

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: P331371-930

Luminaire Tested: **SA2XXDIP-C675D1080U930-4F0-1E-UDD-D4**

Issue Date: 10/7/2019

Test Information

Test Method: LM-79-08
Report Number: P331371-930
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: SA2XXDIP-C675D1080U930-4F0-1E-UDD-D4
Description: DEFINE 2 DIRECT-INDIRECT PENDANT LED LUMINAIRE
DOWNLIGHT 675 LUMENS PER FOOT, DROP SATIN WHITE DIFFUSER
UPLIGHT 1080 LUMENS PER FOOT, BATWING OPTIC
Light Source: -
Ballast/Driver: ELECTRONIC DRIVER

Summary

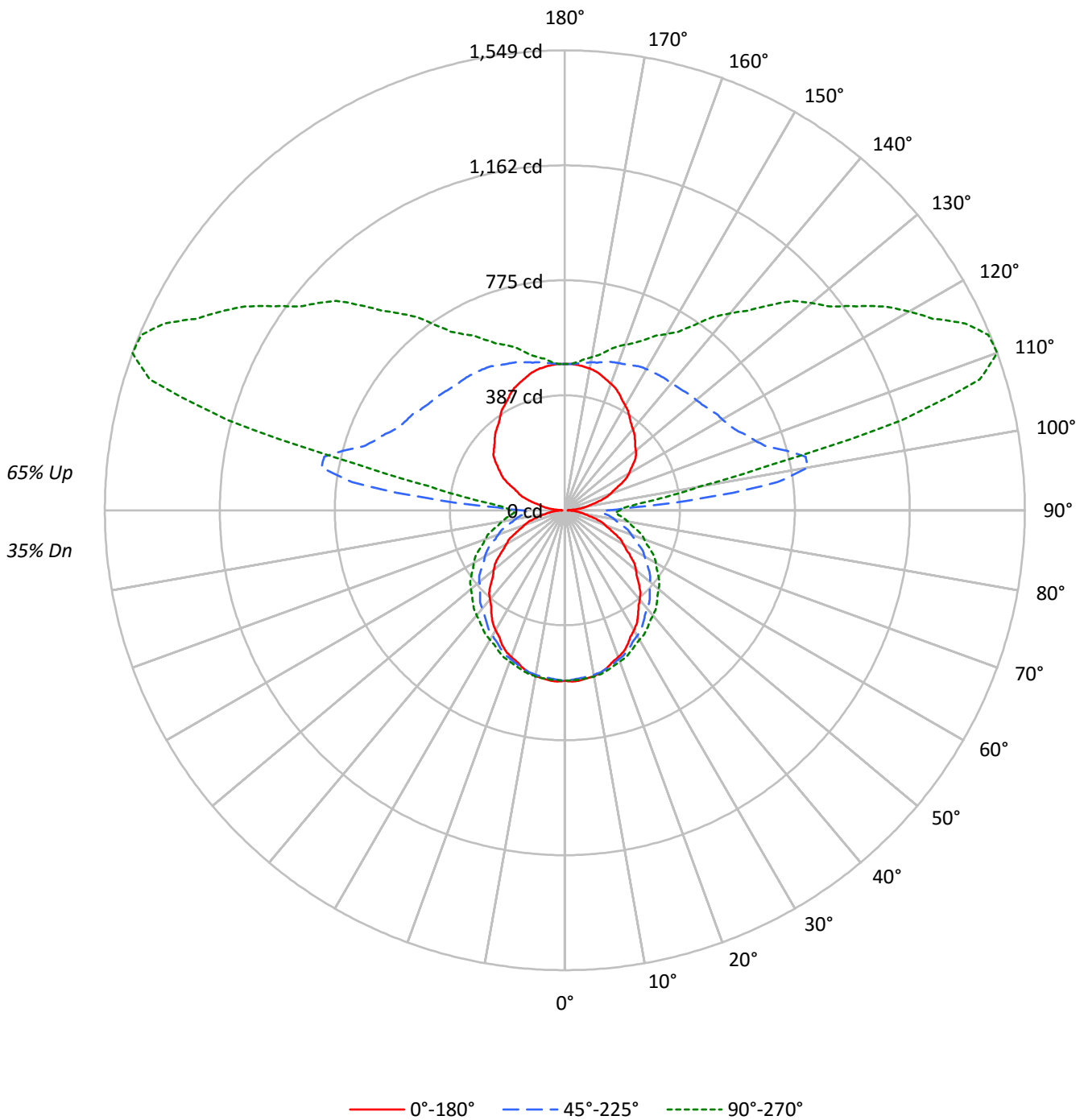
Lumens per Lamp: N/A
Luminaire Lumens: 5622.5 lumens
Efficiency: N/A
Efficacy: 98.8 lumens/watt
Spacing Criteria (0/90/45): 1.21 / 1.32 / 1.42
Luminous Opening: Rectangular w/ Sides (W: 0.17' x L: 4' x H: 0.08')
CIE Type: Semi-Indirect

