

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: P331326-830

Luminaire Tested: **SA2XXDIP-C485D1080U830-4F0-1E-UDD-D4**

Issue Date: 10/7/2019

Test Information

Test Method: LM-79-08
Report Number: P331326-830
REPORT IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-1807-864-16,
Test Lab: INNOVATION CENTER
Issue Date: 10/7/2019
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: NEO-RAY
Catalog Number: SA2XXDIP-C485D1080U830-4F0-1E-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

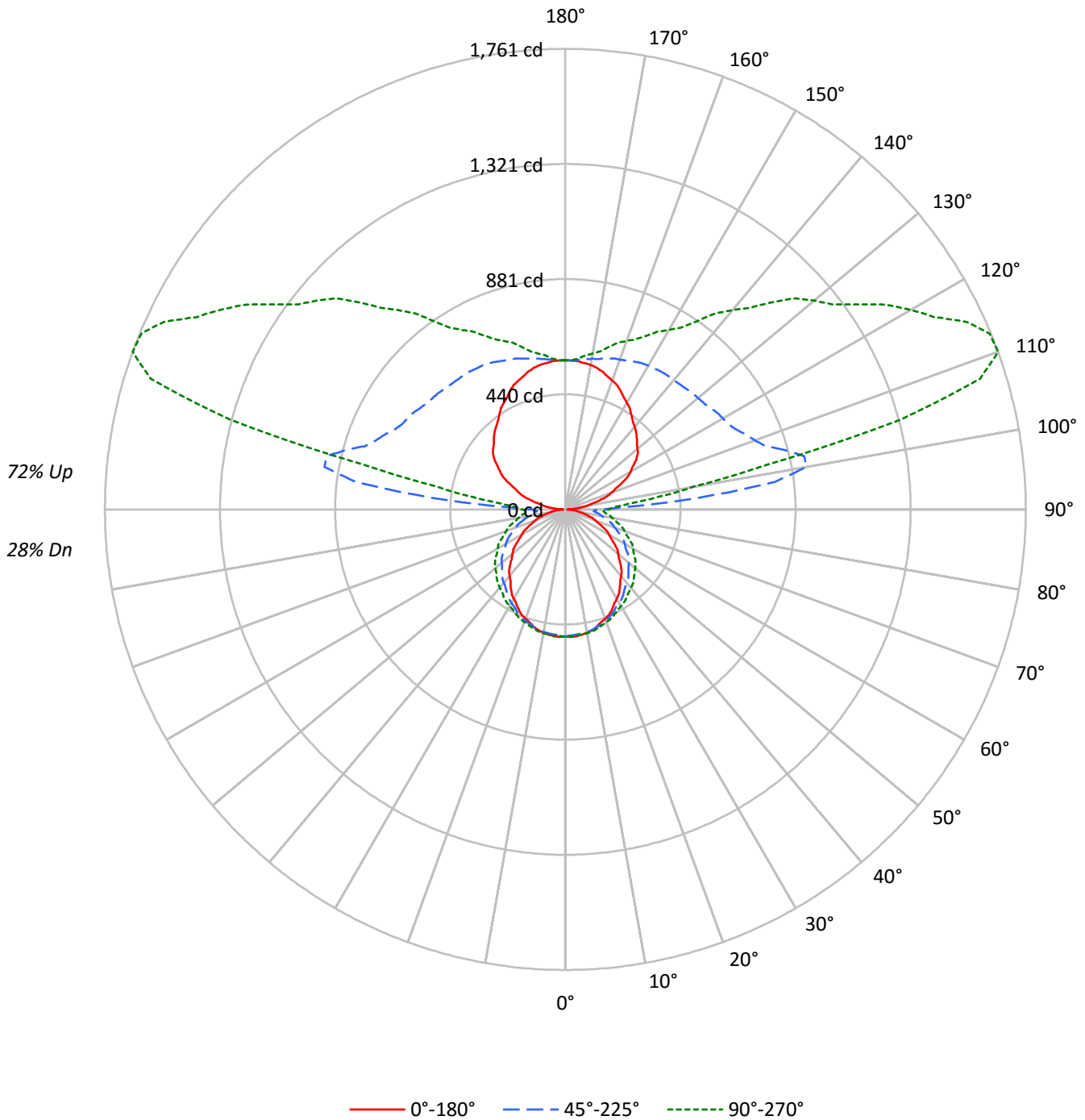
Lumens per Lamp: N/A
Luminaire Lumens: 5820.1 lumens
Efficiency: N/A
Efficacy: 117.8 lumens/watt
Spacing Criteria (0/90/45): 1.21 / 1.32 / 1.42
Luminous Opening: Rectangular w/ Sides (W: 0.17' x L: 4' x H: 0.08')
CIE Type: Semi-Indirect

