

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: P331356-935

Luminaire Tested: **SA2XXDIP-C675D725U935-4F0-1E-UDD-F4**

Issue Date: 10/7/2019

Test Information

Test Method: LM-79-08
Report Number: P331356-935
REPORT IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-1807-864-16,
Test Lab: INNOVATION CENTER
Issue Date: 10/7/2019
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: NEO-RAY
Catalog Number: SA2XXDIP-C675D725U935-4F0-1E-UDD-F4
Description: DEFINE 2 DIRECT-INDIRECT PENDANT LED LUMINAIRE
DOWNLIGHT 675 LUMENS PER FOOT, FLUSH SATIN WHITE DIFFUSER
UPLIGHT 725 LUMENS PER FOOT, BATWING OPTIC
Light Source: -
Ballast/Driver: ELECTRONIC DRIVER

Summary

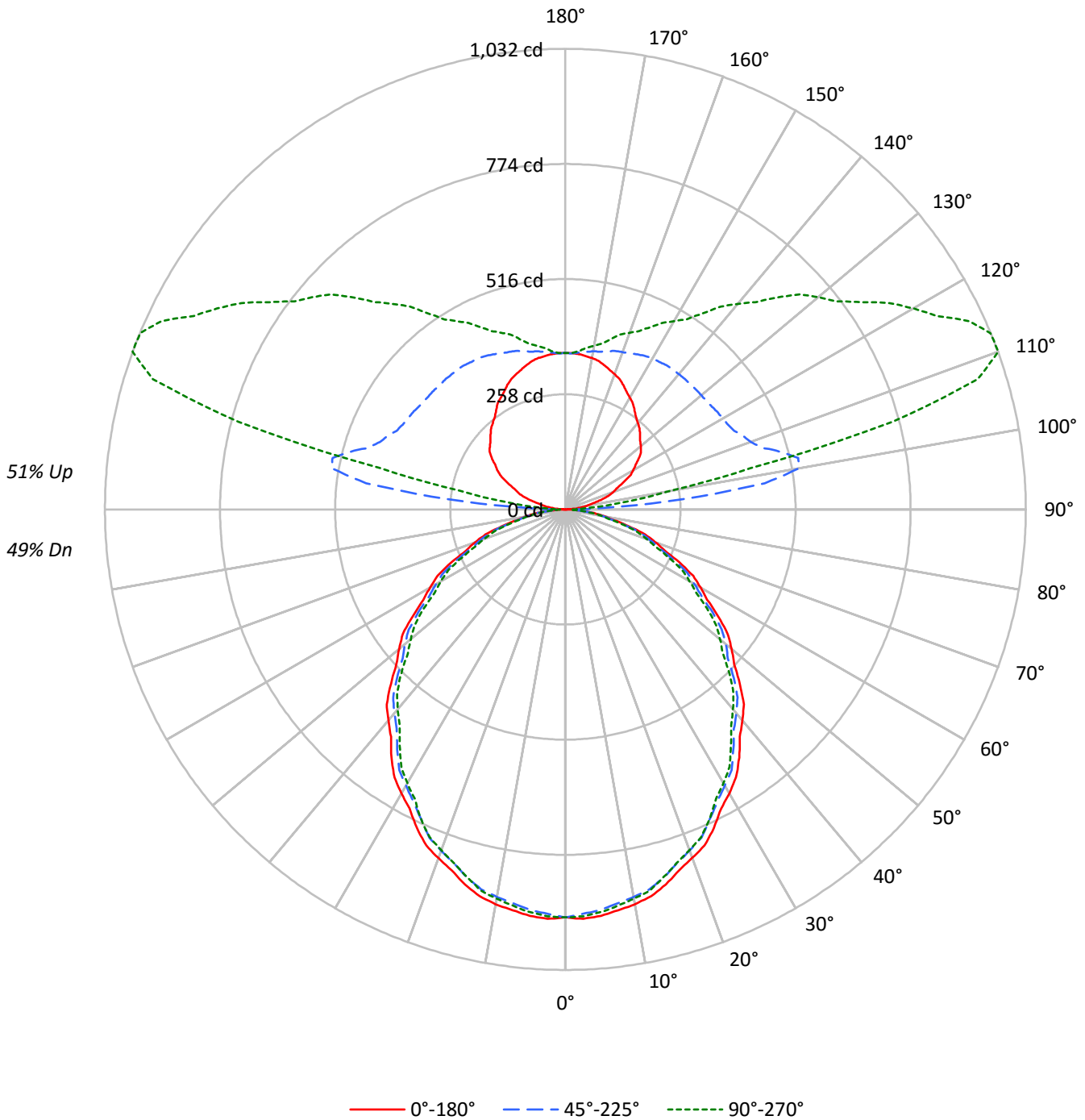
Lumens per Lamp: N/A
Luminaire Lumens: 4764.2 lumens
Efficiency: N/A
Efficacy: 103.8 lumens/watt
Spacing Criteria (0/90/45): 1.2 / 1.16 / 1.3
Luminous Opening: Rectangular (W 0.17' x L: 4' x H: 0')
CIE Type: General Diffuse

