

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: P331352-940

Luminaire Tested: **SA2XXDIP-C675D725U940-4F0-1E-UDD-D1**

Issue Date: 10/7/2019

**Test Information**

Test Method: LM-79-08  
Report Number: P331352-940  
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-C675D725U940-4F0-1E-UDD-D1  
Description: DEFINE 2 DIRECT-INDIRECT PENDANT LED LUMINAIRE  
DOWNLIGHT 675 LUMENS PER FOOT, DROP SATIN WHITE DIFFUSER  
UPLIGHT 725 LUMENS PER FOOT, FLUSH SATIN WHITE DIFFUSER  
Light Source: -  
Ballast/Driver: ELECTRONIC DRIVER

**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 4709.1 lumens  
Efficiency: N/A  
Efficacy: 102.6 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

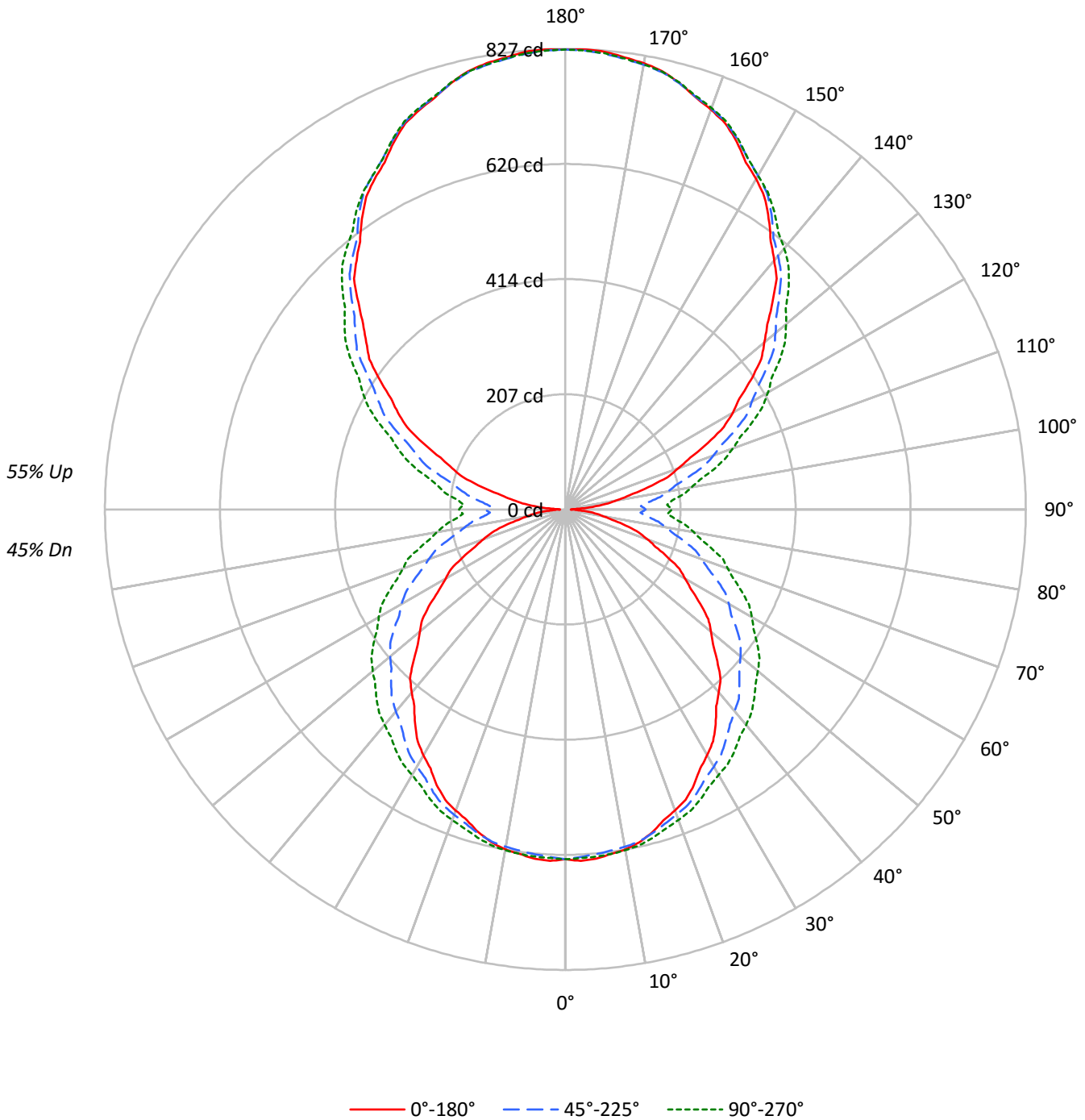
Input Watts (W): 45.9  
Input Voltage (V): 120  
Input Current (Ain): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 25 FT



