

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: P331811-927

Luminaire Tested: **S122RDIW-S675D710U927-4F0-1E-UDD-F**

Issue Date: 3/3/2020

**Test Information**

Test Method: LM-79-08  
Report Number: P331811-927  
REPORT IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-1807-864-2,  
Test Lab: INNOVATION CENTER  
Issue Date: 3/3/2020  
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)  
Product Line: NEO-RAY  
Catalog Number: S122RDIW-S675D710U927-4F0-1E-UDD-F  
Description: DEFINE 2 DIRECT-INDIRECT WALL MOUNT LED LUMINAIRE  
DOWNLIGHT 675 LUMENS PER FOOT, FLUSH SATIN WHITE DIFFUSER, REGRESSED  
HOUSING  
UPLIGHT 710 LUMENS PER FOOT, NO LENS  
Light Source: -  
Ballast/Driver: ELECTRONIC DRIVER

**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 4085.9 lumens  
Efficiency: N/A  
Efficacy: 90.8 lumens/watt  
Spacing Criteria (0/90/45): 1.2 / 0.99 / 1.16  
Luminous Opening: Rectangular (W 0.17' x L: 4' x H: 0')  
CIE Type: General Diffuse

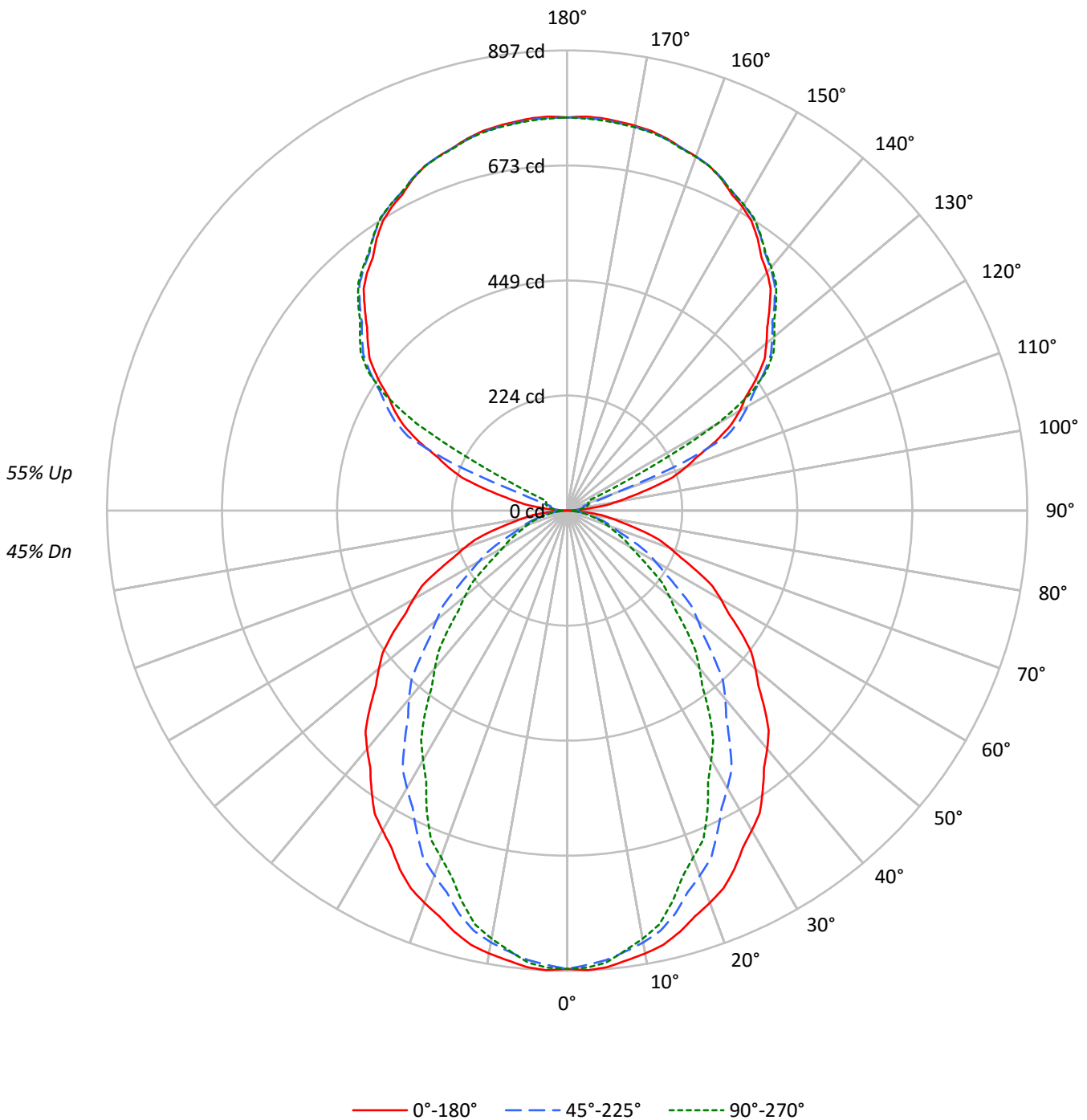
Input Watts (W): 45  
Input Voltage (V): 120  
Input Current (A<sub>in</sub>): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 25 FT



