

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: P331668-930

Luminaire Tested: **SA2XXRDIP-C485D925U930-4F0-1E-UDD-F4**

Issue Date: 10/7/2019

Test Information

Test Method: LM-79-08
Report Number: P331668-930
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: SA2XXRDIP-C485D925U930-4F0-1E-UDD-F4
Description: DEFINE 2 DIRECT-INDIRECT PENDANT LED LUMINAIRE
DOWNLIGHT 485 LUMENS PER FOOT, FLUSH SATIN WHITE DIFFUSER, REGRESSED
HOUSING
UPLIGHT 925 LUMENS PER FOOT, BATWING OPTIC
Light Source: -
Ballast/Driver: ELECTRONIC DRIVER

Summary

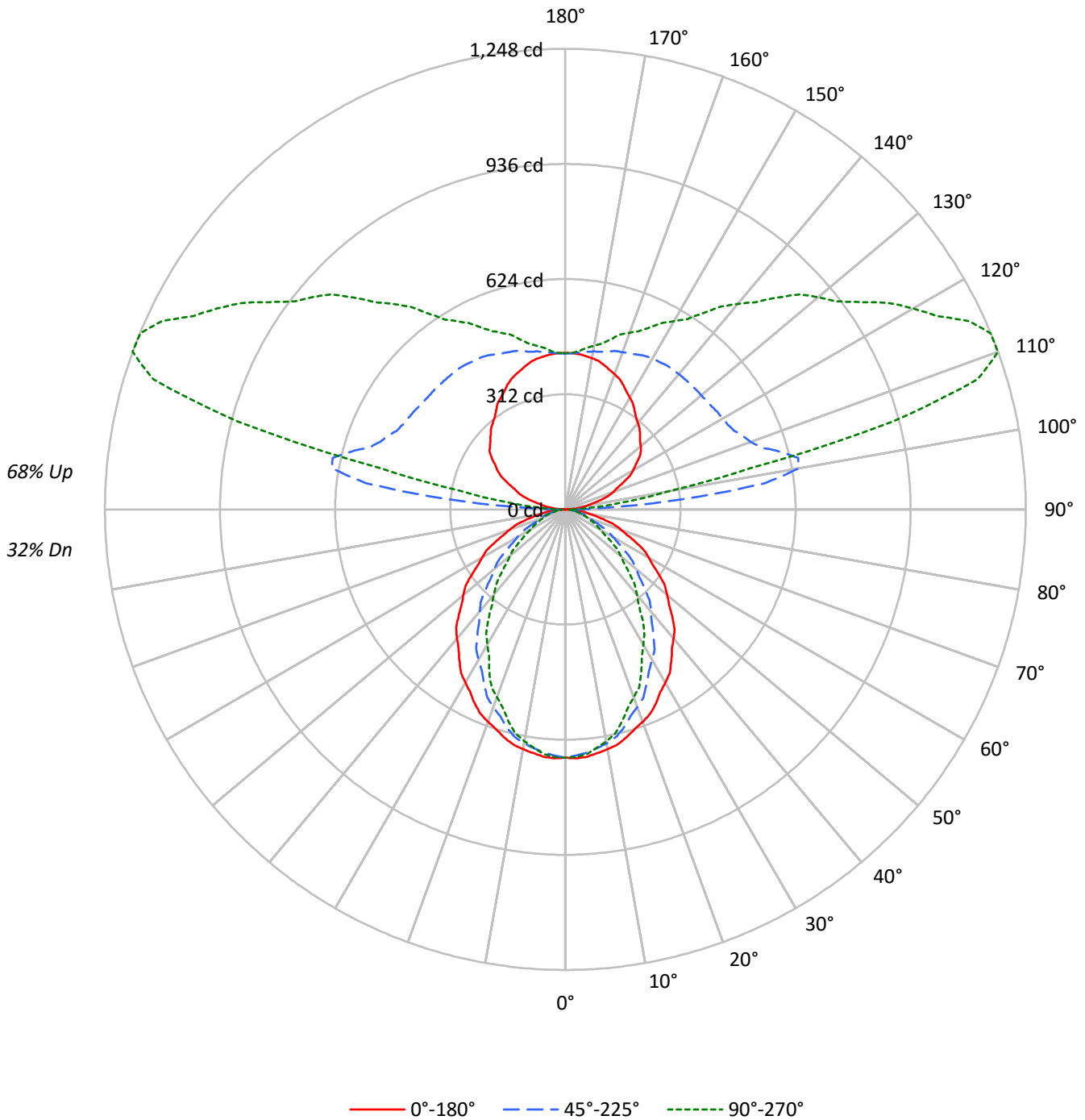
Lumens per Lamp: N/A
Luminaire Lumens: 4332.0 lumens
Efficiency: N/A
Efficacy: 97.3 lumens/watt
Spacing Criteria (0/90/45): 1.2 / 0.99 / 1.16
Luminous Opening: Rectangular (W 0.17' x L: 4' x H: 0')
CIE Type: Semi-Indirect

