

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: P331914-940

Luminaire Tested: **S123DIP-S560D365U940-4F0-1E-UDD-D1**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P331914-940
REPORT IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-1807-864-9,
Test Lab: INNOVATION CENTER
Issue Date: 3/3/2020
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: NEO-RAY
Catalog Number: S123DIP-S560D365U940-4F0-1E-UDD-D1
Description: DEFINE 3 DIRECT-INDIRECT PENDANT LED LUMINAIRE
DOWNLIGHT 560 LUMENS PER FOOT, DROP SATIN WHITE DIFFUSER
UPLIGHT 365 LUMENS PER FOOT, FLUSH SATIN WHITE DIFFUSER
Light Source: -
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 3219.8 lumens
Efficiency: N/A
Efficacy: 117.1 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

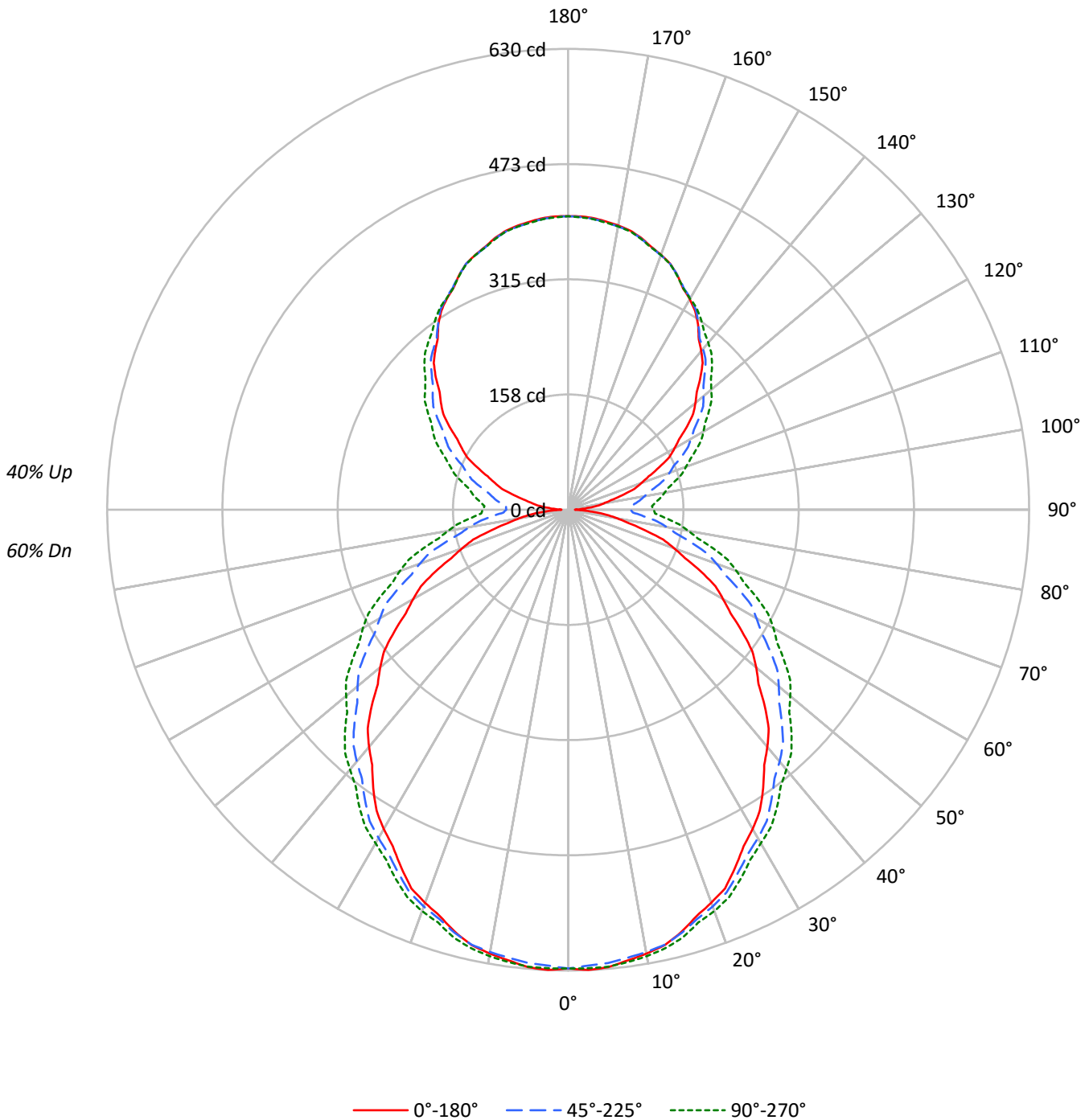
Input Watts (W): 27.5
Input Voltage (V): 120
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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
RW	70	50	30	10	70	50	30	10	50	30	10	50	30	10	50	30	10
RCR																	
0	110	110	110	110	102	102	102	102	89	89	89	77	77	77	65	65	65
1	99	94	89	85	92	88	84	80	76	73	70	65	63	61	56	54	53
2	89	81	74	69	83	76	70	65	66	61	57	57	53	50	48	46	43
3	81	71	63	57	75	66	59	54	58	52	48	50	46	42	42	39	36
4	74	63	54	48	69	59	51	45	51	45	40	44	39	36	38	34	31
5	68	56	47	41	63	52	44	39	46	39	35	40	35	31	34	30	27
6	63	50	41	35	58	47	39	33	41	35	30	36	31	27	31	27	24
7	58	45	37	31	54	42	35	29	37	31	26	32	27	24	28	24	21
8	54	41	33	27	50	38	31	26	34	28	23	30	25	21	26	22	19
9	50	37	30	24	47	35	28	23	31	25	21	27	22	19	24	20	17
10	47	34	27	22	44	32	25	21	29	23	19	25	20	17	22	18	15

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	6750	6750	6750
5°	6771	6579	6584
10°	6710	6428	6396
15°	6624	6256	6191
20°	6501	6059	5966
25°	6348	5833	5729
30°	6191	5629	5489
35°	6016	5414	5298
40°	5848	5218	5093
45°	5664	5030	4929
50°	5480	4845	4748
55°	5278	4654	4586
60°	5080	4461	4419
65°	4879	4255	4221
70°	4575	4025	4016
75°	4191	3760	3810
80°	3748	3499	3575
85°	3332	3319	3435



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	59.4	1.8
10°-20°	169.5	5.3
20°-30°	253.4	7.9
