

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: P331661

Luminaire Tested: **SA2XXRDIP-C485D725U835-4F0-1E-UDD-F1**

Issue Date: 10/7/2019

Test Information

Test Method: LM-79-08
Report Number: P331661
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: SA2XXRDIP-C485D725U835-4F0-1E-UDD-F1
Description: DEFINE 2 DIRECT-INDIRECT PENDANT LED LUMINAIRE
DOWNLIGHT 485 LUMENS PER FOOT, FLUSH SATIN WHITE DIFFUSER, REGRESSED
HOUSING
UPLIGHT 725 LUMENS PER FOOT, FLUSH SATIN WHITE DIFFUSER
Light Source: -
Ballast/Driver: ELECTRONIC DRIVER

Summary

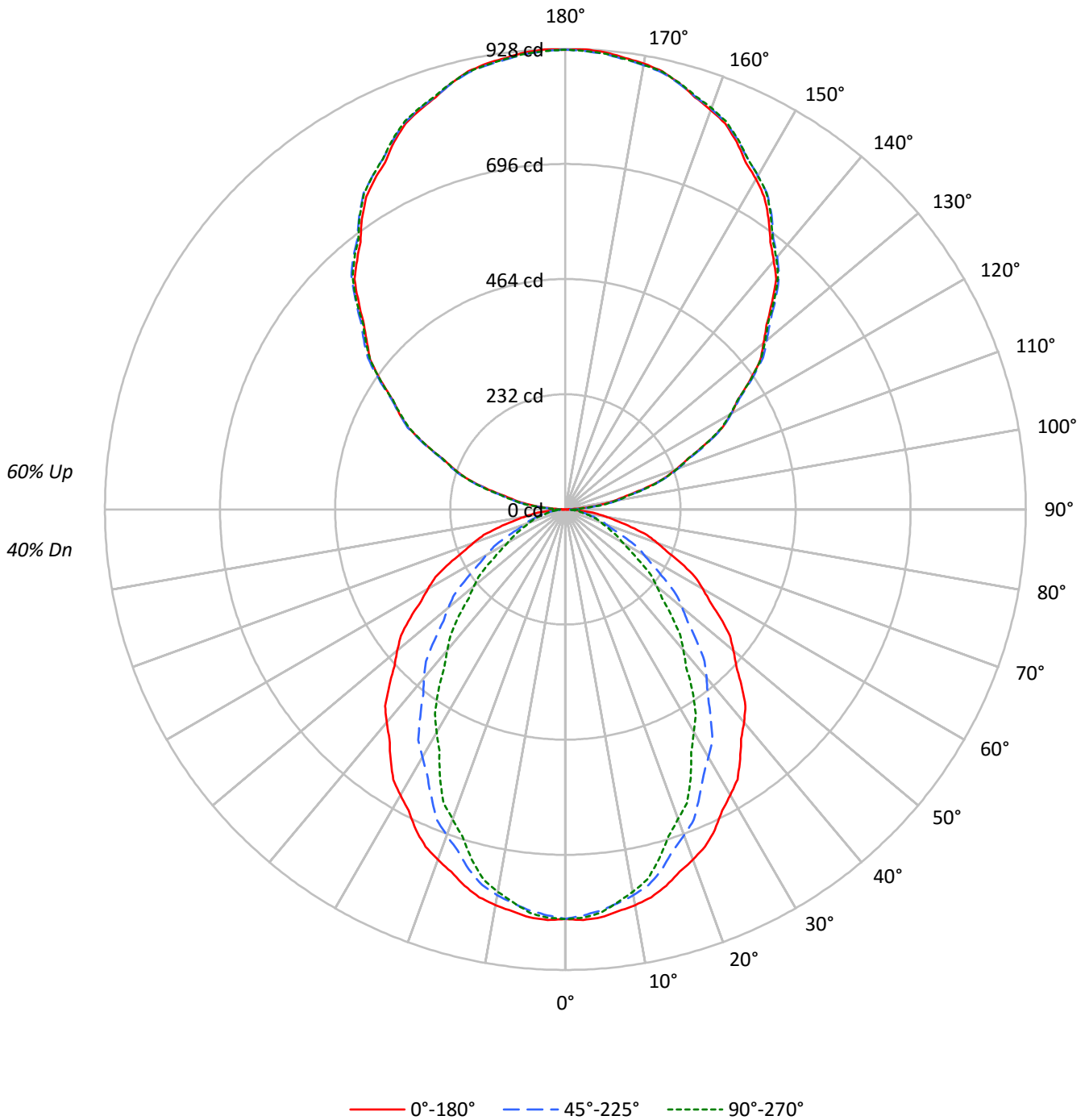
Lumens per Lamp: N/A
Luminaire Lumens: 4291.0 lumens
Efficiency: N/A
Efficacy: 111.7 lumens/watt
Spacing Criteria (0/90/45): 1.2 / 0.99 / 1.16
Luminous Opening: Rectangular (W 0.17' x L: 4' x H: 0')
CIE Type: Semi-Indirect