Input Watts (W): 44.5
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	0
RCR																		
0	103	103	103	103	93	93	93	93	73	73	73	56	56	56	40	40	40	32
1	94	90	86	83	85	81	78	75	65	63	61	49	48	47	35	35	34	28
2	86	79	73	68	77	71	66	62	57	54	51	44	42	40	32	30	29	24
3	78	70	63	57	70	63	57	52	50	46	43	39	36	34	28	27	25	20
4	72	62	54	48	64	56	49	44	45	40	37	35	32	29	25	23	22	18
5	66	55	47	42	59	50	43	38	40	35	32	31	28	25	23	21	19	16
6	61	49	42	36	55	45	38	33	36	31	28	28	25	22	21	19	17	14
7	56	44	37	32	51	40	34	29	33	28	24	26	22	20	19	17	15	12
8	52	40	33	28	47	37	30	26	30	25	22	24	20	18	18	15	14	11
9	48	37	30	25	44	34	27	23	27	23	19	22	18	16	16	14	12	10
10	45	34	27	22	41	31	25	21	25	21	17	20	17	14	15	13	11	9

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	10863	10863	10863
5°	10904	10728	10786
10°	10822	10552	10462
15°	10696	10238	9944
20°	10524	9792	9301
25°	10349	9285	8678
30°	10103	8764	7879
35°	9865	8198	7177
40°	9624	7611	6365
45°	9344	6951	5631
50°	9053	6285	4908
55°	8757	5571	4217
60°	8415	4818	3500
65°	8027	4046	3186
70°	7558	3333	2932
75°	6987	3038	2739
80°	6174	2715	2492
85°	4854	2149	2149



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	63.0	1.5
10°-20°	172.9	4.0
20°-30°	242.8	5.6
30°-40°	264.8	6.1
40°-50°	243.5	5.6
50°-60°	191.2	4.4
60°-70°	124.7	2.9
70°-80°	64.3	1.5
80°-90°	20.5	0.5
90°-100°	169.2	3.9
100°-110°	574.1	13.3
110°-120°	609.9	14.1
120°-130°	502.1	11.6
130°-140°	403.2	9.3
140°-150°	304.7	7.0
150°-160°	214.1	4.9
160°-170°	126.0	2.9
170°-180°	41.0	0.9
0°-30°	478.7	11.1
0°-40°	743.5	17.2
0°-60°	1178.2	27.2
0°-90°	1387.6	32.0
90°-120°	1353.2	31.2
90°-150°	2563.1	59.2
90°-180°	2944.0	68.0
0°-180°	4332.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	673	673	673	673	673	
5°	673	670	662	667	666	64
15°	640	632	612	601	595	180
25°	581	560	521	497	487	267
35°	500	468	416	379	364	313
45°	409	367	304	263	247	316
55°	311	263	198	163	150	278
65°	210	160	106	86	83	208
75°	112	71	49	45	44	119
85°	26	14	12	12	12	31
90°	1	11	28	26	27	3
95°	28	70	319	120	93	30
105°	99	150	603	1078	917	106
115°	175	221	504	1041	1207	173
125°	244	289	485	843	979	217
135°	286	342	479	709	811	221
145°	327	376	477	592	648	205
155°	372	402	463	524	544	171
165°	405	417	443	470	478	114
175°	422	423	426	432	430	40
180°	423	423	423	423	423	