Input Watts (W): 56.9
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	50	30	10	0	
RCR																						
0	103	103	103	103	93	93	93	93	75	75	75	58	58	58	42	42	42	35				
1	93	89	84	81	84	80	76	73	64	61	59	49	47	46	35	34	33	27				
2	84	77	70	65	76	69	64	59	55	51	48	42	40	37	31	29	27	22				
3	77	67	60	54	69	61	54	49	48	44	40	37	34	31	27	25	23	18				
4	70	59	51	45	63	53	46	41	43	38	34	33	29	26	24	21	19	15				
5	64	52	44	38	57	47	40	35	38	33	29	29	26	23	21	19	17	13				
6	59	47	39	33	53	42	35	30	34	29	25	26	23	20	19	17	14	11				
7	54	42	34	28	49	38	31	26	31	25	22	24	20	17	17	15	13	10				
8	50	38	30	25	45	35	28	23	28	23	19	22	18	15	16	13	11	9				
9	47	35	27	22	42	31	25	20	26	20	17	20	16	14	15	12	10	8				
10	44	32	24	20	39	29	22	18	23	18	15	18	15	12	14	11	9	7				

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	9273	9273	9273
5°	9317	8925	8891
10°	9259	8661	8564
15°	9131	8383	8221
20°	8970	8083	7889
25°	8811	7795	7587
30°	8587	7498	7284
35°	8359	7211	7072
40°	8120	6969	6858
45°	7894	6750	6677
50°	7650	6553	6497
55°	7394	6340	6314
60°	7081	6122	6123
65°	6755	5864	5892
70°	6394	5587	5644
75°	5927	5315	5415
80°	5197	5036	5185
85°	4489	4797	5004



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	54.4	1.0
10°-20°	156.0	2.8
20°-30°	236.5	4.2
30°-40°	288.0	5.1
40°-50°	309.9	5.5
50°-60°	300.9	5.4
60°-70°	262.7	4.7
70°-80°	202.3	3.6
80°-90°	140.2	2.5
90°-100°	290.4	5.2
100°-110°	736.5	13.1
110°-120°	755.0	13.4
120°-130°	609.6	10.8
130°-140°	479.9	8.5
140°-150°	356.5	6.3
150°-160°	249.2	4.4
160°-170°	146.7	2.6
170°-180°	47.8	0.8
0°-30°	446.9	7.9
0°-40°	734.9	13.1
0°-60°	1345.7	23.9
0°-90°	1950.9	34.7
90°-120°	1782.0	31.7
90°-150°	3227.9	57.4
90°-180°	3672.0	65.3
0°-180°	5622.5	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	574	574	574	574	574	
5°	576	573	568	573	573	55
15°	549	551	551	558	558	155
25°	499	505	513	522	525	229
35°	430	445	460	478	484	269
45°	353	376	404	429	439	272
55°	270	301	344	373	384	242
65°	185	226	275	308	320	183
75°	102	149	202	237	249	108
85°	30	82	135	168	181	32
90°	9	70	142	173	184	7
95°	40	128	467	266	245	40
105°	120	204	773	1354	1177	128
115°	207	271	637	1286	1489	205
125°	286	339	593	1032	1198	254
135°	334	399	567	851	978	258
145°	381	438	555	694	763	239
155°	433	467	539	609	634	199
165°	472	486	516	547	556	133
175°	492	492	496	502	501	47
180°	492	492	492	492	492	



