

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: P332251

Luminaire Tested: **S123RDIP-S340D585U835-4F0-1E-UDD-F4**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P332251
REPORT IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-1807-864-17,
Test Lab: INNOVATION CENTER
Issue Date: 3/3/2020
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: NEO-RAY
Catalog Number: S123RDIP-S340D585U835-4F0-1E-UDD-F4
Description: DEFINE 3 DIRECT-INDIRECT PENDANT LED LUMINAIRE
DOWNLIGHT 340 LUMENS PER FOOT, FLUSH SATIN WHITE DIFFUSER, REGRESSED
HOUSING
UPLIGHT 585 LUMENS PER FOOT, BATWING OPTIC
Light Source: -
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 3419.9 lumens
Efficiency: N/A
Efficacy: 133.6 lumens/watt
Spacing Criteria (0/90/45): 1.21 / 1.06 / 1.22
Luminous Opening: Rectangular (W 0.25' x L: 4' x H: 0')
CIE Type: Semi-Indirect

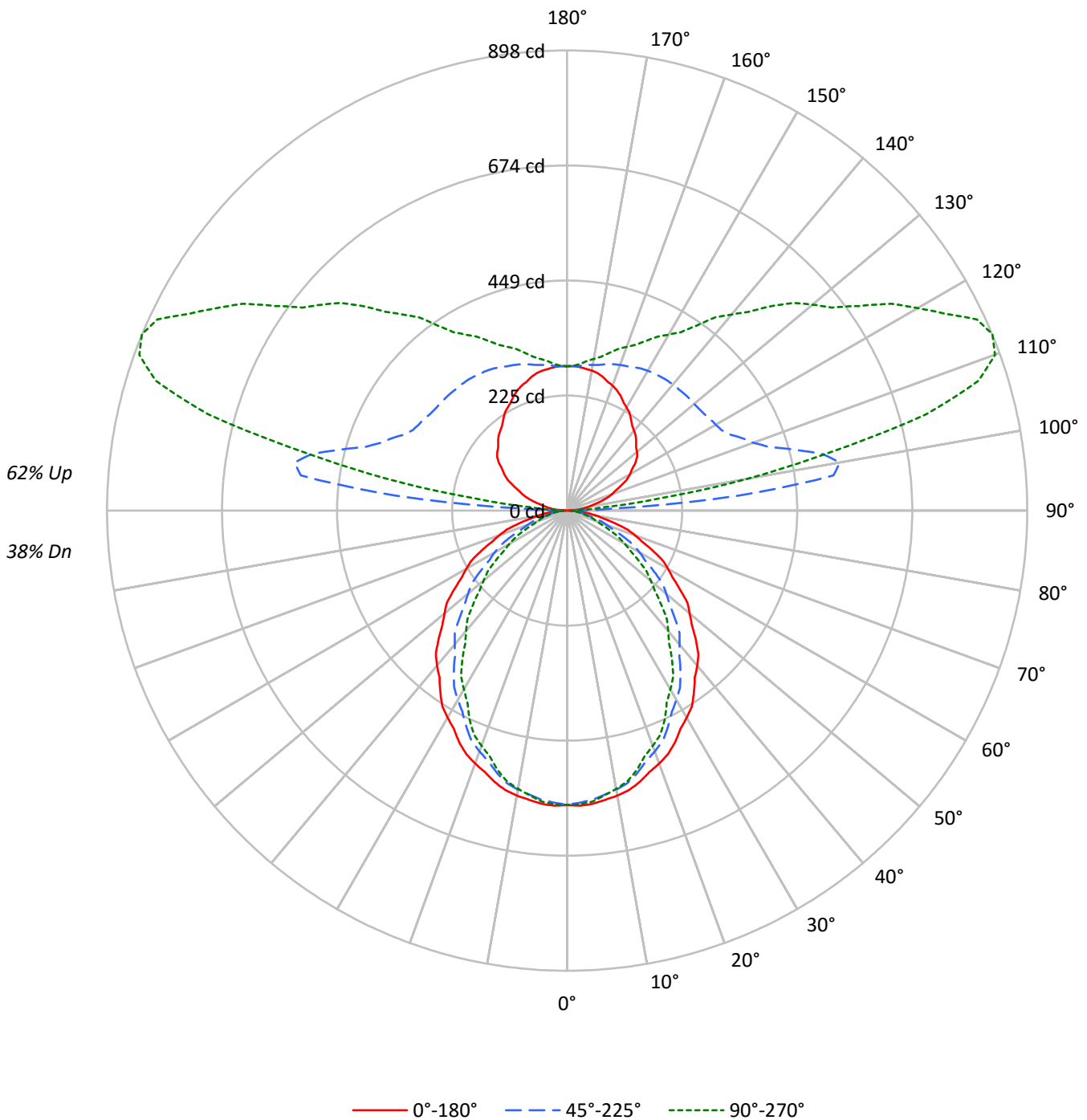
Input Watts (W): 25.6
Input Voltage (V): 120
Input Current (A_{in}): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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	104	104	104	104	95	95	95	95	77	77	77	60	60	60	45	45	45	38
1	95	91	87	84	86	83	80	77	67	65	63	53	52	51	40	39	39	32
2	87	80	74	69	79	73	68	63	59	56	53	47	45	43	36	34	33	28
3	79	70	63	58	72	64	58	53	53	48	45	42	39	36	32	30	28	24
4	73	62	55	49	66	57	50	45	47	42	38	37	34	31	29	26	24	20
5	67	56	48	42	60	51	44	39	42	37	33	34	30	27	26	23	21	18
6	62	50	42	36	56	46	39	34	38	33	29	30	27	24	23	21	19	16
7	57	45	37	32	52	41	35	30	34	29	25	28	24	21	21	19	17	14
8	53	41	33	28	48	38	31	26	31	26	23	25	22	19	20	17	15	13
9	49	37	30	25	45	34	28	23	29	24	20	23	20	17	18	16	14	12
10	46	34	27	22	42	31	25	21	26	21	18	22	18	15	17	14	13	10

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	6184	6184	6184
5°	6207	6122	6158
10°	6172	6045	6025
15°	6107	5904	5841
20°	6015	5727	5593
25°	5922	5529	5352
30°	5797	5299	5009
35°	5670	5070	4696
40°	5552	4799	4308
45°	5398	4532	3958
50°	5228	4228	3565
55°	5054	3883	3200
60°	4895	3511	2799
65°	4689	3110	2397
70°	4428	2609	1936
75°	4051	2054	1822
80°	3608	1822	1674
85°	3051	1606	1494