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CANDELA DISTRIBUTION (FULL):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
0°	672.8	672.8	672.8	672.8	672.8	672.8	672.8	672.8	672.8	672.8	672.8
2.5°	675.2	674.7	674.2	673.6	673.1	672.2	671.1	669.8	668.6	667.5	668.5
5°	672.8	672.1	671.5	670.8	670.1	668.9	667.2	665.4	663.7	661.9	663.1
7.5°	665.9	665.0	664.2	663.3	662.5	661.0	659.0	657.0	654.9	652.9	653.2
10°	660.1	659.1	658.1	657.2	656.2	654.4	651.8	649.0	646.3	643.6	643.2
12.5°	652.7	651.6	650.4	649.2	648.1	645.8	642.3	638.9	635.4	631.9	631.2
15°	639.9	638.5	637.0	635.4	634.0	631.0	626.3	621.7	617.2	612.5	610.0
17.5°	624.3	622.0	619.7	617.4	615.1	611.1	605.2	599.2	593.4	587.4	584.4
20°	612.5	609.8	607.2	604.5	601.7	597.0	590.2	583.4	576.7	569.9	566.6
22.5°	599.9	596.9	593.8	590.8	587.7	582.4	574.8	567.1	559.5	551.9	547.6
25°	580.9	576.6	572.3	567.9	563.5	556.9	548.0	539.1	530.1	521.2	515.7
27.5°	558.0	553.3	548.5	543.9	539.2	531.7	521.7	511.6	501.6	491.5	485.0
30°	541.9	536.8	531.7	526.5	521.4	513.4	502.6	491.7	480.9	470.1	463.2
32.5°	526.4	520.3	514.3	508.3	502.3	493.7	482.7	471.7	460.6	449.6	441.7
35°	500.5	493.6	486.7	479.8	472.9	463.5	451.6	439.7	427.8	415.9	407.3
37.5°	474.7	467.1	459.5	451.9	444.4	434.2	421.6	408.9	396.2	383.5	374.1
40°	456.6	448.6	440.4	432.4	424.2	413.6	400.5	387.3	374.2	361.1	351.5
42.5°	438.1	429.6	421.0	412.5	404.0	392.9	379.4	365.7	352.2	338.7	328.7
45°	409.2	400.1	391.0	382.0	372.9	361.3	347.1	332.9	318.6	304.4	294.8
47.5°	380.9	371.3	361.7	352.1	342.5	330.4	315.7	301.0	286.3	271.7	262.1
50°	360.4	350.8	341.3	331.7	322.0	309.8	294.9	280.1	265.1	250.2	240.9
52.5°	340.5	330.4	320.4	310.4	300.4	288.0	273.5	258.9	244.3	229.8	220.8
55°	311.1	300.6	290.0	279.5	269.0	256.3	241.7	227.1	212.5	197.9	189.8
57.5°	281.0	270.3	259.4	248.6	237.7	225.3	211.3	197.2	183.2	169.2	161.7
60°	260.6	249.8	239.0	228.1	217.3	205.0	191.0	177.1	163.1	149.2	142.3
62.5°	240.6	229.8	219.0	208.1	197.3	185.3	172.0	158.7	145.4	132.2	125.6
65°	210.1	199.1	188.2	177.2	166.2	154.7	142.5	130.3	118.1	105.9	101.3
67.5°	180.6	169.7	158.8	148.0	137.1	126.1	115.2	104.3	93.3	82.3	80.2
70°	160.1	149.6	139.0	128.5	117.9	107.9	98.7	89.3	80.0	70.6	69.3
72.5°	140.6	130.5	120.4	110.3	100.2	91.4	83.9	76.4	68.9	61.4	60.3
75°	112.0	102.6	93.1	83.6	74.1	67.1	62.5	57.9	53.3	48.7	47.8
77.5°	83.9	75.6	67.3	58.9	50.7	45.4	43.2	41.0	38.7	36.5	36.0
80°	66.4	59.4	52.6	45.7	38.7	34.7	33.3	32.0	30.6	29.2	28.7
82.5°	50.3	44.9	39.5	34.2	28.8	25.6	24.7	23.7	22.8	21.9	21.6
85°	26.2	23.3	20.5	17.7	14.8	13.2	12.8	12.4	12.0	11.6	11.6
87.5°	8.0	7.6	7.3	6.8	6.3	6.4	7.2	8.3	9.3	9.5	9.1
90°	0.8	3.3	6.5	8.2	9.8	12.2	16.3	21.9	26.8	27.6	26.8
92.5°	9.9	14.3	20.2	23.7	29.3	36.9	55.4	81.2	104.3	105.7	89.4
95°	28.5	31.7	39.9	47.2	60.3	79.7	117.2	187.9	282.3	318.9	279.1
97.5°	46.4	50.8	59.4	70.4	85.4	107.5	154.6	253.2	410.1	544.5	571.2
100°	62.6	65.1	72.4	85.4	101.7	124.5	167.6	266.9	442.6	642.8	760.0
102.5°	77.6	79.4	86.7	99.8	116.7	139.5	179.4	267.6	430.3	646.0	830.3
105°	99.3	102.6	108.2	120.4	138.4	161.1	199.3	271.7	406.0	602.9	819.4
107.5°	122.7	125.3	130.9	142.1	159.8	182.8	219.9	283.0	394.0	556.8	748.0
110°	138.4	141.6	146.4	157.0	174.1	197.7	233.5	292.1	391.4	534.6	703.0



