

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: P331686-927

Luminaire Tested: **SA2XXRDIP-C675D530U927-4F0-1E-UDD-F4**

Issue Date: 10/7/2019

Test Information

Test Method: LM-79-08
Report Number: P331686-927
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: SA2XXRDIP-C675D530U927-4F0-1E-UDD-F4
Description: DEFINE 2 DIRECT-INDIRECT PENDANT LED LUMINAIRE
DOWNLIGHT 675 LUMENS PER FOOT, FLUSH SATIN WHITE DIFFUSER, REGRESSED
HOUSING
UPLIGHT 530 LUMENS PER FOOT, BATWING OPTIC
Light Source: -
Ballast/Driver: ELECTRONIC DRIVER

Summary

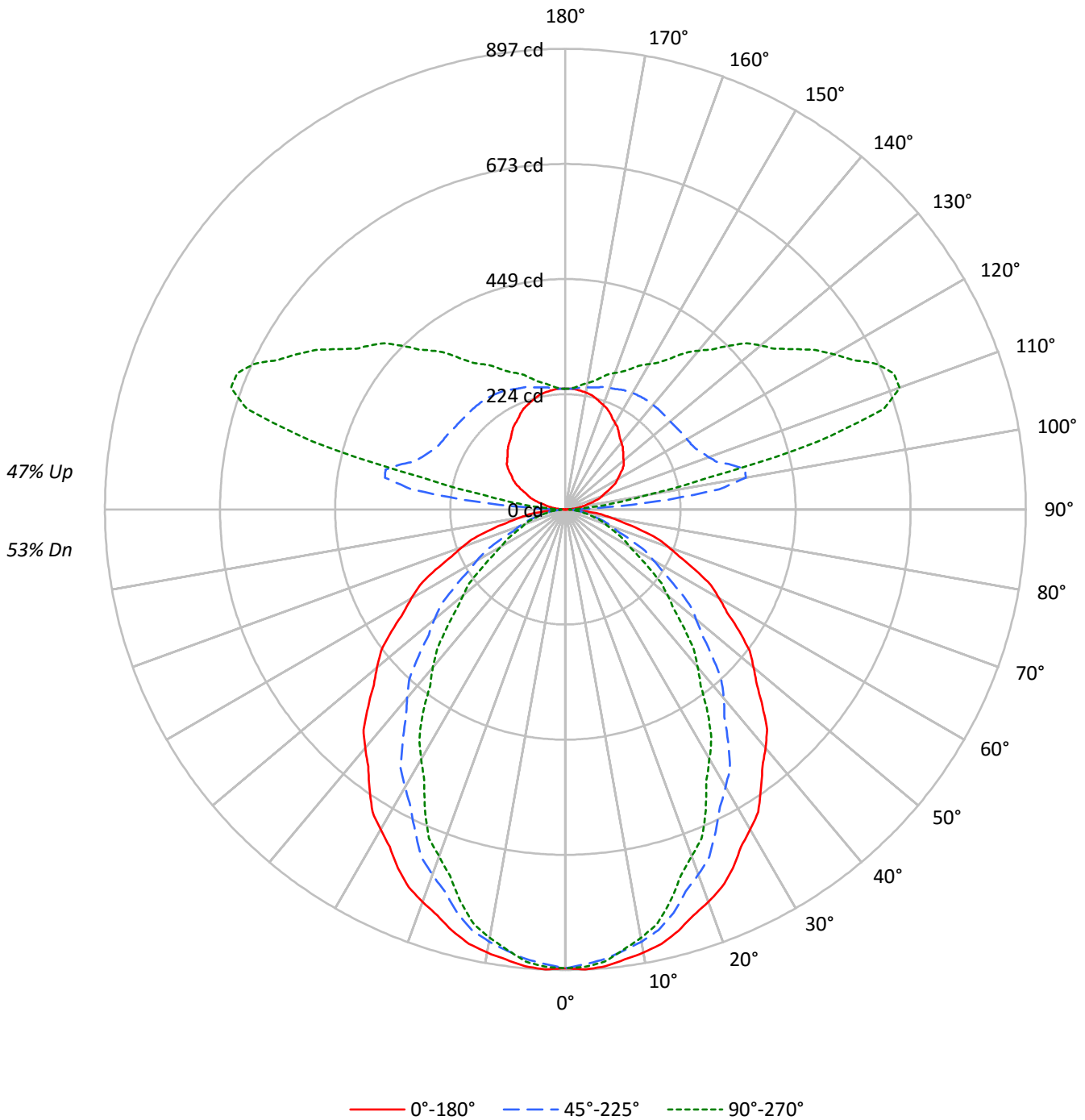
Lumens per Lamp: N/A
Luminaire Lumens: 3474.8 lumens
Efficiency: N/A
Efficacy: 86.2 lumens/watt
Spacing Criteria (0/90/45): 1.2 / 0.99 / 1.16
Luminous Opening: Rectangular (W 0.17' x L: 4' x H: 0')
CIE Type: General Diffuse

