

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: P331308-940

Luminaire Tested: **S122DIP-S485D725U940-4F0-1E-UDD-D4**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P331308-940
REPORT IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-1807-864-16,
Test Lab: INNOVATION CENTER
Issue Date: 3/3/2020
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: NEO-RAY
Catalog Number: S122DIP-S485D725U940-4F0-1E-UDD-D4
Description: DEFINE 2 DIRECT-INDIRECT PENDANT LED LUMINAIRE
DOWNLIGHT 485 LUMENS PER FOOT, DROP SATIN WHITE DIFFUSER
UPLIGHT 725 LUMENS PER FOOT, BATWING OPTIC
Light Source: -
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 4278.6 lumens
Efficiency: N/A
Efficacy: 111.4 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

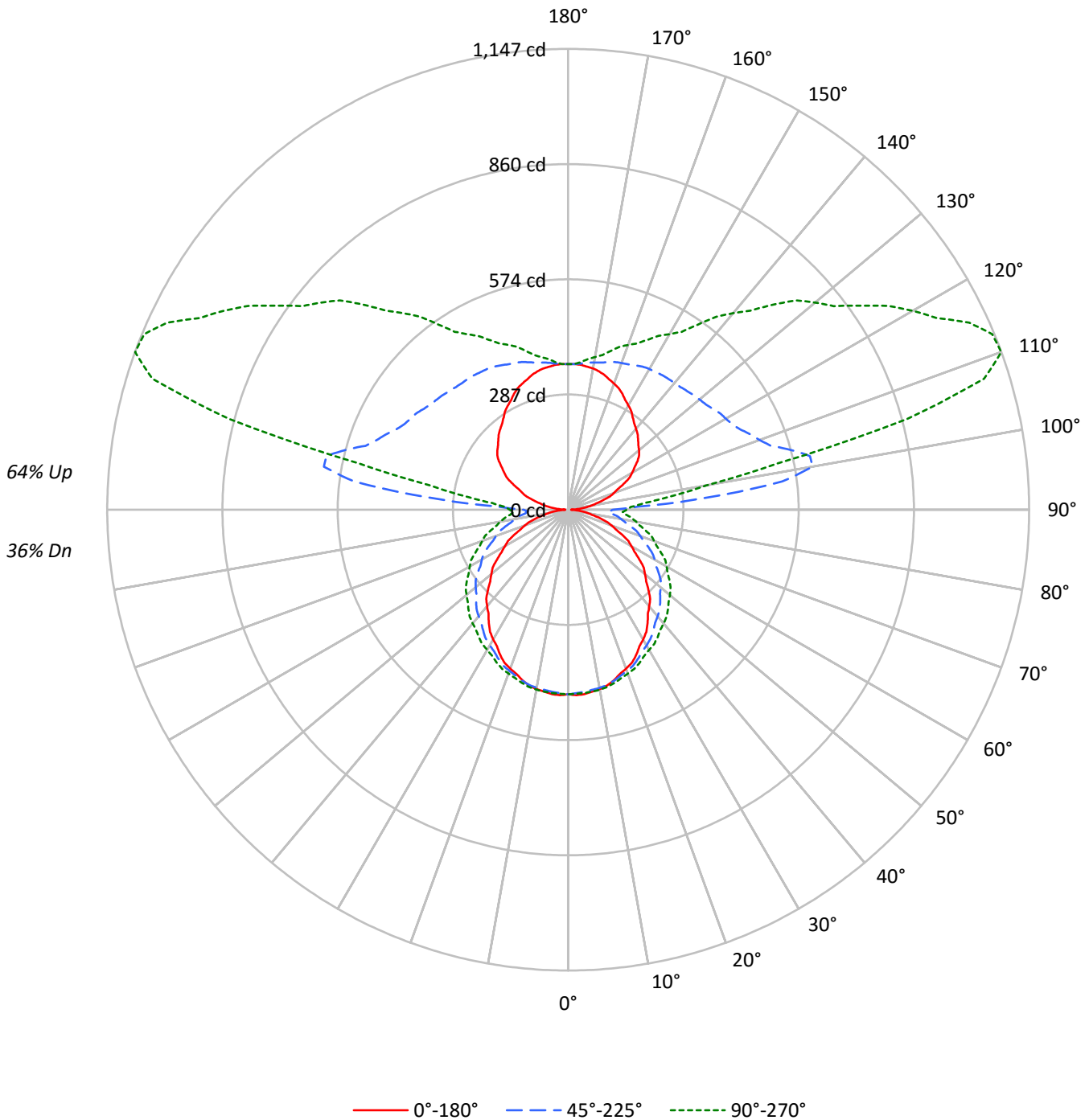
Input Watts (W): 38.4
Input Voltage (V): 120
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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	104	104	104	104	94	94	94	94	76	76	76		59	59	59		44	44	44	36
1	94	89	85	81	84	80	77	74	65	62	60		50	48	47		37	36	35	28
2	85	77	71	65	76	70	64	59	56	52	49		43	41	38		32	30	28	23
3	77	67	60	54	69	61	54	49	49	44	40		38	35	32		28	26	24	19
4	70	59	51	45	63	54	47	41	43	38	34		34	30	27		25	22	20	16
5	64	53	44	38	58	48	40	35	39	33	29		30	26	23		22	19	17	14
6	59	47	39	33	53	43	35	30	35	29	25		27	23	20		20	17	15	12
7	55	42	34	29	49	38	31	26	31	26	22		24	20	18		18	15	13	10
8	50	38	30	25	45	35	28	23	28	23	19		22	18	15		17	14	12	9
9	47	35	27	22	42	32	25	20	26	21	17		20	17	14		15	13	11	8
10	44	32	24	20	39	29	23	18	24	19	15		19	15	12		14	11	10	7

