

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: P331528-930

Luminaire Tested: **S122DIW-S675D435U930-4F0-1E-UDD-D1**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P331528-930
REPORT IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-1807-864-8,
Test Lab: INNOVATION CENTER
Issue Date: 3/3/2020
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: NEO-RAY
Catalog Number: S122DIW-S675D435U930-4F0-1E-UDD-D1
Description: DEFINE 2 DIRECT-INDIRECT WALL MOUNT LED LUMINAIRE
DOWNLIGHT 675 LUMENS PER FOOT, DROP SATIN WHITE DIFFUSER
UPLIGHT 435 LUMENS PER FOOT, FLUSH SATIN WHITE DIFFUSER
Light Source: -
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 3416.6 lumens
Efficiency: N/A
Efficacy: 90.6 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: General Diffuse

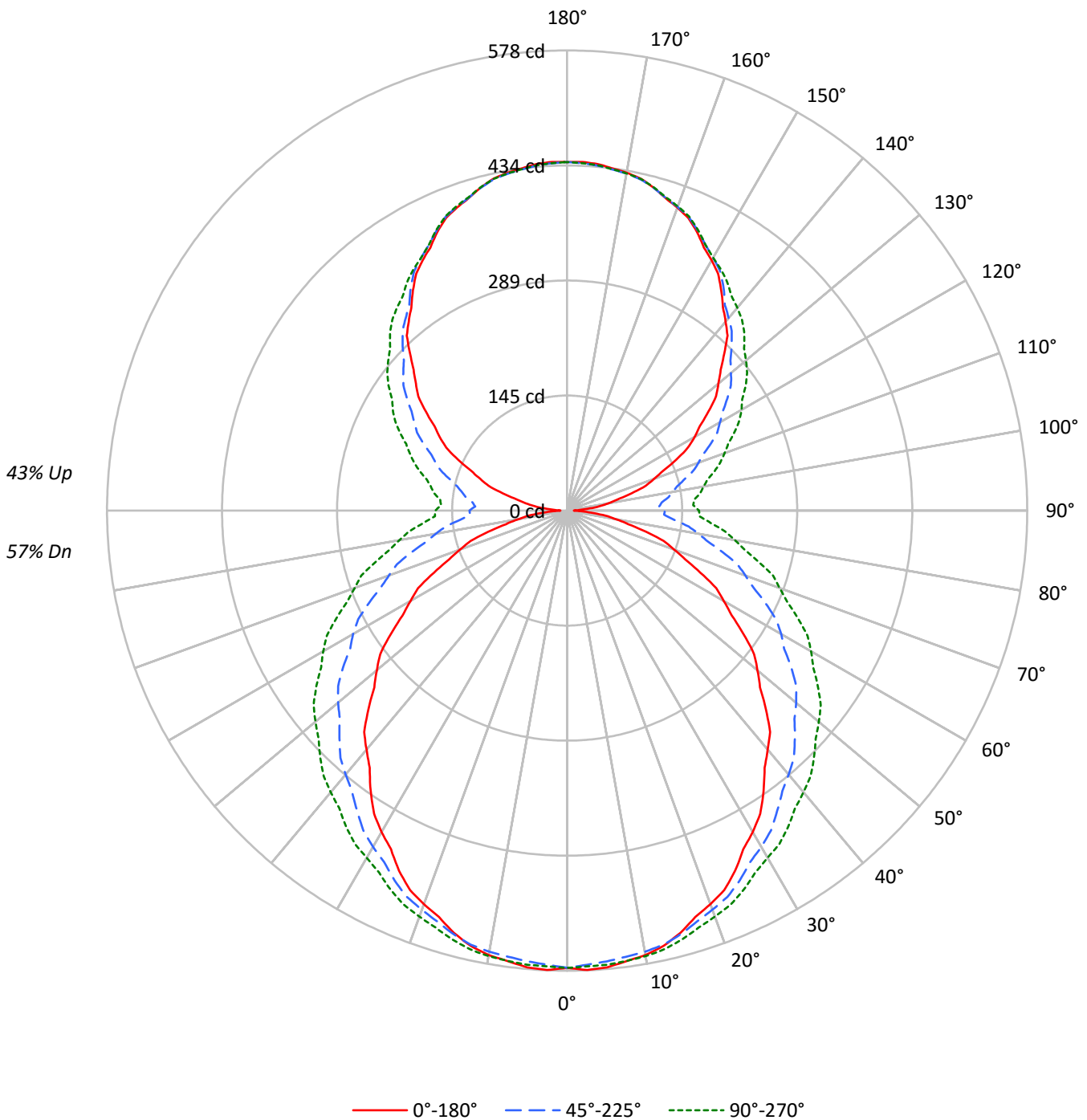
Input Watts (W): 37.7
Input Voltage (V): 120
Input Current (A_{in}): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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	109	109	109	109	101	101	101	101	87	87	87	74	74	74	63	63	63
1	98	93	88	84	91	86	82	78	74	71	68	63	61	58	53	51	49
2	88	80	73	67	82	74	68	63	64	59	55	54	51	48	45	43	40
3	80	70	62	55	74	65	58	52	56	50	46	47	43	39	40	36	34
4	73	61	53	46	67	57	49	44	49	43	38	42	37	33	35	31	28
5	67	54	46	39	62	51	43	37	44	38	33	37	32	29	31	28	25
6	62	49	40	34	57	45	38	32	39	33	28	34	29	25	28	24	21
7	57	44	35	30	53	41	33	28	36	29	25	31	26	22	26	22	19
8	53	40	32	26	49	37	30	25	32	26	22	28	23	19	24	20	17
9	49	36	28	23	45	34	27	22	30	24	20	26	21	17	22	18	15
10	46	33	26	21	43	31	24	20	27	22	18	24	19	16	20	16	14

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	9273	9273	9273
5°	9317	8925	8891
10°	9259	8661	8564
15°	9131	8383	8221
20°	8970	8083	7889
25°	8811	7795	7587
30°	8587	7498	7284
35°	8359	7211	7072
40°	8120	6969	6858
45°	7894	6750	6677
50°	7650	6553	6497
55°	7394	6340	6314
60°	7081	6122	6123
65°	6755	5864	5892
70°	6394	5587	5644
75°	5927	5315	5415
80°	5197	5036	5185
85°	4489	4797	5004



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	54.4	1.6
10°-20°	156.0	4.6
20°-30°	236.5	6.9
30°-40°	288.0	8.4
40°-50°	309.9	9.1