Input Watts (W): 40.3
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	108	108	108	108	100	100	100	100	85	85	85	71	71	71	59	59	59	53
1	99	95	91	88	92	88	85	82	75	73	71	64	62	60	53	52	51	46
2	91	83	77	72	84	78	72	68	67	63	59	56	54	51	47	45	43	39
3	83	74	67	61	77	69	62	57	59	54	51	50	47	44	42	40	38	34
4	76	66	58	52	70	61	54	49	53	48	44	45	41	38	38	35	33	29
5	70	59	51	45	65	55	48	43	48	42	38	41	37	33	34	31	29	26
6	65	53	45	39	60	50	42	37	43	38	33	37	33	30	31	28	26	23
7	60	48	40	35	56	45	38	33	39	34	30	34	30	26	29	26	23	21
8	56	44	36	31	52	41	34	29	36	30	26	31	27	24	27	23	21	19
9	52	40	33	28	48	38	31	26	33	28	24	29	24	21	25	21	19	17
10	49	37	30	25	45	35	28	24	31	25	22	27	22	19	23	20	17	15

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	2.4
10°-20°	229.7	6.6
20°-30°	322.5	9.3
30°-40°	351.7	10.1
40°-50°	323.4	9.3
50°-60°	254.0	7.3
60°-70°	165.6	4.8
70°-80°	85.4	2.5
80°-90°	24.3	0.7
90°-100°	93.9	2.7
100°-110°	318.8	9.2
110°-120°	338.6	9.7
120°-130°	278.8	8.0
130°-140°	223.9	6.4
140°-150°	169.2	4.9
150°-160°	118.9	3.4
160°-170°	70.0	2.0
170°-180°	22.8	0.7
0°-30°	635.8	18.3
0°-40°	987.5	28.4
0°-60°	1564.8	45.0
0°-90°	1840.1	53.0
90°-120°	751.3	21.6
90°-150°	1423.1	41.0
90°-180°	1635.0	47.1
0°-180°	3474.8	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°	0	6	15	15	15	2
95°	16	39	177	67	52	17
105°	55	83	335	598	509	59
115°	97	123	280	578	670	96
125°	136	160	269	468	544	120
135°	159	190	266	394	450	123
145°	182	209	265	329	360	114
155°	206	223	257	291	302	95
165°	225	232	246	261	265	63
175°	234	235	237	240	239	22
180°	235	235	235	235	235	