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	7419	7419	7419
5°	7455	7143	7115
10°	7408	6931	6854
15°	7306	6708	6577
20°	7177	6468	6312
25°	7050	6237	6072
30°	6870	5999	5829
35°	6689	5771	5659
40°	6498	5576	5488
45°	6317	5402	5343
50°	6123	5242	5199
55°	5916	5073	5052
60°	5666	4897	4897
65°	5405	4692	4714
70°	5117	4470	4516
75°	4741	4251	4334
80°	4149	4028	4148
85°	3591	3837	4006



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	43.5	1.0
10°-20°	124.9	2.9
20°-30°	189.2	4.4
30°-40°	230.5	5.4
40°-50°	247.9	5.8
50°-60°	240.8	5.6
60°-70°	210.2	4.9
70°-80°	161.8	3.8
80°-90°	111.9	2.6
90°-100°	219.8	5.1
100°-110°	546.5	12.8
110°-120°	558.6	13.1
120°-130°	450.2	10.5
130°-140°	353.8	8.3
140°-150°	262.5	6.1
150°-160°	183.4	4.3
160°-170°	108.0	2.5
170°-180°	35.1	0.8
0°-30°	357.6	8.4
0°-40°	588.1	13.7
0°-60°	1076.8	25.2
0°-90°	1560.7	36.5
90°-120°	1324.8	31.0
90°-150°	2391.4	55.9
90°-180°	2718.0	63.5
0°-180°	4278.6	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	460	460	460	460	460	
5°	461	459	455	459	458	44
15°	440	441	441	446	446	124
25°	400	404	410	418	420	184
35°	344	356	368	382	388	215
45°	282	301	324	344	351	218
55°	216	241	275	298	308	193
65°	148	181	220	246	256	147
75°	82	119	162	189	199	87
85°	24	65	108	135	145	26
90°	7	55	112	136	146	6
95°	30	97	350	204	189	30
105°	88	152	574	1003	874	94
115°	153	200	472	951	1101	151
125°	210	250	438	762	885	187
135°	246	294	418	628	722	190
145°	280	322	408	511	562	176
155°	318	344	397	449	466	147
165°	347	358	380	403	409	98
175°	362	362	365	370	369	34
180°	362	362	362	362	362	



