

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: P331334-927

Luminaire Tested: **SA2XXDIP-C675D330U927-4F0-1E-UDD-D1**

Issue Date: 10/7/2019

**Test Information**

Test Method: LM-79-08  
Report Number: P331334-927  
REPORT IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-1807-864-8,  
Test Lab: INNOVATION CENTER  
Issue Date: 10/7/2019  
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)  
Product Line: NEO-RAY  
Catalog Number: SA2XXDIP-C675D330U927-4F0-1E-UDD-D1  
Description: DEFINE 2 DIRECT-INDIRECT PENDANT LED LUMINAIRE  
DOWNLIGHT 675 LUMENS PER FOOT, DROP SATIN WHITE DIFFUSER  
UPLIGHT 330 LUMENS PER FOOT, FLUSH SATIN WHITE DIFFUSER  
Light Source: -  
Ballast/Driver: ELECTRONIC DRIVER

**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 3057.5 lumens  
Efficiency: N/A  
Efficacy: 87.4 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: Semi-Direct

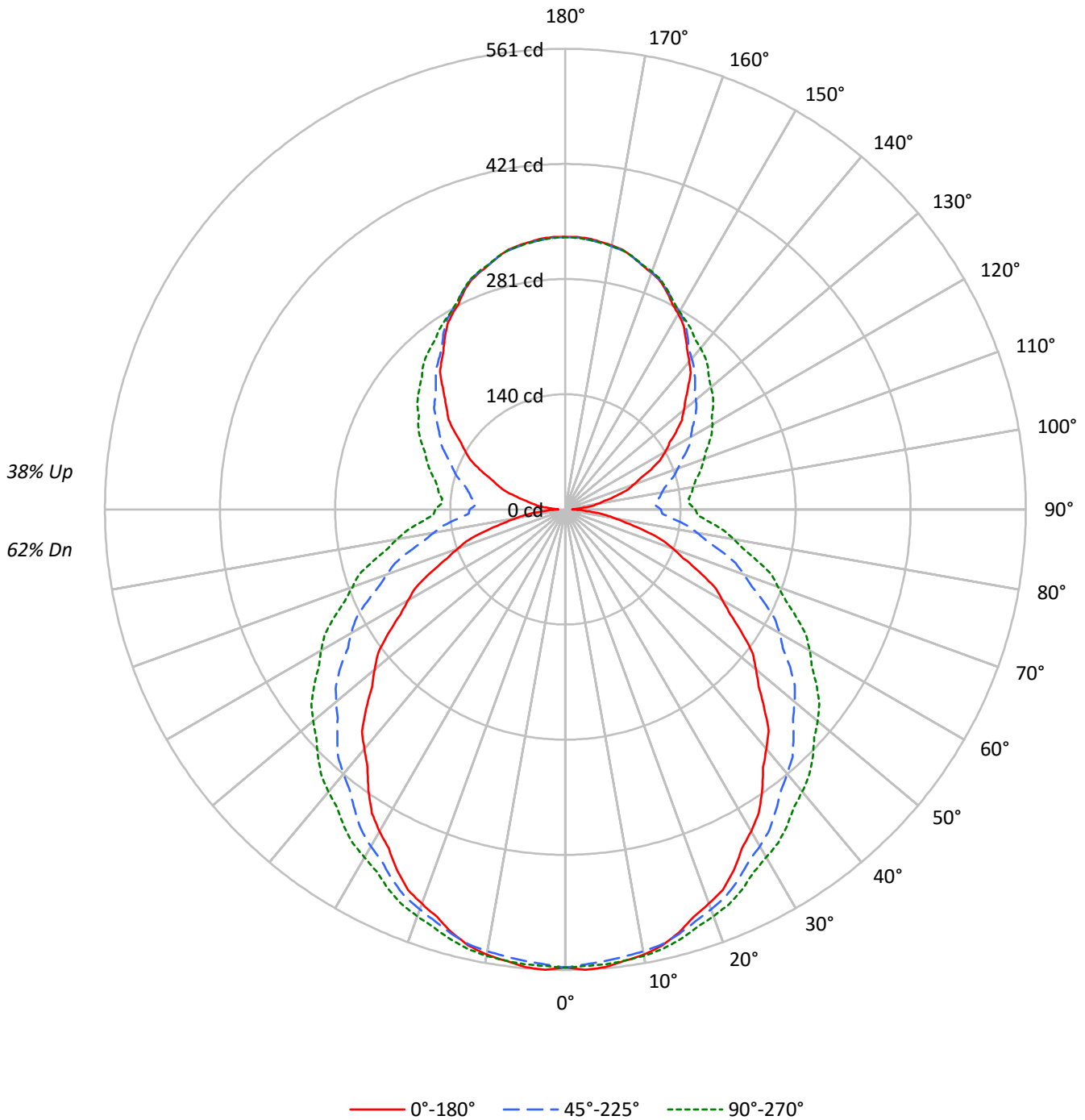
Input Watts (W): 35  
Input Voltage (V): 120  
Input Current (Ain): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 25 FT