30°-40°	302.7	9.4
40°-50°	316.7	9.8
50°-60°	297.2	9.2
60°-70°	248.2	7.7
70°-80°	177.6	5.5
80°-90°	107.1	3.3
90°-100°	92.6	2.9
100°-110°	127.0	3.9
110°-120°	165.6	5.1
120°-130°	193.6	6.0
130°-140°	205.0	6.4
140°-150°	195.1	6.1
150°-160°	162.8	5.1
160°-170°	108.3	3.4
170°-180°	37.9	1.2
0°-30°	482.3	15.0
0°-40°	785.0	24.4
0°-60°	1398.8	43.4
0°-90°	1931.7	60.0
90°-120°	385.3	12.0
90°-150°	979.1	30.4
90°-180°	1288.0	40.0
0°-180°	3219.8	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	627	627	627	627	627	
5°	628	626	622	627	627	59
15°	598	600	599	605	605	168
25°	540	546	548	557	557	249
35°	464	475	484	494	497	290
45°	380	396	413	426	432	293
55°	290	312	337	354	361	259
65°	200	227	257	277	284	198
75°	109	141	175	197	206	116
85°	33	68	104	126	134	35
90°	9	46	85	108	117	7
95°	26	55	91	112	120	27
105°	76	94	126	144	152	81
115°	137	147	170	186	192	136
125°	198	200	218	231	235	177
135°	256	257	264	275	278	197
145°	309	309	310	315	317	193
155°	353	353	354	355	353	163
165°	385	384	384	386	384	108
175°	400	399	399	401	399	38
180°	401	401	401	401	401	



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CANDELA DISTRIBUTION (FULL):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
0°	627.1	627.1	627.1	627.1	627.1	627.1	627.1	627.1	627.1	627.1	627.1
2.5°	629.8	629.5	629.1	628.7	628.3	627.7	626.7	625.7	624.7	623.8	624.7
5°	627.8	627.4	627.1	626.9	626.5	625.9	625.0	624.1	623.2	622.2	623.5
7.5°	621.6	621.6	621.7	621.8	621.9	621.4	620.5	619.6	618.8	617.9	619.4
10°	616.2	616.4	616.7	617.1	617.3	617.2	616.4	615.6	614.8	614.1	615.6
12.5°	609.6	610.0	610.5	610.8	611.3	611.3	610.7	610.2	609.7	609.1	610.6
15°	597.7	598.2	598.6	599.1	599.5	599.7	599.5	599.3	599.2	599.1	600.6
17.5°	582.6	583.5	584.5	585.4	586.3	586.7	586.7	586.6	586.6	586.5	587.8
20°	571.8	572.7	573.5	574.4	575.3	576.0	576.3	576.6	576.8	577.2	578.5
22.5°	560.3	561.2	562.0	563.0	563.9	564.5	565.0	565.4	565.9	566.2	568.0
25°	539.7	541.2	542.7	544.2	545.7	546.7	547.2	547.6	548.0	548.5	550.5
27.5°	518.9	520.6	522.4	524.1	525.8	527.1	528.1	529.1	530.0	531.0	532.7
30°	504.1	506.0	508.0	510.1	512.0	513.6	514.8	516.0	517.2	518.4	520.3