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°	7842	7842	7842
5°	7880	7549	7520
10°	7831	7327	7244
15°	7723	7090	6952
20°	7587	6836	6671
25°	7453	6592	6417
30°	7262	6342	6160
35°	7069	6100	5981
40°	6869	5895	5801
45°	6677	5709	5648
50°	6471	5541	5495
55°	6254	5363	5341
60°	5990	5177	5178
65°	5716	4959	4983
70°	5407	4723	4775
75°	5013	4495	4582
80°	4391	4260	4385
85°	3800	4054	4232



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	46.0	0.8
10°-20°	132.0	2.3
20°-30°	200.0	3.4
30°-40°	243.6	4.2
40°-50°	262.1	4.5
50°-60°	254.5	4.4
60°-70°	222.2	3.8
70°-80°	171.1	2.9
80°-90°	119.9	2.1
90°-100°	306.8	5.3
100°-110°	830.3	14.3
110°-120°	858.8	14.8
120°-130°	696.9	12.0
130°-140°	551.5	9.5
140°-150°	411.5	7.1
150°-160°	288.1	5.0
160°-170°	169.6	2.9
170°-180°	55.2	0.9
0°-30°	378.0	6.5
0°-40°	621.6	10.7
0°-60°	1138.1	19.6
0°-90°	1651.4	28.4
90°-120°	1995.9	34.3
90°-150°	3655.8	62.8
90°-180°	4169.0	71.6
0°-180°	5820.1	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	486	486	486	486	486	
5°	487	485	481	485	484	46
15°	465	466	466	472	472	131
25°	422	427	434	442	444	194
35°	364	376	389	404	410	227
45°	298	318	342	363	371	230
55°	229	255	291	315	325	204
65°	156	191	232	260	270	155
75°	87	126	171	200	210	92
85°	25	69	114	142	153	27
90°	8	63	130	156	166	7
95°	44	133	510	269	241	45
105°	137	226	872	1534	1327	146
115°	238	309	721	1464	1695	236
125°	330	391	676	1177	1366	293
135°	386	461	653	976	1120	299
145°	440	506	642	801	879	276
155°	500	540	623	705	732	230
165°	545	562	597	633	643	154
175°	568	569	574	581	579	54
180°	569	569	569	569	569	



