	732.8	982.1
107.5°	141.6	147.6	156.9	172.7	195.7	226.6	275.0	353.0	485.1	675.7	896.4
110°	158.8	165.1	173.3	187.8	209.8	241.1	288.0	360.7	479.4	647.8	842.5



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**CANDELA DISTRIBUTION (continued):**

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
112.5°	175.0	180.9	189.3	202.8	223.6	255.2	300.3	369.0	477.1	628.3	803.8
115°	200.2	206.3	213.3	225.7	245.6	274.1	319.6	381.7	476.8	606.0	755.4
117.5°	225.8	230.4	236.9	247.6	266.2	295.2	337.2	395.4	479.0	592.6	722.9
120°	241.9	246.1	252.2	261.0	280.0	308.6	349.7	404.7	480.9	584.6	705.1
122.5°	257.5	260.5	266.3	275.5	294.1	323.2	361.9	412.8	483.5	578.8	689.7
125°	277.3	280.0	285.6	296.6	315.0	342.9	380.2	425.8	487.1	568.5	666.9
127.5°	293.4	297.0	304.6	316.6	334.1	362.3	397.9	438.5	491.5	561.2	645.8
130°	303.0	306.6	315.7	328.4	346.7	373.8	408.7	446.5	495.2	556.9	631.8
132.5°	311.9	316.2	326.0	339.5	358.5	385.2	418.1	454.5	498.9	553.3	620.0
135°	324.6	328.2	339.2	353.1	374.2	400.6	431.4	464.9	503.0	548.5	603.7
137.5°	337.1	341.4	352.4	367.2	388.1	412.3	442.0	472.5	506.6	544.9	591.4
140°	346.6	350.1	361.1	375.7	395.8	419.8	447.7	476.4	507.9	542.3	584.0
142.5°	356.2	359.0	369.2	383.7	403.1	425.6	452.5	480.3	509.5	541.4	577.4
145°	369.9	373.6	382.9	396.6	415.0	435.3	460.1	485.9	511.7	539.2	569.5
147.5°	385.4	388.2	397.0	409.7	425.0	443.0	466.4	489.0	512.4	536.0	561.8
150°	395.7	398.5	405.8	417.8	431.6	448.1	469.4	490.5	511.7	533.8	555.8
152.5°	406.0	407.3	414.6	425.2	438.2	453.3	472.3	491.2	510.2	530.0	550.6
155°	420.6	421.4	427.0	437.1	447.3	461.1	476.7	492.3	507.9	523.6	541.1
157.5°	432.7	433.6	438.1	446.9	455.0	466.6	479.8	492.3	503.7	517.0	532.1
160°	440.8	441.7	445.4	452.7	460.1	470.2	481.3	492.3	501.5	512.6	525.5
162.5°	448.9	448.4	452.0	457.9	464.5	472.5	482.0	491.6	499.3	508.9	519.6
165°	458.3	457.4	459.2	464.7	469.4	474.8	483.2	489.6	495.1	501.5	509.8
167.5°	466.0	464.9	466.6	470.1	473.4	476.9	482.9	488.3	490.8	495.1	500.3
170°	471.2	469.4	470.2	473.0	474.8	477.6	482.2	486.8	488.6	491.4	495.1
172.5°	474.1	473.0	472.5	475.2	476.3	478.3	481.5	484.6	485.7	487.0	490.0
175°	477.6	476.7	475.8	477.6	477.6	478.6	480.4	482.2	481.3	482.2	483.2
177.5°	479.3	477.8	477.1	478.6	478.6	478.6	479.3	480.8	479.3	478.6	479.3
180°	478.6	478.6	478.6	478.6	478.6	478.6	478.6	478.6	478.6	478.6	478.6



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**CANDELA DISTRIBUTION (continued):**