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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	0
RCR																		
0	110	110	110	110	103	103	103	103	90	90	90	78	78	78	67	67	67	62
1	99	93	89	84	92	87	83	80	76	73	70	66	63	61	56	55	53	48
2	89	81	73	68	83	75	69	64	66	61	57	57	53	50	49	46	43	39
3	81	70	62	55	75	66	58	52	57	52	47	50	45	41	42	39	36	32
4	74	62	53	46	68	58	50	44	51	44	39	44	39	35	38	34	30	27
5	67	55	46	39	63	51	44	38	45	39	34	39	34	30	34	30	26	23
6	62	49	40	34	58	46	38	32	41	34	29	35	30	26	30	26	23	20
7	57	44	36	30	53	42	34	28	37	30	26	32	27	23	28	23	20	18
8	53	40	32	26	50	38	30	25	33	27	23	29	24	20	25	21	18	16
9	50	37	29	23	46	35	27	22	31	25	20	27	22	18	23	19	16	14
10	46	34	26	21	43	32	25	20	28	22	18	25	20	16	22	18	15	13

**AVERAGE LUMINANCE (cd/sqm):**

	0°	45°	90°
0°	9009	9009	9009
5°	9053	8672	8638
10°	8996	8417	8321
15°	8873	8146	7988
20°	8716	7854	7665
25°	8561	7573	7372
30°	8343	7286	7079
35°	8122	7007	6870
40°	7890	6771	6665
45°	7670	6558	6488
50°	7431	6366	6313
55°	7184	6161	6135
60°	6882	5948	5948
65°	6564	5697	5724
70°	6211	5427	5485
75°	5759	5163	5263
80°	5048	4895	5040
85°	4369	4658	4864



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	52.9	1.7
10°-20°	151.6	5.0
20°-30°	229.8	7.5
30°-40°	279.8	9.2
40°-50°	301.1	9.8
50°-60°	292.4	9.6
60°-70°	255.3	8.3
70°-80°	196.5	6.4
80°-90°	133.2	4.4
90°-100°	111.9	3.7
100°-110°	131.6	4.3
110°-120°	155.4	5.1
120°-130°	171.2	5.6
130°-140°	174.9	5.7
140°-150°	163.2	5.3
150°-160°	135.4	4.4
160°-170°	89.8	2.9
170°-180°	31.4	1.0
0°-30°	434.3	14.2
0°-40°	714.1	23.4
0°-60°	1307.5	42.8
0°-90°	1892.6	61.9
90°-120°	398.9	13.0
90°-150°	908.3	29.7
90°-180°	1165.0	38.1
0°-180°	3057.5	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	558	558	558	558	558	
5°	560	557	552	557	556	53
15°	534	535	535	542	542	150
25°	485	491	498	507	510	223
35°	418	432	447	464	471	261
45°	343	365	393	417	426	265
55°	263	293	334	362	374	235
65°	180	220	267	299	310	178
75°	100	145	196	230	242	105
85°	29	79	131	164	176	31
90°	8	59	116	147	158	6
95°	21	62	111	140	151	22
105°	64	90	131	159	169	68
115°	115	127	162	185	194	114
125°	164	168	192	212	220	147
135°	212	215	223	239	246	164
145°	256	258	259	264	268	160
155°	292	293	294	295	295	135
165°	318	318	318	320	318	90
175°	331	330	330	331	330	31
180°	332	332	332	332	332	