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	54.0	1.6
10°-20°	150.1	4.4
20°-30°	216.1	6.3
30°-40°	243.5	7.1
40°-50°	232.9	6.8
50°-60°	190.7	5.6
60°-70°	128.7	3.8
70°-80°	64.7	1.9
80°-90°	19.3	0.6
90°-100°	156.8	4.6
100°-110°	444.0	13.0
110°-120°	436.8	12.8
120°-130°	348.4	10.2
130°-140°	274.7	8.0
140°-150°	205.0	6.0
150°-160°	142.9	4.2
160°-170°	83.9	2.5
170°-180°	27.3	0.8
0°-30°	420.2	12.3
0°-40°	663.7	19.4
0°-60°	1087.3	31.8
0°-90°	1300.1	38.0
90°-120°	1037.6	30.3
90°-150°	1865.7	54.6
90°-180°	2120.0	62.0
0°-180°	3419.9	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	574	574	574	574	574	
5°	574	572	567	570	570	54
15°	548	542	530	527	524	154
25°	499	486	466	456	451	229
35°	432	414	386	366	357	270
45°	355	333	298	272	260	273
55°	269	246	207	181	170	241
65°	184	158	122	100	94	182
75°	97	75	49	45	44	104
85°	25	15	13	12	12	28
90°	1	7	14	16	16	3
95°	19	63	338	99	66	21
105°	66	98	459	802	726	70
115°	117	146	351	769	882	116
125°	163	192	327	593	696	144
135°	190	227	323	489	564	147
145°	217	249	319	401	441	136
155°	247	266	309	351	366	114
165°	270	278	296	313	319	76
175°	281	282	284	288	287	27
180°	282	282	282	282	282	



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CANDELA DISTRIBUTION (FULL):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
0°	574.5	574.5	574.5	574.5	574.5	574.5	574.5	574.5	574.5	574.5	574.5
2.5°	576.4	576.0	575.7	575.4	575.1	574.4	573.4	572.4	571.4	570.4	571.3
5°	574.5	574.0	573.5	573.0	572.4	571.6	570.3	569.1	567.8	566.6	567.5
7.5°	569.2	568.6	568.1	567.5	567.0	565.9	564.3	562.7	561.0	559.4	559.9
10°	564.7	564.0	563.3	562.6	561.8	560.5	558.7	556.8	554.9	553.1	553.2
12.5°	558.4	557.6	556.8	556.0	555.2	553.6	551.3	549.1	546.8	544.5	544.4
15°	548.0	546.8	545.7	544.5	543.4	541.4	538.5	535.6	532.7	529.8	529.3
17.5°	534.8	533.5	532.2	530.8	529.5	527.0	523.3	519.6	516.0	512.3	511.2
20°	525.1	523.5	521.8	520.2	518.5	515.7	511.8	507.8	503.9	500.0	498.6
22.5°	514.3	512.4	510.5	508.6	506.7	503.7	499.5	495.3	491.1	486.9	485.2
25°	498.6	496.0	493.4	490.8	488.2	484.5	479.8	475.0	470.2	465.5	463.3
27.5°	479.5	476.6	473.7	470.9	468.0	464.0	458.7	453.3	448.0	442.7	439.7