32.5°	487.7	489.9	492.1	494.4	496.6	498.5	500.1	501.6	503.2	504.8	506.8
35°	464.5	466.9	469.3	471.8	474.2	476.4	478.4	480.4	482.3	484.3	486.6
37.5°	439.9	442.6	445.3	448.1	450.8	453.4	455.8	458.3	460.7	463.2	465.7
40°	423.5	426.2	429.0	431.7	434.4	437.3	440.3	443.4	446.4	449.4	452.0
42.5°	405.5	408.8	412.1	415.4	418.8	422.0	425.3	428.4	431.6	434.7	437.6
45°	379.8	383.4	387.1	390.7	394.3	398.1	401.9	405.6	409.5	413.2	416.2
47.5°	352.8	357.0	361.1	365.2	369.3	373.6	378.0	382.3	386.6	391.0	394.2
50°	335.4	339.7	343.8	348.1	352.4	356.9	361.6	366.3	371.0	375.7	379.2
52.5°	316.8	321.3	325.8	330.3	334.7	339.7	344.8	350.0	355.2	360.4	364.0
55°	289.6	294.6	299.6	304.6	309.7	314.9	320.4	325.8	331.3	336.7	340.8
57.5°	263.1	268.3	273.6	278.7	284.0	289.6	295.6	301.6	307.6	313.5	317.6
60°	244.5	250.0	255.5	260.9	266.4	272.2	278.5	284.7	290.9	297.1	301.4
62.5°	227.0	232.6	238.3	243.8	249.4	255.5	262.1	268.7	275.3	281.9	286.1
65°	200.1	206.1	212.0	217.9	223.8	230.2	236.8	243.4	250.1	256.8	261.4
67.5°	172.8	179.1	185.4	191.6	198.0	204.5	211.3	218.1	224.9	231.7	236.7
70°	153.7	160.2	166.7	173.3	179.8	186.7	193.9	201.3	208.6	215.9	220.7
72.5°	136.2	142.8	149.3	155.8	162.3	169.3	176.8	184.4	191.9	199.5	204.5
75°	108.6	115.7	122.9	130.0	137.1	144.5	152.1	159.7	167.3	174.9	179.9
77.5°	84.5	91.8	99.0	106.1	113.3	120.7	128.4	136.1	143.7	151.4	156.7
80°	67.6	75.1	82.5	90.0	97.4	105.0	112.9	120.8	128.8	136.6	141.8
82.5°	52.9	60.5	67.9	75.5	83.1	90.9	98.9	106.9	114.9	123.0	128.1
85°	33.4	41.0	48.7	56.3	63.8	71.6	79.7	87.7	95.8	103.8	109.0
87.5°	18.2	25.9	33.6	41.3	49.0	56.8	64.7	72.7	80.6	88.5	93.7
90°	9.2	17.3	25.5	33.6	41.7	50.1	58.8	67.4	76.1	84.7	90.2
92.5°	16.0	23.2	30.3	37.5	44.7	52.3	60.5	68.7	76.8	84.9	90.2
95°	26.1	32.5	39.0	45.3	51.7	58.9	67.0	74.9	82.9	91.0	95.9
97.5°	39.7	45.4	51.1	56.8	62.5	69.2	76.7	84.2	91.7	99.2	104.1
100°	49.0	54.3	59.6	64.8	70.1	76.4	83.7	91.0	98.4	105.8	110.4
102.5°	59.8	64.4	69.0	73.7	78.3	84.3	91.6	98.9	106.2	113.6	118.1
105°	76.3	80.2	83.9	87.7	91.5	96.9	104.2	111.3	118.4	125.6	129.8
107.5°	95.0	98.2	101.3	104.5	107.7	112.5	119.0	125.4	131.8	138.3	142.6