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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	106	106	106	106	97	97	97	97	81	81	81	65	65	65	52	52	52	45
1	97	93	89	86	89	85	82	79	71	69	67	58	57	55	46	45	44	39
2	89	82	76	71	81	75	70	66	63	59	56	52	49	47	41	40	38	33
3	81	72	65	60	74	66	60	56	56	51	48	46	43	40	37	35	33	29
4	74	64	57	51	68	59	53	47	50	45	41	41	38	35	33	31	29	25
5	69	57	49	44	63	53	46	41	45	40	36	37	33	30	30	27	25	22
6	63	52	44	38	58	48	41	36	41	35	31	34	30	27	28	25	22	19
7	59	47	39	34	54	43	36	32	37	32	28	31	27	24	25	22	20	17
8	54	42	35	30	50	39	33	28	34	28	25	28	24	21	23	20	18	16
9	51	39	32	27	47	36	30	25	31	26	22	26	22	19	22	19	16	14
10	47	36	29	24	44	33	27	23	29	24	20	24	20	18	20	17	15	13

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

	0°	45°	90°
0°	14428	14428	14428
5°	14483	14248	14326
10°	14372	14014	13895
15°	14206	13600	13207
20°	13979	13005	12352
25°	13744	12332	11526
30°	13420	11639	10465
35°	13102	10886	9532
40°	12783	10108	8454
45°	12408	9232	7478
50°	12024	8349	6521
55°	11634	7398	5599
60°	11176	6397	4647
65°	10659	5375	4233
70°	10041	4428	3895
75°	9283	4036	3631
80°	8201	3608	3310
85°	6447	2853	2853



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	83.6	2.0
10°-20°	229.7	5.6
20°-30°	322.5	7.9
30°-40°	351.7	8.6
40°-50°	323.4	7.9
50°-60°	254.0	6.2
60°-70°	165.6	4.1
70°-80°	85.4	2.1
80°-90°	24.0	0.6
90°-100°	25.6	0.6
100°-110°	93.8	2.3
110°-120°	250.6	6.1
120°-130°	413.7	10.1
130°-140°	440.0	10.8
140°-150°	408.9	10.0
150°-160°	328.8	8.0
160°-170°	211.9	5.2
170°-180°	72.9	1.8
0°-30°	635.8	15.6
0°-40°	987.5	24.2
0°-60°	1564.8	38.3
0°-90°	1839.8	45.0
90°-120°	369.9	9.1
90°-150°	1632.5	40.0
90°-180°	2246.0	55.0
0°-180°	4085.9	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	894	894	894	894	894	
5°	894	889	879	886	884	85
15°	850	840	814	799	790	239
25°	772	744	692	660	647	355
35°	665	622	552	503	484	416
45°	543	488	404	349	328	419
55°	413	349	263	216	199	369
65°	279	213	141	115	111	277
75°	149	94	65	59	58	158
85°	35	19	15	15	15	41
90°	1	6	11	14	15	3
95°	36	19	22	24	24	44
105°	169	176	34	40	42	180
115°	319	329	342	97	46	314
125°	451	458	469	472	474	402
135°	558	567	572	577	576	431
145°	647	647	656	660	657	405
155°	713	708	714	717	713	328
165°	751	748	749	753	749	212
175°	768	764	765	769	764	73
180°	766	766	766	766	766	



