

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: P331530-930

Luminaire Tested: **S122DIW-S675D435U930-4F0-1E-UDD-F1**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P331530-930
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-F1
Description: DEFINE 2 DIRECT-INDIRECT WALL MOUNT LED LUMINAIRE
DOWNLIGHT 675 LUMENS PER FOOT, FLUSH 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: 3427.9 lumens
Efficiency: N/A
Efficacy: 90.9 lumens/watt
Spacing Criteria (0/90/45): 1.2 / 1.16 / 1.3
Luminous Opening: Rectangular (W 0.17' x L: 4' x H: 0')
CIE Type: Semi-Direct

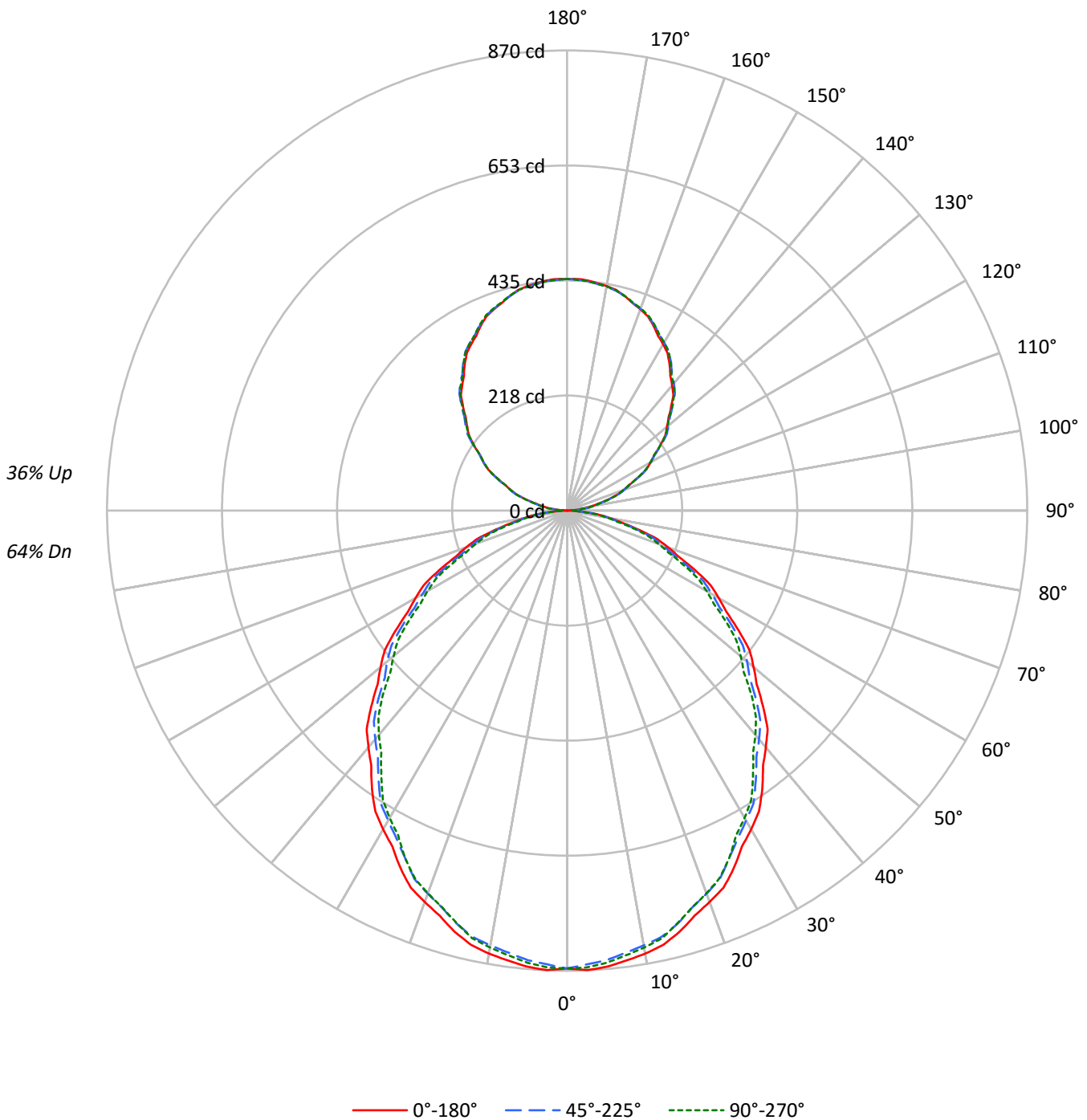
Input Watts (W): 37.7
Input Voltage (V): 120
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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	50	30	10	50	30	10	0		
RCR																										
0	111	111	111	111	104	104	104	104	91	91	91	80	80	80	69	69	69	64					64			
1	101	97	93	89	95	91	87	84	80	77	75	70	68	67	61	60	58	54					54			
2	92	84	78	73	86	79	74	69	70	66	62	62	58	56	54	51	49	45					45			
3	84	74	67	61	79	70	63	58	62	57	52	55	51	47	48	45	42	38					38			
4	77	66	58	51	72	62	55	49	55	49	45	49	44	40	43	39	36	33					33			
5	71	59	50	44	66	55	48	42	49	43	39	44	39	35	39	35	32	29					29			
6	65	53	44	38	61	50	42	37	45	38	34	40	35	31	35	31	28	25					25			
7	60	48	40	34	56	45	38	32	41	34	30	36	31	27	32	28	25	22					22			
8	56	43	35	30	53	41	34	29	37	31	27	33	28	24	29	25	22	20					20			
9	52	40	32	27	49	38	31	26	34	28	24	30	26	22	27	23	20	18					18			
10	49	37	29	24	46	35	28	23	31	26	22	28	23	20	25	21	18	16					16			

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	13976	13976	13976
5°	14029	13827	13908
10°	13946	13686	13754
15°	13772	13508	13494
20°	13527	13242	13228
25°	13286	12916	12916
30°	12972	12616	12506
35°	12682	12254	12073
40°	12313	11894	11666
45°	11953	11536	11250
50°	11560	11163	10766
55°	11153	10731	10331
60°	10698	10214	9836
65°	10208	9700	9253
70°	9588	9073	8644
75°	8721	8359	8153
80°	7736	7504	7122
85°	6336	6002	5391



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	81.4	2.4
10°-20°	229.0	6.7
20°-30°	336.6	9.8
30°-40°	391.0	11.4
40°-50°	390.6	11.4
50°-60°	340.6	9.9
