

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: P331924-930

Luminaire Tested: **S123DIP-S560D585U930-4F0-1E-UDD-D4**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P331924-930
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: S123DIP-S560D585U930-4F0-1E-UDD-D4
Description: DEFINE 3 DIRECT-INDIRECT PENDANT LED LUMINAIRE
DOWNLIGHT 560 LUMENS PER FOOT, DROP SATIN WHITE DIFFUSER
UPLIGHT 585 LUMENS PER FOOT, BATWING OPTIC
Light Source: -
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 3656.7 lumens
Efficiency: N/A
Efficacy: 111.5 lumens/watt
Spacing Criteria (0/90/45): 1.2 / 1.26 / 1.37
Luminous Opening: Rectangular w/ Sides (W: 0.25' x L: 4' x H: 0.08')
CIE Type: General Diffuse

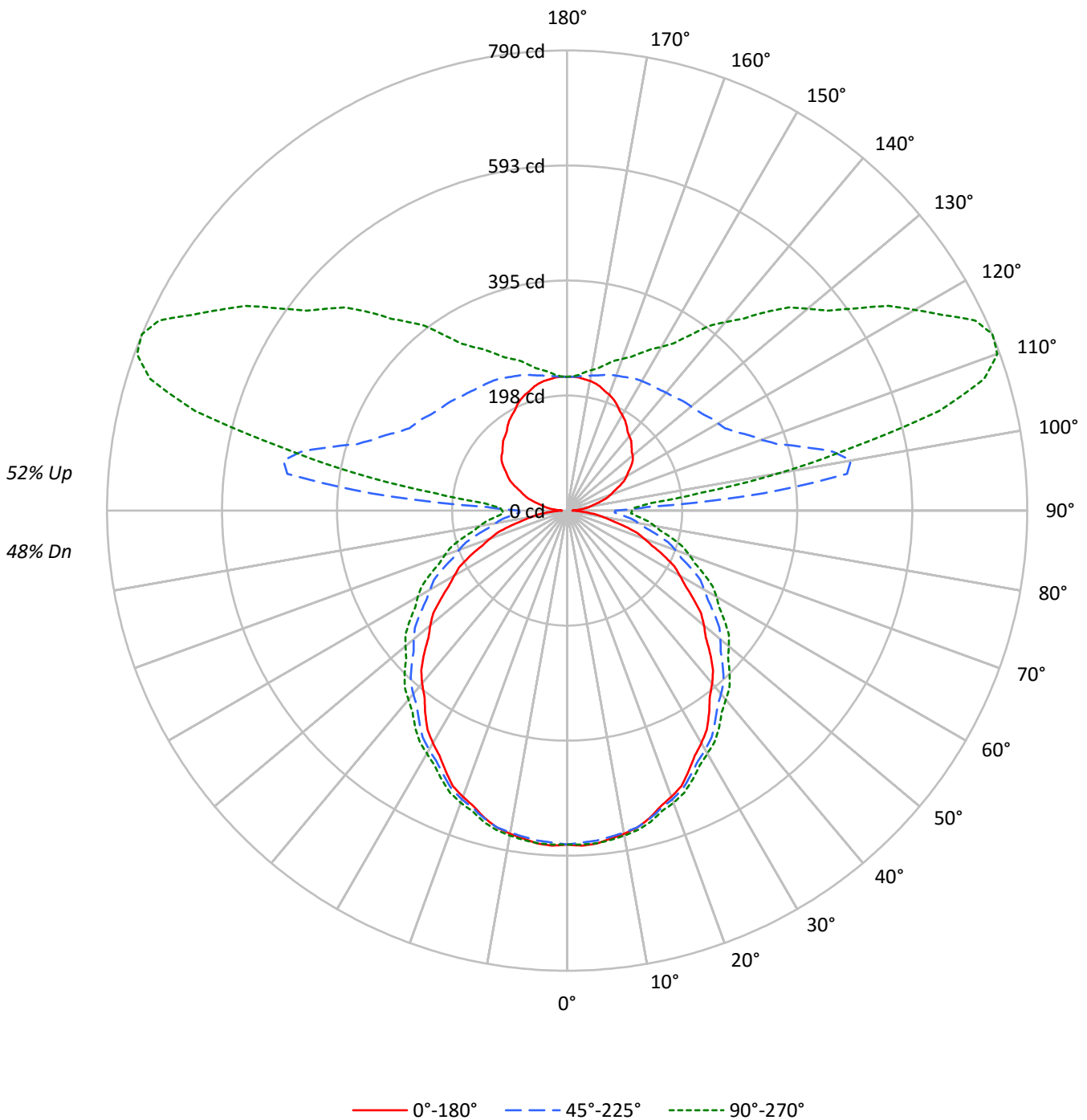
Input Watts (W): 32.8
Input Voltage (V): 120
Input Current (A_{in}): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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	107	107	107	107	98	98	98	98	82	82	82	68	68	68	55	55	55	48
1	96	92	87	83	88	84	81	77	71	68	65	58	56	54	47	45	44	39
2	87	79	73	67	80	73	67	63	61	57	53	50	47	45	40	38	36	32
3	79	69	62	56	73	64	57	52	54	49	44	44	41	37	35	33	30	26
4	73	61	53	47	66	57	49	44	48	42	38	39	35	32	32	28	26	22
5	66	54	46	40	61	50	43	37	42	37	32	35	31	27	28	25	22	19
6	61	49	40	34	56	45	38	32	38	32	28	32	27	24	26	22	20	17
7	56	44	36	30	52	41	33	28	35	29	25	29	24	21	23	20	17	15
8	52	40	32	26	48	37	30	25	31	26	22	26	22	19	21	18	16	13
9	49	36	29	23	45	34	27	22	29	23	19	24	20	17	20	16	14	12
10	45	33	26	21	42	31	24	20	26	21	17	22	18	15	18	15	13	11

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	6171	6171	6171
5°	6191	6015	6019
10°	6135	5878	5848
15°	6056	5720	5660
20°	5943	5540	5454
25°	5804	5333	5238
30°	5660	5147	5019
35°	5500	4950	4844
40°	5347	4771	4656
45°	5177	4599	4506
50°	5010	4430	4341
55°	4826	4256	4193
60°	4646	4080	4040
65°	4462	3891	3859
70°	4185	3680	3673
75°	3832	3437	3484
80°	3426	3199	3268
85°	3052	3034	3143



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	54.4	1.5
10°-20°	154.9	4.2
20°-30°	231.7	6.3
30°-40°	276.7	7.6
40°-50°	289.5	7.9
50°-60°	271.7	7.4
60°-70°	226.9	6.2