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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	0	
RCR																						
0	106	106	106	106	97	97	97	97	81	81	81	66	66	66	52	52	52	45				
1	95	90	86	82	87	83	79	76	69	66	63	56	54	52	44	42	41	35				
2	86	78	72	66	79	72	66	61	59	55	51	48	45	42	38	35	33	28				
3	78	68	60	54	71	63	56	50	52	47	43	42	38	35	33	30	28	24				
4	71	60	52	45	65	55	48	42	46	40	36	37	33	30	29	26	24	20				
5	65	53	45	39	59	49	42	36	41	35	31	33	29	25	26	23	20	17				
6	60	48	39	33	55	44	36	31	37	31	26	30	25	22	24	20	18	15				
7	56	43	35	29	51	40	32	27	33	27	23	27	23	19	21	18	16	13				
8	51	39	31	25	47	36	29	24	30	24	20	25	20	17	20	16	14	11				
9	48	35	28	23	44	33	26	21	28	22	18	23	18	15	18	15	13	10				
10	45	32	25	20	41	30	23	19	25	20	16	21	17	14	17	14	11	9				

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

	0°	45°	90°
0°	10141	10141	10141
5°	10191	9762	9724
10°	10126	9474	9367
15°	9987	9168	8990
20°	9810	8841	8627
25°	9637	8525	8298
30°	9392	8201	7967
35°	9142	7888	7735
40°	8880	7621	7501
45°	8632	7383	7302
50°	8365	7166	7106
55°	8089	6934	6906
60°	7745	6695	6695
65°	7391	6412	6445
70°	6992	6110	6173
75°	6483	5811	5925
80°	5680	5509	5672
85°	4908	5245	5473



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	59.5	1.3
10°-20°	170.7	3.6
20°-30°	258.6	5.5
30°-40°	315.0	6.7
40°-50°	338.9	7.2
50°-60°	329.1	7.0
60°-70°	287.4	6.1
70°-80°	221.2	4.7
80°-90°	151.8	3.2
90°-100°	154.6	3.3
100°-110°	237.2	5.0
110°-120°	327.2	6.9
120°-130°	392.9	8.3
130°-140°	421.6	9.0
140°-150°	404.1	8.6
150°-160°	337.3	7.2
160°-170°	223.7	4.8
170°-180°	78.2	1.7
0°-30°	488.8	10.4
0°-40°	803.8	17.1
0°-60°	1471.8	31.3
0°-90°	2132.2	45.3
90°-120°	719.0	15.3
90°-150°	1937.7	41.1
90°-180°	2577.0	54.7
0°-180°	4709.1	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	628	628	628	628	628	
5°	630	627	622	627	626	60
15°	601	602	603	610	610	169
25°	546	553	561	571	574	251
35°	471	486	503	523	530	294
45°	386	411	442	470	480	298
55°	296	329	376	408	420	264
65°	202	247	300	336	350	201
75°	112	163	221	259	272	118
85°	33	89	148	184	198	35
90°	10	72	144	178	191	8
95°	44	94	149	182	193	47
105°	154	184	232	264	275	163
115°	282	298	336	362	371	279
125°	408	415	441	462	471	364
135°	526	534	544	562	568	406
145°	637	642	646	652	654	398
155°	728	730	732	736	734	335
165°	792	792	792	796	793	223
175°	825	822	821	825	822	78
180°	826	826	826	826	826	