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CANDELA DISTRIBUTION (continued):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
112.5°	152.6	155.9	161.4	171.4	187.8	212.1	246.5	301.9	392.0	520.2	671.8
115°	175.0	179.0	183.9	193.6	209.9	231.9	266.9	316.5	395.4	504.5	633.1
117.5°	198.0	201.3	206.2	214.8	230.4	253.2	285.6	332.2	401.3	496.8	608.6
120°	212.4	215.6	220.5	227.8	244.1	266.9	298.6	342.6	405.2	492.3	595.7
122.5°	226.1	228.6	233.5	241.5	257.8	281.2	311.0	351.6	409.8	489.7	584.6
125°	244.1	246.5	251.4	261.2	277.4	300.3	329.5	366.2	416.6	484.9	568.8
127.5°	258.4	261.7	268.5	279.2	294.9	318.3	346.8	379.7	423.6	482.2	554.2
130°	266.9	270.1	278.3	289.7	306.0	328.7	357.2	388.2	428.8	480.9	544.4
132.5°	274.7	278.6	287.4	299.5	316.3	339.2	366.3	396.6	434.0	480.2	536.5
135°	286.4	289.7	299.5	311.6	330.4	353.1	379.2	407.6	440.2	479.2	525.6
137.5°	297.5	301.4	311.1	324.2	342.8	363.9	389.6	416.1	445.7	479.1	518.0
140°	306.0	309.2	318.9	332.0	349.9	371.0	395.4	420.7	448.3	478.4	513.5
142.5°	314.4	317.0	326.1	339.2	356.4	376.3	400.0	424.6	450.3	478.4	508.9
145°	327.1	330.4	338.5	350.7	367.0	384.9	406.8	429.7	452.4	476.8	502.9
147.5°	340.8	343.2	351.0	362.2	375.8	391.8	412.4	432.4	453.1	473.9	496.7
150°	349.9	352.3	358.8	369.4	381.6	396.2	415.0	433.7	452.4	472.0	491.5
152.5°	359.0	360.1	366.6	375.9	387.5	400.8	417.6	434.3	451.1	468.7	486.9
155°	371.9	372.7	377.6	386.5	395.4	407.6	421.5	435.3	449.1	463.0	478.4
157.5°	382.6	383.4	387.3	395.1	402.3	412.5	424.3	435.3	445.4	457.1	470.5
160°	389.8	390.6	393.8	400.3	406.8	415.8	425.6	435.3	443.4	453.2	464.6
162.5°	396.9	396.4	399.7	404.9	410.7	417.8	426.2	434.6	441.5	450.0	459.4
165°	405.2	404.4	406.0	410.9	415.0	419.9	427.2	432.9	437.7	443.4	450.8
167.5°	412.1	411.1	412.5	415.6	418.6	421.7	427.1	431.8	434.0	437.7	442.3
170°	416.6	415.0	415.8	418.2	419.9	422.3	426.4	430.5	432.1	434.5	437.7
172.5°	419.2	418.2	417.8	420.2	421.2	423.0	425.7	428.5	429.5	430.6	433.3
175°	422.3	421.5	420.7	422.3	422.3	423.1	424.8	426.4	425.6	426.4	427.2
177.5°	423.8	422.5	421.8	423.1	423.1	423.1	423.8	425.1	423.8	423.1	423.8
180°	423.1	423.1	423.1	423.1	423.1	423.1	423.1	423.1	423.1	423.1	423.1