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CANDELA DISTRIBUTION (FULL):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
0°	574.3	574.3	574.3	574.3	574.3	574.3	574.3	574.3	574.3	574.3	574.3
2.5°	577.6	577.2	576.7	576.3	575.8	575.1	574.1	573.0	572.0	571.0	571.7
5°	575.9	575.4	574.9	574.3	573.7	572.9	571.8	570.7	569.6	568.4	569.6
7.5°	570.8	570.4	570.1	569.6	569.3	568.7	567.9	567.0	566.1	565.3	566.6
10°	566.8	566.4	566.1	565.7	565.3	564.8	564.3	563.8	563.2	562.6	564.1
12.5°	560.1	560.2	560.3	560.4	560.4	560.3	559.9	559.5	559.1	558.6	560.1
15°	549.3	549.7	550.1	550.4	550.8	551.0	551.0	551.0	551.0	551.0	552.6
17.5°	535.3	536.1	536.9	537.7	538.4	539.2	539.7	540.3	540.9	541.5	543.2
20°	526.0	526.9	527.8	528.8	529.7	530.5	531.2	532.1	532.8	533.5	535.6
22.5°	516.0	517.1	518.2	519.3	520.3	521.4	522.4	523.4	524.5	525.5	527.6
25°	499.4	500.7	502.0	503.3	504.6	506.1	507.7	509.4	511.0	512.7	514.9
27.5°	479.4	481.5	483.6	485.8	487.9	489.9	491.9	493.8	495.8	497.7	500.5
30°	466.1	468.5	470.9	473.3	475.7	478.1	480.5	482.9	485.3	487.7	490.6
32.5°	451.4	454.1	456.8	459.5	462.3	465.0	467.9	470.7	473.5	476.4	479.8
35°	430.3	433.4	436.6	439.7	442.9	446.2	449.7	453.2	456.7	460.2	464.3
37.5°	407.3	411.0	414.6	418.2	421.8	425.9	430.5	435.0	439.5	444.1	448.7
40°	392.0	396.1	400.1	404.2	408.3	412.8	417.8	422.8	427.8	432.8	437.6
42.5°	377.4	381.4	385.5	389.6	393.6	398.5	404.3	410.0	415.7	421.5	426.7
45°	352.9	357.9	362.9	367.9	372.8	378.6	385.1	391.6	398.0	404.5	410.3
47.5°	328.7	334.2	339.7	345.0	350.5	357.0	364.6	372.2	379.8	387.3	393.4
50°	312.1	317.9	323.6	329.3	335.0	342.1	350.4	358.7	367.0	375.4	381.6
52.5°	296.1	302.1	308.2	314.2	320.2	327.7	336.4	345.2	353.9	362.7	369.2
55°	270.5	277.1	283.8	290.5	297.1	305.2	314.9	324.5	334.1	343.7	350.4
57.5°	245.2	252.7	260.2	267.7	275.2	283.9	293.7	303.5	313.3	323.1	330.3
60°	227.2	235.1	243.1	251.1	259.0	268.3	278.8	289.3	299.9	310.5	317.5
62.5°	211.2	219.5	227.7	235.9	244.3	253.6	264.2	274.7	285.3	295.8	303.3
65°	184.7	193.8	202.9	212.0	221.0	231.0	241.9	252.8	263.7	274.7	282.3
67.5°	160.5	169.9	179.4	188.9	198.4	208.6	219.8	231.0	242.1	253.3	261.0
70°	143.2	152.8	162.4	172.0	181.6	192.2	203.7	215.1	226.6	238.1	246.0
72.5°	127.2	137.1	147.0	156.9	166.8	177.6	189.2	200.8	212.5	224.0	231.9
75°	102.4	112.8	123.1	133.5	143.8	154.9	166.7	178.6	190.4	202.3	210.2
77.5°	78.4	89.3	100.1	110.9	121.7	133.2	145.2	157.3	169.3	181.2	189.2
80°	62.5	73.7	85.0	96.3	107.5	119.2	131.3	143.2	155.2	167.3	175.0
82.5°	49.1	60.3	71.3	82.5	93.7	105.3	117.5	129.6	141.8	154.0	161.8
85°	30.0	41.4	52.9	64.3	75.8	87.5	99.3	111.1	123.0	134.9	142.6
87.5°	16.5	28.1	39.9	51.3	62.7	74.7	87.5	100.6	113.6	125.6	133.0
90°	9.3	22.8	37.3	50.0	62.6	76.7	93.3	111.8	129.3	142.0	148.5
92.5°	19.2	34.3	51.1	65.3	81.7	101.3	134.1	175.6	213.9	227.0	215.1
95°	39.8	52.3	70.4	87.6	111.5	144.1	198.8	292.3	413.3	467.0	427.6
97.5°	59.8	72.6	90.4	111.0	136.2	171.1	236.5	362.0	555.2	722.4	760.3
100°	78.8	88.5	103.8	125.8	151.6	186.7	247.3	373.2	588.1	831.4	974.7
102.5°	95.6	103.9	118.6	140.1	166.0	200.6	257.1	369.8	569.3	830.5	1051.7
105°	119.7	128.9	140.9	160.5	186.6	220.6	274.8	368.7	534.6	773.4	1031.8
107.5°	146.8	154.2	164.9	182.2	207.2	240.6	293.0	375.8	514.1	712.7	941.6
110°	164.4	171.9	181.2	197.2	220.8	254.6	305.4	382.6	507.3	683.0	885.0



