

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: P332531-927

Luminaire Tested: **S124DIP-S350D1205U927-4F0-1E-UDD-D4**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P332531-927
REPORT IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-1807-864-18,
Test Lab: INNOVATION CENTER
Issue Date: 3/3/2020
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: NEO-RAY
Catalog Number: S124DIP-S350D1205U927-4F0-1E-UDD-D4
Description: DEFINE 4 DIRECT-INDIRECT PENDANT LED LUMINAIRE
DOWNLIGHT 350 LUMENS PER FOOT, DROP SATIN WHITE DIFFUSER
UPLIGHT 1205 LUMENS PER FOOT, BATWING OPTIC
Light Source: -
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 4551.7 lumens
Efficiency: N/A
Efficacy: 107.9 lumens/watt
Spacing Criteria (0/90/45): 1.23 / 1.28 / 1.39
Luminous Opening: Rectangular w/ Sides (W: 0.33' x L: 4' x H: 0.08')
CIE Type: Semi-Indirect

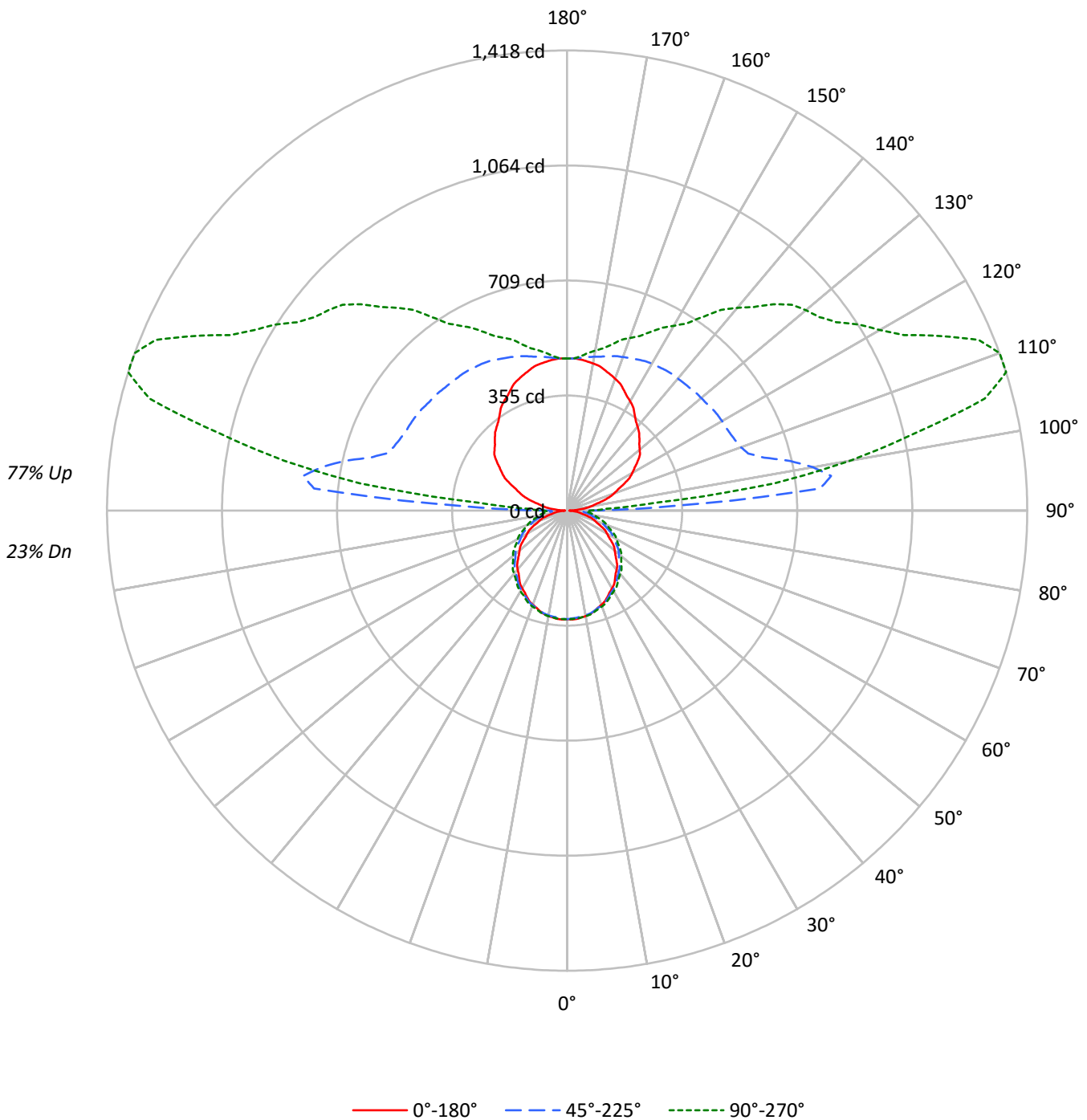
Input Watts (W): 42.2
Input Voltage (V): 120
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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	101	101	101	101	90	90	90	90	68	68	68	49	49	49	32	32	32	23
1	91	87	83	80	81	77	74	71	59	57	55	42	41	40	27	26	26	19
2	83	76	70	64	73	67	62	58	51	48	45	37	35	33	24	22	21	15
3	75	66	59	53	67	59	53	48	45	41	38	32	30	27	21	19	18	13
4	69	58	51	45	61	52	45	40	40	35	32	29	26	23	18	17	15	11
5	63	52	44	38	56	46	39	34	35	31	27	26	22	20	16	15	13	9
6	58	46	38	33	51	41	34	30	32	27	23	23	20	17	15	13	11	8
7	53	41	34	28	47	37	30	26	29	24	20	21	18	15	13	12	10	7
8	49	37	30	25	44	33	27	22	26	21	18	19	16	13	12	10	9	6
9	46	34	27	22	40	30	24	20	24	19	16	17	14	12	11	9	8	6
10	43	31	24	19	38	28	22	18	22	17	14	16	13	11	10	9	7	5

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	2704	2704	2704
5°	2712	2641	2650
10°	2694	2599	2596
15°	2670	2549	2535
20°	2635	2494	2475
25°	2594	2432	2408
30°	2549	2370	2340
35°	2498	2307	2280
40°	2458	2247	2218
45°	2398	2191	2164
50°	2348	2128	2108
55°	2296	2068	2042
60°	2214	1991	1982
65°	2125	1909	1908
70°	2018	1816	1820
75°	1867	1712	1743
80°	1701	1613	1665
85°	1489	1525	1621



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	31.7	0.7
10°-20°	90.8	2.0