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CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
0°	672.8	672.8	672.8	672.8	672.8	672.8	672.8	672.8
2.5°	669.6	670.7	671.8	672.2	672.1	671.8	671.6	671.4
5°	664.3	665.5	666.8	667.2	666.8	666.3	665.9	665.5
7.5°	653.5	653.9	654.3	654.1	653.4	652.6	652.0	651.3
10°	642.8	642.4	642.0	641.4	640.6	639.8	639.0	638.1
12.5°	630.5	629.7	629.0	627.9	626.6	625.3	623.9	622.6
15°	607.4	604.9	602.3	600.3	598.9	597.6	596.2	594.9
17.5°	581.3	578.3	575.2	572.5	570.2	567.9	565.6	563.2
20°	563.1	559.8	556.4	553.2	550.2	547.2	544.3	541.3
22.5°	543.2	538.8	534.5	531.2	529.0	526.8	524.6	522.3
25°	510.1	504.6	499.0	495.2	493.2	491.1	489.2	487.1
27.5°	478.6	472.1	465.6	460.8	457.5	454.4	451.1	447.9
30°	456.2	449.4	442.5	437.2	433.5	429.9	426.2	422.6
32.5°	433.8	426.0	418.1	412.5	409.0	405.6	402.1	398.7
35°	398.8	390.3	381.8	376.0	373.1	370.1	367.1	364.1
37.5°	364.7	355.3	345.9	339.5	336.1	332.7	329.3	325.9
40°	341.9	332.2	322.6	316.1	312.6	309.1	305.5	302.0
42.5°	318.8	308.8	299.0	292.3	288.9	285.4	282.0	278.6
45°	285.2	275.7	266.0	259.6	256.3	253.1	249.8	246.6
47.5°	252.6	243.0	233.5	227.2	224.3	221.4	218.3	215.4
50°	231.5	222.3	212.9	206.8	204.0	201.1	198.3	195.4
52.5°	211.7	202.8	193.7	187.9	185.3	182.7	180.0	177.4
55°	181.6	173.5	165.4	160.0	157.5	154.9	152.4	149.8
57.5°	154.3	146.8	139.4	134.6	132.4	130.3	128.1	125.9
60°	135.3	128.5	121.6	117.1	114.9	112.7	110.6	108.4
62.5°	119.0	112.4	105.8	101.9	100.6	99.3	98.0	96.7
65°	96.8	92.1	87.6	85.0	84.6	84.2	83.8	83.4
67.5°	78.1	76.0	73.9	72.6	72.2	71.7	71.3	70.8
70°	67.9	66.6	65.2	64.2	63.8	63.2	62.6	62.1
72.5°	59.1	58.0	56.8	56.1	55.8	55.4	55.1	54.8
75°	46.8	45.9	44.9	44.4	44.3	44.1	43.9	43.9
77.5°	35.5	34.9	34.4	34.0	33.8	33.6	33.3	33.1
80°	28.1	27.6	27.1	26.8	26.8	26.8	26.8	26.8
82.5°	21.3	21.0	20.6	20.5	20.5	20.5	20.5	20.5
85°	11.6	11.6	11.6	11.6	11.6	11.6	11.6	11.6
87.5°	8.9	8.5	8.6	8.8	8.8	8.8	8.8	8.8
90°	26.0	24.4	26.0	26.8	26.8	26.8	26.8	26.8
92.5°	70.9	60.9	54.1	49.0	48.3	45.7	46.4	45.1
95°	213.2	163.5	129.4	111.5	100.9	94.4	92.0	92.8
97.5°	497.5	407.0	318.9	260.2	221.4	201.3	189.4	182.6
100°	742.9	642.0	530.5	432.1	364.5	329.5	306.0	291.3
102.5°	903.7	880.9	799.4	695.0	621.7	561.9	532.5	512.7
105°	988.6	1080.6	1091.2	1064.3	1013.8	963.4	928.4	917.0
107.5°	927.5	1065.9	1150.6	1189.9	1196.3	1193.5	1186.5	1171.4
110°	874.7	1020.3	1124.5	1191.2	1226.2	1241.7	1249.0	1248.2