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CANDELA DISTRIBUTION (FULL):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
0°	485.7	485.7	485.7	485.7	485.7	485.7	485.7	485.7	485.7	485.7	485.7
2.5°	488.5	488.1	487.8	487.4	487.0	486.4	485.5	484.7	483.8	482.9	483.5
5°	487.1	486.6	486.2	485.7	485.2	484.6	483.6	482.7	481.7	480.8	481.7
7.5°	482.8	482.4	482.1	481.8	481.5	481.0	480.2	479.6	478.8	478.1	479.2
10°	479.4	479.1	478.7	478.4	478.2	477.8	477.3	476.8	476.4	475.9	477.1
12.5°	473.7	473.8	473.9	473.9	474.0	473.8	473.5	473.2	472.8	472.5	473.7
15°	464.6	464.9	465.2	465.5	465.8	466.0	466.0	466.0	466.0	466.0	467.4
17.5°	452.8	453.5	454.1	454.8	455.4	456.0	456.5	456.9	457.5	458.0	459.4
20°	444.9	445.6	446.5	447.2	448.0	448.7	449.3	450.0	450.6	451.2	452.9
22.5°	436.4	437.3	438.3	439.1	440.1	440.9	441.9	442.7	443.6	444.5	446.2
25°	422.4	423.5	424.5	425.7	426.7	428.0	429.4	430.8	432.3	433.6	435.5
27.5°	405.5	407.3	409.1	410.9	412.6	414.3	415.9	417.6	419.2	420.9	423.3
30°	394.2	396.2	398.2	400.3	402.4	404.4	406.4	408.4	410.5	412.5	415.0
32.5°	381.8	384.1	386.3	388.7	391.0	393.3	395.7	398.1	400.5	402.9	405.8
35°	363.9	366.6	369.3	371.9	374.6	377.4	380.3	383.3	386.3	389.3	392.7
37.5°	344.5	347.6	350.6	353.7	356.8	360.2	364.1	367.9	371.7	375.6	379.5
40°	331.6	335.0	338.5	341.9	345.3	349.1	353.4	357.6	361.8	366.1	370.1
42.5°	319.1	322.6	326.0	329.5	332.9	337.1	342.0	346.8	351.7	356.5	360.9
45°	298.5	302.7	306.9	311.1	315.4	320.2	325.6	331.1	336.7	342.1	346.9
47.5°	278.1	282.7	287.3	291.8	296.4	302.0	308.4	314.8	321.2	327.6	332.7
50°	264.0	268.8	273.7	278.5	283.3	289.3	296.3	303.4	310.5	317.4	322.8
52.5°	250.4	255.5	260.6	265.8	270.9	277.1	284.6	291.9	299.4	306.8	312.2
55°	228.8	234.4	240.1	245.6	251.3	258.2	266.4	274.5	282.6	290.7	296.3
57.5°	207.4	213.8	220.1	226.4	232.8	240.1	248.4	256.7	264.9	273.2	279.4
60°	192.2	198.9	205.7	212.4	219.0	226.9	235.8	244.7	253.6	262.6	268.5
62.5°	178.6	185.6	192.7	199.6	206.6	214.5	223.4	232.3	241.3	250.2	256.5
65°	156.3	163.9	171.6	179.3	186.9	195.4	204.6	213.9	223.1	232.3	238.7
67.5°	135.7	143.7	151.7	159.8	167.8	176.4	186.0	195.4	204.8	214.2	220.7
70°	121.1	129.2	137.3	145.4	153.6	162.5	172.2	181.9	191.6	201.3	208.0
72.5°	107.5	115.9	124.3	132.7	141.1	150.2	160.0	169.8	179.6	189.5	196.1
75°	86.6	95.4	104.1	112.8	121.6	131.0	141.0	151.0	161.1	171.1	177.8
77.5°	66.4	75.5	84.6	93.8	103.0	112.6	122.8	133.0	143.2	153.4	160.0
80°	52.8	62.3	71.9	81.4	91.0	100.9	111.0	121.1	131.3	141.5	148.1
82.5°	41.6	51.0	60.3	69.7	79.2	89.1	99.3	109.6	119.9	130.3	136.8
85°	25.4	35.1	44.8	54.5	64.1	74.0	84.0	94.0	104.1	114.0	120.6
87.5°	14.0	24.0	34.2	43.9	53.7	64.0	75.1	86.7	98.0	108.2	114.4
90°	8.1	20.5	33.9	45.2	56.5	69.3	84.8	102.5	119.0	130.2	135.3
92.5°	19.8	34.2	50.5	63.8	79.6	99.1	133.4	177.9	218.6	230.2	214.2
95°	43.9	55.7	74.0	91.2	116.0	150.7	210.5	315.1	451.5	510.2	462.4
97.5°	67.3	79.8	97.9	119.3	146.1	183.6	255.9	397.7	617.7	807.7	849.3
100°	89.3	98.3	114.0	137.2	164.9	202.8	269.7	412.0	657.2	935.4	1098.8
102.5°	108.9	116.5	131.7	154.5	182.6	220.1	282.2	409.4	637.0	935.9	1189.4
105°	137.1	146.0	158.3	179.2	207.8	244.8	304.3	410.0	598.8	871.9	1168.6
107.5°	168.5	175.6	186.7	205.5	232.9	269.6	327.3	420.0	577.1	803.9	1066.5
110°	189.0	196.4	206.1	223.5	249.7	286.8	342.6	429.1	570.4	770.7	1002.4



