

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: P332525-840

Luminaire Tested: **S124DIP-S350D1035U840-4F0-1E-UDD-F4**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P332525-840
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-S350D1035U840-4F0-1E-UDD-F4
Description: DEFINE 4 DIRECT-INDIRECT PENDANT LED LUMINAIRE
DOWNLIGHT 350 LUMENS PER FOOT, FLUSH SATIN WHITE DIFFUSER
UPLIGHT 1035 LUMENS PER FOOT, BATWING OPTIC
Light Source: -
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 5265.7 lumens
Efficiency: N/A
Efficacy: 141.2 lumens/watt
Spacing Criteria (0/90/45): 1.2 / 1.17 / 1.3
Luminous Opening: Rectangular (W 0.33' x L: 4' x H: 0')
CIE Type: Semi-Indirect

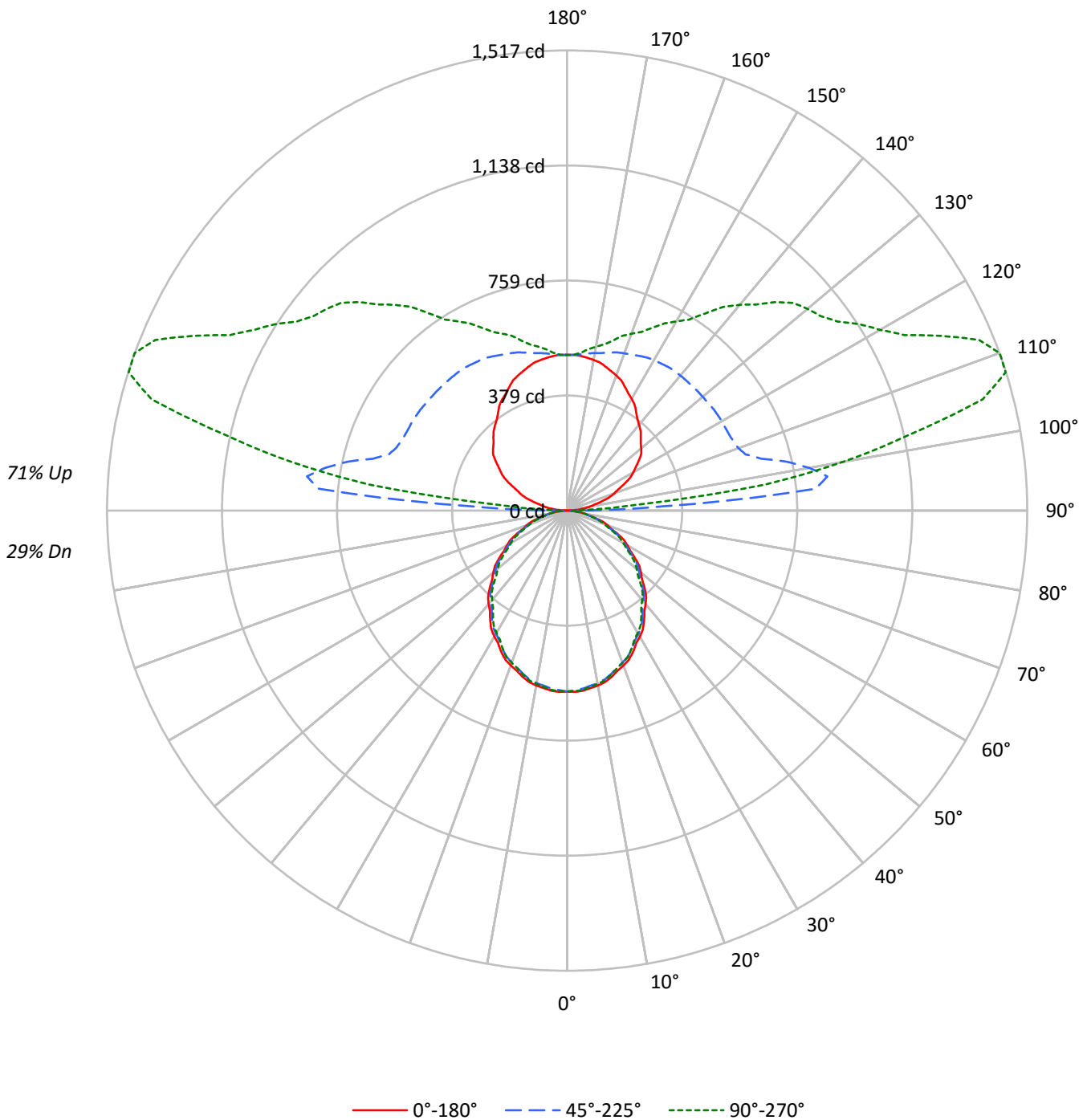
Input Watts (W): 37.3
Input Voltage (V): 120
Input Current (A_{in}): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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
RW	70	50	30	10	70	50	30	10	50	30	10	50	30	10	50	30	10
RCR																	
0	102	102	102	102	92	92	92	92	72	72	72	54	54	54	37	37	37
1	93	89	85	82	83	80	77	74	63	61	59	47	46	44	33	32	31
2	85	78	72	67	76	70	65	60	55	51	48	41	39	37	29	27	26
3	77	68	61	55	69	61	55	50	48	44	41	36	34	31	25	24	22
4	71	60	53	47	63	54	48	43	43	38	35	32	29	27	23	21	19
5	65	53	46	40	58	48	41	36	38	33	30	29	26	23	20	18	17
6	59	48	40	34	53	43	36	31	34	29	26	26	23	20	18	16	15
7	55	43	35	30	49	39	32	27	31	26	23	24	20	18	17	15	13
8	51	39	31	26	45	35	29	24	28	23	20	22	18	16	15	13	12
9	47	35	28	23	42	32	26	21	26	21	18	20	16	14	14	12	10
10	44	32	25	21	39	29	23	19	24	19	16	18	15	13	13	11	9

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	4816	4816	4816
5°	4830	4772	4807
10°	4800	4733	4757
15°	4741	4667	4679
20°	4665	4582	4587
25°	4577	4488	4475
30°	4470	4376	4336
35°	4357	4258	4202
40°	4241	4126	4051
45°	4120	3995	3919
50°	3986	3878	3758
55°	3842	3727	3606
60°	3696	3559	3450
65°	3534	3396	3261
70°	3352	3182	3059
75°	3072	2923	2848
80°	2734	2627	2552
85°	2399	2297	2251



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	56.2	1.1
10°-20°	158.3	3.0
20°-30°	233.0	4.4
30°-40°	270.8	5.1
40°-50°	270.9	5.1
50°-60°	236.9	4.5