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**CANDELA DISTRIBUTION (FULL):**

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
0°	893.6	893.6	893.6	893.6	893.6	893.6	893.6	893.6	893.6	893.6	893.6
2.5°	896.8	896.1	895.4	894.7	894.0	892.8	891.2	889.6	888.1	886.5	888.0
5°	893.6	892.7	891.8	890.9	890.0	888.4	886.1	883.8	881.4	879.1	880.7
7.5°	884.4	883.3	882.2	881.1	880.0	878.0	875.3	872.6	869.8	867.1	867.5
10°	876.6	875.4	874.1	872.8	871.6	869.2	865.5	862.0	858.4	854.8	854.3
12.5°	866.9	865.4	863.8	862.3	860.7	857.7	853.1	848.5	843.8	839.2	838.3
15°	849.9	848.0	846.0	844.0	842.0	838.0	831.9	825.8	819.7	813.6	810.2
17.5°	829.1	826.1	823.1	820.0	817.0	811.6	803.7	795.9	788.1	780.2	776.2
20°	813.6	809.9	806.4	802.8	799.2	792.9	783.9	774.9	766.0	756.9	752.4
22.5°	796.7	792.7	788.7	784.7	780.6	773.6	763.4	753.3	743.1	733.0	727.2
25°	771.5	765.7	760.0	754.2	748.5	739.7	727.9	716.0	704.1	692.2	684.8
27.5°	741.1	734.8	728.6	722.3	716.1	706.2	692.9	679.5	666.1	652.8	644.2
30°	719.8	712.9	706.1	699.3	692.4	681.8	667.4	653.1	638.7	624.3	615.1
32.5°	699.0	691.0	683.1	675.1	667.1	655.8	641.1	626.5	611.8	597.1	586.7
35°	664.7	655.6	646.4	637.2	628.1	615.6	599.8	584.0	568.2	552.3	541.0
37.5°	630.5	620.4	610.3	600.2	590.2	576.7	559.9	543.0	526.2	509.3	496.9
40°	606.5	595.7	584.9	574.2	563.4	549.3	531.9	514.4	497.0	479.6	466.8
42.5°	581.9	570.6	559.2	547.9	536.5	521.8	503.8	485.8	467.8	449.8	436.6
45°	543.4	531.4	519.4	507.3	495.3	479.8	461.0	442.1	423.2	404.3	391.6
47.5°	505.9	493.1	480.4	467.6	454.9	438.8	419.3	399.8	380.3	360.8	348.2
50°	478.7	466.0	453.2	440.5	427.7	411.5	391.7	371.9	352.1	332.4	320.0
52.5°	452.3	438.9	425.6	412.3	398.9	382.5	363.2	343.9	324.6	305.2	293.3
55°	413.3	399.3	385.2	371.2	357.2	340.5	321.1	301.7	282.3	262.8	252.1
57.5°	373.3	358.9	344.5	330.2	315.8	299.3	280.6	262.0	243.3	224.7	214.8
60°	346.1	331.8	317.3	303.0	288.6	272.2	253.7	235.1	216.7	198.1	188.9
62.5°	319.6	305.2	290.8	276.5	262.1	246.1	228.5	210.8	193.1	175.5	166.8
65°	279.0	264.4	249.9	235.4	220.8	205.4	189.3	173.1	156.9	140.7	134.6
67.5°	239.9	225.4	211.0	196.5	182.0	167.5	153.0	138.5	123.9	109.3	106.5
70°	212.7	198.7	184.7	170.6	156.6	143.4	131.0	118.6	106.2	93.8	92.0
72.5°	186.8	173.3	159.9	146.5	133.0	121.4	111.4	101.4	91.5	81.5	80.0
75°	148.8	136.3	123.7	111.1	98.5	89.1	83.0	76.9	70.8	64.7	63.5
77.5°	111.5	100.4	89.4	78.3	67.3	60.3	57.4	54.4	51.5	48.6	47.8
80°	88.2	79.0	69.8	60.7	51.5	46.0	44.2	42.4	40.6	38.8	38.1
82.5°	66.8	59.7	52.5	45.3	38.2	34.0	32.8	31.5	30.3	29.2	28.7
85°	34.8	31.0	27.3	23.4	19.6	17.5	17.0	16.5	15.9	15.4	15.4
87.5°	10.5	9.6	8.7	7.8	7.0	6.6	6.8	7.0	7.2	7.4	7.4
90°	0.6	1.9	3.2	4.6	5.9	7.1	8.2	9.1	10.1	11.1	11.7
92.5°	11.2	11.1	10.9	10.9	10.7	10.9	11.4	11.9	12.4	12.8	13.2
95°	36.0	32.0	27.9	23.8	19.8	18.1	19.0	19.9	20.8	21.6	22.3
97.5°	71.5	60.0	48.6	37.2	25.7	21.0	23.0	25.0	26.9	28.9	29.5
100°	98.2	81.3	64.4	47.5	30.7	23.2	25.3	27.4	29.5	31.6	32.6
102.5°	127.5	123.9	120.3	116.7	113.1	102.6	85.1	67.6	50.0	32.5	33.7
105°	168.6	172.3	176.0	179.7	183.4	168.4	134.8	101.1	67.5	33.8	35.2
107.5°	215.5	218.5	221.5	224.4	227.4	208.7	168.4	128.1	87.7	47.4	45.9
110°	245.7	248.3	250.9	253.4	256.0	239.5	203.9	168.3	132.7	97.0	84.8