50°-60°	300.9	8.8
60°-70°	262.7	7.7
70°-80°	202.3	5.9
80°-90°	137.5	4.0
90°-100°	121.3	3.5
100°-110°	154.4	4.5
110°-120°	192.4	5.6
120°-130°	218.8	6.4
130°-140°	227.9	6.7
140°-150°	214.9	6.3
150°-160°	178.7	5.2
160°-170°	118.6	3.5
170°-180°	41.4	1.2
0°-30°	446.9	13.1
0°-40°	734.9	21.5
0°-60°	1345.7	39.4
0°-90°	1948.2	57.0
90°-120°	468.1	13.7
90°-150°	1129.7	33.1
90°-180°	1468.0	43.0
0°-180°	3416.6	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	574	574	574	574	574	
5°	576	573	568	573	573	55
15°	549	551	551	558	558	155
25°	499	505	513	522	525	229
35°	430	445	460	478	484	269
45°	353	376	404	429	439	272
55°	270	301	344	373	384	242
65°	185	226	275	308	320	183
75°	102	149	202	237	249	108
85°	30	82	135	168	181	32
90°	9	62	123	154	166	7
95°	26	69	119	150	160	27
105°	84	110	153	182	192	89
115°	151	164	199	223	232	149
125°	217	221	246	266	274	194
135°	279	283	292	309	315	216
145°	338	340	342	348	350	211
155°	386	387	388	390	389	178
165°	420	420	420	422	420	118
175°	437	436	435	437	436	41
180°	438	438	438	438	438	



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CANDELA DISTRIBUTION (FULL):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
0°	574.3	574.3	574.3	574.3	574.3	574.3	574.3	574.3	574.3	574.3	574.3
2.5°	577.6	577.2	576.7	576.3	575.8	575.1	574.1	573.0	572.0	571.0	571.7
5°	575.9	575.4	574.9	574.3	573.7	572.9	571.8	570.7	569.6	568.4	569.6
7.5°	570.8	570.4	570.1	569.6	569.3	568.7	567.9	567.0	566.1	565.3	566.6
10°	566.8	566.4	566.1	565.7	565.3	564.8	564.3	563.8	563.2	562.6	564.1
12.5°	560.1	560.2	560.3	560.4	560.4	560.3	559.9	559.5	559.1	558.6	560.1
15°	549.3	549.7	550.1	550.4	550.8	551.0	551.0	551.0	551.0	551.0	552.6
17.5°	535.3	536.1	536.9	537.7	538.4	539.2	539.7	540.3	540.9	541.5	543.2
20°	526.0	526.9	527.8	528.8	529.7	530.5	531.2	532.1	532.8	533.5	535.6
22.5°	516.0	517.1	518.2	519.3	520.3	521.4	522.4	523.4	524.5	525.5	527.6
25°	499.4	500.7	502.0	503.3	504.6	506.1	507.7	509.4	511.0	512.7	514.9
27.5°	479.4	481.5	483.6	485.8	487.9	489.9	491.9	493.8	495.8	497.7	500.5
30°	466.1	468.5	470.9	473.3	475.7	478.1	480.5	482.9	485.3	487.7	490.6
32.5°	451.4	454.1	456.8	459.5	462.3	465.0	467.9	470.7	473.5	476.4	479.8