20°-30°	137.4	3.0
30°-40°	166.2	3.7
40°-50°	175.7	3.9
50°-60°	165.4	3.6
60°-70°	137.2	3.0
70°-80°	96.4	2.1
80°-90°	57.1	1.3
90°-100°	370.8	8.1
100°-110°	728.3	16.0
110°-120°	646.9	14.2
120°-130°	539.7	11.9
130°-140°	446.4	9.8
140°-150°	338.8	7.4
150°-160°	237.6	5.2
160°-170°	139.8	3.1
170°-180°	45.5	1.0
0°-30°	259.9	5.7
0°-40°	426.1	9.4
0°-60°	767.2	16.9
0°-90°	1057.9	23.2
90°-120°	1746.0	38.4
90°-150°	3070.9	67.5
90°-180°	3494.0	76.8
0°-180°	4551.7	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	335	335	335	335	335	
5°	335	334	331	334	334	32
15°	321	322	321	324	324	90
25°	294	296	297	301	302	135
35°	257	262	266	270	272	161
45°	214	222	229	235	237	166
55°	168	176	187	194	197	150
65°	116	128	141	150	153	115
75°	64	78	94	104	108	69
85°	20	36	52	63	68	21
90°	7	28	54	66	70	6
95°	35	113	783	414	271	38
105°	111	167	629	1334	1332	119
115°	192	244	556	1060	1272	190
125°	266	316	546	898	1012	237
135°	315	375	534	791	899	243
145°	362	414	528	661	728	227
155°	412	444	514	582	607	190
165°	448	462	492	522	529	127
175°	468	469	472	479	477	44
180°	469	469	469	469	469	



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CANDELA DISTRIBUTION (FULL):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
0°	334.9	334.9	334.9	334.9	334.9	334.9	334.9	334.9	334.9	334.9	334.9
2.5°	336.0	335.8	335.6	335.4	335.3	334.9	334.4	333.8	333.3	332.7	333.2
5°	335.3	334.9	334.7	334.5	334.2	333.8	333.2	332.6	332.1	331.4	332.2
7.5°	332.4	332.2	332.1	331.9	331.8	331.4	331.0	330.5	330.0	329.5	330.3
10°	329.9	329.9	329.8	329.7	329.6	329.4	329.0	328.5	328.1	327.7	328.4
12.5°	326.7	326.6	326.6	326.6	326.6	326.5	326.1	325.9	325.6	325.3	326.0
15°	321.3	321.5	321.5	321.6	321.7	321.6	321.3	321.1	320.8	320.6	321.3
17.5°	314.1	314.3	314.6	314.8	315.1	315.2	315.1	315.1	315.1	315.0	315.8
20°	309.0	309.2	309.5	309.7	310.0	310.1	310.2	310.3	310.4	310.5	311.3
22.5°	303.2	303.6	303.9	304.2	304.5	304.8	304.9	305.1	305.2	305.4	306.2
25°	294.0	294.5	295.0	295.5	296.0	296.4	296.6	296.8	297.1	297.4	298.3
27.5°	283.6	284.4	285.1	285.8	286.5	287.1	287.5	287.9	288.3	288.7	289.5
30°	276.7	277.4	278.1	278.7	279.4	280.0	280.6	281.1	281.8	282.3	283.3