TEST NUMBER: P331308-940

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CANDELA DISTRIBUTION (FULL):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
0°	459.5	459.5	459.5	459.5	459.5	459.5	459.5	459.5	459.5	459.5	459.5
2.5°	462.2	461.8	461.5	461.1	460.7	460.1	459.3	458.5	457.7	456.8	457.4
5°	460.8	460.4	459.9	459.5	459.1	458.4	457.5	456.6	455.8	454.9	455.8
7.5°	456.7	456.4	456.1	455.8	455.6	455.0	454.3	453.7	453.0	452.3	453.3
10°	453.5	453.3	452.9	452.6	452.4	452.0	451.6	451.1	450.7	450.2	451.4
12.5°	448.2	448.3	448.4	448.4	448.4	448.3	448.0	447.6	447.3	447.0	448.2
15°	439.5	439.8	440.1	440.4	440.7	440.9	440.9	440.9	440.9	440.9	442.2
17.5°	428.4	429.0	429.6	430.3	430.9	431.4	431.9	432.3	432.8	433.3	434.6
20°	420.9	421.6	422.4	423.1	423.8	424.5	425.1	425.7	426.3	426.9	428.5
22.5°	412.9	413.8	414.6	415.4	416.3	417.1	418.0	418.8	419.6	420.5	422.1
25°	399.6	400.6	401.6	402.7	403.7	404.9	406.3	407.6	408.9	410.2	412.0
27.5°	383.6	385.3	387.0	388.7	390.3	392.0	393.5	395.1	396.6	398.2	400.5
30°	372.9	374.9	376.7	378.7	380.7	382.5	384.5	386.4	388.3	390.2	392.6
32.5°	361.2	363.4	365.5	367.7	369.9	372.1	374.3	376.7	378.9	381.2	383.9
35°	344.3	346.8	349.4	351.9	354.4	357.0	359.8	362.7	365.4	368.3	371.5
37.5°	325.9	328.9	331.7	334.7	337.5	340.8	344.5	348.0	351.7	355.3	359.0
40°	313.7	316.9	320.2	323.4	326.7	330.3	334.3	338.3	342.3	346.3	350.2
42.5°	301.9	305.2	308.4	311.7	315.0	318.9	323.5	328.1	332.7	337.2	341.4
45°	282.4	286.3	290.3	294.4	298.4	302.9	308.1	313.3	318.5	323.7	328.2
47.5°	263.1	267.4	271.8	276.1	280.4	285.7	291.8	297.8	303.9	310.0	314.8
50°	249.8	254.3	259.0	263.5	268.0	273.7	280.4	287.0	293.7	300.3	305.4
52.5°	236.9	241.7	246.6	251.5	256.3	262.2	269.2	276.2	283.2	290.3	295.3
55°	216.4	221.8	227.1	232.4	237.7	244.2	252.0	259.7	267.3	275.0	280.4
57.5°	196.2	202.2	208.2	214.2	220.3	227.1	235.0	242.8	250.7	258.5	264.3
60°	181.8	188.2	194.6	200.9	207.2	214.6	223.1	231.5	240.0	248.4	254.0
62.5°	169.0	175.6	182.3	188.9	195.5	203.0	211.3	219.8	228.3	236.7	242.6
65°	147.8	155.1	162.4	169.6	176.8	184.9	193.6	202.3	211.1	219.8	225.9
67.5°	128.4	136.0	143.6	151.1	158.7	166.9	175.9	184.9	193.8	202.7	208.8
70°	114.6	122.3	129.9	137.6	145.3	153.7	162.9	172.1	181.3	190.5	196.8
72.5°	101.7	109.7	117.6	125.6	133.5	142.1	151.4	160.7	170.0	179.2	185.6
75°	81.9	90.2	98.4	106.7	115.0	123.9	133.4	142.9	152.4	161.8	168.2
77.5°	62.8	71.4	80.1	88.7	97.5	106.6	116.2	125.8	135.5	145.1	151.4
80°	49.9	58.9	68.0	77.0	86.1	95.4	105.0	114.6	124.2	133.8	140.1
82.5°	39.3	48.2	57.1	66.0	74.9	84.3	94.0	103.7	113.4	123.2	129.4
85°	24.0	33.2	42.4	51.5	60.6	70.0	79.5	88.9	98.4	107.9	114.1
87.5°	13.2	22.5	31.8	40.9	50.0	59.6	69.7	80.2	90.5	100.1	106.0
90°	7.4	18.0	29.4	39.4	49.4	60.5	73.5	87.7	101.5	111.6	116.8
92.5°	14.6	26.4	39.4	50.5	63.2	78.3	103.2	134.5	163.4	173.7	165.4
95°	29.7	39.5	53.4	66.6	84.7	109.4	150.3	219.8	309.6	349.8	321.3
97.5°	44.4	54.3	67.9	83.6	102.6	128.9	177.7	270.7	413.7	537.3	565.7
100°	58.3	65.9	77.7	94.3	113.7	140.1	185.3	278.7	437.5	617.2	723.1
102.5°	70.6	77.1	88.5	104.6	124.1	150.2	192.3	276.0	423.4	616.4	779.5
105°	88.4	95.4	104.6	119.4	139.0	164.5	205.0	274.7	397.4	573.8	764.4
107.5°	108.3	114.0	122.2	135.2	153.8	178.9	218.0	279.5	381.9	528.7	697.5
110°	121.2	126.9	134.0	146.1	163.6	189.0	226.9	284.4	376.7	506.6	655.6