70°-80°	162.4	4.4
80°-90°	98.6	2.7
90°-100°	188.6	5.2
100°-110°	406.6	11.1
110°-120°	385.9	10.6
120°-130°	301.1	8.2
130°-140°	231.6	6.3
140°-150°	168.8	4.6
150°-160°	116.5	3.2
160°-170°	68.4	1.9
170°-180°	22.3	0.6
0°-30°	441.0	12.1
0°-40°	717.7	19.6
0°-60°	1279.0	35.0
0°-90°	1766.8	48.3
90°-120°	981.2	26.8
90°-150°	1682.6	46.0
90°-180°	1890.0	51.7
0°-180°	3656.7	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	573	573	573	573	573	
5°	574	573	569	574	573	54
15°	546	548	548	554	553	154
25°	493	499	502	509	510	227
35°	425	435	443	452	455	266
45°	347	362	378	389	395	268
55°	265	286	308	324	330	237
65°	183	208	235	253	260	181
75°	99	129	160	180	188	106
85°	31	62	95	115	122	32
90°	9	44	82	104	112	7
95°	23	83	338	161	141	22
105°	59	100	421	718	662	62
115°	98	130	319	675	772	98
125°	134	159	287	516	605	119
135°	156	186	271	417	482	121
145°	178	203	260	332	367	111
155°	201	217	252	286	298	93
165°	220	226	241	256	260	62
175°	229	230	231	234	234	22
180°	230	230	230	230	230	



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CANDELA DISTRIBUTION (FULL):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
0°	573.3	573.3	573.3	573.3	573.3	573.3	573.3	573.3	573.3	573.3	573.3
2.5°	575.8	575.5	575.2	574.8	574.5	573.9	573.0	572.1	571.2	570.3	571.2
5°	574.0	573.6	573.4	573.2	572.8	572.3	571.4	570.6	569.8	568.9	570.1
7.5°	568.3	568.3	568.4	568.5	568.6	568.2	567.4	566.6	565.7	564.9	566.3
10°	563.4	563.6	563.9	564.2	564.4	564.3	563.5	562.9	562.1	561.5	562.9
12.5°	557.3	557.7	558.2	558.5	558.9	558.9	558.4	557.9	557.4	556.9	558.2
15°	546.5	546.9	547.3	547.7	548.1	548.3	548.1	548.0	547.9	547.7	549.1
17.5°	532.7	533.5	534.4	535.2	536.1	536.5	536.4	536.3	536.3	536.2	537.4
20°	522.8	523.6	524.4	525.2	526.0	526.6	526.9	527.2	527.4	527.7	529.0
22.5°	512.3	513.1	513.9	514.8	515.6	516.2	516.6	517.0	517.4	517.7	519.3
25°	493.4	494.8	496.2	497.6	499.0	499.9	500.3	500.7	501.1	501.5	503.3
27.5°	474.4	476.0	477.6	479.2	480.7	481.9	482.8	483.7	484.6	485.5	487.1
30°	460.9	462.7	464.5	466.4	468.1	469.6	470.7	471.8	472.9	474.0	475.7
32.5°	445.9	447.9	450.0	452.0	454.0	455.8	457.2	458.6	460.1	461.5	463.3