32.5°	269.3	270.1	270.8	271.6	272.4	273.1	273.8	274.4	275.1	275.8	276.8
35°	257.2	258.3	259.2	260.2	261.3	262.1	263.0	263.8	264.7	265.5	266.6
37.5°	245.2	246.3	247.5	248.6	249.8	250.8	251.9	252.9	254.0	255.0	256.2
40°	237.3	238.4	239.6	240.6	241.7	242.8	244.0	245.2	246.3	247.5	248.7
42.5°	228.4	229.6	230.8	232.0	233.2	234.5	235.9	237.3	238.6	240.0	241.4
45°	214.4	216.0	217.6	219.2	220.8	222.4	223.9	225.5	227.1	228.7	230.1
47.5°	201.2	202.9	204.5	206.1	207.7	209.5	211.3	213.2	215.0	216.8	218.2
50°	191.6	193.5	195.3	197.1	198.9	200.7	202.6	204.5	206.3	208.1	209.8
52.5°	182.0	183.9	185.7	187.5	189.3	191.3	193.4	195.5	197.6	199.7	201.4
55°	168.0	169.8	171.5	173.3	175.0	177.1	179.6	182.1	184.6	187.1	188.8
57.5°	152.3	154.5	156.6	158.8	161.0	163.3	165.8	168.3	170.7	173.3	175.2
60°	142.1	144.3	146.5	148.6	150.8	153.2	156.0	158.8	161.4	164.2	166.1
62.5°	132.2	134.6	137.0	139.3	141.6	144.3	146.9	149.7	152.5	155.3	157.2
65°	116.2	118.9	121.6	124.2	126.9	129.7	132.5	135.3	138.2	141.0	143.1
67.5°	100.8	103.7	106.5	109.4	112.2	115.1	118.2	121.2	124.2	127.2	129.4
70°	90.4	93.2	96.0	98.9	101.7	104.7	107.9	111.1	114.2	117.4	119.6
72.5°	80.2	83.1	86.0	88.9	91.7	94.9	98.2	101.6	105.0	108.4	110.5
75°	64.5	67.6	70.7	73.8	76.8	80.1	83.7	87.1	90.6	94.1	96.5
77.5°	49.9	53.2	56.4	59.7	62.9	66.4	70.0	73.8	77.4	81.0	83.4
80°	40.9	44.2	47.5	50.9	54.2	57.7	61.4	65.0	68.7	72.4	74.9
82.5°	31.8	35.3	38.8	42.3	45.7	49.3	53.0	56.6	60.3	64.0	66.5
85°	19.9	23.4	26.9	30.3	33.9	37.5	41.3	45.0	48.7	52.5	55.0
87.5°	11.2	15.1	19.0	22.6	26.1	29.7	34.5	38.1	42.1	46.1	48.4
90°	6.9	12.1	18.2	22.4	26.7	30.2	39.3	42.9	48.2	53.7	55.2
92.5°	16.2	24.0	35.6	49.8	66.3	88.7	139.1	214.1	287.2	327.3	280.9
95°	35.3	40.8	52.7	67.4	92.3	134.0	217.5	371.9	595.3	782.8	806.3
97.5°	58.9	61.3	71.5	85.0	106.3	141.6	206.7	334.7	556.7	820.5	1001.6
100°	74.1	76.3	84.8	98.1	117.7	149.9	207.5	314.7	505.7	768.6	1006.5
102.5°	88.8	92.2	99.8	112.0	130.6	161.2	213.5	308.2	471.2	704.5	949.7
105°	111.1	115.5	121.8	134.5	152.7	181.8	229.0	308.6	440.5	628.6	847.0
107.5°	136.4	139.6	145.6	158.8	175.9	204.4	247.8	320.4	433.3	585.2	763.8