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	0
RCR																		
0	107	107	107	107	98	98	98	98	83	83	83	68	68	68	55	55	55	49
1	98	93	89	86	90	86	83	80	72	70	68	60	58	57	49	48	46	41
2	89	81	75	70	82	75	70	65	64	60	56	53	50	47	43	41	39	34
3	81	72	64	58	74	66	60	55	56	51	47	47	43	40	38	35	33	29
4	74	63	55	49	68	59	52	46	50	44	40	42	38	34	34	31	29	25
5	68	56	48	42	62	52	45	40	45	39	35	37	33	30	31	28	25	22
6	63	51	42	37	58	47	40	35	40	34	30	34	29	26	28	25	22	19
7	58	46	38	32	53	42	35	30	36	31	27	31	26	23	25	22	20	17
8	54	41	34	28	49	39	32	27	33	28	24	28	24	21	23	20	18	15
9	50	38	30	25	46	35	29	24	30	25	21	26	22	19	21	18	16	14
10	47	35	27	23	43	32	26	21	28	23	19	24	20	17	20	17	14	12

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	14759	14759	14759
5°	14815	14603	14687
10°	14728	14454	14526
15°	14544	14265	14252
20°	14287	13984	13969
25°	14031	13639	13639
30°	13699	13323	13207
35°	13391	12942	12751
40°	13004	12560	12319
45°	12622	12184	11880
50°	12208	11788	11369
55°	11778	11333	10911
60°	11296	10785	10388
65°	10777	10243	9773
70°	10126	9583	9130
75°	9214	8827	8609
80°	8173	7922	7513
85°	6688	6354	5687



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	86.0	1.8
10°-20°	241.9	5.1
20°-30°	355.5	7.5
30°-40°	412.9	8.7
40°-50°	412.5	8.7
50°-60°	359.7	7.6
60°-70°	266.0	5.6
70°-80°	150.6	3.2
80°-90°	43.7	0.9
90°-100°	139.9	2.9
100°-110°	474.9	10.0
110°-120°	504.5	10.6
120°-130°	415.3	8.7
130°-140°	333.5	7.0
140°-150°	252.0	5.3
150°-160°	177.1	3.7
160°-170°	104.3	2.2
170°-180°	33.9	0.7
0°-30°	683.3	14.3
0°-40°	1096.3	23.0
0°-60°	1868.5	39.2
0°-90°	2328.8	48.9
90°-120°	1119.3	23.5
90°-150°	2120.1	44.5
90°-180°	2435.0	51.1
0°-180°	4764.2	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	914	914	914	914	914	
5°	914	910	901	907	906	87
15°	870	865	853	857	853	245
25°	788	780	766	767	766	362
35°	679	670	657	651	647	424
45°	553	546	534	524	520	426
55°	418	413	403	392	388	374
65°	282	277	268	260	256	279
75°	148	146	142	137	138	158
85°	36	35	34	32	31	41
90°	1	9	23	22	22	3
95°	24	58	264	100	77	25
105°	82	124	499	892	758	87
115°	145	183	417	861	998	143
125°	202	239	401	698	810	179
135°	237	283	396	586	671	183
145°	270	311	394	490	536	170
155°	308	332	383	433	450	141
165°	335	345	367	389	395	94
175°	349	350	353	357	356	33
180°	350	350	350	350	350	



