

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: P331812-927

Luminaire Tested: **S122RDIW-S675D710U927-4F0-1E-UDD-F1**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P331812-927
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: S122RDIW-S675D710U927-4F0-1E-UDD-F1
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, FLUSH SATIN WHITE DIFFUSER
Light Source: -
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 3788.5 lumens
Efficiency: N/A
Efficacy: 84.2 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

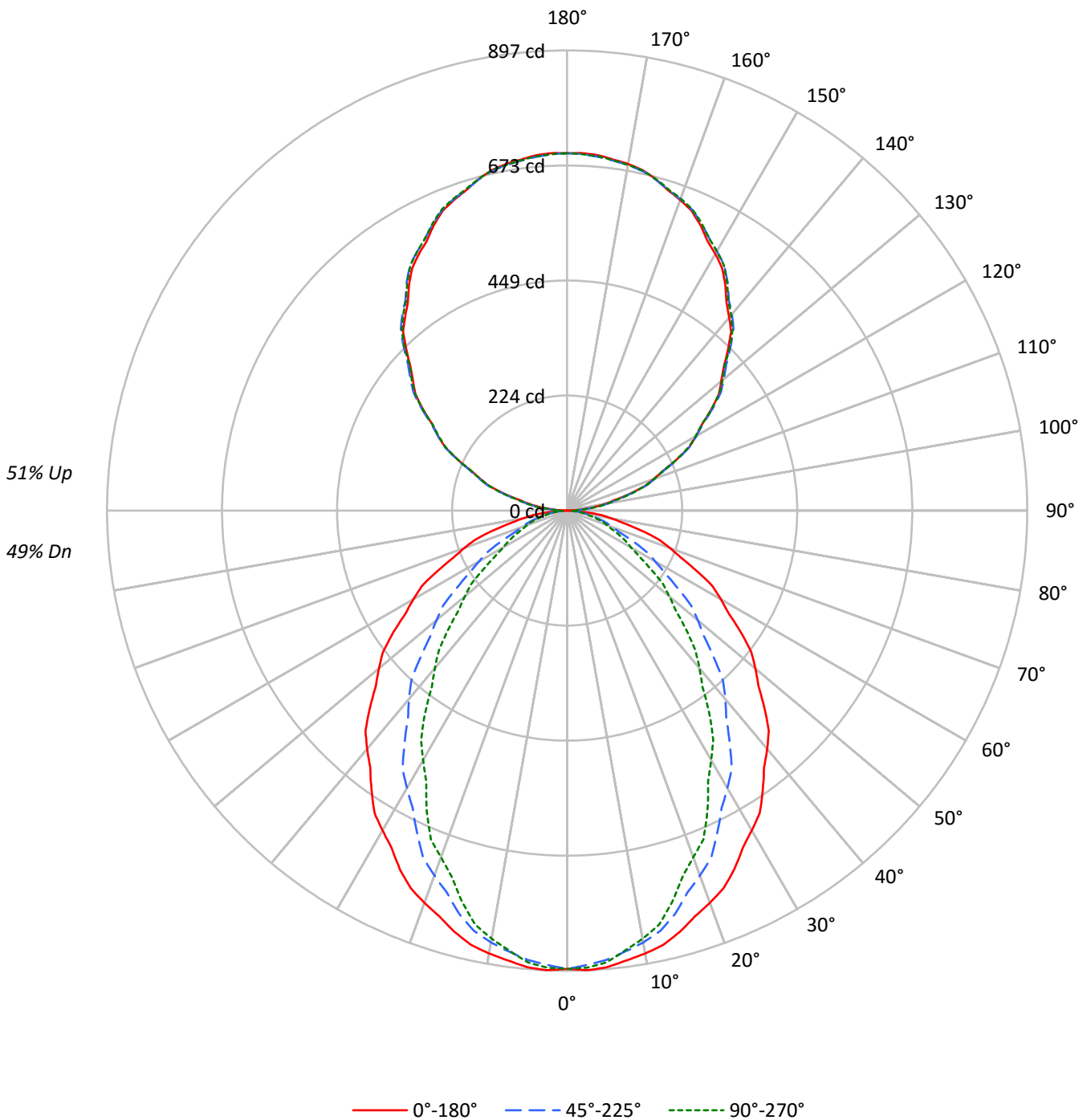
Input Watts (W): 45
Input Voltage (V): 120
Input Current (A_{in}): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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	0
RW	70	50	30	10	70	50	30	10	50	30	10	50	30	10	50	30	10	0
RCR																		
0	107	107	107	107	98	98	98	98	83	83	83	68	68	68	55	55	55	49
1	98	94	90	87	90	87	83	80	73	71	69	61	59	58	49	48	47	42
2	90	82	77	72	82	76	71	67	65	61	58	54	51	49	44	42	40	36
3	82	73	66	60	75	67	61	56	57	53	49	48	45	42	39	37	35	31
4	75	65	57	51	69	60	53	48	51	46	42	43	39	36	35	33	31	27
5	69	58	50	44	64	54	47	42	46	41	37	39	35	32	32	29	27	24
6	64	52	44	39	59	49	42	36	42	36	32	35	31	28	29	26	24	21
7	59	47	39	34	54	44	37	32	38	32	29	32	28	25	27	24	21	19
8	55	43	35	30	51	40	33	29	35	29	25	30	25	22	25	22	19	17
9	51	39	32	27	47	37	30	26	32	27	23	27	23	20	23	20	18	15
10	48	36	29	24	44	34	27	23	29	24	21	25	21	18	21	18	16	14