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**CANDELA DISTRIBUTION (FULL):**

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
0°	628.1	628.1	628.1	628.1	628.1	628.1	628.1	628.1	628.1	628.1	628.1
2.5°	631.8	631.2	630.8	630.3	629.8	629.0	627.9	626.7	625.6	624.5	625.3
5°	629.9	629.3	628.7	628.1	627.5	626.6	625.4	624.2	622.9	621.7	622.9
7.5°	624.3	623.8	623.5	623.0	622.7	622.0	621.1	620.1	619.2	618.3	619.7
10°	619.9	619.5	619.1	618.7	618.3	617.8	617.2	616.6	616.0	615.4	617.0
12.5°	612.6	612.7	612.8	612.9	613.0	612.8	612.3	611.9	611.4	611.0	612.6
15°	600.8	601.2	601.6	602.0	602.4	602.6	602.6	602.6	602.6	602.6	604.4
17.5°	585.5	586.4	587.2	588.1	588.9	589.7	590.3	590.9	591.6	592.3	594.1
20°	575.3	576.3	577.3	578.4	579.3	580.2	581.0	581.9	582.7	583.5	585.8
22.5°	564.4	565.5	566.8	567.9	569.1	570.2	571.4	572.5	573.6	574.8	577.0
25°	546.2	547.6	549.0	550.5	551.9	553.5	555.3	557.1	558.9	560.7	563.2
27.5°	524.3	526.6	529.0	531.3	533.6	535.8	538.0	540.1	542.2	544.4	547.4
30°	509.8	512.4	515.1	517.6	520.3	522.9	525.6	528.2	530.8	533.4	536.6
32.5°	493.7	496.7	499.6	502.6	505.6	508.6	511.8	514.8	517.9	521.0	524.8
35°	470.6	474.0	477.5	480.9	484.4	488.0	491.9	495.7	499.5	503.4	507.8
37.5°	445.5	449.5	453.4	457.4	461.4	465.8	470.8	475.8	480.7	485.7	490.7
40°	428.7	433.2	437.7	442.1	446.6	451.5	457.0	462.4	467.9	473.3	478.6
42.5°	412.8	417.1	421.6	426.1	430.5	435.9	442.2	448.4	454.7	461.0	466.7
45°	385.9	391.5	396.9	402.3	407.8	414.1	421.2	428.3	435.3	442.4	448.7
47.5°	359.5	365.5	371.5	377.4	383.3	390.5	398.8	407.1	415.4	423.7	430.3
50°	341.3	347.7	353.9	360.2	366.4	374.2	383.3	392.4	401.4	410.5	417.4
52.5°	323.9	330.5	337.1	343.7	350.3	358.4	367.9	377.6	387.1	396.7	403.8
55°	295.9	303.1	310.4	317.7	324.9	333.9	344.4	354.9	365.4	375.9	383.3
57.5°	268.1	276.4	284.6	292.8	301.0	310.5	321.2	331.9	342.7	353.4	361.2
60°	248.5	257.2	265.9	274.6	283.3	293.5	305.0	316.5	328.0	339.6	347.2
62.5°	231.0	240.0	249.1	258.1	267.2	277.4	288.9	300.4	312.0	323.5	331.7
65°	202.1	212.0	221.9	231.8	241.7	252.6	264.6	276.5	288.5	300.4	308.7
67.5°	175.5	185.8	196.3	206.6	217.0	228.2	240.4	252.6	264.8	277.1	285.4
70°	156.6	167.1	177.6	188.2	198.7	210.2	222.7	235.2	247.8	260.4	269.0
72.5°	139.1	149.9	160.8	171.7	182.4	194.2	207.0	219.6	232.4	245.0	253.6
75°	112.0	123.3	134.6	146.0	157.3	169.4	182.4	195.3	208.2	221.2	229.9
77.5°	85.8	97.6	109.5	121.3	133.1	145.7	158.8	172.0	185.1	198.2	207.0
80°	68.3	80.6	92.9	105.3	117.6	130.4	143.6	156.7	169.8	183.0	191.5
82.5°	53.7	65.9	78.0	90.2	102.5	115.1	128.5	141.8	155.1	168.4	176.9
85°	32.8	45.3	57.9	70.4	82.9	95.7	108.6	121.5	134.6	147.5	156.0
87.5°	18.0	30.4	42.8	55.3	67.7	80.7	94.3	108.0	121.6	135.3	143.4
90°	9.8	23.4	37.0	50.6	64.2	79.1	95.5	111.8	128.2	144.5	152.3
92.5°	20.8	33.1	45.4	57.6	69.9	82.7	95.9	109.2	122.5	135.8	143.7
95°	43.5	54.6	65.6	76.7	87.7	99.5	111.9	124.4	136.9	149.3	156.9
97.5°	72.6	82.4	92.2	102.0	111.8	122.9	135.1	147.4	159.6	171.8	179.3
100°	94.9	103.6	112.4	121.1	129.7	140.1	151.9	163.6	175.4	187.3	194.7
102.5°	117.6	125.4	133.2	141.1	148.9	158.6	170.2	181.8	193.4	205.0	212.4
105°	154.4	160.8	167.1	173.4	179.8	188.3	199.1	210.0	220.8	231.7	239.0
107.5°	192.4	197.8	203.1	208.6	213.9	221.7	231.8	241.8	251.9	261.9	268.9
110°	216.2	221.2	226.1	231.1	236.1	243.5	253.5	263.4	273.3	283.2	289.7



