

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: P331326-840

Luminaire Tested: **SA2XXDIP-C485D1080U840-4F0-1E-UDD-D4**

Issue Date: 10/7/2019

Test Information

Test Method: LM-79-08
Report Number: P331326-840
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-C485D1080U840-4F0-1E-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

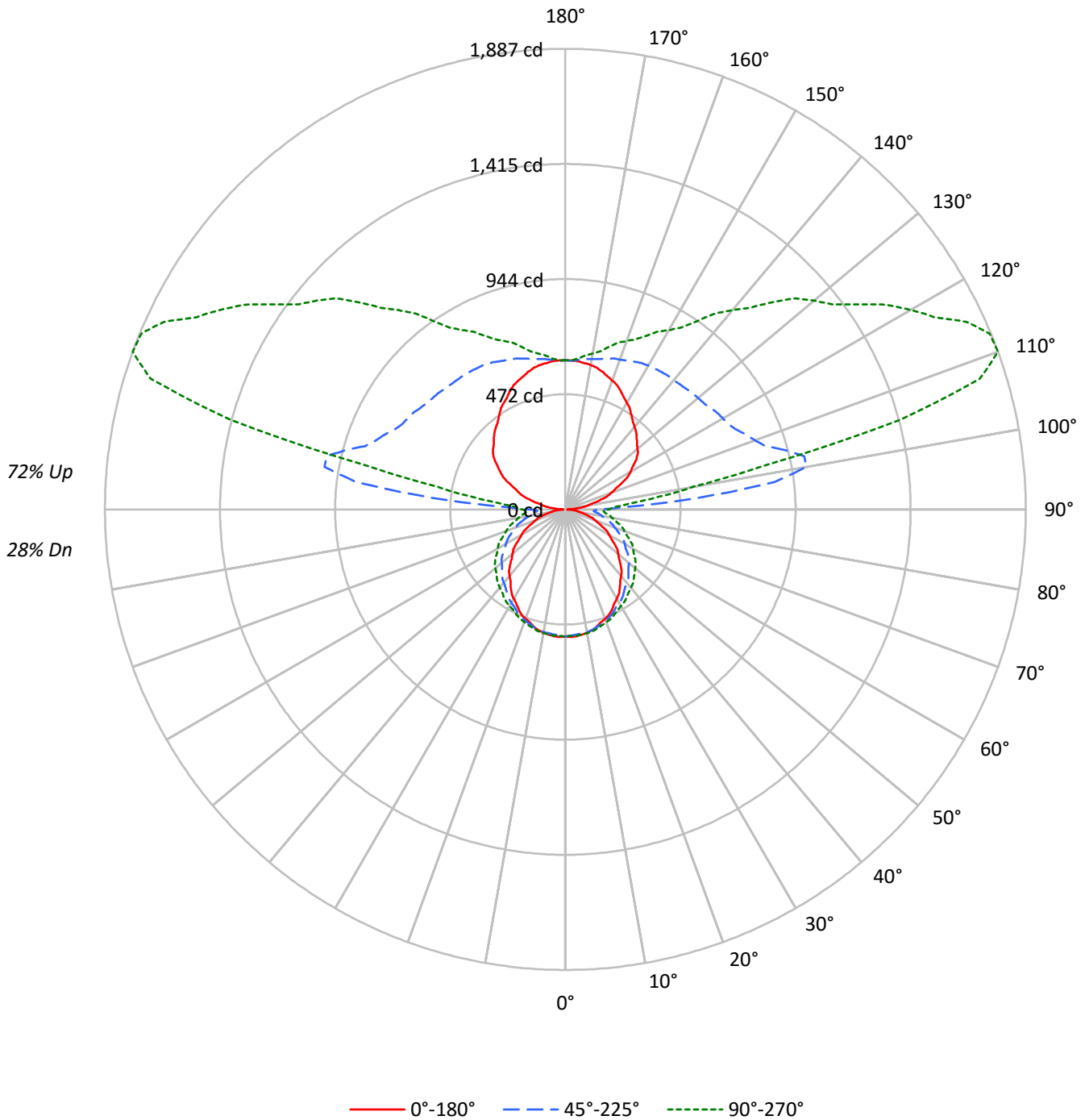
Lumens per Lamp: N/A
Luminaire Lumens: 6235.9 lumens
Efficiency: N/A
Efficacy: 126.2 lumens/watt
Spacing Criteria (0/90/45): 1.21 / 1.32 / 1.42
Luminous Opening: Rectangular w/ Sides (W: 0.17' x L: 4' x H: 0.08')
CIE Type: Semi-Indirect