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CANDELA DISTRIBUTION (continued):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
112.5°	181.0	187.9	197.5	212.1	234.3	268.5	317.2	390.2	503.8	661.7	843.9
115°	206.9	213.7	221.4	234.8	255.8	286.6	335.7	401.7	501.9	637.2	792.3
117.5°	233.0	238.1	245.2	256.5	276.1	307.0	352.5	414.3	502.6	621.4	757.0
120°	249.7	254.2	260.7	269.9	289.6	320.2	364.5	423.1	503.4	612.1	737.6
122.5°	265.6	269.0	274.9	284.5	303.7	334.6	376.3	430.6	505.2	605.1	720.6
125°	285.8	288.6	294.3	305.7	324.7	354.1	394.1	442.6	507.3	592.8	695.3
127.5°	302.5	306.1	313.8	326.1	344.1	373.7	411.6	454.7	510.6	583.6	671.9
130°	312.3	315.9	325.2	338.3	357.0	385.4	422.4	462.3	513.6	578.0	656.4
132.5°	321.4	325.8	335.8	349.7	369.2	397.1	431.7	469.9	516.5	573.3	643.1
135°	334.2	338.0	349.4	363.5	385.4	412.8	445.0	480.0	519.7	567.0	624.8
137.5°	347.1	351.6	363.0	378.1	399.6	424.6	455.3	487.1	522.4	562.0	610.7
140°	356.9	360.5	371.7	386.7	407.3	432.0	460.9	490.6	523.2	558.6	602.3
142.5°	366.8	369.7	380.1	395.0	414.9	438.0	465.7	494.4	524.4	557.3	595.0
145°	380.7	384.5	394.0	408.2	427.1	448.0	473.5	500.1	526.6	555.0	586.4
147.5°	396.6	399.5	408.5	421.7	437.4	455.9	480.0	503.3	527.3	551.6	578.3
150°	407.2	410.1	417.7	430.0	444.2	461.2	483.1	504.8	526.6	549.3	572.0
152.5°	417.8	419.2	426.7	437.6	451.0	466.5	486.1	505.6	525.1	545.5	566.7
155°	432.8	433.7	439.4	449.9	460.3	474.5	490.6	506.7	522.8	538.9	556.9
157.5°	445.3	446.3	450.9	459.9	468.2	480.2	493.8	506.7	518.4	532.1	547.6
160°	453.6	454.6	458.4	465.9	473.5	484.0	495.4	506.7	516.2	527.6	540.8
162.5°	462.0	461.5	465.2	471.2	478.1	486.2	496.1	506.0	513.9	523.7	534.8
165°	471.7	470.8	472.6	478.3	483.1	488.7	497.3	503.9	509.6	516.2	524.7
167.5°	479.6	478.5	480.2	483.8	487.2	490.8	497.0	502.6	505.2	509.6	514.9
170°	484.9	483.1	484.0	486.8	488.7	491.5	496.3	501.0	502.9	505.7	509.6
172.5°	488.0	486.8	486.2	489.1	490.2	492.3	495.5	498.7	499.9	501.2	504.3
175°	491.5	490.6	489.7	491.5	491.5	492.5	494.4	496.3	495.4	496.3	497.3
177.5°	493.3	491.7	491.0	492.5	492.5	492.5	493.3	494.8	493.3	492.5	493.3
180°	492.5	492.5	492.5	492.5	492.5	492.5	492.5	492.5	492.5	492.5	492.5