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**CANDELA DISTRIBUTION (FULL):**

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
0°	558.0	558.0	558.0	558.0	558.0	558.0	558.0	558.0	558.0	558.0	558.0
2.5°	561.3	560.8	560.4	559.9	559.5	558.8	557.8	556.7	555.8	554.8	555.5
5°	559.6	559.0	558.6	558.0	557.5	556.7	555.6	554.5	553.4	552.3	553.4
7.5°	554.6	554.2	553.9	553.5	553.2	552.5	551.8	550.9	550.1	549.3	550.6
10°	550.7	550.3	550.0	549.6	549.3	548.8	548.3	547.8	547.2	546.7	548.1
12.5°	544.2	544.3	544.4	544.5	544.5	544.4	544.0	543.6	543.2	542.8	544.2
15°	533.8	534.1	534.5	534.8	535.2	535.4	535.4	535.4	535.4	535.4	536.9
17.5°	520.1	520.9	521.7	522.4	523.2	523.9	524.4	525.0	525.5	526.2	527.8
20°	511.1	512.0	512.9	513.8	514.7	515.5	516.2	517.0	517.7	518.4	520.4
22.5°	501.4	502.4	503.5	504.5	505.6	506.6	507.6	508.6	509.6	510.6	512.6
25°	485.2	486.5	487.7	489.0	490.3	491.7	493.3	495.0	496.5	498.1	500.3
27.5°	465.8	467.9	469.9	472.0	474.0	476.0	477.9	479.8	481.7	483.6	486.3
30°	452.9	455.2	457.6	459.9	462.2	464.5	466.9	469.2	471.6	473.9	476.7
32.5°	438.6	441.2	443.9	446.5	449.2	451.9	454.6	457.3	460.1	462.9	466.2
35°	418.1	421.1	424.2	427.2	430.3	433.6	437.0	440.4	443.8	447.2	451.1
37.5°	395.8	399.3	402.8	406.3	409.9	413.8	418.3	422.7	427.1	431.5	435.9
40°	380.9	384.8	388.8	392.8	396.7	401.1	406.0	410.8	415.7	420.5	425.2
42.5°	366.7	370.6	374.5	378.5	382.5	387.2	392.8	398.4	403.9	409.6	414.6
45°	342.9	347.8	352.6	357.4	362.3	367.9	374.1	380.5	386.7	393.0	398.6
47.5°	319.4	324.7	330.0	335.3	340.6	346.9	354.3	361.6	369.0	376.4	382.2
50°	303.2	308.9	314.4	320.0	325.5	332.4	340.5	348.6	356.6	364.7	370.8
52.5°	287.7	293.6	299.4	305.3	311.2	318.4	326.9	335.4	343.9	352.4	358.7
55°	262.8	269.3	275.8	282.3	288.7	296.6	305.9	315.3	324.6	334.0	340.5
57.5°	238.2	245.6	252.9	260.2	267.4	275.8	285.3	294.9	304.4	313.9	320.9
60°	220.8	228.5	236.2	244.0	251.7	260.7	270.9	281.1	291.4	301.7	308.5
62.5°	205.3	213.3	221.3	229.3	237.3	246.4	256.7	266.9	277.2	287.4	294.7
65°	179.5	188.3	197.2	206.0	214.8	224.4	235.0	245.7	256.3	266.9	274.3
67.5°	155.9	165.1	174.4	183.5	192.7	202.7	213.6	224.4	235.3	246.1	253.6
70°	139.1	148.5	157.8	167.2	176.5	186.7	197.9	209.0	220.1	231.3	239.0
72.5°	123.6	133.2	142.8	152.5	162.1	172.5	183.9	195.1	206.4	217.7	225.3
75°	99.5	109.6	119.6	129.7	139.7	150.5	162.0	173.5	185.0	196.5	204.2
77.5°	76.2	86.7	97.3	107.7	118.3	129.4	141.1	152.8	164.5	176.1	183.9
80°	60.7	71.6	82.5	93.6	104.5	115.8	127.5	139.2	150.8	162.6	170.1
82.5°	47.7	58.5	69.3	80.2	91.0	102.3	114.2	126.0	137.8	149.6	157.2
85°	29.2	40.2	51.4	62.5	73.7	85.0	96.5	108.0	119.5	131.0	138.6
87.5°	15.9	26.8	37.6	48.5	59.3	70.7	82.5	94.2	106.0	117.8	125.1
90°	8.4	19.6	30.7	41.9	53.1	65.0	78.0	90.8	103.7	116.5	123.6
92.5°	12.4	22.7	33.0	43.2	53.4	64.2	75.7	87.1	98.5	109.8	116.9
95°	21.0	30.1	39.1	48.2	57.3	67.3	78.2	89.1	100.0	110.9	117.7
97.5°	32.2	40.3	48.4	56.4	64.5	73.8	84.4	95.0	105.6	116.1	122.8
100°	41.2	48.3	55.5	62.7	69.8	78.5	88.7	99.0	109.2	119.5	126.1
102.5°	50.0	56.4	62.9	69.4	75.9	84.1	94.1	104.1	114.2	124.1	130.7
105°	64.2	69.6	75.0	80.4	85.8	93.2	102.7	112.2	121.7	131.1	137.5
107.5°	79.4	83.8	88.2	92.7	97.2	103.9	112.8	121.8	130.7	139.7	145.8
110°	88.6	92.5	96.6	100.5	104.5	110.8	119.7	128.5	137.3	146.1	151.9