60°-70°	175.9	3.3
70°-80°	100.0	1.9
80°-90°	31.7	0.6
90°-100°	370.6	7.0
100°-110°	771.4	14.6
110°-120°	690.9	13.1
120°-130°	581.2	11.0
130°-140°	484.6	9.2
140°-150°	370.2	7.0
150°-160°	260.2	4.9
160°-170°	153.1	2.9
170°-180°	49.8	0.9
0°-30°	447.4	8.5
0°-40°	718.3	13.6
0°-60°	1226.1	23.3
0°-90°	1533.6	29.1
90°-120°	1833.0	34.8
90°-150°	3269.0	62.1
90°-180°	3732.0	70.9
0°-180°	5265.7	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	596	596	596	596	596	
5°	596	594	589	594	593	57
15°	567	565	558	561	560	160
25°	514	510	504	504	502	236
35°	442	439	432	429	426	276
45°	361	357	350	345	343	278
55°	273	271	265	259	256	244
65°	185	182	178	173	171	183
75°	98	96	94	92	91	105
85°	26	26	25	25	24	28
90°	1	8	18	20	21	3
95°	33	105	822	407	246	37
105°	118	171	661	1424	1418	126
115°	208	261	590	1133	1362	206
125°	289	344	587	964	1087	258
135°	344	409	582	856	972	266
145°	396	454	579	722	794	249
155°	451	486	563	637	664	208
165°	491	506	539	571	580	139
175°	512	513	517	524	522	49
180°	513	513	513	513	513	



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CANDELA DISTRIBUTION (FULL):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
0°	596.5	596.5	596.5	596.5	596.5	596.5	596.5	596.5	596.5	596.5	596.5
2.5°	598.0	597.8	597.5	597.3	597.0	596.4	595.5	594.6	593.7	592.7	593.6
5°	596.0	595.6	595.2	594.8	594.4	593.6	592.4	591.3	590.1	588.9	590.1
7.5°	590.6	590.1	589.7	589.3	588.9	587.9	586.6	585.4	584.1	582.8	583.7
10°	585.5	585.1	584.7	584.3	583.9	583.0	581.6	580.2	578.9	577.4	578.2
12.5°	579.1	578.7	578.2	577.7	577.3	576.4	574.9	573.5	572.0	570.6	571.5
15°	567.3	566.9	566.5	566.1	565.7	564.7	563.1	561.5	559.9	558.4	559.0
17.5°	553.3	552.8	552.3	551.8	551.2	550.2	548.7	547.1	545.6	544.1	544.5
20°	543.0	542.5	542.0	541.4	540.9	539.9	538.3	536.6	535.0	533.4	533.8
22.5°	531.9	531.2	530.5	529.8	529.1	528.0	526.3	524.8	523.2	521.6	522.2
25°	513.8	513.1	512.4	511.6	510.9	509.8	508.3	506.8	505.3	503.8	503.9
27.5°	493.2	492.4	491.7	490.9	490.2	489.1	487.7	486.4	484.9	483.5	483.3
30°	479.5	478.6	477.8	476.9	476.1	474.9	473.5	472.1	470.8	469.4	469.0
32.5°	464.9	464.1	463.3	462.6	461.8	460.7	459.3	457.8	456.4	454.8	454.3