30°	466.4	463.3	460.2	457.1	454.0	449.5	443.7	437.9	432.1	426.3	422.8
32.5°	453.4	449.8	446.3	442.8	439.3	434.5	428.3	422.2	416.1	409.9	406.1
35°	431.5	427.7	424.0	420.3	416.6	411.5	405.1	398.6	392.2	385.8	381.4
37.5°	409.3	405.1	401.0	396.9	392.7	387.2	380.4	373.5	366.7	359.8	354.8
40°	395.1	390.6	386.0	381.5	376.9	370.9	363.6	356.2	348.9	341.5	336.2
42.5°	379.1	374.5	370.0	365.4	360.9	354.8	347.2	339.6	332.0	324.4	318.5
45°	354.6	349.9	345.3	340.6	335.9	329.6	321.7	313.7	305.7	297.7	291.8
47.5°	330.1	325.0	319.8	314.7	309.6	303.1	295.1	287.1	279.2	271.2	264.8
50°	312.2	307.3	302.5	297.6	292.7	286.1	277.7	269.3	260.9	252.5	246.1
52.5°	296.2	290.9	285.6	280.3	275.0	268.2	259.9	251.6	243.3	235.0	228.4
55°	269.3	264.2	259.2	254.1	249.0	242.1	233.3	224.5	215.7	206.9	200.9
57.5°	244.5	239.0	233.5	227.9	222.4	215.2	206.4	197.5	188.7	179.9	174.2
60°	227.4	221.7	216.0	210.3	204.6	197.5	188.9	180.3	171.7	163.1	157.5
62.5°	210.2	204.5	198.8	193.2	187.5	180.3	171.7	163.1	154.5	145.9	140.7
65°	184.1	178.4	172.7	167.0	161.3	154.4	146.3	138.2	130.2	122.1	117.0
67.5°	157.9	152.1	146.3	140.6	134.8	128.1	120.3	112.6	104.8	97.1	93.3
70°	140.7	135.1	129.5	123.9	118.4	111.9	104.7	97.4	90.2	82.9	79.3
72.5°	123.6	118.1	112.6	107.0	101.5	95.5	88.9	82.3	75.7	69.1	66.2
75°	97.4	92.4	87.4	82.5	77.5	72.2	66.5	60.8	55.1	49.4	48.4
77.5°	73.5	69.0	64.5	60.0	55.6	51.5	47.8	44.1	40.5	36.8	36.3
80°	58.2	54.0	49.8	45.5	41.3	38.1	35.9	33.7	31.5	29.4	29.0
82.5°	43.7	40.0	36.4	32.7	29.0	26.7	25.7	24.7	23.7	22.6	22.3
85°	24.7	22.4	20.1	17.9	15.6	14.3	14.0	13.7	13.4	13.0	12.8
87.5°	9.2	8.5	7.8	7.2	6.6	6.3	6.7	7.0	7.4	7.7	7.5
90°	1.1	2.3	3.4	5.1	6.3	7.4	9.1	10.8	12.5	14.3	13.7
92.5°	7.1	10.5	15.3	19.7	24.5	33.0	47.9	72.4	96.5	87.7	66.2
95°	19.4	21.1	27.4	37.1	51.9	74.1	122.6	207.6	301.2	338.2	274.3
97.5°	33.1	33.7	38.6	47.0	61.6	85.7	132.0	227.8	383.7	524.2	560.8
100°	42.2	42.8	46.8	54.8	68.4	90.7	130.6	215.0	365.0	540.1	652.5
102.5°	51.8	52.8	56.4	63.9	76.2	96.6	132.4	204.1	337.7	510.5	657.1
105°	66.2	67.9	71.3	78.1	89.0	106.7	137.5	196.2	304.0	458.6	622.3
107.5°	81.4	83.2	86.5	93.2	103.4	119.8	146.8	195.6	282.6	412.7	561.4