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CANDELA DISTRIBUTION (continued):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
112.5°	208.2	215.3	225.3	241.3	266.1	303.6	357.3	439.0	567.7	747.5	956.4
115°	238.2	245.4	253.7	268.5	292.2	326.1	380.2	454.1	567.3	721.0	898.8
117.5°	268.6	274.1	281.8	294.5	316.7	351.2	401.2	470.4	570.0	705.0	860.1
120°	287.9	292.8	300.1	310.6	333.1	367.2	416.1	481.5	572.1	695.5	839.0
122.5°	306.3	310.0	316.9	327.8	350.0	384.6	430.6	491.2	575.2	688.6	820.6
125°	329.9	333.2	339.8	352.9	374.8	407.9	452.3	506.6	579.6	676.5	793.5
127.5°	349.1	353.4	362.4	376.7	397.6	431.0	473.4	521.7	584.8	667.7	768.4
130°	360.5	364.8	375.6	390.8	412.5	444.7	486.3	531.2	589.2	662.6	751.8
132.5°	371.1	376.2	387.9	403.9	426.5	458.4	497.5	540.7	593.6	658.4	737.7
135°	386.2	390.5	403.6	420.1	445.3	476.6	513.3	553.2	598.5	652.6	718.3
137.5°	401.1	406.2	419.3	436.9	461.8	490.6	525.8	562.2	602.8	648.4	703.6
140°	412.4	416.6	429.6	447.0	470.9	499.5	532.6	566.8	604.4	645.3	694.8
142.5°	423.8	427.2	439.2	456.6	479.7	506.3	538.4	571.5	606.1	644.1	687.0
145°	440.2	444.5	455.5	471.9	493.8	517.9	547.4	578.2	608.8	641.6	677.6
147.5°	458.5	461.8	472.3	487.5	505.7	527.1	554.9	581.8	609.6	637.7	668.5
150°	470.8	474.1	482.9	497.1	513.5	533.2	558.5	583.6	608.8	635.1	661.3
152.5°	483.1	484.7	493.3	505.9	521.4	539.3	561.9	584.5	607.0	630.7	655.2
155°	500.4	501.4	508.0	520.1	532.2	548.6	567.1	585.8	604.4	623.0	643.9
157.5°	514.8	515.9	521.2	531.7	541.3	555.2	570.9	585.8	599.4	615.1	633.1
160°	524.4	525.6	529.9	538.7	547.4	559.5	572.7	585.8	596.7	609.9	625.2
162.5°	534.1	533.5	537.8	544.8	552.7	562.1	573.5	584.9	594.1	605.5	618.2
165°	545.3	544.2	546.4	552.9	558.5	565.0	574.9	582.5	589.1	596.7	606.6
167.5°	554.5	553.2	555.2	559.3	563.3	567.4	574.6	581.0	584.0	589.1	595.2
170°	560.6	558.5	559.5	562.8	565.0	568.3	573.7	579.2	581.4	584.7	589.1
172.5°	564.1	562.8	562.1	565.4	566.8	569.1	572.9	576.6	577.9	579.5	583.0
175°	568.3	567.1	566.1	568.3	568.3	569.4	571.6	573.7	572.7	573.7	574.9
177.5°	570.2	568.4	567.6	569.4	569.4	569.4	570.2	572.0	570.2	569.4	570.2
180°	569.4	569.4	569.4	569.4	569.4	569.4	569.4	569.4	569.4	569.4	569.4



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CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
0°	485.7	485.7	485.7	485.7	485.7	485.7	485.7	485.7
2.5°	484.2	484.7	485.4	485.6	485.3	485.1	484.8	484.6
5°	482.7	483.6	484.6	484.9	484.7	484.7	484.5	484.3
7.5°	480.3	481.5	482.6	483.1	483.0	482.8	482.6	482.5
10°	478.3	479.6	480.9	481.5	481.3	481.1	481.0	480.8
12.5°	474.9	476.3	477.5	478.1	477.9	477.7	477.6	477.4
15°	468.8	470.2	471.6	472.2	472.1	471.9	471.7	471.6
17.5°	460.9	462.4	463.8	464.6	464.6	464.6	464.6	464.6
20°	454.7	456.4	458.1	458.9	458.9	458.9	458.9	458.9
22.5°	447.9	449.6	451.4	452.3	452.6	452.8	453.1	453.4
25°	437.3	439.2	441.1	442.3	442.8	443.3	443.7	444.2
27.5°	425.7	428.1	430.5	431.8	432.2	432.5	432.8	433.2
30°	417.5	420.0	422.5	424.0	424.4	424.9	425.4	425.8
32.5°	408.7	411.5	414.4	416.3	417.2	418.0	418.9	419.7
35°	396.2	399.6	403.0	405.3	406.4	407.5	408.6	409.7
37.5°	383.2	387.1	390.9	393.3	394.5	395.7	396.8	398.0
40°	374.2	378.2	382.3	385.0	386.4	387.9	389.3	390.7
42.5°	365.3	369.8	374.2	377.2	378.5	379.9	381.4	382.8
45°	351.9	356.7	361.5	364.7	366.3	367.9	369.4	371.0
47.5°	337.7	342.8	347.9	351.3	353.0	354.7	356.5	358.2
50°	328.1	333.4	338.7	342.2	344.0	345.7	347.4	349.1
52.5°	317.6	323.1	328.6	332.2	334.0	335.9	337.7	339.6
55°	302.0	307.6	313.2	317.1	319.1	321.1	323.2	325.2
57.5°	285.4	291.4	297.6	301.6	303.7	305.8	307.8	309.9
60°	274.5	280.4	286.3	290.4	292.6	294.8	297.0	299.2
62.5°	262.8	269.1	275.4	279.7	281.7	283.8	285.9	287.9
65°	245.2	251.6	258.0	262.2	264.2	266.3	268.2	270.3
67.5°	227.2	233.7	240.2	244.5	246.6	248.7	250.9	253.0
70°	214.8	221.5	228.2	232.5	234.4	236.3	238.2	240.1
72.5°	202.7	209.3	215.9	220.4	222.5	224.8	227.1	229.3
75°	184.5	191.2	197.9	202.4	204.3	206.4	208.4	210.5
77.5°	166.7	173.4	180.1	184.5	186.7	188.9	191.1	193.3
80°	154.7	161.2	167.8	172.1	174.4	176.5	178.7	180.9
82.5°	143.4	150.0	156.5	160.8	162.9	164.9	167.0	169.1
85°	127.1	133.7	140.3	144.7	146.8	149.1	151.3	153.4
87.5°	120.6	126.5	133.4	137.7	139.8	141.8	143.7	145.7
90°	140.4	144.5	153.0	158.2	160.0	161.9	163.8	165.7
92.5°	195.6	188.1	185.1	182.3	183.3	181.6	184.5	184.5
95°	379.8	318.9	278.8	258.6	246.3	239.4	238.0	241.0
97.5°	755.9	640.0	527.3	452.0	401.5	376.5	362.3	355.0
100°	1081.7	951.7	807.5	678.7	589.6	544.2	514.2	496.2
102.5°	1293.8	1268.9	1164.8	1028.0	931.0	852.4	814.5	789.5
105°	1401.8	1531.1	1550.8	1518.2	1452.0	1385.8	1340.5	1326.9
107.5°	1313.2	1504.9	1624.0	1680.5	1690.7	1688.8	1681.0	1662.5
110°	1238.4	1439.5	1584.6	1677.7	1726.5	1749.1	1760.7	1761.2