60°-70°	251.9	7.3
70°-80°	142.7	4.2
80°-90°	40.1	1.2
90°-100°	27.7	0.8
100°-110°	86.1	2.5
110°-120°	147.2	4.3
120°-130°	193.6	5.6
130°-140°	217.3	6.3
140°-150°	213.1	6.2
150°-160°	178.7	5.2
160°-170°	118.6	3.5
170°-180°	41.4	1.2
0°-30°	647.0	18.9
0°-40°	1038.1	30.3
0°-60°	1769.3	51.6
0°-90°	2204.0	64.3
90°-120°	261.1	7.6
90°-150°	885.2	25.8
90°-180°	1224.0	35.7
0°-180°	3427.9	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	866	866	866	866	866	
5°	866	862	853	859	858	82
15°	824	819	808	811	807	232
25°	746	739	725	726	725	343
35°	643	635	622	617	612	402
45°	524	517	505	496	493	404
55°	396	391	381	372	367	354
65°	267	262	254	247	242	264
75°	140	138	134	129	131	149
85°	34	33	32	30	29	39
90°	0	5	13	12	13	3
95°	19	23	24	24	23	22
105°	79	80	81	82	82	84
115°	148	150	149	149	148	146
125°	215	218	217	216	216	192
135°	278	282	283	282	281	215
145°	338	340	342	343	341	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°	865.6	865.6	865.6	865.6	865.6	865.6	865.6	865.6	865.6	865.6	865.6
2.5°	869.6	868.9	868.1	867.4	866.7	865.4	863.8	862.2	860.5	858.9	860.4
5°	865.6	864.9	864.1	863.4	862.7	861.3	859.2	857.2	855.2	853.1	854.6
7.5°	857.9	856.8	855.7	854.5	853.4	851.7	849.7	847.6	845.5	843.4	844.9
10°	850.6	849.3	848.0	846.7	845.5	843.7	841.5	839.3	837.0	834.8	836.3
12.5°	840.7	839.5	838.3	837.1	836.0	834.4	832.1	829.9	827.7	825.5	826.6
15°	823.9	822.9	821.7	820.7	819.5	817.7	815.4	812.9	810.6	808.1	808.9
17.5°	802.7	801.5	800.5	799.3	798.3	796.5	794.0	791.6	789.1	786.7	787.6
20°	787.3	786.3	785.1	784.0	782.9	781.1	778.4	775.9	773.3	770.7	771.3
22.5°	772.0	770.5	768.9	767.4	765.8	763.9	761.4	759.0	756.5	754.1	754.2
25°	745.8	744.3	742.8	741.3	739.8	737.5	734.3	731.2	728.1	725.0	725.3
27.5°	715.8	714.4	713.1	711.8	710.5	708.6	706.0	703.6	701.1	698.6	698.1
30°	695.8	694.3	692.8	691.4	689.9	687.8	685.0	682.2	679.5	676.7	676.1
32.5°	674.5	673.3	672.1	670.9	669.8	667.7	664.8	661.9	658.9	656.0	655.0
35°	643.4	641.6	639.7	637.8	635.9	633.6	630.6	627.6	624.7	621.7	620.6
37.5°	608.2	606.6	605.0	603.3	601.8	599.4	596.5	593.5	590.6	587.6	586.2
40°	584.2	582.8	581.3	579.8	578.4	576.2	573.2	570.2	567.3	564.3	562.6