35°	442.1	441.4	440.7	439.9	439.2	438.1	436.6	435.0	433.6	432.1	431.4
37.5°	418.2	417.5	416.8	416.2	415.5	414.3	412.7	411.1	409.5	407.9	407.1
40°	402.4	401.6	400.8	399.9	399.1	397.9	396.3	394.7	393.0	391.5	390.4
42.5°	385.7	385.2	384.7	384.2	383.6	382.4	380.7	378.9	377.2	375.5	374.2
45°	360.9	360.1	359.4	358.7	357.9	356.7	355.0	353.3	351.6	349.9	348.7
47.5°	335.0	334.5	334.0	333.5	333.0	331.9	330.3	328.7	327.2	325.6	324.3
50°	317.4	317.0	316.6	316.1	315.7	314.8	313.3	311.7	310.2	308.8	307.3
52.5°	300.2	299.6	299.1	298.6	298.1	297.1	295.5	294.0	292.4	290.8	289.5
55°	273.0	272.7	272.3	272.0	271.7	270.7	269.2	267.8	266.3	264.8	263.6
57.5°	246.9	246.6	246.2	245.9	245.5	244.6	243.1	241.7	240.1	238.7	237.5
60°	228.9	228.4	227.9	227.3	226.8	225.9	224.5	223.1	221.8	220.4	219.4
62.5°	211.4	211.0	210.5	210.1	209.5	208.6	207.1	205.7	204.2	202.8	201.9
65°	185.0	184.5	183.9	183.4	182.9	182.1	181.0	180.0	178.8	177.8	176.7
67.5°	158.4	157.9	157.4	156.9	156.4	155.7	154.7	153.7	152.7	151.6	150.6
70°	142.0	141.2	140.5	139.8	139.0	138.1	137.3	136.5	135.6	134.8	133.9
72.5°	124.4	123.6	122.9	122.2	121.4	120.7	120.0	119.4	118.7	118.0	117.2
75°	98.5	98.0	97.5	96.8	96.3	95.8	95.3	94.7	94.2	93.7	93.3
77.5°	73.7	73.5	73.2	73.0	72.8	72.4	72.0	71.5	71.0	70.6	70.4
80°	58.8	58.5	58.2	57.9	57.6	57.3	57.1	56.9	56.7	56.5	56.1
82.5°	44.2	44.1	43.9	43.8	43.6	43.5	43.5	43.5	43.4	43.4	43.3
85°	25.9	25.9	25.9	25.9	25.9	25.8	25.4	25.2	25.0	24.8	24.8
87.5°	10.1	10.5	11.0	11.1	11.2	11.1	12.2	12.2	12.5	12.8	12.6
90°	1.0	3.0	6.1	7.1	8.1	8.1	14.1	14.1	16.2	18.2	17.2
92.5°	11.5	16.8	26.3	38.5	53.2	74.2	125.4	203.7	279.8	319.8	266.4
95°	33.2	36.3	46.4	59.5	83.7	126.0	213.7	379.1	620.1	821.6	844.9
97.5°	59.7	59.7	68.4	80.5	101.2	136.7	204.3	340.7	580.3	865.4	1061.4
100°	76.6	76.6	83.7	95.7	114.9	147.2	206.7	320.6	526.2	810.5	1068.6
102.5°	92.7	94.3	100.6	111.9	130.3	160.9	214.7	315.0	490.0	742.0	1008.1
105°	118.0	121.0	126.0	138.1	156.2	185.5	233.9	317.6	458.7	661.4	898.3
107.5°	145.8	147.8	152.8	165.7	183.1	211.9	256.3	332.4	453.0	616.2	809.5
110°	164.3	166.3	171.4	183.5	201.7	228.8	273.2	343.8	454.6	600.9	765.2