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CANDELA DISTRIBUTION (FULL):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
0°	914.1	914.1	914.1	914.1	914.1	914.1	914.1	914.1	914.1	914.1	914.1
2.5°	918.3	917.6	916.8	916.0	915.2	914.0	912.2	910.5	908.8	907.1	908.6
5°	914.1	913.3	912.6	911.8	911.0	909.6	907.4	905.3	903.1	901.0	902.5
7.5°	906.0	904.8	903.6	902.4	901.2	899.5	897.3	895.1	892.9	890.7	892.3
10°	898.3	896.9	895.5	894.1	892.9	891.0	888.6	886.3	883.9	881.6	883.1
12.5°	887.8	886.6	885.3	884.1	882.9	881.1	878.7	876.4	874.1	871.8	872.9
15°	870.1	869.0	867.8	866.7	865.5	863.6	861.1	858.5	856.0	853.4	854.3
17.5°	847.7	846.4	845.3	844.1	843.0	841.1	838.5	835.9	833.4	830.8	831.7
20°	831.5	830.3	829.1	827.9	826.8	824.8	822.1	819.4	816.7	813.9	814.5
22.5°	815.3	813.6	812.0	810.4	808.7	806.7	804.1	801.5	798.9	796.3	796.4
25°	787.6	786.0	784.5	782.8	781.3	778.9	775.5	772.2	768.9	765.6	765.9
27.5°	755.9	754.5	753.1	751.7	750.3	748.3	745.6	743.0	740.4	737.8	737.2
30°	734.8	733.2	731.7	730.1	728.6	726.3	723.4	720.5	717.6	714.6	714.0
32.5°	712.3	711.0	709.8	708.5	707.3	705.2	702.1	699.0	695.9	692.8	691.7
35°	679.4	677.5	675.5	673.6	671.6	669.1	666.0	662.8	659.7	656.6	655.4
37.5°	642.3	640.6	638.9	637.1	635.5	633.0	629.9	626.8	623.7	620.5	619.1
40°	617.0	615.4	613.9	612.3	610.8	608.5	605.3	602.2	599.1	595.9	594.2
42.5°	592.5	590.8	589.3	587.7	586.2	583.8	580.7	577.6	574.5	571.4	569.4
45°	552.8	551.5	550.1	548.8	547.4	545.3	542.3	539.4	536.5	533.6	531.4
47.5°	513.5	512.2	510.9	509.6	508.3	506.2	503.1	500.1	497.1	494.0	491.7
50°	486.0	485.1	484.1	483.1	482.2	480.3	477.6	474.8	472.1	469.3	466.7
52.5°	459.3	458.1	456.8	455.5	454.2	452.3	449.7	447.1	444.5	442.0	439.7
55°	418.4	417.2	416.0	414.8	413.7	411.9	409.6	407.3	404.9	402.6	400.2
57.5°	377.2	376.3	375.4	374.4	373.5	371.8	369.2	366.6	364.0	361.4	359.1
60°	349.8	349.0	348.3	347.5	346.7	344.9	342.2	339.5	336.7	334.0	331.8
62.5°	323.1	321.8	320.6	319.3	318.1	316.4	314.4	312.2	310.1	308.0	306.0
65°	282.1	280.9	279.8	278.6	277.4	275.9	274.0	272.0	270.0	268.1	266.3
67.5°	240.5	239.5	238.6	237.6	236.7	235.4	233.6	231.9	230.1	228.3	227.0
70°	214.5	213.7	212.9	212.2	211.4	210.1	208.3	206.6	204.8	203.0	201.6
72.5°	187.8	186.9	186.1	185.4	184.6	183.7	182.5	181.4	180.3	179.1	177.8
75°	147.7	147.2	146.9	146.5	146.1	145.4	144.5	143.4	142.5	141.5	140.3
77.5°	111.8	111.2	110.5	109.8	109.2	108.7	108.2	107.8	107.5	107.0	106.5
80°	87.9	87.7	87.5	87.3	87.1	86.8	86.4	86.0	85.7	85.2	84.6
82.5°	65.4	65.3	65.3	65.3	65.3	65.1	64.8	64.7	64.4	64.1	63.5
85°	36.1	35.8	35.6	35.5	35.2	35.0	34.9	34.7	34.4	34.3	33.7
87.5°	12.8	12.9	13.1	13.1	13.0	13.1	13.4	14.1	14.6	14.4	13.8
90°	0.7	2.7	5.4	6.7	8.1	10.1	13.4	18.2	22.2	22.9	22.2
92.5°	8.2	11.9	16.7	19.6	24.2	30.6	45.8	67.2	86.3	87.5	73.9
95°	23.6	26.3	33.0	39.0	49.8	66.0	96.9	155.5	233.6	263.8	230.8
97.5°	38.4	42.0	49.2	58.3	70.7	88.9	127.9	209.5	339.2	450.4	472.5
100°	51.8	53.8	59.9	70.7	84.1	103.0	138.6	220.8	366.1	531.7	628.6
102.5°	64.2	65.7	71.7	82.5	96.5	115.4	148.4	221.3	355.9	534.4	686.7
105°	82.1	84.8	89.5	99.6	114.4	133.3	164.9	224.8	335.9	498.7	677.8
107.5°	101.5	103.7	108.2	117.5	132.2	151.2	181.8	234.1	325.9	460.5	618.6
110°	114.4	117.1	121.1	129.9	144.0	163.6	193.1	241.6	323.7	442.2	581.5