110°	92.4	94.1	97.0	103.2	112.9	128.9	154.6	197.9	274.3	386.7	523.0



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CANDELA DISTRIBUTION (continued):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
112.5°	102.4	104.2	107.0	113.3	123.0	138.5	162.3	202.5	269.8	369.4	489.7
115°	116.9	119.2	122.6	128.3	138.0	153.4	175.1	209.9	268.1	350.8	449.5
117.5°	131.4	134.0	136.9	142.1	153.0	167.2	188.7	219.7	269.1	339.8	425.2
120°	141.5	143.2	146.0	151.7	162.6	176.8	197.3	227.0	270.9	334.8	412.4
122.5°	150.1	151.8	154.7	160.8	171.2	186.4	206.5	233.9	274.1	331.6	401.9
125°	162.6	163.7	167.1	173.4	184.2	199.6	219.6	244.7	278.9	327.4	388.4
127.5°	172.0	173.7	178.0	184.3	196.3	211.7	231.0	253.6	284.4	325.3	376.6
130°	178.0	179.7	184.8	191.6	203.6	219.0	237.8	259.5	288.0	324.0	370.2
132.5°	182.5	184.7	190.3	198.5	210.5	225.4	243.8	265.0	290.8	323.5	364.2
135°	190.5	192.8	199.1	207.6	219.6	235.0	252.7	272.1	294.9	322.8	356.5
137.5°	198.0	200.4	206.6	215.7	227.6	241.8	258.8	277.3	297.6	321.6	349.8
140°	203.1	205.9	211.6	220.7	232.1	246.4	262.9	280.1	299.4	321.1	345.6
142.5°	208.5	210.9	217.1	225.3	236.7	250.1	266.1	282.8	300.8	320.2	342.0
145°	217.3	219.0	224.2	232.7	242.4	255.5	270.4	285.8	301.7	318.8	337.1
147.5°	226.2	227.2	232.3	239.7	249.0	260.2	273.8	287.6	301.7	316.7	332.3
150°	232.1	232.7	237.3	244.7	252.7	262.9	276.1	288.0	301.7	314.8	329.1
152.5°	238.1	238.2	242.8	249.3	256.3	266.1	277.4	289.0	300.4	312.6	325.5
155°	247.0	247.0	250.4	256.1	262.4	270.4	280.1	289.2	298.9	308.6	320.0
157.5°	254.0	254.5	257.2	262.3	267.6	273.8	281.5	289.8	296.9	305.0	313.8
160°	259.5	259.5	261.8	266.4	270.4	276.1	282.9	289.8	296.0	302.3	309.7
162.5°	263.6	263.6	265.5	269.1	272.6	277.4	283.4	289.3	294.2	299.6	305.6
165°	269.8	269.2	270.4	273.2	275.5	279.5	284.0	288.0	291.5	295.5	300.0
167.5°	274.5	273.8	274.3	276.5	278.1	280.6	283.9	287.1	288.7	291.3	294.7
170°	277.2	276.1	276.6	278.3	279.5	280.6	283.5	285.8	286.9	288.6	291.5
172.5°	279.0	278.3	278.5	279.7	280.4	281.1	283.5	285.3	285.5	286.3	288.3
175°	281.2	280.6	280.1	281.2	281.2	281.8	282.9	284.0	283.5	283.5	284.6