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**CANDELA DISTRIBUTION (continued):**

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
112.5°	99.3	102.7	106.2	109.6	112.9	118.7	127.1	135.4	143.8	152.1	157.6
115°	115.2	117.6	119.9	122.2	124.6	129.8	137.7	145.7	153.6	161.6	166.9
117.5°	130.2	132.0	133.7	135.5	137.4	141.8	148.9	156.1	163.2	170.3	175.5
120°	140.7	141.9	143.1	144.3	145.5	149.5	156.2	162.9	169.6	176.3	181.3
122.5°	150.3	151.2	152.1	153.0	153.8	157.5	163.9	170.3	176.7	183.2	187.9
125°	164.5	165.1	165.6	166.2	166.8	169.8	175.4	180.9	186.5	192.0	196.7
127.5°	179.1	179.7	180.1	180.7	181.3	183.7	188.1	192.5	196.9	201.4	205.6
130°	188.3	188.9	189.6	190.2	190.8	193.0	196.6	200.3	203.9	207.6	211.8
132.5°	198.6	199.1	199.6	200.0	200.5	202.2	205.2	208.1	211.0	214.0	217.9
135°	211.6	212.2	212.9	213.6	214.3	215.6	217.5	219.4	221.3	223.3	227.0
137.5°	226.1	226.6	227.1	227.6	228.1	228.9	229.8	230.8	231.7	232.7	236.0
140°	234.8	235.2	235.5	235.9	236.3	236.9	237.5	238.2	238.8	239.5	242.4
142.5°	243.8	244.2	244.5	244.9	245.3	245.6	245.9	246.1	246.4	246.8	249.1
145°	255.8	256.3	256.7	257.1	257.5	257.9	258.3	258.7	259.0	259.4	260.5
147.5°	267.3	267.8	268.3	268.9	269.3	269.7	270.0	270.3	270.5	270.8	271.0
150°	275.1	275.5	275.8	276.2	276.6	276.9	277.2	277.4	277.7	277.9	278.1
152.5°	282.1	282.4	282.8	283.2	283.5	283.9	284.2	284.5	284.8	285.1	285.3
155°	292.5	292.6	292.9	293.0	293.2	293.4	293.6	293.7	294.0	294.1	294.5
157.5°	301.3	301.5	301.6	301.7	301.9	302.0	302.1	302.2	302.3	302.5	302.9
160°	306.7	306.9	307.0	307.1	307.2	307.4	307.4	307.4	307.5	307.6	307.9
162.5°	311.6	311.7	311.7	311.7	311.8	311.8	311.9	312.0	312.0	312.0	312.5
165°	318.2	318.1	318.1	318.1	318.0	317.9	317.9	317.9	317.9	317.9	318.4
167.5°	323.7	323.5	323.4	323.1	323.0	322.9	322.8	322.8	322.8	322.8	323.2
170°	326.6	326.5	326.2	326.1	325.9	325.7	325.7	325.6	325.6	325.5	325.9
172.5°	328.6	328.4	328.3	328.0	327.9	327.7	327.7	327.6	327.6	327.5	328.0
175°	331.1	330.9	330.7	330.5	330.3	330.2	330.1	329.9	329.8	329.7	330.1
177.5°	332.1	331.9	331.8	331.7	331.5	331.4	331.3	331.2	331.1	331.0	331.3
180°	331.7	331.7	331.7	331.7	331.7	331.7	331.7	331.7	331.7	331.7	331.7