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CANDELA DISTRIBUTION (continued):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
112.5°	126.2	129.0	133.5	141.7	155.3	175.4	204.0	249.7	324.3	430.3	555.7
115°	144.7	148.1	152.1	160.1	173.7	191.8	220.8	261.8	327.1	417.3	523.7
117.5°	163.8	166.5	170.6	177.7	190.6	209.5	236.3	274.7	331.9	411.0	503.4
120°	175.6	178.4	182.4	188.5	201.9	220.8	247.0	283.4	335.2	407.2	492.7
122.5°	187.0	189.2	193.1	199.8	213.2	232.6	257.3	290.9	339.0	405.0	483.5
125°	201.9	204.0	207.9	216.0	229.5	248.3	272.6	302.9	344.6	401.1	470.5
127.5°	213.8	216.5	222.1	231.0	243.9	263.3	286.9	314.0	350.4	398.8	458.3
130°	220.8	223.4	230.1	239.6	253.0	271.9	295.5	321.1	354.7	397.8	450.3
132.5°	227.2	230.5	237.7	247.7	261.7	280.5	303.0	328.0	359.0	397.3	443.8
135°	236.9	239.6	247.7	257.8	273.3	292.1	313.7	337.2	364.1	396.4	434.8
137.5°	246.1	249.3	257.4	268.1	283.5	301.0	322.3	344.2	368.7	396.3	428.4
140°	253.0	255.7	263.8	274.6	289.4	306.9	327.1	347.9	370.8	395.7	424.7
142.5°	260.0	262.3	269.8	280.5	294.8	311.3	330.9	351.2	372.5	395.7	420.9
145°	270.5	273.3	280.0	290.1	303.5	318.3	336.6	355.3	374.2	394.4	415.9
147.5°	281.9	283.9	290.3	299.6	310.8	324.0	341.1	357.7	374.8	392.0	410.9
150°	289.4	291.4	296.8	305.6	315.6	327.8	343.3	358.7	374.2	390.4	406.5
152.5°	297.0	297.9	303.2	310.9	320.5	331.6	345.4	359.3	373.2	387.7	402.8
155°	307.5	308.2	312.3	319.7	327.1	337.2	348.6	360.1	371.5	383.0	395.7
157.5°	316.5	317.1	320.4	326.8	332.8	341.2	350.9	360.1	368.4	378.2	389.2
160°	322.4	323.0	325.7	331.1	336.6	343.9	352.0	360.1	366.8	374.9	384.4
162.5°	328.3	327.9	330.6	334.9	339.8	345.5	352.6	359.6	365.2	372.2	380.0
165°	335.2	334.5	335.9	339.9	343.3	347.3	353.4	358.1	362.1	366.8	372.9
167.5°	340.9	340.0	341.2	343.8	346.2	348.8	353.2	357.1	359.0	362.1	365.8
170°	344.6	343.3	343.9	345.9	347.3	349.3	352.7	356.0	357.4	359.4	362.1
172.5°	346.7	345.9	345.5	347.6	348.4	349.8	352.1	354.4	355.2	356.2	358.3
175°	349.3	348.6	347.9	349.3	349.3	350.0	351.3	352.7	352.0	352.7	353.4
177.5°	350.5	349.5	348.9	350.0	350.0	350.0	350.5	351.6	350.5	350.0	350.5
180°	350.0	350.0	350.0	350.0	350.0	350.0	350.0	350.0	350.0	350.0	350.0