35°	430.3	433.4	436.6	439.7	442.9	446.2	449.7	453.2	456.7	460.2	464.3
37.5°	407.3	411.0	414.6	418.2	421.8	425.9	430.5	435.0	439.5	444.1	448.7
40°	392.0	396.1	400.1	404.2	408.3	412.8	417.8	422.8	427.8	432.8	437.6
42.5°	377.4	381.4	385.5	389.6	393.6	398.5	404.3	410.0	415.7	421.5	426.7
45°	352.9	357.9	362.9	367.9	372.8	378.6	385.1	391.6	398.0	404.5	410.3
47.5°	328.7	334.2	339.7	345.0	350.5	357.0	364.6	372.2	379.8	387.3	393.4
50°	312.1	317.9	323.6	329.3	335.0	342.1	350.4	358.7	367.0	375.4	381.6
52.5°	296.1	302.1	308.2	314.2	320.2	327.7	336.4	345.2	353.9	362.7	369.2
55°	270.5	277.1	283.8	290.5	297.1	305.2	314.9	324.5	334.1	343.7	350.4
57.5°	245.2	252.7	260.2	267.7	275.2	283.9	293.7	303.5	313.3	323.1	330.3
60°	227.2	235.1	243.1	251.1	259.0	268.3	278.8	289.3	299.9	310.5	317.5
62.5°	211.2	219.5	227.7	235.9	244.3	253.6	264.2	274.7	285.3	295.8	303.3
65°	184.7	193.8	202.9	212.0	221.0	231.0	241.9	252.8	263.7	274.7	282.3
67.5°	160.5	169.9	179.4	188.9	198.4	208.6	219.8	231.0	242.1	253.3	261.0
70°	143.2	152.8	162.4	172.0	181.6	192.2	203.7	215.1	226.6	238.1	246.0
72.5°	127.2	137.1	147.0	156.9	166.8	177.6	189.2	200.8	212.5	224.0	231.9
75°	102.4	112.8	123.1	133.5	143.8	154.9	166.7	178.6	190.4	202.3	210.2
77.5°	78.4	89.3	100.1	110.9	121.7	133.2	145.2	157.3	169.3	181.2	189.2
80°	62.5	73.7	85.0	96.3	107.5	119.2	131.3	143.2	155.2	167.3	175.0
82.5°	49.1	60.3	71.3	82.5	93.7	105.3	117.5	129.6	141.8	154.0	161.8
85°	30.0	41.4	52.9	64.3	75.8	87.5	99.3	111.1	123.0	134.9	142.6
87.5°	16.4	27.6	38.8	50.1	61.2	73.0	85.2	97.3	109.6	121.8	129.3
90°	8.7	20.4	32.1	43.9	55.5	68.2	81.9	95.5	109.2	122.8	130.0
92.5°	14.3	24.9	35.6	46.4	57.1	68.3	80.1	92.0	103.8	115.6	122.9
95°	25.8	35.4	44.9	54.4	63.9	74.3	85.6	96.9	108.1	119.4	126.4
97.5°	40.9	49.4	57.8	66.3	74.8	84.5	95.4	106.4	117.3	128.3	135.2
100°	52.7	60.3	67.8	75.3	82.8	91.8	102.4	113.0	123.6	134.2	141.0
102.5°	64.5	71.3	78.0	84.8	91.6	100.2	110.6	120.9	131.3	141.7	148.4
105°	83.6	89.2	94.8	100.4	106.0	113.7	123.5	133.3	143.1	152.9	159.5
107.5°	103.6	108.3	112.9	117.6	122.3	129.2	138.4	147.7	156.9	166.1	172.4