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**CANDELA DISTRIBUTION (continued):**

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
112.5°	243.0	247.4	251.6	256.0	260.3	267.2	276.4	285.7	295.1	304.3	310.4
115°	282.4	285.6	288.7	291.9	295.1	301.0	309.9	318.6	327.4	336.2	342.1
117.5°	320.8	323.5	326.2	329.0	331.6	336.7	344.3	351.9	359.4	366.9	372.6
120°	347.1	349.1	351.2	353.2	355.3	359.7	366.6	373.4	380.2	387.1	392.8
122.5°	371.0	372.8	374.6	376.5	378.3	382.5	389.3	396.0	402.8	409.5	414.6
125°	407.5	408.8	410.3	411.6	413.0	416.8	422.8	428.7	434.8	440.8	445.8
127.5°	443.9	445.4	447.0	448.5	450.1	453.3	457.9	462.5	467.2	471.9	476.4
130°	466.7	468.5	470.4	472.2	473.9	476.8	480.8	484.7	488.7	492.6	497.1
132.5°	492.4	493.8	495.3	496.7	498.1	500.5	503.8	507.2	510.5	513.9	517.9
135°	525.8	527.4	529.1	530.8	532.5	534.6	536.9	539.2	541.6	543.9	548.0
137.5°	561.9	563.2	564.5	565.9	567.3	568.6	569.9	571.1	572.5	573.7	577.4
140°	583.6	584.8	585.9	587.2	588.4	589.5	590.8	591.9	593.1	594.2	597.5
142.5°	605.9	607.1	608.3	609.5	610.6	611.5	612.2	612.8	613.4	614.0	616.7
145°	637.0	638.1	639.3	640.3	641.4	642.4	643.4	644.3	645.2	646.1	647.5
147.5°	665.7	666.9	668.2	669.5	670.8	671.8	672.4	673.1	673.7	674.3	674.8
150°	685.2	686.1	687.0	688.0	688.8	689.6	690.3	690.9	691.5	692.1	692.6
152.5°	702.4	703.4	704.3	705.3	706.1	706.9	707.8	708.5	709.2	710.0	710.5
155°	728.3	728.8	729.3	729.8	730.2	730.7	731.1	731.6	732.1	732.5	733.3
157.5°	750.6	750.8	751.2	751.4	751.8	752.1	752.3	752.6	752.9	753.1	754.2
160°	763.9	764.2	764.6	764.8	765.2	765.4	765.5	765.7	765.9	766.0	767.0
162.5°	776.1	776.2	776.3	776.3	776.4	776.5	776.7	776.9	777.0	777.1	778.2
165°	792.5	792.4	792.2	792.0	791.8	791.8	791.8	791.8	791.8	791.8	792.9
167.5°	806.1	805.7	805.2	804.8	804.3	804.1	804.1	804.0	804.0	803.9	805.0
170°	813.4	813.0	812.4	812.0	811.5	811.2	811.1	810.9	810.7	810.6	811.7
172.5°	818.4	818.0	817.5	817.0	816.5	816.3	816.1	815.9	815.8	815.6	816.7
175°	824.6	824.1	823.6	823.1	822.7	822.3	822.0	821.7	821.4	821.1	822.2
177.5°	827.1	826.7	826.3	825.9	825.5	825.3	825.0	824.7	824.5	824.3	825.0
180°	825.9	825.9	825.9	825.9	825.9	825.9	825.9	825.9	825.9	825.9	825.9