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°	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	0.8
10°-20°	141.4	2.3
20°-30°	214.3	3.4
30°-40°	261.0	4.2
40°-50°	280.8	4.5
50°-60°	272.7	4.4
60°-70°	238.1	3.8
70°-80°	183.3	2.9
80°-90°	128.5	2.1
90°-100°	328.7	5.3
100°-110°	889.6	14.3
110°-120°	920.2	14.8
120°-130°	746.7	12.0
130°-140°	590.9	9.5
140°-150°	440.9	7.1
150°-160°	308.7	5.0
160°-170°	181.7	2.9
170°-180°	59.1	0.9
0°-30°	405.0	6.5
0°-40°	666.0	10.7
0°-60°	1219.4	19.6
0°-90°	1769.3	28.4
90°-120°	2138.5	34.3
90°-150°	3917.0	62.8
90°-180°	4467.0	71.6
0°-180°	6235.9	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°	9	67	140	167	178	7
95°	47	143	547	288	258	48
105°	147	242	934	1644	1422	156
115°	255	331	772	1568	1816	253
125°	354	419	725	1261	1464	314
135°	414	494	699	1045	1200	320
145°	472	542	687	858	942	296
155°	536	579	668	755	785	247
165°	584	602	639	678	689	165
175°	609	609	615	622	621	58
180°	610	610	610	610	610	



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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°	15.0	25.8	36.7	47.1	57.6	68.6	80.5	92.9	105.0	115.9	122.6
90°	8.7	21.9	36.4	48.5	60.5	74.2	90.9	109.8	127.5	139.5	145.0
92.5°	21.2	36.7	54.1	68.4	85.3	106.1	142.9	190.6	234.2	246.6	229.5
95°	47.1	59.7	79.3	97.8	124.3	161.5	225.5	337.6	483.7	546.6	495.4
97.5°	72.1	85.5	104.9	127.8	156.5	196.7	274.2	426.1	661.9	865.4	910.0
100°	95.6	105.3	122.1	147.0	176.7	217.3	288.9	441.4	704.2	1002.2	1177.3
102.5°	116.6	124.8	141.1	165.5	195.6	235.8	302.4	438.7	682.5	1002.7	1274.3
105°	146.9	156.4	169.6	192.0	222.7	262.3	326.1	439.3	641.6	934.1	1252.0
107.5°	180.6	188.1	200.1	220.2	249.5	288.8	350.6	450.0	618.3	861.3	1142.7
110°	202.5	210.5	220.9	239.4	267.5	307.3	367.1	459.8	611.2	825.8	1074.0



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CANDELA DISTRIBUTION (continued):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
112.5°	223.1	230.7	241.4	258.5	285.1	325.3	382.8	470.4	608.2	800.9	1024.7
115°	255.2	263.0	271.9	287.7	313.1	349.4	407.4	486.6	607.8	772.5	963.0
117.5°	287.8	293.7	301.9	315.6	339.3	376.3	429.9	504.0	610.7	755.4	921.5
120°	308.4	313.8	321.5	332.8	356.9	393.4	445.9	515.9	613.0	745.2	898.9
122.5°	328.2	332.1	339.5	351.2	375.0	412.0	461.3	526.2	616.3	737.8	879.2
125°	353.5	357.0	364.1	378.1	401.5	437.1	484.6	542.8	621.0	724.8	850.2
127.5°	374.1	378.6	388.3	403.6	426.0	461.8	507.3	559.0	626.6	715.4	823.2
130°	386.3	390.8	402.4	418.7	441.9	476.5	521.0	569.2	631.3	709.9	805.5
132.5°	397.6	403.0	415.6	432.7	457.0	491.1	533.0	579.4	636.0	705.4	790.4
135°	413.7	418.4	432.4	450.1	477.1	510.7	550.0	592.7	641.3	699.2	769.6
137.5°	429.7	435.3	449.3	468.1	494.7	525.6	563.4	602.4	645.8	694.7	753.9
140°	441.8	446.4	460.3	478.9	504.5	535.1	570.7	607.3	647.5	691.4	744.5
142.5°	454.0	457.7	470.6	489.2	513.9	542.5	576.8	612.3	649.4	690.1	736.1
145°	471.6	476.3	488.1	505.6	529.1	554.9	586.5	619.5	652.3	687.4	726.0
147.5°	491.3	494.8	506.0	522.3	541.8	564.7	594.5	623.4	653.2	683.3	716.2
150°	504.4	508.0	517.4	532.6	550.2	571.3	598.3	625.3	652.3	680.4	708.5
152.5°	517.6	519.3	528.6	542.0	558.7	577.8	602.1	626.2	650.4	675.7	702.0
155°	536.1	537.2	544.3	557.2	570.2	587.7	607.6	627.6	647.5	667.5	689.8
157.5°	551.6	552.8	558.5	569.7	580.0	594.8	611.7	627.6	642.2	659.0	678.3
160°	561.9	563.1	567.7	577.1	586.5	599.5	613.6	627.6	639.3	653.5	669.8
162.5°	572.3	571.6	576.2	583.7	592.2	602.3	614.5	626.7	636.5	648.7	662.4
165°	584.2	583.1	585.4	592.4	598.3	605.3	615.9	624.1	631.2	639.3	649.9
167.5°	594.1	592.7	594.8	599.3	603.5	607.9	615.6	622.5	625.7	631.2	637.7
170°	600.7	598.3	599.5	603.0	605.3	608.8	614.7	620.6	622.9	626.4	631.2
172.5°	604.4	603.0	602.3	605.8	607.2	609.8	613.8	617.7	619.1	620.9	624.6
175°	608.8	607.6	606.5	608.8	608.8	610.1	612.4	614.7	613.6	614.7	615.9
177.5°	611.0	609.0	608.1	610.1	610.1	610.1	611.0	612.9	611.0	610.1	611.0
180°	610.1	610.1	610.1	610.1	610.1	610.1	610.1	610.1	610.1	610.1	610.1