35°	424.7	426.9	429.1	431.4	433.6	435.6	437.4	439.2	441.0	442.8	444.9
37.5°	402.2	404.7	407.2	409.7	412.2	414.6	416.8	419.0	421.2	423.5	425.8
40°	387.2	389.7	392.2	394.7	397.2	399.8	402.6	405.4	408.1	410.9	413.3
42.5°	370.7	373.8	376.8	379.8	382.9	385.9	388.8	391.7	394.6	397.5	400.1
45°	347.2	350.6	353.9	357.3	360.5	363.9	367.5	370.9	374.4	377.8	380.5
47.5°	322.6	326.4	330.2	333.9	337.7	341.6	345.6	349.5	353.5	357.5	360.4
50°	306.6	310.5	314.4	318.3	322.2	326.3	330.6	334.9	339.2	343.5	346.7
52.5°	289.7	293.8	297.9	302.0	306.1	310.5	315.3	320.0	324.7	329.5	332.8
55°	264.8	269.4	273.9	278.5	283.2	287.9	292.9	297.9	302.9	307.9	311.6
57.5°	240.6	245.3	250.1	254.9	259.7	264.8	270.3	275.7	281.2	286.7	290.4
60°	223.6	228.6	233.6	238.6	243.5	248.9	254.6	260.3	266.0	271.7	275.6
62.5°	207.6	212.7	217.8	222.9	228.0	233.6	239.6	245.6	251.7	257.7	261.5
65°	183.0	188.4	193.8	199.3	204.6	210.4	216.5	222.6	228.7	234.8	239.0
67.5°	158.0	163.8	169.5	175.2	181.0	186.9	193.2	199.4	205.6	211.8	216.4
70°	140.6	146.5	152.5	158.4	164.4	170.7	177.3	184.0	190.7	197.4	201.8
72.5°	124.5	130.5	136.5	142.4	148.4	154.8	161.7	168.6	175.5	182.4	186.9
75°	99.3	105.8	112.3	118.9	125.4	132.2	139.1	146.0	153.0	159.9	164.4
77.5°	77.3	83.9	90.5	97.0	103.6	110.4	117.4	124.4	131.4	138.4	143.2
80°	61.8	68.6	75.4	82.3	89.0	96.0	103.2	110.5	117.7	124.9	129.6
82.5°	48.3	55.3	62.1	69.1	76.0	83.1	90.4	97.8	105.1	112.4	117.2
85°	30.6	37.5	44.5	51.4	58.4	65.5	72.9	80.2	87.6	94.9	99.6
87.5°	16.8	23.9	31.0	38.2	45.2	52.4	59.8	67.2	74.5	81.9	86.5
90°	9.0	16.8	24.5	32.7	40.4	48.3	56.7	65.2	73.7	82.2	86.4
92.5°	13.4	22.3	32.4	42.2	52.2	65.6	84.7	111.7	138.3	138.1	125.1
95°	22.7	29.5	40.0	53.3	70.8	95.1	141.4	217.5	300.6	337.6	289.8
97.5°	33.1	38.5	47.3	59.1	75.9	101.2	145.4	230.1	363.7	484.7	518.7
100°	40.0	44.9	52.7	63.6	79.2	102.7	141.7	216.9	345.6	494.7	590.4
102.5°	47.4	52.2	59.0	69.2	83.2	105.0	140.5	205.2	320.3	467.6	590.9
105°	58.9	63.7	69.8	78.7	90.8	109.9	141.0	194.9	288.7	420.7	558.1
107.5°	70.7	74.8	80.4	88.7	99.9	117.5	145.2	190.6	267.2	379.0	503.9
110°	79.1	83.0	87.8	95.4	105.8	122.9	149.4	190.2	258.1	355.2	470.0