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**CANDELA DISTRIBUTION (continued):**

	55°	60°	65°	70°	75°	80°	85°	90°
0°	628.1	628.1	628.1	628.1	628.1	628.1	628.1	628.1
2.5°	626.1	626.9	627.7	627.9	627.6	627.3	627.0	626.7
5°	624.2	625.4	626.6	627.1	626.9	626.7	626.5	626.2
7.5°	621.2	622.7	624.1	624.7	624.6	624.3	624.1	623.9
10°	618.6	620.2	621.9	622.5	622.3	622.1	622.0	621.7
12.5°	614.2	615.8	617.5	618.1	618.0	617.8	617.6	617.3
15°	606.3	608.1	609.9	610.7	610.6	610.3	610.1	609.9
17.5°	596.0	598.0	599.9	600.8	600.8	600.8	600.8	600.8
20°	588.0	590.2	592.4	593.5	593.5	593.5	593.5	593.5
22.5°	579.3	581.5	583.6	585.0	585.2	585.6	585.9	586.2
25°	565.6	568.0	570.4	571.9	572.6	573.2	573.8	574.4
27.5°	550.5	553.6	556.7	558.4	558.8	559.3	559.7	560.2
30°	539.9	543.1	546.4	548.3	548.9	549.6	550.1	550.7
32.5°	528.5	532.3	535.9	538.3	539.5	540.6	541.6	542.7
35°	512.3	516.7	521.2	524.1	525.6	527.0	528.3	529.8
37.5°	495.6	500.5	505.5	508.7	510.2	511.7	513.2	514.7
40°	483.8	489.1	494.4	497.9	499.7	501.6	503.4	505.2
42.5°	472.4	478.2	483.9	487.8	489.5	491.4	493.2	495.0
45°	455.0	461.2	467.5	471.6	473.7	475.7	477.7	479.7
47.5°	436.8	443.4	449.9	454.2	456.5	458.7	460.9	463.2
50°	424.3	431.1	438.1	442.6	444.9	447.1	449.2	451.5
52.5°	410.8	417.9	424.9	429.6	431.9	434.4	436.8	439.2
55°	390.5	397.8	405.1	410.0	412.7	415.3	417.9	420.5
57.5°	369.1	376.9	384.8	390.0	392.7	395.4	398.1	400.7
60°	354.9	362.6	370.3	375.6	378.4	381.2	384.1	386.9
62.5°	339.8	348.0	356.2	361.7	364.3	366.9	369.6	372.3
65°	317.0	325.3	333.6	339.0	341.7	344.3	347.0	349.6
67.5°	293.8	302.2	310.6	316.2	318.9	321.6	324.4	327.2
70°	277.8	286.4	295.2	300.7	303.1	305.6	308.0	310.4
72.5°	262.2	270.6	279.2	284.9	287.8	290.8	293.6	296.6
75°	238.6	247.3	256.0	261.6	264.3	266.9	269.6	272.2
77.5°	215.6	224.3	232.9	238.6	241.5	244.3	247.1	249.9
80°	199.9	208.5	217.0	222.7	225.4	228.3	231.1	234.0
82.5°	185.4	193.9	202.4	207.9	210.6	213.3	216.0	218.6
85°	164.4	173.0	181.5	187.1	189.9	192.8	195.6	198.4
87.5°	151.6	159.8	168.0	173.4	176.0	178.6	181.3	183.9
90°	160.2	167.9	175.7	180.8	183.4	186.0	188.6	191.2
92.5°	151.8	159.7	167.7	173.0	175.4	177.9	180.3	182.8
95°	164.7	172.4	180.0	184.9	187.1	189.2	191.3	193.4
97.5°	186.8	194.3	201.8	206.7	209.1	211.4	213.7	216.2
100°	202.2	209.6	217.1	221.9	224.0	226.0	228.1	230.2
102.5°	219.9	227.3	234.8	239.5	241.6	243.7	245.8	247.8
105°	246.4	253.8	261.2	266.0	268.2	270.5	272.7	274.9
107.5°	275.8	282.7	289.6	293.8	295.3	296.9	298.4	299.9
110°	296.1	302.6	309.2	313.3	315.0	316.7	318.5	320.3