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CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
0°	574.3	574.3	574.3	574.3	574.3	574.3	574.3	574.3
2.5°	572.4	573.2	573.9	574.1	573.8	573.6	573.2	573.0
5°	570.7	571.8	572.9	573.4	573.2	573.0	572.8	572.6
7.5°	567.9	569.3	570.6	571.2	571.0	570.8	570.6	570.5
10°	565.6	567.0	568.6	569.2	569.0	568.8	568.7	568.4
12.5°	561.6	563.0	564.6	565.2	565.0	564.8	564.7	564.4
15°	554.3	556.0	557.7	558.4	558.2	558.0	557.8	557.7
17.5°	544.9	546.7	548.5	549.3	549.3	549.3	549.3	549.3
20°	537.6	539.6	541.6	542.7	542.7	542.7	542.7	542.7
22.5°	529.6	531.7	533.6	534.8	535.1	535.4	535.7	536.0
25°	517.1	519.3	521.5	522.9	523.5	524.1	524.6	525.2
27.5°	503.4	506.1	509.0	510.5	510.9	511.4	511.8	512.2
30°	493.7	496.6	499.5	501.3	501.9	502.5	503.0	503.5
32.5°	483.2	486.7	490.0	492.2	493.3	494.2	495.2	496.2
35°	468.4	472.5	476.5	479.2	480.5	481.8	483.1	484.4
37.5°	453.1	457.6	462.2	465.1	466.5	467.8	469.2	470.6
40°	442.4	447.2	452.0	455.3	456.9	458.6	460.2	461.9
42.5°	431.9	437.2	442.5	446.0	447.6	449.3	450.9	452.6
45°	416.0	421.7	427.5	431.2	433.1	435.0	436.8	438.6
47.5°	399.3	405.4	411.3	415.3	417.4	419.4	421.4	423.5
50°	387.9	394.2	400.6	404.7	406.8	408.8	410.7	412.8
52.5°	375.6	382.0	388.5	392.8	394.9	397.1	399.3	401.5
55°	357.0	363.7	370.4	374.9	377.3	379.7	382.1	384.5
57.5°	337.5	344.6	351.8	356.6	359.1	361.5	363.9	366.4
60°	324.5	331.5	338.6	343.4	345.9	348.5	351.1	353.8
62.5°	310.7	318.2	325.7	330.7	333.0	335.5	337.9	340.4
65°	289.8	297.4	305.0	310.0	312.4	314.8	317.2	319.6
67.5°	268.6	276.3	284.0	289.1	291.6	294.1	296.6	299.1
70°	254.0	261.9	269.9	274.9	277.1	279.4	281.6	283.8
72.5°	239.7	247.4	255.3	260.5	263.2	265.9	268.5	271.2
75°	218.2	226.1	234.1	239.2	241.7	244.0	246.5	248.8
77.5°	197.1	205.0	213.0	218.2	220.8	223.4	225.9	228.5
80°	182.8	190.6	198.4	203.6	206.1	208.7	211.3	213.9
82.5°	169.5	177.2	185.1	190.1	192.6	195.0	197.5	199.9
85°	150.3	158.2	165.9	171.0	173.7	176.3	178.9	181.4
87.5°	140.3	147.5	155.4	160.6	163.0	165.3	167.7	170.1
90°	155.0	160.5	169.7	175.5	177.7	179.9	182.1	184.4
92.5°	201.0	196.5	195.8	194.6	196.1	195.3	198.3	198.9
95°	357.9	307.2	274.4	258.2	248.1	242.7	242.1	245.3
97.5°	681.3	582.9	487.2	423.3	380.3	359.1	347.5	341.7
100°	961.6	851.0	728.1	618.0	541.4	502.7	477.3	462.3
102.5°	1143.8	1124.0	1035.8	918.8	835.4	767.8	735.6	714.5
105°	1235.3	1348.7	1367.6	1340.5	1283.9	1227.2	1188.5	1177.3
107.5°	1156.7	1324.1	1428.8	1478.8	1488.2	1487.0	1480.9	1465.3
110°	1090.7	1266.2	1393.3	1475.0	1517.8	1537.7	1548.3	1549.4