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	2.2
10°-20°	229.7	6.1
20°-30°	322.5	8.5
30°-40°	351.7	9.3
40°-50°	323.4	8.5
50°-60°	254.0	6.7
60°-70°	165.6	4.4
70°-80°	85.4	2.3
80°-90°	24.9	0.7
90°-100°	44.1	1.2
100°-110°	137.1	3.6
110°-120°	234.3	6.2
120°-130°	308.1	8.1
130°-140°	345.9	9.1
140°-150°	339.1	9.0
150°-160°	284.5	7.5
160°-170°	188.7	5.0
170°-180°	65.9	1.7
0°-30°	635.8	16.8
0°-40°	987.5	26.1
0°-60°	1564.8	41.3
0°-90°	1840.7	48.6
90°-120°	415.5	11.0
90°-150°	1408.7	37.2
90°-180°	1948.0	51.4
0°-180°	3788.5	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	8	21	20	20	3
95°	31	36	38	38	36	35
105°	126	128	129	130	130	133
115°	235	238	238	237	235	233
125°	342	347	346	344	343	306
135°	443	449	450	450	448	342
145°	537	541	545	545	543	336
155°	614	616	618	620	619	283
165°	668	668	668	672	669	188
175°	695	694	692	696	693	66
180°	697	697	697	697	697	



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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	9.7	8.8	7.9	7.1	7.0	7.6	8.2	8.7	9.3	9.1
90°	0.6	2.1	3.7	5.3	6.9	9.1	12.0	14.8	17.7	20.6	20.3
92.5°	10.5	11.6	12.8	13.9	15.1	16.0	16.6	17.3	18.0	18.7	18.8
95°	30.6	31.8	33.2	34.5	35.8	36.6	36.8	37.1	37.4	37.6	37.6
97.5°	55.8	57.0	58.1	59.3	60.4	61.2	61.8	62.3	62.7	63.2	63.2
100°	74.6	75.7	76.8	77.8	78.8	79.5	79.9	80.3	80.7	81.1	81.1
102.5°	94.4	95.2	96.1	96.9	97.8	98.4	98.9	99.4	99.9	100.4	100.5
105°	126.4	126.7	127.1	127.5	127.9	128.3	128.6	128.8	129.0	129.4	129.6
107.5°	158.6	159.1	159.8	160.3	160.9	161.2	161.2	161.2	161.2	161.2	161.3
110°	179.3	180.1	180.9	181.6	182.4	182.8	182.8	182.8	182.8	182.8	182.8



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CANDELA DISTRIBUTION (continued):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
112.5°	201.8	202.6	203.4	204.2	205.0	205.3	205.3	205.1	205.0	204.9	204.6
115°	235.1	235.9	236.7	237.5	238.3	238.5	238.3	238.0	237.7	237.5	237.3
117.5°	268.3	269.3	270.4	271.4	272.4	272.6	271.9	271.2	270.5	269.7	269.4
120°	290.4	291.4	292.5	293.5	294.5	294.5	293.5	292.5	291.4	290.4	290.4
122.5°	310.6	311.9	313.1	314.3	315.6	315.9	315.1	314.4	313.7	313.0	312.7
125°	342.1	343.3	344.4	345.6	346.8	347.2	346.8	346.4	346.0	345.6	345.2
127.5°	372.8	374.3	375.8	377.2	378.7	379.3	378.8	378.3	377.9	377.4	376.9
130°	392.1	393.8	395.5	397.2	398.9	399.6	399.3	399.1	398.8	398.5	398.3
132.5°	413.8	415.1	416.5	417.9	419.2	420.0	420.0	420.1	420.2	420.2	419.6
135°	442.7	444.1	445.5	446.9	448.4	449.2	449.5	449.8	450.0	450.3	450.1
137.5°	473.1	474.3	475.5	476.7	477.8	478.6	478.9	479.3	479.6	479.9	479.8
140°	491.5	492.6	493.8	495.0	496.1	497.0	497.7	498.4	499.0	499.6	499.6
142.5°	510.2	511.4	512.6	513.8	514.9	515.8	516.2	516.7	517.1	517.5	517.6
145°	537.3	538.2	539.1	540.0	541.0	541.8	542.6	543.4	544.2	544.9	545.0
147.5°	561.4	562.4	563.6	564.7	565.8	566.6	567.1	567.6	568.2	568.7	568.9
150°	577.8	578.6	579.4	580.2	581.0	581.6	582.2	582.7	583.2	583.8	584.2
152.5°	592.4	593.2	594.0	594.8	595.6	596.3	596.9	597.5	598.2	598.8	599.3
155°	614.3	614.7	615.1	615.4	615.8	616.2	616.6	617.0	617.4	617.8	618.5
157.5°	633.0	633.3	633.5	633.7	634.1	634.3	634.5	634.8	635.0	635.3	636.1
160°	644.3	644.5	644.8	645.1	645.3	645.5	645.6	645.8	645.9	646.0	646.8
162.5°	654.6	654.7	654.7	654.7	654.8	654.9	655.1	655.2	655.3	655.5	656.3
165°	668.4	668.2	668.1	668.0	667.9	667.8	667.8	667.8	667.8	667.8	668.7
167.5°	679.9	679.5	679.1	678.7	678.3	678.1	678.1	678.0	678.0	678.0	678.9
170°	686.0	685.6	685.2	684.8	684.4	684.2	684.0	683.9	683.8	683.7	684.6
172.5°	690.2	689.8	689.4	689.0	688.6	688.4	688.2	688.2	688.0	687.9	688.8
175°	695.4	695.1	694.7	694.3	693.9	693.6	693.2	693.0	692.8	692.4	693.4
177.5°	697.5	697.2	696.9	696.6	696.2	696.0	695.8	695.6	695.4	695.1	695.8
180°	696.6	696.6	696.6	696.6	696.6	696.6	696.6	696.6	696.6	696.6	696.6