110°	116.0	120.2	124.3	128.6	132.7	139.4	148.5	157.5	166.6	175.6	181.6



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CANDELA DISTRIBUTION (continued):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
112.5°	130.2	133.8	137.4	141.0	144.6	150.7	159.2	167.8	176.3	184.8	190.6
115°	151.1	153.6	156.1	158.7	161.2	166.6	174.7	182.9	191.0	199.2	204.6
117.5°	171.0	173.1	175.0	177.1	179.0	183.6	190.9	198.1	205.4	212.5	217.8
120°	185.0	186.4	187.8	189.1	190.5	194.6	201.4	208.1	214.8	221.6	226.7
122.5°	197.7	198.8	199.8	200.9	202.0	205.8	212.3	218.8	225.3	231.8	236.6
125°	216.6	217.4	218.1	218.8	219.6	222.8	228.4	234.2	239.8	245.5	250.2
127.5°	235.9	236.7	237.4	238.1	239.0	241.6	246.1	250.5	254.9	259.4	263.7
130°	248.0	248.9	249.8	250.7	251.6	253.9	257.6	261.3	265.1	268.7	273.0
132.5°	261.6	262.3	263.0	263.7	264.4	266.2	269.3	272.3	275.3	278.3	282.3
135°	279.0	279.9	280.8	281.7	282.6	284.1	286.1	288.0	290.1	292.1	295.9
137.5°	298.1	298.8	299.5	300.2	300.9	301.7	302.8	303.9	304.8	305.9	309.2
140°	309.7	310.2	310.7	311.3	311.9	312.5	313.3	314.1	314.9	315.6	318.6
142.5°	321.5	322.0	322.5	323.1	323.7	324.1	324.5	324.8	325.1	325.5	328.0
145°	337.6	338.2	338.8	339.3	339.9	340.5	341.0	341.4	341.9	342.4	343.6
147.5°	352.8	353.4	354.2	354.8	355.6	356.0	356.4	356.7	357.0	357.3	357.7
150°	363.1	363.6	364.1	364.6	365.1	365.5	365.8	366.2	366.5	366.8	367.0
152.5°	372.3	372.8	373.2	373.7	374.2	374.7	375.0	375.4	375.9	376.3	376.6
155°	386.0	386.2	386.5	386.8	387.0	387.3	387.5	387.8	388.0	388.2	388.7
157.5°	397.8	397.9	398.1	398.3	398.4	398.5	398.7	398.8	399.0	399.2	399.7
160°	404.9	405.0	405.2	405.4	405.5	405.6	405.7	405.8	405.9	405.9	406.4
162.5°	411.3	411.4	411.4	411.4	411.5	411.6	411.6	411.7	411.8	411.9	412.4
165°	420.0	419.9	419.8	419.7	419.6	419.6	419.6	419.6	419.6	419.6	420.2
167.5°	427.2	427.0	426.7	426.5	426.2	426.1	426.1	426.1	426.1	426.1	426.6
170°	431.0	430.8	430.6	430.3	430.1	429.9	429.8	429.7	429.7	429.6	430.2
172.5°	433.7	433.5	433.3	433.0	432.8	432.6	432.5	432.4	432.4	432.3	432.8
175°	437.0	436.8	436.5	436.3	436.0	435.8	435.6	435.5	435.3	435.1	435.7
177.5°	438.3	438.1	437.9	437.7	437.5	437.3	437.2	437.1	436.9	436.8	437.2