177.5°	282.2	281.8	281.3	281.8	281.8	281.8	282.2	283.1	282.2	281.8	282.2
180°	281.8	281.8	281.8	281.8	281.8	281.8	281.8	281.8	281.8	281.8	281.8



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CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
0°	574.5	574.5	574.5	574.5	574.5	574.5	574.5	574.5
2.5°	572.2	573.1	574.1	574.4	574.3	574.1	573.9	573.8
5°	568.5	569.4	570.3	570.7	570.5	570.3	570.1	569.9
7.5°	560.5	561.0	561.5	561.6	561.2	560.9	560.5	560.2
10°	553.3	553.4	553.5	553.3	552.8	552.3	551.7	551.2
12.5°	544.4	544.3	544.3	543.9	543.3	542.7	542.1	541.5
15°	528.7	528.2	527.7	527.1	526.4	525.6	524.9	524.2
17.5°	510.1	509.0	507.9	506.8	505.7	504.6	503.6	502.5
20°	497.3	495.9	494.6	493.3	492.0	490.8	489.6	488.3
22.5°	483.6	481.9	480.2	478.8	477.6	476.5	475.3	474.2
25°	461.1	459.0	456.8	455.1	454.0	452.9	451.7	450.6
27.5°	436.7	433.7	430.7	428.3	426.5	424.8	423.1	421.3
30°	419.3	415.8	412.3	409.7	408.0	406.4	404.7	403.0
32.5°	402.2	398.4	394.5	391.7	390.0	388.3	386.5	384.8
35°	376.9	372.4	368.0	364.8	363.0	361.1	359.2	357.4
37.5°	349.7	344.6	339.6	335.9	333.6	331.3	329.0	326.7
40°	330.8	325.4	320.0	316.1	313.7	311.4	309.0	306.6
42.5°	312.6	306.8	300.9	296.9	294.7	292.6	290.5	288.3
45°	285.9	280.0	274.1	269.9	267.5	265.0	262.5	260.0
47.5°	258.3	251.9	245.5	241.2	239.0	236.8	234.5	232.3
50°	239.7	233.3	226.9	222.5	220.1	217.7	215.3	212.9
52.5°	221.7	215.0	208.4	204.0	201.8	199.7	197.6	195.4
55°	194.9	188.9	182.9	178.8	176.8	174.7	172.6	170.5
57.5°	168.5	162.8	157.2	153.4	151.7	149.9	148.2	146.4
60°	151.9	146.3	140.7	137.0	135.3	133.5	131.8	130.0
62.5°	135.4	130.2	124.9	121.3	119.5	117.7	115.8	114.0
65°	111.9	106.9	101.8	98.7	97.5	96.4	95.3	94.1
67.5°	89.5	85.7	81.9	79.4	78.2	77.0	75.8	74.6
70°	75.7	72.1	68.4	66.1	64.9	63.8	62.6	61.5
72.5°	63.2	60.3	57.3	55.6	55.1	54.6	54.2	53.7
75°	47.3	46.3	45.2	44.6	44.4	44.2	44.0	43.8
77.5°	35.7	35.1	34.6	34.2	34.0	33.8	33.6	33.4
80°	28.7	28.4	28.1	27.9	27.6	27.4	27.2	27.0
82.5°	22.0	21.7	21.4	21.2	21.2	21.1	21.1	21.1
85°	12.6	12.4	12.2	12.1	12.1	12.1	12.1	12.1
87.5°	7.5	7.6	7.6	7.7	7.5	7.6	7.6	7.4
90°	14.3	14.8	15.4	16.5	16.0	16.5	17.1	16.5