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**CANDELA DISTRIBUTION (continued):**

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
112.5°	274.1	276.4	278.7	280.9	283.2	280.0	271.2	262.4	253.6	244.8	199.9
115°	318.9	321.0	323.1	325.2	327.3	329.9	333.0	336.0	339.1	342.1	285.1
117.5°	358.9	361.2	363.6	365.9	368.3	370.5	372.6	374.8	376.8	379.0	365.2
120°	388.2	390.1	391.9	393.7	395.6	397.6	399.8	402.0	404.3	406.5	408.0
122.5°	413.0	415.0	416.9	418.9	420.8	423.0	425.4	427.9	430.2	432.7	433.6
125°	450.8	452.5	454.1	455.7	457.2	459.2	461.6	463.9	466.3	468.6	469.4
127.5°	485.1	486.9	488.7	490.4	492.3	494.0	495.7	497.5	499.2	501.0	502.2
130°	506.8	508.8	510.8	512.8	514.8	516.4	517.8	519.1	520.5	521.9	523.2
132.5°	529.1	530.8	532.4	534.1	535.8	537.3	538.6	540.0	541.4	542.7	543.8
135°	557.9	559.8	561.8	563.8	565.8	567.4	568.5	569.6	570.7	571.8	573.0
137.5°	587.1	588.4	589.9	591.2	592.6	593.9	595.2	596.4	597.7	599.0	600.2
140°	606.2	607.1	608.1	609.1	610.1	611.2	612.6	613.9	615.3	616.7	617.8
142.5°	622.1	623.0	623.9	624.8	625.7	626.9	628.4	630.0	631.5	633.1	634.1
145°	647.2	647.1	647.0	646.8	646.7	647.7	649.7	651.9	653.9	656.1	657.0
147.5°	669.0	668.6	668.1	667.7	667.2	668.0	670.0	672.1	674.1	676.2	676.9
150°	683.3	682.4	681.5	680.6	679.8	680.3	682.3	684.3	686.3	688.2	689.0
152.5°	695.2	694.3	693.3	692.3	691.3	691.8	693.7	695.5	697.4	699.3	700.1
155°	712.6	711.5	710.4	709.3	708.2	708.4	709.9	711.3	712.8	714.3	715.0
157.5°	726.3	725.3	724.4	723.4	722.5	722.5	723.6	724.6	725.6	726.7	727.5
160°	734.3	733.5	732.8	732.1	731.3	731.3	732.1	732.8	733.5	734.3	735.0
162.5°	741.3	740.6	739.9	739.1	738.4	738.3	738.9	739.7	740.3	740.9	741.7
165°	750.9	750.1	749.4	748.7	747.9	747.7	748.1	748.5	748.8	749.2	750.1
167.5°	758.0	757.2	756.5	755.7	755.0	754.9	755.2	755.5	755.9	756.2	757.1
170°	762.0	761.2	760.5	759.8	759.0	758.8	759.0	759.3	759.5	759.8	760.7
172.5°	764.6	763.9	763.2	762.4	761.7	761.4	761.7	761.9	762.2	762.4	763.3
175°	768.1	767.2	766.4	765.5	764.6	764.3	764.5	764.9	765.1	765.3	766.2
177.5°	768.7	767.9	767.2	766.6	765.9	765.6	765.6	765.8	765.9	766.0	766.7
180°	766.4	766.4	766.4	766.4	766.4	766.4	766.4	766.4	766.4	766.4	766.4