Input Watts (W): 38.4
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	105	105	105	105	95	95	95	95	78	78	78	61	61	61	47	47	47	40
1	96	92	88	85	87	84	80	78	68	66	64	55	53	52	42	41	40	34
2	88	80	75	70	79	74	69	64	60	57	54	48	46	44	37	36	34	29
3	80	71	64	59	73	65	59	54	54	49	46	43	40	37	33	31	30	25
4	73	63	56	50	67	58	51	46	48	43	39	39	35	32	30	28	26	22
5	67	56	49	43	61	52	45	40	43	38	34	35	31	28	27	25	23	19
6	62	51	43	37	57	47	40	35	39	34	30	32	28	25	25	22	20	17
7	58	46	38	33	52	42	35	31	35	30	26	29	25	22	23	20	18	15
8	53	42	34	29	49	38	32	27	32	27	23	26	23	20	21	18	16	14
9	50	38	31	26	45	35	29	24	30	25	21	24	21	18	19	17	15	13
10	46	35	28	23	42	32	26	22	27	22	19	22	19	16	18	15	13	12

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	13324	13324	13324
5°	13374	13157	13230
10°	13273	12942	12832
15°	13120	12558	12197
20°	12909	12010	11407
25°	12693	11389	10644
30°	12392	10750	9663
35°	12100	10054	8803
40°	11805	9335	7807
45°	11460	8526	6907
50°	11105	7709	6021
55°	10742	6832	5171
60°	10320	5909	4292
65°	9845	4963	3908
70°	9272	4088	3597
75°	8571	3724	3356
80°	7569	3329	3059
85°	5947	2631	2631



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	77.2	1.8
10°-20°	212.1	4.9
20°-30°	297.8	6.9
30°-40°	324.8	7.6
40°-50°	298.6	7.0
50°-60°	234.5	5.5
60°-70°	152.9	3.6
70°-80°	78.8	1.8
80°-90°	24.2	0.6
90°-100°	58.7	1.4
100°-110°	182.3	4.2
110°-120°	311.6	7.3
120°-130°	409.8	9.5
130°-140°	459.9	10.7
140°-150°	450.9	10.5
150°-160°	378.2	8.8
160°-170°	250.9	5.8
170°-180°	87.7	2.0
0°-30°	587.2	13.7
0°-40°	912.0	21.3
0°-60°	1445.1	33.7
0°-90°	1701.0	39.6
90°-120°	552.6	12.9
90°-150°	1873.2	43.7
90°-180°	2590.0	60.4
0°-180°	4291.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	825	825	825	825	825	
5°	825	821	812	818	816	78
15°	785	776	751	738	730	221
25°	712	687	639	610	598	327
35°	614	574	510	465	447	384
45°	502	450	373	322	302	387
55°	382	322	243	200	184	341
65°	258	197	130	106	102	255
75°	137	87	60	55	54	145
85°	32	17	14	14	14	38
90°	1	11	27	26	27	3
95°	41	48	50	50	48	47
105°	168	170	172	173	174	177
115°	313	317	316	315	313	309
125°	455	461	460	457	456	406
135°	589	597	599	598	596	454
145°	714	720	725	725	722	446
155°	817	819	822	825	823	376
165°	889	888	888	893	890	251
175°	925	922	921	926	922	88
180°	926	926	926	926	926	