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CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
0°	914.1	914.1	914.1	914.1	914.1	914.1	914.1	914.1
2.5°	910.2	911.8	913.3	914.0	913.6	913.3	913.0	912.7
5°	904.0	905.6	907.1	907.8	907.4	907.0	906.6	906.2
7.5°	893.9	895.4	897.0	897.5	897.1	896.7	896.3	895.9
10°	884.7	886.3	887.9	888.3	887.8	887.2	886.6	886.0
12.5°	873.9	875.0	876.2	876.4	876.0	875.6	875.2	874.8
15°	855.1	855.8	856.6	856.5	855.5	854.5	853.6	852.6
17.5°	832.6	833.4	834.4	834.4	833.4	832.5	831.6	830.6
20°	815.1	815.7	816.2	816.1	815.4	814.6	813.8	813.0
22.5°	796.6	796.7	796.8	796.6	796.2	795.7	795.2	794.8
25°	766.4	766.7	767.2	767.2	766.7	766.4	765.9	765.6
27.5°	736.6	736.1	735.5	734.7	733.7	732.8	731.8	730.9
30°	713.4	712.8	712.2	711.5	710.8	710.0	709.2	708.4
32.5°	690.7	689.7	688.5	687.7	686.9	686.1	685.3	684.5
35°	654.3	653.1	651.9	650.8	649.9	648.8	647.9	646.9
37.5°	617.7	616.2	614.8	613.5	612.6	611.7	610.8	609.8
40°	592.5	590.6	588.9	587.6	586.9	586.1	585.3	584.5
42.5°	567.5	565.6	563.7	562.1	561.0	560.0	558.9	557.8
45°	529.3	527.1	525.0	523.5	522.7	521.9	521.2	520.3
47.5°	489.5	487.2	484.9	483.2	482.1	481.0	479.8	478.7
50°	463.9	461.2	458.4	456.6	455.6	454.6	453.7	452.6
52.5°	437.4	435.1	432.9	431.1	429.8	428.5	427.2	425.9
55°	397.9	395.5	393.2	391.5	390.5	389.6	388.6	387.6
57.5°	356.8	354.5	352.2	350.7	349.9	349.2	348.4	347.7
60°	329.7	327.5	325.4	324.1	323.5	322.9	322.3	321.7
62.5°	304.0	302.0	300.1	298.7	297.9	297.1	296.4	295.7
65°	264.6	262.8	261.1	259.7	258.7	257.7	256.8	255.8
67.5°	225.6	224.3	222.9	221.8	221.0	220.2	219.5	218.7
70°	200.3	199.0	197.6	196.5	195.7	194.9	194.2	193.4
72.5°	176.4	175.0	173.7	172.6	172.0	171.4	170.8	170.1
75°	139.1	138.0	136.8	136.5	136.8	137.2	137.6	138.0
77.5°	105.9	105.3	104.7	104.2	103.6	103.1	102.5	101.9
80°	84.1	83.5	82.9	82.4	82.1	81.6	81.3	80.8
82.5°	62.7	61.9	61.2	60.8	60.7	60.6	60.5	60.4
85°	33.1	32.5	31.9	31.5	31.3	31.2	31.0	30.7
87.5°	13.2	12.5	12.3	12.1	12.0	11.8	11.6	11.5
90°	21.5	20.2	21.5	22.2	22.2	22.2	22.2	22.2
92.5°	58.7	50.4	44.7	40.6	40.0	37.8	38.4	37.3
95°	176.3	135.3	107.0	92.2	83.4	78.1	76.0	76.7
97.5°	411.5	336.7	263.8	215.2	183.0	166.5	156.7	151.0
100°	614.5	531.1	438.9	357.4	301.5	272.6	253.0	240.9
102.5°	747.5	728.7	661.2	574.9	514.2	464.8	440.4	424.0
105°	817.8	893.8	902.6	880.4	838.6	796.9	767.9	758.5
107.5°	767.2	881.7	951.7	984.3	989.5	987.2	981.5	968.9
110°	723.5	844.0	930.1	985.3	1014.3	1027.1	1033.1	1032.4