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CANDELA DISTRIBUTION (continued):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
112.5°	182.1	184.1	190.0	201.3	219.3	246.6	289.3	355.9	459.5	593.6	740.2
115°	207.7	210.7	217.7	227.8	247.0	274.2	314.6	375.1	468.8	589.8	716.8
117.5°	234.3	237.1	243.4	254.5	272.4	300.6	338.9	394.6	478.7	588.8	706.3
120°	252.1	254.1	261.2	272.2	289.3	317.6	355.9	408.3	485.9	588.8	700.6
122.5°	268.2	270.1	277.2	287.5	306.3	333.7	372.0	421.2	493.2	587.9	694.2
125°	289.3	293.4	299.4	310.5	329.6	357.9	394.2	440.6	504.1	586.7	683.6
127.5°	308.1	311.3	318.6	331.2	351.2	379.7	414.8	457.3	512.7	584.5	669.2
130°	318.6	322.7	330.6	345.8	365.0	394.2	428.5	467.8	519.2	583.7	660.4
132.5°	329.0	332.2	342.7	357.1	377.9	405.5	439.8	478.3	524.8	582.9	652.3
135°	343.8	347.8	357.9	375.1	396.2	422.4	455.7	492.0	533.3	581.7	640.2
137.5°	358.5	362.3	373.4	389.7	411.7	436.8	467.8	501.7	538.4	581.5	629.7
140°	369.0	372.0	383.1	400.2	421.4	445.7	475.8	508.1	542.4	580.7	624.1
142.5°	380.3	383.3	393.5	409.9	430.3	453.6	483.1	512.9	545.6	580.7	619.2
145°	396.2	399.2	409.3	423.4	442.6	464.7	491.0	518.2	547.4	578.7	611.0
147.5°	414.1	415.2	424.0	438.6	454.4	474.4	499.1	522.8	548.5	575.0	603.5
150°	425.5	426.5	434.5	446.7	461.7	480.9	503.1	525.2	548.5	572.6	597.8
152.5°	436.0	436.2	444.2	455.4	469.0	486.6	506.3	526.8	546.8	568.6	591.4
155°	450.6	451.6	457.7	467.8	478.9	494.0	511.1	528.3	544.4	562.6	581.7
157.5°	464.9	464.9	470.6	478.5	488.2	500.1	514.5	528.3	541.8	556.3	571.8
160°	473.8	473.8	477.9	484.9	493.0	504.1	516.1	528.3	539.4	551.5	564.6
162.5°	481.9	481.1	484.3	490.6	497.9	506.5	517.8	528.3	536.9	546.6	558.2
165°	491.0	491.0	493.0	498.1	503.1	509.1	518.2	526.2	532.3	539.4	547.4
167.5°	500.1	499.1	500.1	503.9	506.8	511.3	518.0	523.8	527.5	532.1	537.8
170°	504.1	503.1	504.1	507.2	509.1	512.1	517.2	522.2	524.2	527.3	531.3
172.5°	508.1	507.2	507.3	509.5	510.7	512.9	516.3	520.6	521.0	522.4	525.6
175°	512.1	511.1	511.1	512.1	513.1	513.1	515.1	518.2	517.2	517.2	519.2
177.5°	513.9	513.1	512.3	513.1	513.1	513.1	513.9	515.5	513.9	513.9	514.7