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CANDELA DISTRIBUTION (FULL):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
0°	825.2	825.2	825.2	825.2	825.2	825.2	825.2	825.2	825.2	825.2	825.2
2.5°	828.2	827.6	826.9	826.2	825.6	824.5	823.1	821.6	820.1	818.7	820.0
5°	825.2	824.4	823.6	822.8	821.9	820.4	818.3	816.1	814.0	811.8	813.3
7.5°	816.7	815.7	814.7	813.6	812.6	810.8	808.3	805.8	803.3	800.8	801.2
10°	809.6	808.4	807.2	806.1	804.9	802.7	799.4	796.0	792.7	789.4	788.9
12.5°	800.6	799.2	797.7	796.3	794.9	792.1	787.8	783.6	779.3	775.1	774.2
15°	784.9	783.1	781.3	779.4	777.6	773.9	768.2	762.6	757.0	751.3	748.2
17.5°	765.7	762.9	760.1	757.3	754.5	749.5	742.3	735.0	727.8	720.5	716.8
20°	751.3	748.0	744.7	741.4	738.0	732.2	723.9	715.6	707.3	699.0	694.9
22.5°	735.8	732.1	728.3	724.6	720.9	714.4	705.0	695.6	686.3	676.9	671.6
25°	712.5	707.2	701.9	696.5	691.2	683.1	672.1	661.2	650.2	639.3	632.5
27.5°	684.4	678.6	672.8	667.1	661.3	652.2	639.9	627.5	615.2	602.8	594.9
30°	664.7	658.4	652.1	645.8	639.5	629.7	616.4	603.1	589.8	576.6	568.1
32.5°	645.6	638.2	630.8	623.5	616.1	605.6	592.1	578.5	565.0	551.5	541.8
35°	613.9	605.4	597.0	588.5	580.0	568.5	553.9	539.3	524.7	510.1	499.6
37.5°	582.2	572.9	563.6	554.3	545.1	532.6	517.1	501.5	485.9	470.4	458.8
40°	560.1	550.2	540.2	530.3	520.3	507.3	491.2	475.1	459.0	442.9	431.1
42.5°	537.4	526.9	516.4	506.0	495.5	481.9	465.3	448.6	432.0	415.4	403.2
45°	501.9	490.8	479.6	468.5	457.4	443.1	425.7	408.3	390.8	373.4	361.6
47.5°	467.2	455.4	443.7	431.9	420.1	405.2	387.2	369.2	351.2	333.2	321.5
50°	442.1	430.3	418.6	406.8	395.0	380.0	361.7	343.5	325.2	306.9	295.5
52.5°	417.6	405.3	393.0	380.7	368.4	353.3	335.4	317.6	299.7	281.9	270.8
55°	381.6	368.7	355.7	342.8	329.9	314.4	296.5	278.6	260.6	242.7	232.8
57.5°	344.7	331.5	318.2	304.9	291.6	276.4	259.2	241.9	224.7	207.5	198.3
60°	319.6	306.4	293.1	279.8	266.5	251.4	234.3	217.2	200.1	183.0	174.5
62.5°	295.1	281.9	268.6	255.3	242.0	227.3	211.0	194.7	178.4	162.1	154.0
65°	257.7	244.2	230.8	217.3	203.9	189.7	174.8	159.8	144.9	129.9	124.3
67.5°	221.5	208.2	194.8	181.5	168.1	154.7	141.3	127.9	114.4	101.0	98.4
70°	196.4	183.5	170.5	157.6	144.6	132.4	121.0	109.5	98.1	86.6	85.0
72.5°	172.5	160.1	147.7	135.3	122.9	112.1	102.9	93.7	84.5	75.3	73.9
75°	137.4	125.8	114.2	102.6	90.9	82.3	76.7	71.0	65.4	59.7	58.6
77.5°	102.9	92.7	82.5	72.3	62.2	55.7	53.0	50.3	47.5	44.8	44.1
80°	81.4	72.9	64.5	56.0	47.5	42.5	40.8	39.2	37.5	35.8	35.2
82.5°	61.7	55.1	48.5	41.9	35.3	31.4	30.3	29.1	28.0	26.9	26.5
85°	32.1	28.6	25.1	21.7	18.2	16.2	15.7	15.2	14.7	14.2	14.2
87.5°	9.7	9.1	8.4	7.8	7.1	7.2	8.0	8.7	9.5	10.3	10.0
90°	0.8	2.9	5.0	7.0	9.1	12.1	15.9	19.7	23.5	27.4	27.0
92.5°	13.9	15.4	17.0	18.5	20.0	21.2	22.1	23.0	24.0	24.9	24.9
95°	40.6	42.4	44.1	45.9	47.6	48.6	49.0	49.3	49.7	50.0	50.0
97.5°	74.3	75.8	77.3	78.8	80.4	81.5	82.1	82.8	83.4	84.1	84.1
100°	99.3	100.7	102.0	103.4	104.8	105.8	106.3	106.8	107.3	107.9	107.9
102.5°	125.5	126.6	127.8	128.9	130.0	130.9	131.5	132.2	132.8	133.5	133.6
105°	168.1	168.6	169.1	169.6	170.1	170.6	170.9	171.3	171.6	172.0	172.3
107.5°	210.9	211.7	212.4	213.2	213.9	214.3	214.3	214.3	214.3	214.3	214.5
110°	238.4	239.4	240.5	241.5	242.6	243.1	243.1	243.1	243.1	243.1	243.1