180°	437.7	437.7	437.7	437.7	437.7	437.7	437.7	437.7	437.7	437.7	437.7



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CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
0°	574.3	574.3	574.3	574.3	574.3	574.3	574.3	574.3
2.5°	572.4	573.2	573.9	574.1	573.8	573.6	573.2	573.0
5°	570.7	571.8	572.9	573.4	573.2	573.0	572.8	572.6
7.5°	567.9	569.3	570.6	571.2	571.0	570.8	570.6	570.5
10°	565.6	567.0	568.6	569.2	569.0	568.8	568.7	568.4
12.5°	561.6	563.0	564.6	565.2	565.0	564.8	564.7	564.4
15°	554.3	556.0	557.7	558.4	558.2	558.0	557.8	557.7
17.5°	544.9	546.7	548.5	549.3	549.3	549.3	549.3	549.3
20°	537.6	539.6	541.6	542.7	542.7	542.7	542.7	542.7
22.5°	529.6	531.7	533.6	534.8	535.1	535.4	535.7	536.0
25°	517.1	519.3	521.5	522.9	523.5	524.1	524.6	525.2
27.5°	503.4	506.1	509.0	510.5	510.9	511.4	511.8	512.2
30°	493.7	496.6	499.5	501.3	501.9	502.5	503.0	503.5
32.5°	483.2	486.7	490.0	492.2	493.3	494.2	495.2	496.2
35°	468.4	472.5	476.5	479.2	480.5	481.8	483.1	484.4
37.5°	453.1	457.6	462.2	465.1	466.5	467.8	469.2	470.6
40°	442.4	447.2	452.0	455.3	456.9	458.6	460.2	461.9
42.5°	431.9	437.2	442.5	446.0	447.6	449.3	450.9	452.6
45°	416.0	421.7	427.5	431.2	433.1	435.0	436.8	438.6
47.5°	399.3	405.4	411.3	415.3	417.4	419.4	421.4	423.5
50°	387.9	394.2	400.6	404.7	406.8	408.8	410.7	412.8
52.5°	375.6	382.0	388.5	392.8	394.9	397.1	399.3	401.5
55°	357.0	363.7	370.4	374.9	377.3	379.7	382.1	384.5
57.5°	337.5	344.6	351.8	356.6	359.1	361.5	363.9	366.4
60°	324.5	331.5	338.6	343.4	345.9	348.5	351.1	353.8
62.5°	310.7	318.2	325.7	330.7	333.0	335.5	337.9	340.4
65°	289.8	297.4	305.0	310.0	312.4	314.8	317.2	319.6
67.5°	268.6	276.3	284.0	289.1	291.6	294.1	296.6	299.1
70°	254.0	261.9	269.9	274.9	277.1	279.4	281.6	283.8
72.5°	239.7	247.4	255.3	260.5	263.2	265.9	268.5	271.2
75°	218.2	226.1	234.1	239.2	241.7	244.0	246.5	248.8
77.5°	197.1	205.0	213.0	218.2	220.8	223.4	225.9	228.5
80°	182.8	190.6	198.4	203.6	206.1	208.7	211.3	213.9
82.5°	169.5	177.2	185.1	190.1	192.6	195.0	197.5	199.9
85°	150.3	158.2	165.9	171.0	173.7	176.3	178.9	181.4
87.5°	136.8	144.3	151.8	156.8	159.1	161.5	164.0	166.3
90°	137.3	144.5	151.7	156.5	158.8	161.1	163.4	165.7