110°	106.5	109.4	112.3	115.1	118.0	122.5	128.8	135.0	141.2	147.4	151.6



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CANDELA DISTRIBUTION (continued):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
112.5°	119.1	121.5	123.8	126.1	128.4	132.5	138.4	144.3	150.1	156.0	160.2
115°	137.3	139.4	141.4	143.5	145.4	149.2	154.4	159.8	165.1	170.4	174.2
117.5°	156.2	157.5	158.7	160.1	161.3	164.4	169.3	174.3	179.2	184.2	187.8
120°	167.6	168.7	169.9	171.1	172.3	175.2	179.9	184.5	189.1	193.8	197.2
122.5°	179.9	180.6	181.3	182.0	182.7	185.4	189.9	194.5	199.1	203.7	206.9
125°	198.0	198.2	198.5	198.7	198.9	201.2	205.4	209.6	213.9	218.2	221.1
127.5°	215.4	215.7	216.1	216.3	216.6	218.6	222.0	225.5	229.0	232.5	235.1
130°	227.0	227.5	227.8	228.3	228.7	230.3	233.1	235.9	238.8	241.6	244.2
132.5°	238.1	238.6	239.2	239.7	240.2	241.7	243.9	246.2	248.4	250.7	253.2
135°	255.7	255.9	256.2	256.5	256.7	257.7	259.3	260.9	262.5	264.0	266.5
137.5°	271.9	272.2	272.4	272.6	272.9	273.5	274.6	275.7	276.9	278.0	280.1
140°	282.8	283.0	283.4	283.7	284.1	284.5	285.1	285.6	286.1	286.7	288.8
142.5°	293.0	293.3	293.6	293.7	294.0	294.2	294.4	294.6	294.8	295.1	297.0
145°	309.2	309.2	309.2	309.2	309.2	309.2	309.4	309.7	309.9	310.0	311.2
147.5°	322.6	322.9	323.2	323.4	323.6	323.9	324.0	324.2	324.4	324.7	325.0
150°	332.4	332.6	332.7	332.9	333.1	333.1	333.3	333.4	333.6	333.7	333.7
152.5°	340.5	340.7	340.9	341.1	341.3	341.4	341.5	341.6	341.7	341.8	341.9
155°	353.3	353.3	353.3	353.3	353.3	353.3	353.4	353.4	353.5	353.6	353.8
157.5°	364.1	364.0	363.9	363.8	363.7	363.7	363.8	363.8	363.9	364.0	364.3
160°	370.9	370.8	370.6	370.5	370.3	370.2	370.2	370.2	370.2	370.2	370.6
162.5°	376.9	376.7	376.6	376.4	376.1	376.1	376.1	376.2	376.3	376.3	376.7
165°	384.8	384.6	384.3	384.1	383.9	383.8	383.8	383.8	383.8	383.8	384.2
167.5°	391.0	390.7	390.5	390.1	389.9	389.8	389.9	389.9	389.9	390.0	390.4
170°	394.5	394.2	394.0	393.7	393.4	393.2	393.2	393.2	393.2	393.2	393.8
172.5°	397.3	397.0	396.7	396.5	396.2	396.0	396.0	396.0	396.0	396.0	396.5
175°	400.2	399.9	399.7	399.4	399.1	399.0	399.0	399.0	399.0	399.0	399.4
177.5°	401.4	401.2	400.9	400.7	400.5	400.4	400.4	400.4	400.4	400.4	400.7