92.5°	48.0	38.1	33.7	30.7	29.7	27.9	28.5	27.5
95°	205.3	139.2	108.9	88.4	77.6	72.4	68.4	66.2
97.5°	511.9	410.0	336.4	268.2	226.1	200.4	185.0	180.1
100°	672.5	626.3	559.5	478.5	420.9	379.3	357.1	357.6
102.5°	725.9	724.4	685.5	634.1	589.3	556.3	537.7	524.6
105°	741.5	798.5	809.4	794.5	768.3	746.6	728.4	725.5
107.5°	696.5	789.2	839.1	859.4	859.9	852.6	846.4	841.2
110°	653.6	758.6	830.5	870.4	886.4	890.9	889.8	888.6



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CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
112.5°	611.2	718.4	799.0	850.3	879.5	893.7	898.0	898.2
115°	555.0	654.2	738.1	800.2	843.0	868.1	879.5	882.4
117.5°	514.2	599.9	675.2	738.3	782.9	811.6	828.1	831.9
120°	492.8	569.8	638.2	695.9	740.9	772.9	786.5	790.0
122.5°	475.9	545.6	609.0	662.5	702.6	731.3	746.4	750.7
125°	453.4	515.6	570.4	616.0	652.5	677.6	691.9	695.9
127.5°	433.8	489.3	538.7	580.2	612.7	634.1	647.0	650.7
130°	421.5	472.8	519.0	557.8	588.1	608.6	620.6	625.1
132.5°	410.1	457.3	500.3	537.3	565.7	586.2	596.8	600.0
135°	394.7	435.2	472.3	504.8	532.7	549.8	560.1	564.1
137.5°	380.7	413.9	445.8	474.0	497.5	514.8	523.5	526.1
140°	372.5	401.5	428.9	453.4	475.1	491.1	500.2	499.6
142.5°	364.7	389.7	413.4	434.7	453.2	467.4	475.6	475.0
145°	355.3	374.2	392.4	409.0	423.2	435.2	439.8	440.9
147.5°	347.7	362.6	377.4	389.1	399.9	408.0	412.4	412.8
150°	342.2	355.3	367.3	378.2	386.7	393.0	396.4	396.4
152.5°	337.2	348.5	359.1	368.1	374.8	380.7	382.7	382.7
155°	329.7	338.8	347.4	354.2	359.3	363.9	365.0	365.6
157.5°	321.7	329.3	336.0	341.3	345.8	349.2	350.1	350.0
160°	317.1	323.4	329.1	333.1	337.1	340.5	340.5	339.9
162.5°	311.7	317.0	322.3	325.8	328.4	331.4	331.4	330.8
165°	304.6	308.0	312.0	314.8	317.1	319.4	318.8	318.8
167.5°	298.4	301.0	303.3	305.4	306.4	308.0	307.4	307.4
170°	294.3	296.0	298.3	299.4	300.0	301.2	300.6	300.6
172.5°	290.7	291.9	293.7	294.4	294.5	295.7	294.7	294.2
175°	285.8	286.3	287.5	287.5	287.5	288.0	287.5	286.9
177.5°	282.7	283.1	283.6	283.6	283.1	283.6	282.7	282.7
180°	281.8	281.8	281.8	281.8	281.8	281.8	281.8	281.8

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