110°	153.0	156.1	161.8	174.0	191.8	218.6	262.1	329.5	433.6	570.0	722.0



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CANDELA DISTRIBUTION (continued):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
112.5°	169.0	171.8	178.2	189.6	207.2	233.9	275.7	339.2	436.7	561.9	697.6
115°	191.9	195.4	202.6	212.5	230.8	257.3	296.8	354.7	443.0	556.1	673.9
117.5°	216.1	219.1	225.3	235.8	252.7	280.0	317.4	370.7	450.0	552.9	662.0
120°	232.0	234.1	240.8	251.2	267.0	294.1	331.5	381.8	455.1	551.4	655.3
122.5°	246.8	248.6	255.1	264.6	281.7	307.9	345.2	392.4	460.4	549.2	647.9
125°	265.7	269.3	274.7	284.8	302.1	328.9	364.2	408.6	468.7	546.2	636.2
127.5°	282.7	285.6	292.2	303.6	321.8	348.5	382.1	422.6	474.8	541.9	620.8
130°	292.0	295.6	302.9	316.6	334.0	361.3	394.0	431.2	479.5	539.7	611.2
132.5°	301.6	304.4	313.9	326.9	345.8	371.5	403.9	440.1	483.7	537.8	602.5
135°	314.7	318.3	327.6	343.2	362.5	386.7	417.7	451.4	489.7	534.5	589.2
137.5°	328.1	331.5	341.5	356.4	376.4	399.3	427.9	459.1	492.9	532.6	577.8
140°	337.6	340.3	350.4	365.9	385.2	407.3	435.0	464.5	495.9	531.0	571.6
142.5°	347.7	350.4	359.8	374.7	393.2	414.5	441.4	468.6	498.4	530.4	566.5
145°	362.1	364.8	373.9	386.7	404.2	424.4	448.3	473.2	499.9	528.4	558.3
147.5°	378.5	379.4	387.4	400.5	415.0	433.2	455.7	477.4	500.7	525.1	551.1
150°	388.8	389.7	397.0	407.9	421.6	439.1	459.3	479.6	500.7	522.8	545.9
152.5°	398.1	398.3	405.6	415.9	428.3	444.3	462.3	481.1	499.3	519.2	540.0
155°	411.5	412.4	417.9	427.1	437.3	451.1	466.7	482.4	497.1	513.7	531.2
157.5°	424.5	424.5	429.7	436.9	445.7	456.6	469.8	482.4	494.7	507.9	522.1
160°	432.6	432.6	436.3	442.8	450.1	460.3	471.3	482.4	492.5	503.5	515.5
162.5°	440.0	439.3	442.2	447.9	454.6	462.5	472.8	482.4	490.3	499.1	509.6
165°	448.3	448.3	450.1	454.7	459.3	464.9	473.2	480.5	486.0	492.5	499.9
167.5°	456.6	455.7	456.6	460.1	462.6	466.9	472.9	478.3	481.6	485.8	491.0
170°	460.3	459.3	460.3	463.0	464.9	467.6	472.2	476.8	478.6	481.4	485.1
172.5°	463.9	463.0	463.2	465.2	466.4	468.3	471.5	475.4	475.7	477.0	480.0
175°	467.6	466.7	466.7	467.6	468.6	468.6	470.4	473.2	472.2	472.2	474.0
177.5°	469.3	468.6	467.8	468.6	468.6	468.6	469.3	470.7	469.3	469.3	470.0