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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	8.8	7.8	6.8	6.5	7.0	7.6	8.2	8.2	8.0
90°	0.5	1.8	3.6	4.5	5.4	6.8	9.0	12.2	14.9	15.4	14.9
92.5°	5.5	7.9	11.2	13.2	16.2	20.5	30.7	45.1	57.9	58.7	49.6
95°	15.8	17.6	22.1	26.2	33.4	44.3	65.0	104.3	156.8	177.1	155.0
97.5°	25.7	28.2	33.0	39.1	47.5	59.7	85.9	140.6	227.7	302.3	317.1
100°	34.8	36.1	40.2	47.5	56.5	69.2	93.1	148.2	245.7	356.9	421.9
102.5°	43.1	44.1	48.2	55.4	64.8	77.4	99.6	148.5	238.9	358.7	461.0
105°	55.1	57.0	60.0	66.9	76.8	89.4	110.7	150.9	225.5	334.8	455.0
107.5°	68.1	69.6	72.6	78.9	88.7	101.5	122.1	157.1	218.7	309.1	415.3
110°	76.8	78.6	81.4	87.2	96.6	109.8	129.7	162.2	217.3	296.8	390.3



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CANDELA DISTRIBUTION (continued):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
112.5°	84.8	86.6	89.6	95.1	104.3	117.7	136.9	167.6	217.7	288.8	373.0
115°	97.1	99.4	102.1	107.5	116.5	128.7	148.2	175.7	219.6	280.1	351.5
117.5°	110.0	111.8	114.5	119.3	127.9	140.6	158.6	184.4	222.8	275.8	337.9
120°	117.9	119.7	122.4	126.5	135.5	148.2	165.8	190.2	225.0	273.3	330.7
122.5°	125.5	127.0	129.7	134.1	143.1	156.1	172.7	195.3	227.5	271.9	324.6
125°	135.5	136.9	139.6	145.0	154.1	166.7	183.0	203.3	231.3	269.3	315.8
127.5°	143.5	145.3	149.1	155.0	163.7	176.7	192.6	210.8	235.2	267.8	307.7
130°	148.2	150.0	154.5	160.8	169.8	182.5	198.4	215.5	238.1	267.0	302.2
132.5°	152.5	154.7	159.5	166.3	175.6	188.3	203.4	220.2	241.0	266.6	297.9
135°	159.0	160.8	166.3	173.0	183.4	196.1	210.6	226.3	244.4	266.1	291.8
137.5°	165.2	167.3	172.8	180.0	190.3	202.0	216.3	231.0	247.5	266.0	287.6
140°	169.8	171.7	177.1	184.3	194.2	206.0	219.6	233.5	248.9	265.6	285.1
142.5°	174.6	176.0	181.1	188.3	197.9	208.9	222.1	235.8	250.0	265.6	282.6
145°	181.6	183.4	187.9	194.7	203.7	213.7	225.9	238.5	251.2	264.7	279.2
147.5°	189.2	190.5	194.9	201.1	208.7	217.5	228.9	240.1	251.5	263.1	275.8
150°	194.2	195.6	199.2	205.1	211.9	220.0	230.4	240.8	251.2	262.1	272.9
152.5°	199.3	199.9	203.6	208.7	215.2	222.5	231.9	241.1	250.5	260.2	270.4
155°	206.4	206.9	209.6	214.6	219.6	226.3	234.0	241.7	249.4	257.1	265.6
157.5°	212.4	212.9	215.1	219.4	223.4	229.0	235.5	241.7	247.3	253.8	261.2
160°	216.4	216.8	218.6	222.3	225.9	230.8	236.3	241.7	246.2	251.7	257.9
162.5°	220.4	220.1	221.9	224.8	228.1	232.0	236.6	241.3	245.1	249.9	255.1
165°	225.0	224.5	225.5	228.1	230.4	233.1	237.2	240.3	243.0	246.2	250.3
167.5°	228.8	228.2	229.0	230.8	232.4	234.1	237.1	239.7	241.0	243.0	245.6
170°	231.3	230.4	230.8	232.2	233.1	234.5	236.7	239.0	239.9	241.2	243.0
172.5°	232.7	232.2	232.0	233.3	233.9	234.8	236.4	237.9	238.4	239.1	240.5
175°	234.5	234.0	233.5	234.5	234.5	234.9	235.8	236.7	236.3	236.7	237.2
177.5°	235.3	234.6	234.2	234.9	234.9	234.9	235.3	236.0	235.3	234.9	235.3
180°	234.9	234.9	234.9	234.9	234.9	234.9	234.9	234.9	234.9	234.9	234.9