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CANDELA DISTRIBUTION (continued):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
112.5°	87.2	90.7	95.1	102.2	112.2	128.6	153.4	191.4	251.6	338.1	439.8
115°	98.5	102.0	106.4	112.8	122.3	138.2	160.9	194.2	246.6	319.1	402.8
117.5°	110.1	113.3	116.7	122.0	131.8	146.3	168.5	198.4	243.4	305.8	378.6
120°	117.8	119.9	122.9	128.2	137.8	152.1	173.4	202.1	242.6	299.2	365.7
122.5°	124.9	126.6	129.3	134.7	143.6	158.2	179.0	205.7	242.9	294.1	354.5
125°	134.4	135.3	138.1	143.2	152.1	166.6	186.9	211.4	243.4	286.9	339.6
127.5°	142.1	143.4	146.7	151.7	161.3	175.5	194.6	216.3	244.8	281.5	326.0
130°	147.0	148.2	152.3	157.7	167.3	181.2	199.3	219.8	245.8	277.9	318.2
132.5°	150.2	151.9	156.5	163.1	172.8	186.1	203.3	222.8	246.1	275.0	310.7
135°	156.5	158.2	163.3	170.1	179.7	193.0	209.0	226.2	246.4	270.7	300.6
137.5°	162.6	164.4	169.3	176.7	186.2	198.2	213.0	228.9	246.3	266.7	291.9
140°	166.2	168.5	173.2	180.6	189.9	201.7	215.6	230.0	246.2	264.3	286.4
142.5°	170.6	172.5	177.4	184.0	193.1	204.1	217.2	230.9	245.6	261.5	281.2
145°	177.8	179.0	183.1	190.0	197.7	208.3	220.5	233.0	246.0	259.9	276.0
147.5°	184.4	185.2	189.4	195.4	203.0	212.1	223.2	234.5	246.0	258.2	271.3
150°	189.2	189.7	193.5	199.5	206.0	214.3	225.1	234.8	246.0	256.7	268.3
152.5°	194.1	194.2	198.0	203.3	209.0	217.0	226.2	235.6	244.9	254.9	265.4
155°	201.4	201.4	204.2	208.8	213.9	220.5	228.4	235.8	243.7	251.6	260.9
157.5°	207.1	207.5	209.7	213.9	218.2	223.2	229.5	236.3	242.1	248.7	255.8
160°	211.6	211.6	213.4	217.2	220.5	225.1	230.6	236.3	241.3	246.5	252.5
162.5°	214.9	214.9	216.5	219.4	222.3	226.2	231.1	235.9	239.9	244.3	249.2
165°	220.0	219.5	220.5	222.7	224.6	227.9	231.5	234.8	237.7	240.9	244.6
167.5°	223.8	223.2	223.6	225.4	226.7	228.8	231.5	234.1	235.4	237.5	240.3
170°	226.0	225.1	225.5	226.9	227.9	228.8	231.1	233.0	233.9	235.3	237.7
172.5°	227.5	226.9	227.1	228.0	228.6	229.2	231.1	232.6	232.8	233.4	235.1
175°	229.3	228.8	228.4	229.3	229.3	229.8	230.6	231.5	231.1	231.1	232.0
177.5°	230.1	229.8	229.3	229.8	229.8	229.8	230.1	230.8	230.1	229.8	230.1