180°	513.1	513.1	513.1	513.1	513.1	513.1	513.1	513.1	513.1	513.1	513.1



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CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
0°	596.5	596.5	596.5	596.5	596.5	596.5	596.5	596.5
2.5°	594.4	595.3	596.1	596.5	596.4	596.3	596.2	596.1
5°	591.3	592.4	593.6	594.0	593.8	593.6	593.4	593.2
7.5°	584.6	585.6	586.5	586.9	586.8	586.6	586.5	586.4
10°	579.2	580.0	580.9	581.2	581.0	580.7	580.5	580.3
12.5°	572.4	573.3	574.3	574.6	574.3	574.0	573.7	573.4
15°	559.6	560.2	560.9	561.0	560.7	560.4	560.1	559.8
17.5°	544.9	545.3	545.7	545.8	545.6	545.4	545.2	545.0
20°	534.1	534.4	534.7	534.8	534.5	534.3	534.1	533.9
22.5°	522.7	523.3	523.9	524.0	523.6	523.2	522.8	522.5
25°	504.0	504.1	504.2	504.1	503.6	503.2	502.8	502.4
27.5°	483.0	482.8	482.5	482.1	481.6	481.1	480.5	480.0
30°	468.6	468.2	467.7	467.3	466.7	466.2	465.6	465.1
32.5°	453.8	453.3	452.8	452.3	451.8	451.2	450.7	450.2
35°	430.6	429.9	429.1	428.5	428.0	427.5	426.9	426.4
37.5°	406.3	405.5	404.7	403.9	403.2	402.5	401.8	401.1
40°	389.4	388.3	387.3	386.5	385.9	385.4	384.9	384.4
42.5°	372.9	371.7	370.5	369.7	369.3	369.0	368.6	368.3
45°	347.6	346.4	345.3	344.5	344.2	343.9	343.6	343.3
47.5°	323.0	321.6	320.3	319.3	318.5	317.7	316.9	316.1
50°	305.8	304.4	302.9	301.7	301.1	300.5	299.8	299.2
52.5°	288.2	286.9	285.6	284.5	283.7	282.9	282.1	281.2
55°	262.3	260.9	259.7	258.7	258.1	257.5	256.8	256.2
57.5°	236.3	235.1	233.9	233.0	232.4	231.8	231.2	230.5
60°	218.4	217.5	216.5	215.8	215.3	214.7	214.2	213.7
62.5°	201.1	200.2	199.2	198.5	198.0	197.5	197.0	196.4
65°	175.7	174.6	173.6	172.8	172.3	171.7	171.2	170.7
67.5°	149.6	148.6	147.5	146.9	146.8	146.6	146.5	146.3
70°	133.1	132.3	131.4	130.8	130.5	130.2	129.9	129.6
72.5°	116.6	115.9	115.2	114.7	114.4	114.1	113.8	113.5
75°	92.8	92.4	92.0	91.7	91.6	91.5	91.4	91.3
77.5°	70.3	70.2	70.1	69.9	69.6	69.3	69.0	68.8
80°	55.9	55.7	55.5	55.4	55.2	55.1	55.0	54.9
82.5°	43.1	43.0	42.9	42.8	42.7	42.5	42.4	42.3
85°	24.8	24.8	24.8	24.8	24.7	24.6	24.4	24.3
87.5°	12.8	13.0	13.2	13.2	13.4	13.6	13.4	13.4
90°	18.2	19.2	20.2	20.2	21.2	22.2	21.2	21.2
92.5°	198.0	149.1	118.6	98.4	86.5	81.1	77.7	77.7