42.5°	561.0	559.5	558.0	556.5	555.1	552.9	549.8	546.9	544.0	541.0	539.2
45°	523.5	522.2	520.9	519.7	518.4	516.3	513.6	510.8	508.0	505.2	503.2
47.5°	486.2	485.0	483.8	482.6	481.4	479.3	476.4	473.5	470.7	467.7	465.6
50°	460.2	459.3	458.4	457.5	456.6	454.8	452.2	449.6	447.0	444.4	441.9
52.5°	435.0	433.7	432.5	431.3	430.1	428.3	425.8	423.4	420.9	418.5	416.4
55°	396.2	395.1	394.0	392.8	391.8	390.0	387.8	385.6	383.4	381.2	379.0
57.5°	357.2	356.4	355.5	354.6	353.7	352.0	349.6	347.2	344.7	342.3	340.1
60°	331.3	330.5	329.8	329.1	328.3	326.6	324.1	321.5	318.9	316.3	314.2
62.5°	306.0	304.8	303.6	302.4	301.3	299.6	297.7	295.6	293.7	291.6	289.8
65°	267.2	266.0	265.0	263.8	262.7	261.2	259.4	257.6	255.7	253.9	252.2
67.5°	227.7	226.8	225.9	225.0	224.1	222.9	221.2	219.6	217.9	216.2	214.9
70°	203.1	202.4	201.6	200.9	200.2	198.9	197.2	195.6	194.0	192.2	190.9
72.5°	177.8	177.0	176.3	175.5	174.8	173.9	172.8	171.8	170.7	169.6	168.4
75°	139.8	139.4	139.1	138.7	138.4	137.7	136.8	135.8	134.9	134.0	132.9
77.5°	105.9	105.3	104.6	104.0	103.4	102.9	102.5	102.1	101.7	101.3	100.9
80°	83.2	83.1	82.8	82.7	82.5	82.2	81.9	81.4	81.1	80.7	80.1
82.5°	62.0	61.9	61.9	61.8	61.8	61.6	61.4	61.2	61.0	60.7	60.1
85°	34.2	33.9	33.8	33.6	33.3	33.2	33.0	32.9	32.6	32.4	31.9
87.5°	12.1	12.0	11.8	11.7	11.7	11.7	11.7	11.7	11.8	11.9	11.4
90°	0.4	1.4	2.4	3.3	4.3	5.7	7.5	9.3	11.1	13.0	12.8
92.5°	6.6	7.3	8.0	8.7	9.5	10.0	10.4	10.9	11.3	11.7	11.7
95°	19.2	20.1	20.9	21.7	22.5	23.0	23.2	23.3	23.5	23.6	23.6
97.5°	35.1	35.8	36.5	37.3	38.0	38.5	38.8	39.1	39.5	39.7	39.7
100°	46.9	47.5	48.2	48.9	49.6	50.0	50.2	50.5	50.7	51.0	51.0
102.5°	59.4	59.8	60.3	60.9	61.4	61.9	62.1	62.5	62.8	63.1	63.2
105°	79.4	79.7	79.9	80.1	80.4	80.6	80.8	81.0	81.1	81.3	81.4
107.5°	99.6	100.0	100.4	100.8	101.1	101.3	101.3	101.3	101.3	101.3	101.3
110°	112.7	113.2	113.7	114.1	114.6	114.9	114.9	114.9	114.9	114.9	114.9



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CANDELA DISTRIBUTION (continued):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
112.5°	126.9	127.3	127.8	128.3	128.8	129.1	129.0	128.9	128.8	128.7	128.6
115°	147.7	148.2	148.7	149.2	149.7	149.9	149.7	149.5	149.4	149.2	149.1