180°	468.6	468.6	468.6	468.6	468.6	468.6	468.6	468.6	468.6	468.6	468.6



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CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
0°	334.9	334.9	334.9	334.9	334.9	334.9	334.9	334.9
2.5°	333.7	334.1	334.6	334.8	334.8	334.7	334.6	334.5
5°	332.8	333.4	334.1	334.5	334.4	334.2	334.1	334.1
7.5°	331.1	331.8	332.6	332.9	332.8	332.7	332.6	332.6
10°	329.2	329.9	330.7	331.1	331.0	330.9	330.8	330.7
12.5°	326.7	327.4	328.0	328.4	328.4	328.4	328.4	328.3
15°	322.1	322.8	323.6	323.9	323.8	323.8	323.7	323.6
17.5°	316.5	317.3	318.1	318.4	318.3	318.2	318.2	318.1
20°	312.1	313.0	313.8	314.3	314.3	314.3	314.3	314.3
22.5°	307.0	307.8	308.7	309.2	309.3	309.4	309.6	309.7
25°	299.2	300.1	301.0	301.5	301.6	301.7	301.7	301.8
27.5°	290.3	291.2	292.1	292.6	292.6	292.7	292.8	292.9
30°	284.2	285.1	286.0	286.5	286.7	286.9	287.1	287.2
32.5°	277.8	278.9	280.0	280.6	280.7	280.9	281.1	281.2
35°	267.8	268.9	270.1	270.8	271.1	271.3	271.6	271.9
37.5°	257.4	258.5	259.7	260.5	260.7	260.9	261.3	261.5
40°	250.0	251.2	252.5	253.3	253.6	254.0	254.3	254.6
42.5°	242.7	244.2	245.5	246.4	246.6	246.8	247.2	247.4
45°	231.6	233.0	234.4	235.3	235.8	236.1	236.5	236.9
47.5°	219.8	221.2	222.7	223.6	224.2	224.7	225.1	225.7
50°	211.4	213.1	214.8	215.9	216.3	216.8	217.4	217.9
52.5°	203.0	204.7	206.4	207.5	207.9	208.4	209.0	209.5
55°	190.4	192.1	193.8	194.9	195.4	195.8	196.4	196.9
57.5°	177.2	179.2	181.2	182.4	182.8	183.3	183.8	184.3
60°	168.1	170.0	171.9	173.2	173.9	174.5	175.2	175.9
62.5°	159.1	161.0	162.9	164.2	164.9	165.5	166.2	166.8
65°	145.1	147.3	149.3	150.7	151.4	152.0	152.7	153.4
67.5°	131.5	133.6	135.7	137.1	137.8	138.4	139.0	139.7
70°	121.8	124.1	126.4	127.8	128.3	129.0	129.5	130.1
72.5°	112.7	114.9	117.1	118.5	119.1	119.8	120.5	121.1
75°	98.8	101.1	103.5	105.0	105.8	106.5	107.3	108.0
77.5°	85.8	88.2	90.5	92.1	92.9	93.7	94.5	95.3
80°	77.4	79.9	82.4	84.0	84.6	85.3	86.0	86.6
82.5°	69.1	71.7	74.2	75.9	76.6	77.3	78.1	78.8
85°	57.5	60.0	62.5	64.2	65.0	65.8	66.6	67.5
87.5°	50.9	53.6	56.2	57.8	58.6	59.6	60.1	60.8
90°	58.5	61.9	65.2	66.7	68.4	69.9	69.6	70.3
92.5°	220.8	178.4	153.0	136.1	125.9	121.6	119.1	119.8