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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°	8.9	8.7	8.5	8.4	8.5	8.5	8.5	8.6
90°	20.0	19.8	19.6	19.5	19.6	19.7	19.9	20.0
92.5°	18.8	18.9	18.9	18.9	18.9	19.0	19.0	19.0
95°	37.6	37.6	37.6	37.5	37.2	37.0	36.7	36.4
97.5°	63.2	63.2	63.2	63.2	63.2	63.2	63.1	63.1
100°	81.1	81.1	81.1	81.0	81.0	80.8	80.6	80.6
102.5°	100.6	100.7	100.8	100.8	100.7	100.5	100.4	100.3
105°	129.8	130.1	130.4	130.5	130.5	130.5	130.5	130.5
107.5°	161.4	161.5	161.6	161.4	160.7	160.2	159.5	159.0
110°	182.8	182.8	182.8	182.6	182.2	181.8	181.4	181.1



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CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
112.5°	204.3	204.0	203.7	203.4	203.1	202.8	202.5	202.2
115°	237.3	237.1	236.9	236.7	236.3	235.9	235.5	235.1
117.5°	269.1	268.8	268.5	268.1	267.7	267.3	266.9	266.5
120°	290.4	290.4	290.4	290.2	289.8	289.4	289.0	288.6
122.5°	312.4	312.0	311.7	311.4	311.1	310.9	310.5	310.3
125°	344.8	344.4	344.0	343.8	343.7	343.6	343.4	343.3
127.5°	376.4	376.0	375.5	375.1	374.6	374.2	373.8	373.4
130°	398.1	397.8	397.5	397.1	396.6	396.1	395.5	395.1
132.5°	419.1	418.4	417.9	417.4	417.0	416.5	416.1	415.7
135°	450.0	449.9	449.8	449.5	449.1	448.7	448.3	447.9
137.5°	479.7	479.6	479.5	479.2	478.6	478.2	477.6	477.1
140°	499.6	499.6	499.6	499.4	498.9	498.4	497.8	497.3
142.5°	517.8	517.8	517.9	517.8	517.2	516.7	516.2	515.6
145°	545.2	545.3	545.4	545.3	544.7	544.2	543.7	543.2
147.5°	569.3	569.5	569.8	569.7	569.3	568.7	568.2	567.8
150°	584.5	584.9	585.3	585.3	584.9	584.5	584.2	583.8
152.5°	599.8	600.2	600.8	600.8	600.2	599.8	599.3	598.8
155°	619.1	619.8	620.4	620.6	620.2	619.8	619.4	619.0
157.5°	637.0	637.9	638.7	638.9	638.3	637.6	637.0	636.4
160°	647.6	648.4	649.2	649.3	648.8	648.2	647.8	647.2
162.5°	657.2	658.1	659.0	659.1	658.5	657.9	657.3	656.6
165°	669.6	670.5	671.5	671.6	670.9	670.3	669.6	669.0
167.5°	679.9	680.7	681.7	681.8	681.1	680.4	679.8	679.1
170°	685.5	686.4	687.3	687.4	686.6	685.8	685.0	684.2
172.5°	689.8	690.6	691.6	691.6	690.9	690.1	689.3	688.5
175°	694.3	695.2	696.2	696.2	695.4	694.7	693.9	693.1
177.5°	696.4	697.0	697.7	697.7	697.0	696.4	695.8	695.1
180°	696.6	696.6	696.6	696.6	696.6	696.6	696.6	696.6

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