117.5°	168.6	169.3	169.9	170.6	171.2	171.3	170.9	170.4	169.9	169.5	169.3
120°	182.5	183.1	183.8	184.4	185.1	185.1	184.4	183.8	183.1	182.5	182.5
122.5°	195.2	196.0	196.7	197.5	198.4	198.5	198.0	197.5	197.1	196.7	196.5
125°	215.0	215.7	216.5	217.2	217.9	218.2	217.9	217.7	217.4	217.2	217.0
127.5°	234.2	235.2	236.1	237.1	238.0	238.3	238.1	237.7	237.4	237.2	236.8
130°	246.4	247.4	248.5	249.6	250.6	251.1	250.9	250.8	250.6	250.5	250.3
132.5°	260.0	260.8	261.7	262.6	263.4	263.9	263.9	264.0	264.0	264.0	263.7
135°	278.2	279.1	280.0	280.9	281.8	282.3	282.4	282.6	282.7	282.9	282.8
137.5°	297.3	298.0	298.7	299.5	300.2	300.7	300.9	301.2	301.3	301.6	301.5
140°	308.8	309.6	310.3	311.0	311.8	312.3	312.7	313.2	313.6	314.0	314.0
142.5°	320.7	321.4	322.1	322.9	323.6	324.1	324.3	324.7	324.9	325.2	325.3
145°	337.6	338.2	338.8	339.3	339.9	340.5	341.0	341.4	341.9	342.4	342.5
147.5°	352.8	353.4	354.2	354.8	355.6	356.0	356.4	356.7	357.0	357.3	357.5
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°	865.6	865.6	865.6	865.6	865.6	865.6	865.6	865.6
2.5°	861.9	863.4	864.9	865.4	865.1	864.9	864.5	864.3
5°	856.1	857.5	859.0	859.6	859.2	858.8	858.5	858.1
7.5°	846.4	847.9	849.4	849.9	849.5	849.1	848.7	848.3
10°	837.7	839.3	840.7	841.1	840.7	840.1	839.5	838.9
12.5°	827.5	828.6	829.6	829.9	829.5	829.2	828.8	828.3
15°	809.7	810.4	811.1	811.1	810.1	809.2	808.3	807.3
17.5°	788.4	789.2	790.1	790.1	789.2	788.3	787.4	786.5
20°	771.8	772.4	772.9	772.8	772.1	771.4	770.6	769.9
22.5°	754.3	754.4	754.5	754.3	753.9	753.4	753.0	752.6
25°	725.7	726.0	726.4	726.4	726.0	725.7	725.3	725.0
27.5°	697.5	697.0	696.4	695.7	694.8	693.9	693.0	692.1
30°	675.6	675.0	674.4	673.8	673.0	672.3	671.6	670.8
32.5°	654.0	653.1	652.0	651.2	650.4	649.7	648.9	648.2
35°	619.5	618.4	617.3	616.3	615.4	614.4	613.5	612.5
37.5°	584.9	583.5	582.1	581.0	580.1	579.2	578.4	577.5
40°	561.0	559.3	557.7	556.4	555.7	555.0	554.2	553.5
42.5°	537.4	535.6	533.8	532.3	531.2	530.3	529.2	528.2
45°	501.2	499.1	497.1	495.7	495.0	494.2	493.5	492.7
47.5°	463.5	461.3	459.2	457.5	456.5	455.4	454.4	453.3
50°	439.3	436.7	434.1	432.4	431.4	430.5	429.6	428.6
52.5°	414.2	412.1	409.9	408.2	407.0	405.8	404.6	403.3