95°	719.2	578.8	457.7	369.9	325.6	297.8	281.9	270.7
97.5°	1042.4	991.6	903.8	809.1	743.7	689.0	662.1	643.7
100°	1143.1	1163.8	1120.9	1054.2	974.7	919.2	892.2	885.3
102.5°	1136.4	1229.9	1245.1	1218.1	1169.7	1129.7	1101.2	1096.0
105°	1059.9	1221.2	1314.5	1353.5	1356.1	1349.4	1337.1	1332.3
107.5°	952.5	1124.1	1254.5	1337.9	1384.0	1405.6	1415.4	1418.4
110°	887.7	1048.9	1184.3	1286.8	1352.9	1392.2	1409.5	1418.4



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CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
112.5°	839.7	982.4	1110.3	1212.8	1287.7	1335.1	1359.0	1373.1
115°	790.8	905.9	1015.4	1105.0	1178.3	1234.1	1264.2	1272.1
117.5°	765.6	861.0	947.5	1023.6	1086.2	1133.3	1163.8	1170.2
120°	753.6	840.9	916.2	982.7	1035.9	1077.1	1101.6	1112.5
122.5°	743.3	827.6	896.3	954.7	999.7	1034.8	1055.7	1066.4
125°	726.1	806.9	872.0	923.7	961.0	988.2	1006.2	1012.2
127.5°	705.3	782.5	847.3	896.4	934.0	958.3	973.6	979.7
130°	689.1	763.3	827.4	877.2	915.4	939.0	954.2	960.2
132.5°	672.3	742.0	804.6	854.4	891.8	918.3	932.8	938.8
135°	648.6	709.7	767.2	814.1	851.4	877.7	892.9	899.0
137.5°	627.2	679.1	727.6	770.1	804.9	830.8	843.3	850.3
140°	615.1	659.4	702.0	741.3	774.0	794.6	807.9	815.7
142.5°	603.9	642.9	679.5	713.6	742.4	761.6	773.3	778.9
145°	588.3	620.1	648.2	674.4	697.8	713.8	723.3	728.2
147.5°	575.4	600.4	622.5	642.9	660.1	673.8	681.1	683.0
150°	568.0	589.1	607.5	624.1	638.8	650.8	656.3	657.3
152.5°	559.8	578.1	595.0	608.6	621.2	630.9	634.2	635.2
155°	547.7	562.4	576.2	587.3	596.5	603.9	606.7	606.7
157.5°	534.6	547.0	558.6	567.4	574.4	580.0	581.6	581.6
160°	526.6	536.6	546.8	554.1	559.7	565.2	566.1	566.1
162.5°	518.4	527.1	535.0	541.6	545.7	551.2	552.2	551.4
165°	507.2	512.7	519.2	523.8	527.4	531.2	530.2	529.3
167.5°	496.4	500.6	505.7	508.5	510.3	512.7	512.5	511.8
170°	489.7	492.5	496.1	498.9	500.7	501.7	500.7	500.7
172.5°	483.8	485.8	488.1	490.0	491.2	492.1	491.2	489.7
175°	475.9	476.8	478.6	478.6	478.6	480.5	478.6	476.8
177.5°	470.7	471.5	471.5	472.2	471.5	472.2	470.7	469.3
180°	468.6	468.6	468.6	468.6	468.6	468.6	468.6	468.6

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