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CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
112.5°	1169.7	1362.8	1517.6	1623.9	1691.1	1727.6	1747.9	1755.6
115°	1084.1	1257.4	1405.6	1521.5	1601.0	1653.1	1683.3	1694.9
117.5°	1018.2	1170.9	1305.6	1414.5	1495.3	1550.2	1581.8	1591.7
120°	984.6	1124.7	1245.2	1347.8	1426.3	1479.4	1512.9	1525.5
122.5°	957.3	1085.9	1200.1	1293.0	1363.2	1415.2	1445.0	1455.7
125°	917.1	1034.1	1134.6	1219.6	1284.5	1327.5	1356.3	1366.5
127.5°	877.4	983.3	1078.1	1156.5	1213.2	1253.6	1278.7	1287.0
130°	851.9	949.8	1040.0	1114.7	1169.7	1208.2	1231.3	1241.3
132.5°	827.2	917.9	1001.1	1071.4	1125.5	1163.9	1185.3	1194.5
135°	792.8	868.4	943.9	1007.5	1055.8	1093.2	1114.2	1119.8
137.5°	764.5	827.8	888.1	943.5	987.4	1019.5	1037.9	1045.6
140°	746.6	801.6	854.5	904.4	940.4	969.8	987.1	994.7
142.5°	732.2	778.8	824.3	865.9	900.0	926.7	942.2	944.3
145°	712.5	749.5	784.5	817.1	844.1	863.5	875.2	879.3
147.5°	697.5	726.1	752.7	776.2	798.2	813.5	821.3	823.7
150°	687.6	711.7	734.7	754.4	770.8	784.0	790.5	791.6
152.5°	678.0	700.3	719.8	736.9	749.8	761.2	766.0	766.2
155°	664.6	682.1	698.5	710.6	722.6	730.3	734.7	732.5
157.5°	649.0	663.7	677.5	686.9	695.5	701.8	703.8	703.8
160°	639.4	651.5	663.5	671.2	678.8	684.3	685.4	685.4
162.5°	629.8	640.1	650.4	656.3	663.9	667.7	668.7	667.9
165°	615.4	623.0	630.7	635.1	639.4	643.9	643.9	642.7
167.5°	601.5	607.5	612.7	616.7	618.6	621.0	620.9	619.5
170°	594.6	597.9	602.2	604.4	605.5	608.8	607.7	605.5
172.5°	586.6	589.1	592.6	593.9	595.0	596.5	595.4	594.1
175°	578.2	579.2	580.3	581.4	581.4	582.5	581.4	579.2
177.5°	572.0	572.0	572.9	572.9	572.9	572.9	572.0	570.2
180°	569.4	569.4	569.4	569.4	569.4	569.4	569.4	569.4

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