180°	401.2	401.2	401.2	401.2	401.2	401.2	401.2	401.2	401.2	401.2	401.2



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CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
0°	627.1	627.1	627.1	627.1	627.1	627.1	627.1	627.1
2.5°	625.7	626.7	627.7	628.1	627.9	627.9	627.8	627.6
5°	624.7	625.9	627.1	627.7	627.5	627.3	627.2	627.1
7.5°	620.9	622.4	624.0	624.6	624.5	624.3	624.1	623.9
10°	617.2	618.7	620.2	620.7	620.5	620.2	619.8	619.6
12.5°	612.0	613.3	614.7	615.3	615.0	614.7	614.4	614.1
15°	602.1	603.6	605.1	605.8	605.6	605.5	605.4	605.2
17.5°	589.2	590.6	591.9	592.5	592.3	592.1	591.9	591.7
20°	580.0	581.3	582.6	583.4	583.5	583.7	583.9	584.0
22.5°	569.7	571.5	573.2	574.0	573.9	573.8	573.7	573.6
25°	552.4	554.5	556.4	557.4	557.4	557.4	557.4	557.4
27.5°	534.4	536.1	537.8	538.8	538.9	539.0	539.1	539.2
30°	522.1	523.9	525.8	526.6	526.6	526.6	526.6	526.6
32.5°	508.6	510.6	512.6	513.7	514.1	514.4	514.8	515.1
35°	488.8	491.2	493.4	494.8	495.4	496.1	496.7	497.3
37.5°	468.2	470.8	473.4	475.0	475.5	475.9	476.4	476.9
40°	454.6	457.2	459.8	461.4	462.0	462.6	463.2	463.8
42.5°	440.3	443.2	446.0	447.8	448.7	449.5	450.4	451.2
45°	419.0	421.9	424.8	426.9	428.0	429.3	430.5	431.7
47.5°	397.5	400.7	403.9	406.1	407.0	408.0	408.9	409.8
50°	382.6	386.2	389.7	391.9	393.0	394.0	395.1	396.2
52.5°	367.7	371.2	374.9	377.3	378.6	379.9	381.2	382.5
55°	344.9	349.0	353.1	355.8	357.0	358.2	359.4	360.7
57.5°	321.8	325.9	330.0	332.8	334.2	335.6	337.1	338.5
60°	305.7	309.9	314.1	317.1	318.8	320.4	322.1	323.8
62.5°	290.3	294.6	298.8	301.8	303.3	304.8	306.4	307.9
65°	265.9	270.5	275.1	278.1	279.6	281.2	282.7	284.2
67.5°	241.7	246.6	251.6	254.8	256.0	257.3	258.6	259.8
70°	225.6	230.4	235.3	238.4	240.0	241.5	243.0	244.5
72.5°	209.4	214.4	219.4	222.7	224.2	225.7	227.2	228.7
75°	184.9	189.9	194.9	198.3	200.1	202.0	203.8	205.6
77.5°	161.9	167.2	172.5	175.8	177.3	178.6	180.0	181.5
80°	147.0	152.1	157.3	160.6	162.1	163.6	165.1	166.7
82.5°	133.3	138.4	143.6	147.0	148.5	150.0	151.5	153.0
85°	114.1	119.3	124.5	127.8	129.3	130.8	132.3	133.8
87.5°	99.0	104.2	109.4	112.8	114.3	115.8	117.4	119.0
90°	95.6	101.0	106.5	110.0	111.7	113.3	115.0	116.7