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CANDELA DISTRIBUTION (continued):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
112.5°	133.4	138.7	146.0	156.9	173.5	198.9	235.4	289.7	373.8	490.6	625.1
115°	152.6	157.7	163.5	173.4	189.0	212.0	248.6	297.8	372.0	472.2	586.7
117.5°	171.7	175.5	180.7	189.2	203.7	226.8	260.7	306.7	372.1	460.1	560.3
120°	184.0	187.3	192.1	198.9	213.5	236.2	269.4	312.9	372.5	453.0	545.7
122.5°	195.6	198.1	202.5	209.6	223.7	246.7	277.9	318.3	373.5	447.5	532.9
125°	210.4	212.5	216.7	225.1	239.1	260.9	290.7	326.8	374.8	438.1	513.9
127.5°	222.7	225.3	231.0	240.1	253.3	275.3	303.4	335.5	376.9	431.0	496.2
130°	230.0	232.6	239.4	249.1	262.8	283.8	311.3	340.9	378.9	426.6	484.6
132.5°	236.7	239.9	247.3	257.4	271.8	292.4	318.1	346.4	380.8	422.8	474.5
135°	246.0	248.8	257.2	267.6	283.7	303.9	327.7	353.6	383.0	417.9	460.7
137.5°	255.5	258.9	267.2	278.3	294.2	312.5	335.3	358.6	384.7	413.8	450.0
140°	262.8	265.4	273.6	284.6	299.8	318.0	339.2	361.1	385.1	411.2	443.5
142.5°	270.0	272.1	279.7	290.8	305.4	322.4	342.8	363.9	385.9	410.1	438.1
145°	280.2	283.0	290.0	300.4	314.3	329.7	348.6	368.0	387.5	408.5	431.7
147.5°	291.9	294.0	300.7	310.3	321.9	335.6	353.3	370.4	388.2	406.0	425.6
150°	299.7	301.8	307.4	316.5	326.9	339.5	355.5	371.5	387.5	404.3	421.0
152.5°	307.6	308.5	314.1	322.0	331.9	343.4	357.8	372.1	386.5	401.5	417.1
155°	318.5	319.2	323.4	331.1	338.8	349.2	361.1	372.9	384.8	396.6	409.8
157.5°	327.8	328.4	331.8	338.5	344.6	353.4	363.5	372.9	381.6	391.6	403.1
160°	333.9	334.6	337.3	343.0	348.6	356.1	364.5	372.9	379.9	388.3	398.1
162.5°	340.0	339.6	342.4	346.9	351.9	357.8	365.2	372.4	378.3	385.5	393.5
165°	347.1	346.4	347.9	352.0	355.5	359.7	366.0	370.9	375.1	379.9	386.2
167.5°	353.0	352.1	353.4	356.1	358.6	361.2	365.8	369.9	371.8	375.1	378.9
170°	356.9	355.5	356.1	358.3	359.7	361.8	365.2	368.7	370.1	372.2	375.1
172.5°	359.1	358.3	357.8	360.0	360.8	362.3	364.7	367.0	367.9	368.9	371.1
175°	361.8	361.1	360.3	361.8	361.8	362.5	363.8	365.2	364.5	365.2	366.0
177.5°	363.0	361.9	361.3	362.5	362.5	362.5	363.0	364.2	363.0	362.5	363.0
180°	362.5	362.5	362.5	362.5	362.5	362.5	362.5	362.5	362.5	362.5	362.5