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**CANDELA DISTRIBUTION (continued):**

	55°	60°	65°	70°	75°	80°	85°	90°
112.5°	316.6	322.6	328.8	332.7	334.6	336.5	338.4	340.3
115°	348.0	353.9	359.9	363.7	365.4	367.2	369.0	370.8
117.5°	378.2	383.8	389.4	393.0	394.6	396.2	397.8	399.4
120°	398.4	404.1	409.7	413.5	415.3	417.0	418.7	420.5
122.5°	419.7	424.9	430.0	433.4	434.9	436.5	438.0	439.6
125°	450.8	455.8	460.7	464.1	465.7	467.4	469.1	470.7
127.5°	480.8	485.3	489.7	492.6	493.8	495.2	496.4	497.8
130°	501.7	506.2	510.8	513.5	514.5	515.5	516.6	517.5
132.5°	521.9	525.9	529.9	532.5	533.6	534.8	535.8	537.0
135°	552.1	556.2	560.3	562.9	564.1	565.3	566.4	567.5
137.5°	580.9	584.5	588.2	590.3	591.1	591.8	592.6	593.3
140°	600.7	604.0	607.3	609.1	609.8	610.3	610.9	611.5
142.5°	619.5	622.1	624.8	626.4	626.9	627.3	627.8	628.1
145°	648.9	650.2	651.6	652.5	652.8	653.3	653.6	654.1
147.5°	675.3	675.8	676.3	676.5	676.4	676.3	676.2	676.1
150°	693.0	693.5	694.0	694.0	693.5	693.0	692.6	692.1
152.5°	711.1	711.8	712.3	712.3	711.8	711.1	710.5	710.0
155°	734.1	734.9	735.7	735.8	735.3	734.9	734.4	734.0
157.5°	755.3	756.3	757.4	757.5	756.8	756.1	755.3	754.6
160°	767.9	768.8	769.7	769.9	769.3	768.7	768.0	767.4
162.5°	779.3	780.3	781.4	781.5	780.8	780.1	779.3	778.6
165°	794.0	795.0	796.1	796.3	795.5	794.7	794.0	793.2
167.5°	806.1	807.2	808.2	808.4	807.6	806.8	806.0	805.2
170°	812.8	813.9	814.9	815.0	814.1	813.2	812.3	811.3
172.5°	817.8	818.9	819.9	820.0	819.1	818.1	817.3	816.4
175°	823.2	824.3	825.4	825.5	824.6	823.6	822.7	821.8
177.5°	825.7	826.5	827.2	827.2	826.5	825.7	825.0	824.3
180°	825.9	825.9	825.9	825.9	825.9	825.9	825.9	825.9

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