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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°	129.2	135.5	142.9	147.5	149.8	151.9	154.0	156.1
90°	150.5	154.8	163.9	169.5	171.5	173.5	175.5	177.5
92.5°	209.5	201.6	198.3	195.3	196.4	194.6	197.6	197.7
95°	406.9	341.6	298.7	277.1	263.9	256.5	255.0	258.2
97.5°	809.9	685.7	564.9	484.3	430.2	403.3	388.2	380.3
100°	1158.9	1019.7	865.2	727.2	631.7	583.1	550.9	531.6
102.5°	1386.2	1359.5	1248.0	1101.5	997.5	913.3	872.6	845.9
105°	1502.0	1640.4	1661.5	1626.6	1555.7	1484.8	1436.2	1421.7
107.5°	1407.0	1612.4	1740.0	1800.5	1811.5	1809.4	1801.1	1781.2
110°	1326.9	1542.3	1697.8	1797.6	1849.9	1874.0	1886.4	1887.0



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CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
112.5°	1253.2	1460.2	1626.0	1739.9	1811.9	1851.0	1872.8	1881.0
115°	1161.5	1347.3	1506.0	1630.2	1715.4	1771.2	1803.5	1815.9
117.5°	1091.0	1254.6	1398.9	1515.5	1602.2	1660.9	1694.8	1705.4
120°	1054.9	1205.1	1334.1	1444.1	1528.1	1585.1	1620.9	1634.5
122.5°	1025.7	1163.5	1285.9	1385.3	1460.6	1516.3	1548.2	1559.6
125°	982.6	1107.9	1215.7	1306.7	1376.2	1422.3	1453.2	1464.1
127.5°	940.1	1053.5	1155.1	1239.1	1299.9	1343.1	1370.0	1379.0
130°	912.7	1017.6	1114.3	1194.4	1253.2	1294.4	1319.3	1330.0
132.5°	886.3	983.5	1072.6	1147.9	1205.9	1247.1	1270.0	1279.8
135°	849.4	930.4	1011.3	1079.4	1131.3	1171.2	1193.8	1199.8
137.5°	819.1	887.0	951.5	1010.9	1057.9	1092.4	1112.1	1120.2
140°	799.9	858.9	915.5	969.0	1007.5	1039.1	1057.6	1065.7
142.5°	784.5	834.5	883.1	927.8	964.3	992.9	1009.5	1011.8
145°	763.4	803.0	840.5	875.5	904.4	925.1	937.8	942.1
147.5°	747.3	778.0	806.5	831.6	855.3	871.6	880.0	882.5
150°	736.7	762.5	787.2	808.3	825.9	840.0	847.0	848.2
152.5°	726.4	750.3	771.2	789.5	803.3	815.6	820.7	820.9
155°	712.1	730.8	748.4	761.3	774.3	782.4	787.2	784.9
157.5°	695.4	711.1	725.9	736.0	745.2	751.9	754.1	754.1
160°	685.1	698.0	710.9	719.1	727.3	733.2	734.4	734.4
162.5°	674.8	685.8	696.8	703.2	711.3	715.4	716.5	715.6
165°	659.3	667.5	675.7	680.4	685.1	689.8	689.8	688.6
167.5°	644.5	650.9	656.5	660.8	662.8	665.4	665.2	663.8
170°	637.0	640.6	645.2	647.5	648.7	652.3	651.1	648.7
172.5°	628.5	631.2	634.9	636.3	637.5	639.1	637.9	636.5
175°	619.5	620.6	621.8	622.9	622.9	624.1	622.9	620.6
177.5°	612.9	612.9	613.8	613.8	613.8	613.8	612.9	611.0
180°	610.1	610.1	610.1	610.1	610.1	610.1	610.1	610.1

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