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**CANDELA DISTRIBUTION (continued):**

	55°	60°	65°	70°	75°	80°	85°	90°
0°	893.6	893.6	893.6	893.6	893.6	893.6	893.6	893.6
2.5°	889.4	890.8	892.2	892.8	892.6	892.2	892.0	891.7
5°	882.3	883.9	885.5	886.1	885.5	884.9	884.5	883.9
7.5°	868.0	868.5	868.9	868.7	867.8	866.9	865.9	865.0
10°	853.7	853.2	852.6	851.8	850.7	849.7	848.6	847.5
12.5°	837.3	836.4	835.4	834.0	832.2	830.4	828.6	826.8
15°	806.8	803.3	799.9	797.3	795.5	793.7	791.9	790.1
17.5°	772.1	768.0	764.0	760.4	757.3	754.2	751.1	748.1
20°	748.0	743.5	738.9	734.7	730.8	726.8	722.9	718.9
22.5°	721.4	715.7	709.9	705.5	702.5	699.6	696.6	693.7
25°	677.5	670.1	662.7	657.7	655.1	652.4	649.7	647.0
27.5°	635.6	627.0	618.5	612.0	607.7	603.4	599.1	594.8
30°	606.0	596.8	587.6	580.7	575.8	570.9	566.1	561.3
32.5°	576.2	565.8	555.3	547.8	543.2	538.7	534.1	529.6
35°	529.7	518.4	507.1	499.4	495.4	491.5	487.6	483.6
37.5°	484.3	471.9	459.5	450.9	446.4	441.9	437.4	432.8
40°	454.0	441.2	428.5	419.8	415.1	410.4	405.8	401.1
42.5°	423.4	410.2	397.0	388.2	383.7	379.1	374.6	370.0
45°	378.8	366.1	353.3	344.8	340.5	336.1	331.8	327.5
47.5°	335.5	322.8	310.1	301.8	297.9	294.0	290.0	286.1
50°	307.6	295.2	282.8	274.6	270.9	267.1	263.4	259.6
52.5°	281.3	269.3	257.3	249.6	246.1	242.6	239.2	235.7
55°	241.3	230.4	219.7	212.6	209.2	205.7	202.3	198.9
57.5°	204.9	195.0	185.1	178.7	175.9	173.0	170.1	167.2
60°	179.8	170.6	161.4	155.4	152.6	149.7	146.8	143.9
62.5°	158.0	149.2	140.5	135.3	133.6	131.9	130.2	128.4
65°	128.5	122.4	116.3	113.0	112.4	111.9	111.3	110.8
67.5°	103.7	100.9	98.2	96.4	95.9	95.3	94.7	94.1
70°	90.2	88.4	86.6	85.4	84.6	83.9	83.2	82.5
72.5°	78.5	77.0	75.5	74.5	74.1	73.7	73.2	72.8
75°	62.2	60.9	59.7	58.9	58.8	58.6	58.4	58.2
77.5°	47.1	46.3	45.6	45.2	44.8	44.6	44.3	44.0
80°	37.4	36.7	36.0	35.6	35.6	35.6	35.6	35.6
82.5°	28.3	27.8	27.4	27.2	27.2	27.2	27.2	27.2
85°	15.4	15.4	15.4	15.4	15.4	15.4	15.4	15.4
87.5°	7.4	7.4	7.3	7.3	7.4	7.4	7.4	7.5
90°	12.4	12.9	13.5	14.0	14.3	14.5	14.7	15.0
92.5°	13.5	13.9	14.2	14.4	14.5	14.7	14.8	15.0
95°	22.9	23.4	24.1	24.3	24.2	24.1	24.0	23.8
97.5°	29.9	30.4	30.9	31.2	31.4	31.5	31.7	31.8
100°	33.6	34.5	35.6	36.2	36.4	36.7	36.9	37.2
102.5°	35.1	36.4	37.6	38.4	38.8	39.1	39.5	39.8
105°	36.5	37.9	39.2	40.2	40.6	41.2	41.7	42.1
107.5°	44.6	43.3	41.8	41.4	41.9	42.4	42.9	43.3
110°	72.4	60.0	47.8	41.8	42.3	42.9	43.3	43.8