92.5°	95.4	100.7	105.9	109.2	110.6	111.9	113.2	114.5
95°	100.9	105.9	110.9	114.1	115.7	117.2	118.7	120.2
97.5°	108.9	113.7	118.6	121.7	123.2	124.8	126.2	127.7
100°	114.9	119.6	124.2	127.3	129.0	130.6	132.3	133.9
102.5°	122.5	127.1	131.5	134.6	136.0	137.5	139.0	140.4
105°	134.1	138.4	142.6	145.4	147.0	148.5	150.0	151.5
107.5°	146.9	151.1	155.4	158.2	159.4	160.7	161.9	163.2
110°	155.9	160.1	164.3	166.9	168.0	169.1	170.1	171.2



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CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
112.5°	164.3	168.4	172.6	175.3	176.6	178.0	179.2	180.6
115°	177.9	181.6	185.3	187.7	188.9	190.0	191.2	192.3
117.5°	191.4	195.0	198.6	200.9	201.9	202.9	203.8	204.8
120°	200.6	204.1	207.5	209.6	210.6	211.5	212.4	213.4
122.5°	210.1	213.2	216.4	218.5	219.4	220.2	221.1	221.9
125°	224.0	226.9	229.8	231.7	232.5	233.2	234.0	234.8
127.5°	237.7	240.3	242.9	244.6	245.3	246.0	246.7	247.4
130°	246.8	249.4	252.0	253.5	254.0	254.4	254.8	255.2
132.5°	255.6	258.0	260.4	262.0	262.6	263.2	263.9	264.6
135°	268.9	271.4	273.8	275.4	276.1	276.7	277.2	277.9
137.5°	282.2	284.3	286.4	287.8	288.2	288.7	289.2	289.7
140°	291.1	293.3	295.5	296.8	297.0	297.3	297.6	297.8
142.5°	299.0	301.0	302.9	304.1	304.4	304.9	305.2	305.6
145°	312.4	313.5	314.7	315.4	315.8	316.0	316.4	316.7
147.5°	325.4	325.7	326.1	326.4	326.5	326.6	326.7	326.8
150°	333.7	333.7	333.7	333.7	333.5	333.4	333.3	333.2
152.5°	342.0	342.1	342.2	342.1	341.8	341.5	341.3	340.9
155°	354.1	354.4	354.7	354.5	354.1	353.6	353.1	352.6
157.5°	364.5	364.9	365.2	365.1	364.7	364.4	363.9	363.6
160°	371.0	371.3	371.7	371.7	371.4	371.1	370.9	370.6
162.5°	377.0	377.4	377.7	377.6	377.2	376.7	376.3	375.9
165°	384.7	385.0	385.5	385.5	385.0	384.5	384.0	383.5
167.5°	390.8	391.3	391.7	391.7	391.3	390.8	390.4	390.0
170°	394.2	394.8	395.2	395.2	394.8	394.2	393.8	393.2
172.5°	396.9	397.3	397.8	397.8	397.3	396.8	396.3	395.8
175°	399.8	400.2	400.6	400.6	400.1	399.6	399.1	398.6
177.5°	401.1	401.4	401.7	401.7	401.4	400.9	400.6	400.1
180°	401.2	401.2	401.2	401.2	401.2	401.2	401.2	401.2

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