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**CANDELA DISTRIBUTION (continued):**

	55°	60°	65°	70°	75°	80°	85°	90°
0°	558.0	558.0	558.0	558.0	558.0	558.0	558.0	558.0
2.5°	556.2	556.9	557.6	557.9	557.5	557.3	557.0	556.7
5°	554.5	555.6	556.7	557.1	556.9	556.7	556.6	556.3
7.5°	551.8	553.2	554.4	555.0	554.8	554.6	554.4	554.3
10°	549.5	551.0	552.5	553.0	552.9	552.7	552.5	552.3
12.5°	545.7	547.1	548.6	549.1	549.0	548.8	548.7	548.4
15°	538.6	540.2	541.9	542.6	542.4	542.2	542.0	541.9
17.5°	529.5	531.2	532.9	533.8	533.8	533.8	533.8	533.8
20°	522.4	524.3	526.2	527.3	527.3	527.3	527.3	527.3
22.5°	514.6	516.6	518.5	519.7	519.9	520.2	520.5	520.8
25°	502.5	504.6	506.8	508.1	508.7	509.2	509.8	510.3
27.5°	489.1	491.8	494.6	496.1	496.5	496.9	497.3	497.6
30°	479.7	482.5	485.4	487.1	487.7	488.2	488.7	489.3
32.5°	469.5	472.9	476.1	478.2	479.3	480.2	481.2	482.1
35°	455.1	459.1	463.0	465.6	466.9	468.2	469.4	470.6
37.5°	440.3	444.7	449.1	451.9	453.3	454.6	455.9	457.2
40°	429.8	434.5	439.2	442.4	443.9	445.6	447.2	448.9
42.5°	419.7	424.8	429.9	433.3	434.9	436.6	438.2	439.7
45°	404.2	409.7	415.3	419.0	420.8	422.6	424.4	426.2
47.5°	388.0	393.9	399.7	403.5	405.5	407.5	409.5	411.5
50°	376.9	383.0	389.2	393.2	395.2	397.2	399.1	401.1
52.5°	365.0	371.2	377.5	381.7	383.7	385.9	388.0	390.1
55°	346.9	353.4	359.9	364.2	366.6	368.9	371.3	373.6
57.5°	327.9	334.9	341.8	346.5	348.9	351.3	353.6	356.0
60°	315.3	322.1	329.0	333.7	336.1	338.7	341.2	343.7
62.5°	301.9	309.2	316.5	321.3	323.6	326.0	328.4	330.7
65°	281.6	289.0	296.4	301.2	303.6	305.9	308.2	310.5
67.5°	261.0	268.5	275.9	280.9	283.3	285.7	288.2	290.7
70°	246.8	254.4	262.2	267.1	269.3	271.5	273.6	275.8
72.5°	232.9	240.4	248.0	253.1	255.7	258.3	260.9	263.5
75°	212.0	219.7	227.4	232.4	234.8	237.1	239.5	241.8
77.5°	191.5	199.2	206.9	212.0	214.5	217.1	219.5	222.0
80°	177.6	185.2	192.7	197.8	200.3	202.8	205.3	207.9
82.5°	164.7	172.2	179.8	184.7	187.1	189.5	191.9	194.2
85°	146.1	153.7	161.2	166.2	168.7	171.3	173.8	176.3
87.5°	132.4	139.7	147.0	151.8	154.1	156.5	158.8	161.1
90°	130.7	137.8	144.8	149.4	151.6	153.8	156.1	158.3
92.5°	124.0	131.0	138.1	142.8	144.9	147.0	149.2	151.4
95°	124.6	131.4	138.2	142.7	144.7	146.7	148.8	150.8
97.5°	129.4	136.1	142.8	147.1	149.2	151.4	153.4	155.6
100°	132.8	139.4	146.1	150.4	152.3	154.2	156.1	158.0
102.5°	137.3	143.8	150.4	154.6	156.5	158.4	160.3	162.2
105°	143.9	150.4	156.8	161.0	163.0	164.9	166.9	168.9
107.5°	151.9	158.0	164.0	167.9	169.6	171.3	173.0	174.7
110°	157.6	163.3	169.1	172.9	174.7	176.4	178.2	180.0