	55°	60°	65°	70°	75°	80°	85°	90°
0°	408.2	408.2	408.2	408.2	408.2	408.2	408.2	408.2
2.5°	406.9	407.4	408.0	408.1	407.9	407.7	407.5	407.3
5°	405.7	406.5	407.3	407.6	407.4	407.3	407.2	407.0
7.5°	403.7	404.6	405.6	406.0	405.9	405.8	405.6	405.5
10°	402.0	403.1	404.2	404.6	404.5	404.3	404.3	404.1
12.5°	399.2	400.3	401.3	401.8	401.6	401.5	401.4	401.2
15°	394.0	395.2	396.4	396.9	396.8	396.6	396.5	396.4
17.5°	387.4	388.6	389.8	390.5	390.5	390.5	390.5	390.5
20°	382.1	383.6	385.0	385.7	385.7	385.7	385.7	385.7
22.5°	376.4	377.9	379.4	380.2	380.4	380.6	380.8	381.0
25°	367.6	369.2	370.7	371.8	372.2	372.6	373.0	373.4
27.5°	357.8	359.8	361.8	362.9	363.2	363.5	363.8	364.1
30°	350.9	353.0	355.1	356.3	356.7	357.1	357.5	357.9
32.5°	343.5	345.9	348.3	349.9	350.6	351.3	352.0	352.8
35°	333.0	335.9	338.7	340.6	341.6	342.5	343.4	344.4
37.5°	322.1	325.3	328.5	330.6	331.6	332.6	333.5	334.5
40°	314.5	317.9	321.3	323.6	324.8	326.0	327.2	328.4
42.5°	307.0	310.8	314.5	317.0	318.1	319.3	320.5	321.7
45°	295.7	299.8	303.8	306.5	307.8	309.2	310.5	311.8
47.5°	283.8	288.1	292.4	295.2	296.7	298.1	299.6	301.0
50°	275.8	280.2	284.7	287.6	289.1	290.6	292.0	293.4
52.5°	267.0	271.6	276.2	279.2	280.7	282.3	283.8	285.4
55°	253.8	258.6	263.2	266.5	268.2	269.9	271.6	273.3
57.5°	239.9	244.9	250.1	253.5	255.2	257.0	258.7	260.5
60°	230.7	235.7	240.7	244.1	245.9	247.8	249.6	251.4
62.5°	220.9	226.2	231.5	235.0	236.8	238.5	240.3	242.0
65°	206.0	211.4	216.8	220.4	222.0	223.8	225.5	227.2
67.5°	191.0	196.4	201.8	205.5	207.2	209.1	210.9	212.6
70°	180.5	186.2	191.8	195.4	197.0	198.6	200.2	201.8
72.5°	170.4	175.9	181.5	185.2	187.0	188.9	190.8	192.7
75°	155.1	160.7	166.4	170.1	171.7	173.5	175.2	176.9
77.5°	140.1	145.8	151.4	155.1	156.9	158.8	160.7	162.5
80°	130.0	135.5	141.0	144.7	146.6	148.4	150.2	152.0
82.5°	120.5	126.0	131.5	135.1	136.9	138.6	140.4	142.1
85°	106.9	112.4	118.0	121.6	123.4	125.3	127.1	129.0
87.5°	101.3	106.3	112.1	115.7	117.5	119.1	120.8	122.5
90°	118.0	121.4	128.6	132.9	134.5	136.1	137.7	139.3
92.5°	164.4	158.1	155.6	153.2	154.1	152.7	155.0	155.1
95°	319.2	268.0	234.3	217.4	207.0	201.2	200.0	202.6
97.5°	635.3	537.9	443.1	379.9	337.5	316.4	304.5	298.3
100°	909.1	799.9	678.7	570.5	495.5	457.4	432.1	417.0
102.5°	1087.4	1066.4	979.0	864.0	782.5	716.4	684.5	663.5
105°	1178.2	1286.8	1303.4	1276.0	1220.4	1164.7	1126.6	1115.2
107.5°	1103.7	1264.8	1364.9	1412.4	1421.0	1419.4	1412.9	1397.3
110°	1040.8	1209.8	1331.8	1410.1	1451.1	1470.1	1479.8	1480.3





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**CANDELA DISTRIBUTION (continued):**

	55°	60°	65°	70°	75°	80°	85°	90°
112.5°	983.1	1145.4	1275.5	1364.9	1421.3	1452.0	1469.1	1475.5
115°	911.2	1056.9	1181.4	1278.8	1345.6	1389.4	1414.8	1424.5
117.5°	855.8	984.1	1097.3	1188.8	1256.8	1302.9	1329.4	1337.8
120°	827.5	945.3	1046.6	1132.8	1198.7	1243.4	1271.5	1282.1
122.5°	804.6	912.7	1008.7	1086.7	1145.7	1189.5	1214.5	1223.4
125°	770.8	869.1	953.6	1025.0	1079.6	1115.7	1140.0	1148.5
127.5°	737.4	826.4	906.1	972.0	1019.7	1053.6	1074.7	1081.7
130°	716.0	798.3	874.1	936.9	983.1	1015.4	1034.9	1043.3
132.5°	695.2	771.5	841.4	900.5	945.9	978.3	996.2	1003.9
135°	666.3	729.8	793.3	846.8	887.4	918.8	936.4	941.2
137.5°	642.5	695.8	746.4	793.0	829.9	856.9	872.4	878.8
140°	627.5	673.8	718.2	760.1	790.4	815.1	829.7	836.0
142.5°	615.4	654.6	692.8	727.8	756.5	778.9	791.9	793.7
145°	598.8	629.9	659.3	686.7	709.5	725.7	735.6	739.0
147.5°	586.2	610.3	632.6	652.4	670.9	683.7	690.3	692.3
150°	577.9	598.2	617.5	634.1	647.8	658.9	664.4	665.4
152.5°	569.8	588.6	605.0	619.3	630.2	639.8	643.8	644.0
155°	558.6	573.3	587.1	597.2	607.4	613.8	617.5	615.7
157.5°	545.5	557.9	569.4	577.3	584.6	589.9	591.5	591.5
160°	537.4	547.6	557.7	564.1	570.5	575.1	576.1	576.1
162.5°	529.3	538.0	546.6	551.6	558.0	561.2	562.1	561.3
165°	517.2	523.6	530.0	533.8	537.4	541.1	541.1	540.2
167.5°	505.6	510.6	515.0	518.3	519.9	522.0	521.8	520.7
170°	499.7	502.5	506.1	507.9	508.9	511.7	510.7	508.9
172.5°	493.1	495.1	498.0	499.2	500.1	501.4	500.4	499.3
175°	485.9	486.8	487.7	488.6	488.6	489.6	488.6	486.8
177.5°	480.8	480.8	481.5	481.5	481.5	481.5	480.8	479.3
180°	478.6	478.6	478.6	478.6	478.6	478.6	478.6	478.6

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