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CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
112.5°	1030.0	1198.7	1334.2	1427.1	1485.8	1517.9	1536.1	1543.2
115°	954.1	1105.5	1235.2	1336.5	1405.8	1451.4	1478.1	1488.7
117.5°	895.3	1028.8	1146.8	1241.9	1312.5	1360.3	1388.2	1397.3
120°	865.0	987.6	1093.2	1182.9	1251.2	1297.8	1327.3	1338.8
122.5°	840.2	952.8	1053.0	1134.2	1195.4	1240.9	1267.1	1276.8
125°	803.6	906.1	994.4	1068.8	1125.4	1163.0	1188.4	1197.7
127.5°	767.4	860.2	943.5	1012.1	1061.6	1097.0	1119.1	1126.7
130°	744.1	830.1	909.3	974.8	1022.6	1056.3	1076.8	1085.8
132.5°	721.7	801.4	874.4	936.0	983.2	1016.8	1035.8	1044.0
135°	690.3	756.7	823.1	878.8	921.0	953.7	972.3	977.5
137.5°	664.2	719.9	773.0	821.5	859.9	888.1	904.2	911.3
140°	647.8	696.3	742.7	786.5	817.9	843.7	858.9	865.8
142.5°	634.7	675.7	715.6	752.1	781.9	805.2	818.8	820.9
145°	616.9	649.2	679.7	708.3	731.9	748.9	759.3	763.0
147.5°	603.4	628.2	651.3	671.6	690.8	704.2	711.0	713.2
150°	594.8	615.6	635.5	652.6	666.8	678.2	683.8	684.8
152.5°	586.4	605.8	622.6	637.4	648.6	658.4	662.6	662.8
155°	574.9	590.0	604.2	614.7	625.1	631.7	635.5	633.7
157.5°	561.4	574.1	586.0	594.2	601.6	607.1	608.8	608.8
160°	553.1	563.5	574.0	580.6	587.2	591.9	592.9	592.9
162.5°	544.8	553.7	562.6	567.7	574.3	577.6	578.5	577.7
165°	532.3	538.9	545.5	549.3	553.1	556.9	556.9	556.0
167.5°	520.3	525.5	530.0	533.5	535.1	537.2	537.0	535.9
170°	514.3	517.1	520.9	522.8	523.7	526.6	525.6	523.7
172.5°	507.4	509.6	512.6	513.7	514.7	516.0	515.0	513.9
175°	500.1	501.0	502.0	502.9	502.9	503.9	502.9	501.0
177.5°	494.8	494.8	495.5	495.5	495.5	495.5	494.8	493.3
180°	492.5	492.5	492.5	492.5	492.5	492.5	492.5	492.5

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