95°	747.0	590.8	455.7	357.9	308.5	277.2	259.1	246.0
97.5°	1103.8	1045.6	947.1	841.8	769.4	708.7	678.5	657.5
100°	1215.9	1236.0	1186.6	1112.0	1024.3	962.8	932.5	924.5
102.5°	1210.2	1310.2	1324.5	1293.4	1239.6	1195.1	1163.3	1156.8
105°	1129.1	1303.5	1403.3	1444.7	1446.7	1438.7	1424.5	1418.5
107.5°	1014.0	1199.7	1340.3	1430.2	1480.0	1503.0	1513.1	1515.7
110°	944.6	1119.0	1265.3	1376.1	1447.7	1490.1	1508.2	1517.3



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CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
112.5°	893.8	1048.0	1186.2	1297.1	1378.4	1429.6	1455.0	1469.7
115°	842.8	966.8	1084.8	1181.5	1261.2	1321.7	1353.9	1362.0
117.5°	817.8	920.5	1013.2	1095.3	1163.3	1214.1	1246.7	1252.9
120°	806.5	900.3	981.0	1052.5	1109.9	1154.4	1180.5	1191.6
122.5°	796.9	887.4	960.8	1023.5	1072.1	1109.9	1132.2	1143.3
125°	780.3	867.0	936.5	992.0	1032.4	1061.6	1080.8	1086.8
127.5°	760.1	843.0	912.4	965.0	1005.5	1031.6	1047.6	1053.7
130°	744.1	823.6	892.2	945.6	986.9	1012.2	1028.3	1034.4
132.5°	727.1	801.9	868.8	922.3	962.8	991.2	1006.5	1012.6
135°	703.7	769.2	830.7	881.1	921.5	949.7	965.8	971.9
137.5°	682.6	738.0	789.8	835.4	873.0	900.9	914.2	921.5
140°	670.4	717.8	763.2	805.5	840.8	863.0	877.1	885.1
142.5°	659.1	700.8	739.8	776.5	807.7	828.3	840.8	846.5
145°	643.2	677.5	707.7	736.0	761.1	778.3	788.4	793.5
147.5°	630.1	657.3	681.6	703.7	722.3	737.0	744.7	746.4
150°	622.1	645.2	665.4	683.6	699.6	712.8	718.8	719.8
152.5°	613.2	633.1	651.7	666.6	680.3	690.9	694.6	695.6
155°	599.9	616.0	631.1	643.2	653.3	661.4	664.4	664.4
157.5°	585.5	599.1	611.8	621.5	629.0	635.1	636.9	636.9
160°	576.6	587.7	598.8	606.9	613.0	619.0	620.1	620.1
162.5°	567.7	577.2	585.9	593.2	597.6	603.7	604.7	603.9
165°	555.5	561.6	568.6	573.6	577.6	581.7	580.7	579.7
167.5°	543.6	548.3	553.9	556.9	559.0	561.6	561.4	560.6
170°	536.3	539.4	543.4	546.4	548.5	549.5	548.5	548.5
172.5°	529.9	532.1	534.5	536.7	538.0	539.0	538.0	536.3
175°	521.2	522.2	524.2	524.2	524.2	526.2	524.2	522.2
177.5°	515.5	516.3	516.3	517.2	516.3	517.2	515.5	513.9
180°	513.1	513.1	513.1	513.1	513.1	513.1	513.1	513.1

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