55°	376.7	374.5	372.3	370.7	369.8	368.9	367.9	367.0
57.5°	337.9	335.7	333.5	332.1	331.3	330.7	330.0	329.2
60°	312.2	310.1	308.1	306.9	306.3	305.7	305.2	304.6
62.5°	287.9	286.0	284.1	282.8	282.1	281.4	280.7	280.0
65°	250.5	248.8	247.2	245.9	245.0	244.0	243.1	242.2
67.5°	213.6	212.4	211.1	210.0	209.3	208.6	207.8	207.1
70°	189.6	188.4	187.1	186.1	185.3	184.6	183.8	183.1
72.5°	167.1	165.8	164.4	163.5	162.9	162.3	161.8	161.1
75°	131.8	130.7	129.6	129.2	129.6	130.0	130.3	130.7
77.5°	100.3	99.7	99.1	98.7	98.1	97.6	97.1	96.5
80°	79.7	79.1	78.5	78.0	77.7	77.3	77.0	76.6
82.5°	59.4	58.6	58.0	57.6	57.5	57.4	57.3	57.2
85°	31.4	30.8	30.2	29.8	29.7	29.5	29.4	29.1
87.5°	10.9	10.5	10.0	9.7	9.5	9.5	9.3	9.1
90°	12.6	12.5	12.3	12.2	12.3	12.4	12.5	12.6
92.5°	11.8	11.8	11.9	11.9	11.9	11.9	12.0	12.0
95°	23.6	23.6	23.6	23.6	23.4	23.2	23.1	22.9
97.5°	39.7	39.7	39.7	39.7	39.7	39.7	39.7	39.7
100°	51.0	51.0	51.0	51.0	50.9	50.8	50.7	50.6
102.5°	63.2	63.3	63.3	63.3	63.3	63.2	63.1	63.0
105°	81.6	81.8	81.9	82.0	82.0	82.0	82.0	82.0
107.5°	101.4	101.5	101.6	101.4	101.0	100.6	100.3	99.9
110°	114.9	114.9	114.9	114.7	114.5	114.2	114.0	113.7



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CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
112.5°	128.4	128.2	128.0	127.8	127.6	127.4	127.3	127.1
115°	149.0	149.0	148.9	148.7	148.5	148.2	148.0	147.7
117.5°	169.1	168.8	168.7	168.4	168.2	168.0	167.7	167.5
120°	182.5	182.5	182.5	182.4	182.1	181.9	181.6	181.4
122.5°	196.2	196.1	195.8	195.7	195.5	195.3	195.1	194.9
125°	216.7	216.5	216.2	216.1	216.0	215.9	215.8	215.7
127.5°	236.5	236.3	235.9	235.7	235.4	235.1	234.9	234.6
130°	250.1	250.0	249.8	249.6	249.2	248.9	248.6	248.3
132.5°	263.3	262.9	262.6	262.3	262.0	261.7	261.5	261.2
135°	282.7	282.7	282.6	282.4	282.2	281.9	281.7	281.4
137.5°	301.4	301.3	301.3	301.1	300.8	300.4	300.1	299.8
140°	314.0	314.0	314.0	313.8	313.5	313.2	312.8	312.5
142.5°	325.3	325.4	325.5	325.3	325.0	324.7	324.3	324.0
145°	342.6	342.7	342.8	342.6	342.3	341.9	341.6	341.3
147.5°	357.7	357.9	358.1	358.0	357.7	357.3	357.0	356.8
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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