180°	229.8	229.8	229.8	229.8	229.8	229.8	229.8	229.8	229.8	229.8	229.8



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CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
0°	573.3	573.3	573.3	573.3	573.3	573.3	573.3	573.3
2.5°	572.1	573.0	573.9	574.3	574.1	574.1	574.0	573.8
5°	571.2	572.3	573.4	573.9	573.7	573.6	573.5	573.3
7.5°	567.7	569.1	570.5	571.1	571.0	570.8	570.6	570.5
10°	564.3	565.7	567.0	567.5	567.3	567.0	566.7	566.5
12.5°	559.5	560.8	562.1	562.6	562.3	562.0	561.7	561.5
15°	550.5	551.9	553.3	553.9	553.8	553.6	553.5	553.3
17.5°	538.7	540.0	541.2	541.8	541.5	541.4	541.2	541.0
20°	530.3	531.5	532.7	533.5	533.5	533.7	533.9	533.9
22.5°	520.9	522.5	524.1	524.8	524.7	524.6	524.6	524.5
25°	505.1	507.0	508.7	509.6	509.6	509.6	509.6	509.6
27.5°	488.6	490.2	491.7	492.6	492.7	492.8	492.9	493.0
30°	477.4	479.0	480.7	481.5	481.5	481.5	481.5	481.5
32.5°	465.0	466.8	468.6	469.7	470.0	470.3	470.7	471.0
35°	446.9	449.1	451.1	452.4	453.0	453.6	454.1	454.7
37.5°	428.1	430.5	432.8	434.3	434.7	435.1	435.6	436.0
40°	415.6	418.0	420.4	421.8	422.4	423.0	423.5	424.0
42.5°	402.6	405.2	407.8	409.4	410.3	411.0	411.8	412.5
45°	383.1	385.7	388.4	390.3	391.3	392.5	393.6	394.7
47.5°	363.5	366.4	369.3	371.3	372.1	373.0	373.9	374.7
50°	349.8	353.1	356.3	358.3	359.3	360.3	361.3	362.2
52.5°	336.1	339.4	342.8	345.0	346.2	347.3	348.5	349.8
55°	315.4	319.1	322.9	325.3	326.4	327.5	328.6	329.8
57.5°	294.2	298.0	301.7	304.3	305.6	306.9	308.2	309.5
60°	279.5	283.3	287.2	289.9	291.5	292.9	294.5	296.0
62.5°	265.5	269.4	273.2	275.9	277.3	278.7	280.1	281.5
65°	243.1	247.3	251.5	254.3	255.7	257.1	258.4	259.8
67.5°	220.9	225.5	230.1	232.9	234.1	235.2	236.4	237.6
70°	206.3	210.7	215.2	218.0	219.4	220.8	222.2	223.6
72.5°	191.4	196.0	200.6	203.6	205.0	206.4	207.7	209.1
75°	169.0	173.7	178.2	181.3	183.0	184.7	186.3	188.0
77.5°	148.1	152.9	157.7	160.8	162.1	163.3	164.6	165.9
80°	134.4	139.1	143.8	146.8	148.2	149.6	151.0	152.4
82.5°	121.9	126.5	131.3	134.4	135.7	137.1	138.5	139.9
85°	104.4	109.1	113.8	116.8	118.2	119.6	121.0	122.4
87.5°	91.3	96.1	100.9	104.2	105.5	107.0	108.4	109.7
90°	91.6	96.9	102.0	106.0	106.9	108.8	110.6	111.5