92.5°	130.2	137.5	144.7	149.5	151.7	154.0	156.2	158.4
95°	133.4	140.5	147.5	152.0	154.1	156.1	158.2	160.2
97.5°	142.0	148.8	155.6	160.2	162.3	164.5	166.6	168.8
100°	147.9	154.7	161.6	166.0	168.0	169.9	171.9	173.8
102.5°	155.2	161.9	168.7	173.1	175.0	177.0	178.9	180.8
105°	166.1	172.8	179.4	183.7	185.7	187.8	189.8	191.8
107.5°	178.6	184.9	191.2	195.1	196.8	198.4	200.1	201.8
110°	187.4	193.4	199.3	203.2	205.0	206.8	208.6	210.3



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CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
112.5°	196.3	202.0	207.7	211.6	213.4	215.2	217.1	219.0
115°	210.1	215.6	221.0	224.7	226.4	228.2	230.0	231.8
117.5°	223.1	228.4	233.7	237.2	238.8	240.4	242.1	243.7
120°	232.0	237.1	242.3	245.8	247.6	249.4	251.2	252.9
122.5°	241.4	246.3	251.1	254.3	255.8	257.4	259.0	260.6
125°	255.0	259.8	264.5	267.7	269.2	270.8	272.4	273.9
127.5°	268.0	272.3	276.6	279.4	280.8	282.2	283.6	284.9
130°	277.3	281.6	285.8	288.5	289.7	290.9	292.0	293.2
132.5°	286.2	290.2	294.1	296.6	297.8	299.1	300.3	301.5
135°	299.7	303.5	307.3	309.8	311.0	312.3	313.6	314.8
137.5°	312.6	315.9	319.3	321.4	322.3	323.3	324.2	325.1
140°	321.6	324.5	327.5	329.4	330.1	330.9	331.7	332.5
142.5°	330.4	332.8	335.3	336.8	337.5	338.1	338.7	339.3
145°	344.8	346.0	347.2	348.1	348.7	349.3	349.8	350.5
147.5°	358.0	358.3	358.7	358.9	359.0	359.1	359.3	359.4
150°	367.3	367.5	367.8	367.8	367.5	367.3	367.0	366.8
152.5°	376.8	377.2	377.5	377.5	377.2	376.8	376.6	376.3
155°	389.1	389.5	389.9	390.0	389.7	389.5	389.2	389.0
157.5°	400.2	400.8	401.4	401.5	401.0	400.6	400.3	399.9
160°	406.9	407.4	407.9	408.0	407.6	407.3	407.0	406.7
162.5°	412.9	413.5	414.1	414.2	413.8	413.4	412.9	412.6
165°	420.8	421.3	421.9	422.0	421.6	421.2	420.8	420.4
167.5°	427.2	427.8	428.4	428.4	428.0	427.5	427.1	426.7
170°	430.7	431.3	431.9	431.9	431.5	431.0	430.5	430.0
172.5°	433.4	434.0	434.6	434.6	434.1	433.6	433.1	432.6
175°	436.3	436.8	437.4	437.5	437.0	436.5	436.0	435.5
177.5°	437.7	438.0	438.4	438.4	438.0	437.7	437.2	436.8
180°	437.7	437.7	437.7	437.7	437.7	437.7	437.7	437.7

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