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CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
0°	459.5	459.5	459.5	459.5	459.5	459.5	459.5	459.5
2.5°	458.1	458.6	459.2	459.4	459.1	459.0	458.7	458.4
5°	456.6	457.5	458.4	458.8	458.6	458.5	458.3	458.2
7.5°	454.4	455.5	456.6	457.0	456.9	456.7	456.6	456.5
10°	452.5	453.7	455.0	455.5	455.3	455.1	455.0	454.9
12.5°	449.3	450.6	451.7	452.3	452.1	451.9	451.8	451.7
15°	443.5	444.9	446.2	446.7	446.7	446.5	446.3	446.2
17.5°	436.0	437.5	438.8	439.5	439.5	439.5	439.5	439.5
20°	430.2	431.8	433.4	434.2	434.2	434.2	434.2	434.2
22.5°	423.7	425.3	427.0	427.9	428.2	428.4	428.6	428.9
25°	413.8	415.5	417.3	418.5	418.9	419.4	419.8	420.3
27.5°	402.8	405.0	407.2	408.5	408.8	409.2	409.5	409.8
30°	395.0	397.3	399.8	401.1	401.5	402.0	402.4	402.9
32.5°	386.6	389.3	392.1	393.9	394.7	395.5	396.3	397.1
35°	374.8	378.1	381.3	383.4	384.5	385.5	386.6	387.6
37.5°	362.6	366.2	369.8	372.1	373.3	374.3	375.4	376.6
40°	354.0	357.8	361.7	364.3	365.6	366.9	368.3	369.6
42.5°	345.6	349.8	354.0	356.9	358.1	359.4	360.8	362.1
45°	332.9	337.4	342.0	345.0	346.5	348.0	349.5	351.0
47.5°	319.5	324.3	329.1	332.3	333.9	335.6	337.2	338.9
50°	310.4	315.4	320.5	323.8	325.5	327.1	328.7	330.3
52.5°	300.5	305.7	310.9	314.2	316.0	317.8	319.5	321.3
55°	285.7	291.1	296.3	300.0	301.9	303.8	305.8	307.6
57.5°	270.0	275.7	281.5	285.3	287.3	289.3	291.2	293.2
60°	259.7	265.3	270.9	274.7	276.8	278.9	281.0	283.0
62.5°	248.6	254.6	260.6	264.6	266.5	268.5	270.5	272.4
65°	231.9	238.0	244.1	248.1	249.9	251.9	253.8	255.7
67.5°	215.0	221.1	227.2	231.3	233.3	235.3	237.4	239.3
70°	203.2	209.6	215.9	220.0	221.8	223.6	225.3	227.1
72.5°	191.8	198.0	204.3	208.5	210.5	212.7	214.8	217.0
75°	174.6	180.9	187.3	191.5	193.3	195.3	197.2	199.1
77.5°	157.7	164.1	170.4	174.6	176.6	178.7	180.8	182.9
80°	146.3	152.5	158.7	162.8	165.0	167.0	169.1	171.1
82.5°	135.6	141.9	148.0	152.1	154.1	156.0	158.0	160.0
85°	120.3	126.5	132.8	136.9	138.9	141.1	143.1	145.2
87.5°	111.9	117.7	123.9	128.0	130.0	131.9	133.8	135.6
90°	122.1	126.5	133.9	138.4	140.2	142.0	143.7	145.5
92.5°	155.5	152.7	152.6	152.0	153.3	152.8	155.2	155.8
95°	270.5	233.5	209.9	198.3	191.0	187.2	186.9	189.3
97.5°	508.0	436.0	366.0	319.3	287.8	272.3	263.9	259.8
100°	714.0	633.0	543.0	462.2	406.0	377.6	359.0	348.1
102.5°	847.7	833.6	769.1	683.2	622.0	572.4	548.8	533.4
105°	914.5	998.5	1012.7	993.1	951.5	910.0	881.6	873.5
107.5°	856.2	979.9	1057.3	1094.4	1101.4	1100.7	1096.4	1084.9
110°	807.4	936.9	1030.9	1091.2	1122.8	1137.7	1145.6	1146.6