92.5°	115.0	111.5	112.4	113.0	113.4	113.3	115.0	115.4
95°	237.8	188.2	167.9	153.9	146.5	143.7	141.9	141.4
97.5°	482.9	404.0	348.1	295.3	262.4	242.8	231.6	229.0
100°	610.7	577.0	526.6	463.3	417.7	385.1	368.4	370.2
102.5°	650.9	653.6	625.8	586.7	551.5	526.0	512.3	503.0
105°	659.2	709.6	722.3	712.7	692.6	676.1	662.5	661.5
107.5°	617.8	697.0	741.5	760.5	762.1	757.4	753.6	750.5
110°	580.1	669.3	731.5	766.4	780.5	785.4	785.5	785.7



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CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
112.5°	542.3	633.2	702.4	746.6	771.6	784.4	789.1	790.5
115°	492.2	576.5	648.2	701.1	737.0	758.6	769.1	772.5
117.5°	454.6	527.7	592.5	646.0	683.5	708.0	722.5	726.8
120°	434.4	500.3	559.4	608.4	646.1	673.1	685.3	689.0
122.5°	417.9	477.8	532.6	578.3	611.9	636.3	649.5	654.0
125°	395.5	449.1	496.7	535.8	566.6	588.0	600.5	604.8
127.5°	375.4	423.4	466.4	502.1	529.5	548.0	559.5	563.4
130°	362.6	407.2	447.4	480.8	506.3	523.8	534.4	539.0
132.5°	350.7	391.7	429.3	461.1	485.3	503.0	512.5	516.1
135°	334.3	369.8	402.5	430.6	454.1	468.7	477.8	481.8
137.5°	319.3	348.5	376.7	401.1	421.0	435.9	443.6	446.5
140°	310.3	336.1	360.5	381.9	400.3	414.0	422.2	422.3
142.5°	301.6	323.8	345.0	363.6	379.4	391.7	399.0	399.3
145°	292.0	308.4	324.4	338.7	350.9	361.2	365.5	367.0
147.5°	284.1	296.7	309.0	319.0	328.3	335.4	339.5	340.3
150°	279.0	289.7	299.5	308.4	315.7	321.1	324.2	324.4
152.5°	274.9	284.1	292.8	300.2	305.7	310.5	312.3	312.3
155°	268.8	276.2	283.2	288.8	292.9	296.7	297.6	298.1
157.5°	262.3	268.5	273.9	278.3	281.9	284.7	285.4	285.4
160°	258.5	263.7	268.3	271.6	274.8	277.6	277.6	277.1
162.5°	254.1	258.4	262.8	265.6	267.7	270.2	270.2	269.7
165°	248.3	251.1	254.4	256.7	258.5	260.4	259.9	259.9
167.5°	243.3	245.4	247.3	249.0	249.8	251.1	250.6	250.6
170°	239.9	241.3	243.2	244.1	244.6	245.6	245.1	245.1
172.5°	237.0	238.0	239.5	240.0	240.1	241.1	240.3	239.9
175°	233.0	233.4	234.4	234.4	234.4	234.8	234.4	233.9
177.5°	230.5	230.8	231.2	231.2	230.8	231.2	230.5	230.5
180°	229.8	229.8	229.8	229.8	229.8	229.8	229.8	229.8

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