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CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
112.5°	683.7	799.3	891.4	954.7	994.9	1016.3	1027.8	1031.4
115°	634.6	738.3	826.5	895.8	943.6	974.6	992.0	998.2
117.5°	597.8	688.8	768.8	833.8	882.5	915.2	933.7	938.7
120°	579.5	663.0	734.3	795.6	842.7	874.3	893.8	900.5
122.5°	565.0	641.4	708.9	764.3	806.6	837.7	855.1	860.7
125°	543.8	613.1	672.4	722.8	761.9	787.5	804.3	809.7
127.5°	523.0	585.7	641.5	688.1	722.2	746.1	760.7	765.0
130°	509.5	567.4	620.5	665.0	697.9	720.8	734.3	739.7
132.5°	496.5	550.2	599.0	640.8	673.2	696.0	708.4	713.3
135°	478.5	523.0	567.4	605.0	634.0	656.3	668.3	671.1
137.5°	464.2	501.3	536.6	569.4	595.8	614.9	625.5	629.6
140°	455.0	487.3	518.2	547.9	569.4	586.9	597.0	601.1
142.5°	447.5	474.9	501.5	526.3	546.8	562.7	571.7	572.5
145°	436.8	459.0	479.9	499.4	515.6	527.0	533.7	535.7
147.5°	428.6	446.1	462.4	476.6	490.0	499.1	503.7	504.9
150°	422.7	437.5	451.6	463.7	473.8	481.9	485.9	486.6
152.5°	416.7	430.5	442.5	453.0	460.9	467.9	470.9	471.0
155°	408.5	419.3	429.4	436.8	444.2	448.9	451.6	450.3
157.5°	399.0	408.0	416.5	422.2	427.5	431.4	432.7	432.7
160°	393.0	400.5	407.9	412.6	417.3	420.7	421.3	421.3
162.5°	387.1	393.5	399.8	403.5	408.1	410.4	411.1	410.5
165°	378.2	383.0	387.7	390.4	393.0	395.7	395.7	395.1
167.5°	369.8	373.4	376.6	379.1	380.3	381.8	381.6	380.8
170°	365.5	367.5	370.1	371.5	372.2	374.2	373.5	372.2
172.5°	360.6	362.1	364.3	365.1	365.8	366.7	366.0	365.2
175°	355.3	356.0	356.7	357.4	357.4	358.1	357.4	356.0
177.5°	351.6	351.6	352.1	352.1	352.1	352.1	351.6	350.5
180°	350.0	350.0	350.0	350.0	350.0	350.0	350.0	350.0

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