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**CANDELA DISTRIBUTION (continued):**

	55°	60°	65°	70°	75°	80°	85°	90°
112.5°	163.3	168.9	174.4	178.2	180.1	181.9	183.7	185.5
115°	172.2	177.6	182.9	186.5	188.2	190.0	191.9	193.6
117.5°	180.6	185.8	191.0	194.4	196.1	197.6	199.3	201.0
120°	186.3	191.4	196.4	199.8	201.6	203.4	205.2	207.0
122.5°	192.6	197.3	202.1	205.3	206.8	208.3	209.9	211.4
125°	201.4	206.0	210.7	213.8	215.4	217.0	218.5	220.1
127.5°	209.8	214.0	218.3	221.1	222.4	223.9	225.2	226.6
130°	215.9	220.1	224.3	227.0	228.1	229.3	230.5	231.7
132.5°	221.7	225.7	229.6	232.1	233.4	234.6	235.8	237.1
135°	230.7	234.4	238.1	240.6	241.9	243.1	244.4	245.6
137.5°	239.2	242.5	245.7	247.9	248.8	249.8	250.7	251.8
140°	245.3	248.1	251.0	252.9	253.7	254.5	255.3	256.2
142.5°	251.4	253.8	256.1	257.6	258.3	259.0	259.7	260.4
145°	261.7	262.8	264.0	264.9	265.5	266.2	266.9	267.5
147.5°	271.3	271.6	271.9	272.1	272.3	272.5	272.7	272.9
150°	278.3	278.5	278.7	278.7	278.5	278.3	278.1	277.9
152.5°	285.6	285.8	286.1	286.1	285.8	285.6	285.3	285.1
155°	294.8	295.1	295.4	295.5	295.2	295.1	294.9	294.7
157.5°	303.2	303.7	304.1	304.2	303.9	303.6	303.3	303.0
160°	308.3	308.7	309.1	309.1	308.9	308.6	308.4	308.2
162.5°	312.9	313.3	313.8	313.8	313.5	313.2	312.9	312.6
165°	318.8	319.2	319.6	319.7	319.4	319.1	318.8	318.5
167.5°	323.7	324.1	324.6	324.6	324.3	323.9	323.6	323.3
170°	326.4	326.8	327.3	327.3	326.9	326.5	326.1	325.7
172.5°	328.4	328.8	329.2	329.3	328.9	328.5	328.2	327.8
175°	330.6	331.0	331.4	331.4	331.1	330.7	330.3	329.9
177.5°	331.6	331.8	332.2	332.2	331.8	331.6	331.3	331.0
180°	331.7	331.7	331.7	331.7	331.7	331.7	331.7	331.7

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