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CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
112.5°	826.6	966.4	1077.7	1154.1	1202.8	1228.7	1242.5	1246.9
115°	767.3	892.6	999.2	1083.0	1140.8	1178.2	1199.4	1206.7
117.5°	722.7	832.7	929.4	1008.0	1066.9	1106.4	1128.8	1134.9
120°	700.6	801.5	887.7	961.8	1018.7	1057.0	1080.6	1088.8
122.5°	683.0	775.4	857.1	924.1	975.1	1012.7	1033.7	1040.6
125°	657.5	741.3	812.9	873.9	921.1	952.0	972.3	978.8
127.5°	632.3	708.1	775.6	831.9	873.1	902.0	919.7	924.9
130°	616.0	685.9	750.2	804.0	843.8	871.5	887.7	894.2
132.5°	600.3	665.1	724.1	774.6	813.8	841.6	856.5	862.3
135°	578.5	632.3	685.9	731.5	766.5	793.4	808.0	811.2
137.5°	561.1	606.0	648.7	688.4	720.3	743.4	756.3	761.2
140°	550.1	589.1	626.6	662.3	688.4	709.6	721.8	726.6
142.5°	541.0	574.1	606.3	636.3	661.0	680.3	691.1	692.1
145°	528.1	555.0	580.2	603.7	623.3	637.2	645.2	647.7
147.5°	518.1	539.3	559.0	576.3	592.4	603.4	608.9	610.4
150°	511.0	528.9	546.0	560.6	572.8	582.6	587.5	588.3
152.5°	503.9	520.4	534.9	547.6	557.2	565.7	569.2	569.4
155°	493.9	507.0	519.1	528.1	537.0	542.7	546.0	544.4
157.5°	482.3	493.3	503.5	510.5	516.8	521.5	523.0	523.0
160°	475.2	484.1	493.1	498.8	504.5	508.6	509.4	509.4
162.5°	468.1	475.6	483.3	487.7	493.4	496.2	497.0	496.4
165°	457.3	463.0	468.7	472.0	475.2	478.4	478.4	477.6
167.5°	447.0	451.4	455.3	458.3	459.7	461.5	461.4	460.4
170°	441.8	444.3	447.5	449.1	450.0	452.4	451.6	450.0
172.5°	435.9	437.7	440.3	441.3	442.1	443.3	442.5	441.5
175°	429.7	430.5	431.3	432.1	432.1	432.9	432.1	430.5
177.5°	425.1	425.1	425.7	425.7	425.7	425.7	425.1	423.8
180°	423.1	423.1	423.1	423.1	423.1	423.1	423.1	423.1

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