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**CANDELA DISTRIBUTION (continued):**

	55°	60°	65°	70°	75°	80°	85°	90°
112.5°	154.9	110.0	65.0	42.7	43.1	43.5	43.9	44.3
115°	228.1	171.0	113.9	81.0	72.1	63.2	54.3	45.5
117.5°	351.4	337.5	323.8	302.3	273.1	244.0	214.8	185.7
120°	409.5	410.9	412.4	404.8	388.2	371.5	354.9	338.3
122.5°	434.4	435.3	436.3	435.1	431.8	428.6	425.4	422.2
125°	470.3	471.2	472.1	472.7	473.0	473.4	473.8	474.1
127.5°	503.5	504.8	506.0	506.7	506.8	506.8	506.9	507.0
130°	524.6	525.9	527.3	527.9	527.8	527.7	527.5	527.4
132.5°	545.0	546.2	547.3	547.9	547.7	547.6	547.5	547.4
135°	574.3	575.4	576.7	577.2	576.9	576.7	576.5	576.2
137.5°	601.3	602.5	603.8	604.2	603.7	603.3	602.9	602.5
140°	618.9	620.0	621.2	621.4	620.8	620.1	619.5	618.9
142.5°	635.1	636.1	637.2	637.3	636.8	636.1	635.5	634.9
145°	657.7	658.6	659.5	659.7	659.0	658.4	657.7	657.2
147.5°	677.6	678.2	678.8	678.9	678.3	677.9	677.3	676.8
150°	689.7	690.5	691.2	691.3	690.6	690.0	689.4	688.8
152.5°	700.8	701.6	702.3	702.3	701.4	700.6	699.8	698.9
155°	715.7	716.5	717.2	717.1	716.1	715.2	714.2	713.2
157.5°	728.4	729.2	730.1	730.0	729.0	728.1	727.1	726.1
160°	735.7	736.5	737.2	737.1	736.3	735.4	734.6	733.7
162.5°	742.6	743.4	744.3	744.2	743.1	742.0	740.9	739.9
165°	751.0	751.8	752.7	752.7	751.8	751.0	750.1	749.2
167.5°	758.0	758.8	759.6	759.5	758.4	757.3	756.2	755.1
170°	761.5	762.3	763.2	763.1	762.0	760.9	759.8	758.7
172.5°	764.1	765.0	765.9	765.7	764.6	763.5	762.4	761.3
175°	767.1	767.9	768.7	768.6	767.3	766.1	764.9	763.7
177.5°	767.4	768.0	768.7	768.7	767.8	766.8	766.0	765.1
180°	766.4	766.4	766.4	766.4	766.4	766.4	766.4	766.4

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