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CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
112.5°	762.4	886.9	987.0	1055.7	1099.0	1122.8	1136.3	1141.7
115°	706.1	818.0	913.7	988.6	1039.6	1073.4	1093.1	1101.0
117.5°	662.4	761.0	848.2	918.5	970.4	1005.8	1026.4	1033.2
120°	639.7	730.3	808.3	874.7	925.1	959.5	981.3	989.9
122.5°	621.3	704.5	778.5	838.5	883.7	917.2	936.7	943.9
125°	593.9	669.7	734.9	790.0	831.7	859.5	878.2	885.2
127.5°	566.8	635.4	697.0	747.7	784.3	810.4	826.7	832.5
130°	549.4	613.0	671.5	719.9	755.3	780.2	795.2	802.0
132.5°	532.6	591.6	645.6	691.1	725.9	750.7	764.7	771.0
135°	509.2	558.3	607.3	648.5	679.8	703.9	717.6	721.6
137.5°	489.6	530.8	570.1	605.9	634.3	655.1	667.1	672.3
140°	477.2	513.1	547.5	579.8	603.1	622.1	633.4	638.5
142.5°	467.4	497.8	527.3	554.3	576.2	593.4	603.6	605.2
145°	454.1	478.0	500.5	521.6	539.0	551.6	559.4	562.1
147.5°	444.2	462.4	479.4	494.4	508.5	518.4	523.4	525.0
150°	437.7	453.1	467.7	480.3	490.7	499.1	503.3	504.0
152.5°	431.6	445.9	458.3	469.1	477.3	484.6	487.7	487.8
155°	423.1	434.3	444.7	452.4	460.0	464.9	467.7	466.4
157.5°	413.2	422.6	431.3	437.3	442.7	446.8	448.1	448.1
160°	407.1	414.7	422.4	427.3	432.2	435.7	436.3	436.3
162.5°	400.9	407.5	414.0	417.9	422.7	425.1	425.8	425.2
165°	391.7	396.6	401.5	404.3	407.1	409.8	409.8	409.2
167.5°	383.0	386.7	390.0	392.6	393.9	395.4	395.2	394.4
170°	378.5	380.6	383.3	384.8	385.5	387.5	386.8	385.5
172.5°	373.4	375.1	377.3	378.1	378.8	379.8	379.1	378.3
175°	368.0	368.7	369.4	370.1	370.1	370.9	370.1	368.7
177.5°	364.2	364.2	364.7	364.7	364.7	364.7	364.2	363.0
180°	362.5	362.5	362.5	362.5	362.5	362.5	362.5	362.5

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