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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°	7.8	7.4	7.5	7.5	7.5	7.5	7.5	7.5
90°	14.4	13.5	14.4	14.9	14.9	14.9	14.9	14.9
92.5°	39.4	33.8	30.0	27.2	26.9	25.4	25.7	25.0
95°	118.4	90.8	71.9	61.9	56.0	52.4	51.0	51.5
97.5°	276.2	226.0	177.1	144.5	122.9	111.8	105.2	101.4
100°	412.5	356.5	294.5	239.9	202.4	183.0	169.8	161.8
102.5°	501.8	489.1	443.9	385.9	345.2	312.0	295.6	284.6
105°	548.9	599.9	605.9	590.9	562.9	534.9	515.5	509.1
107.5°	514.9	591.8	638.8	660.7	664.2	662.7	658.8	650.4
110°	485.7	566.5	624.3	661.4	680.8	689.4	693.5	693.0



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CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
112.5°	458.9	536.5	598.3	640.8	667.8	682.1	689.8	692.3
115°	426.0	495.6	554.8	601.3	633.3	654.2	665.9	669.9
117.5°	401.2	462.3	516.0	559.7	592.4	614.3	626.7	630.1
120°	389.0	445.0	492.9	534.0	565.6	586.8	599.9	604.4
122.5°	379.2	430.6	475.9	513.0	541.4	562.3	573.9	577.7
125°	365.0	411.5	451.3	485.2	511.4	528.5	539.9	543.5
127.5°	351.0	393.2	430.6	461.9	484.7	500.8	510.6	513.5
130°	342.0	380.9	416.5	446.3	468.5	483.9	492.9	496.5
132.5°	333.4	369.3	402.1	430.1	451.9	467.2	475.5	478.8
135°	321.2	351.0	380.9	406.2	425.6	440.5	448.6	450.4
137.5°	311.6	336.5	360.1	382.2	399.9	412.7	419.9	422.6
140°	305.4	327.1	347.8	367.7	382.2	394.0	400.7	403.5
142.5°	300.3	318.8	336.7	353.3	367.0	377.7	383.7	384.3
145°	293.2	308.1	322.1	335.3	346.0	353.7	358.2	359.6
147.5°	287.7	299.4	310.4	320.0	328.9	335.0	338.1	338.9
150°	283.7	293.7	303.2	311.2	318.1	323.4	326.1	326.6
152.5°	279.7	289.0	297.0	304.0	309.3	314.1	316.1	316.2
155°	274.3	281.5	288.2	293.2	298.2	301.3	303.2	302.2
157.5°	267.8	273.9	279.6	283.4	286.9	289.6	290.4	290.4
160°	263.8	268.8	273.8	276.9	280.1	282.3	282.8	282.8
162.5°	259.8	264.1	268.4	270.8	273.9	275.5	275.9	275.6
165°	253.9	257.1	260.2	262.1	263.8	265.6	265.6	265.2
167.5°	248.2	250.6	252.8	254.4	255.2	256.3	256.2	255.6
170°	245.3	246.7	248.5	249.4	249.9	251.2	250.7	249.9
172.5°	242.1	243.0	244.5	245.0	245.5	246.1	245.7	245.1
175°	238.5	239.0	239.5	239.9	239.9	240.3	239.9	239.0
177.5°	236.0	236.0	236.4	236.4	236.4	236.4	236.0	235.3
180°	234.9	234.9	234.9	234.9	234.9	234.9	234.9	234.9

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