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CANDELA DISTRIBUTION (continued):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
112.5°	268.4	269.5	270.5	271.5	272.6	273.0	272.9	272.8	272.6	272.5	272.1
115°	312.7	313.7	314.7	315.8	316.8	317.2	316.8	316.5	316.1	315.8	315.6
117.5°	356.7	358.1	359.5	360.9	362.3	362.5	361.5	360.6	359.6	358.6	358.2
120°	386.1	387.5	388.9	390.3	391.7	391.7	390.3	388.9	387.5	386.1	386.1
122.5°	413.0	414.7	416.4	418.0	419.7	420.0	419.1	418.1	417.1	416.1	415.7
125°	454.9	456.5	458.0	459.6	461.2	461.7	461.2	460.6	460.1	459.6	459.1
127.5°	495.7	497.7	499.7	501.7	503.6	504.3	503.7	503.1	502.4	501.8	501.2
130°	521.4	523.6	525.9	528.1	530.4	531.3	531.0	530.6	530.3	530.0	529.6
132.5°	550.1	552.0	553.8	555.6	557.5	558.4	558.5	558.6	558.6	558.7	558.0
135°	588.6	590.5	592.4	594.3	596.2	597.3	597.7	598.0	598.4	598.7	598.6
137.5°	629.1	630.6	632.2	633.8	635.3	636.3	636.8	637.2	637.7	638.1	638.0
140°	653.5	655.0	656.6	658.1	659.7	660.9	661.8	662.7	663.5	664.4	664.4
142.5°	678.5	680.0	681.6	683.2	684.7	685.8	686.4	687.0	687.6	688.2	688.3
145°	714.4	715.6	716.9	718.1	719.3	720.4	721.5	722.5	723.5	724.6	724.8
147.5°	746.5	747.9	749.4	750.8	752.3	753.4	754.1	754.8	755.5	756.2	756.5
150°	768.4	769.4	770.4	771.5	772.5	773.4	774.1	774.8	775.5	776.2	776.7
152.5°	787.7	788.8	789.8	790.9	791.9	792.8	793.7	794.5	795.3	796.2	796.8
155°	816.8	817.3	817.9	818.4	818.9	819.4	819.9	820.5	821.0	821.5	822.4
157.5°	841.7	842.0	842.4	842.7	843.1	843.4	843.7	844.0	844.3	844.6	845.8
160°	856.7	857.0	857.4	857.7	858.1	858.3	858.5	858.7	858.9	859.0	860.1
162.5°	870.4	870.5	870.6	870.6	870.7	870.8	871.0	871.2	871.4	871.5	872.7
165°	888.7	888.6	888.4	888.2	888.0	887.9	887.9	887.9	887.9	887.9	889.2
167.5°	904.0	903.5	903.0	902.5	902.0	901.7	901.7	901.6	901.6	901.5	902.8
170°	912.2	911.7	911.1	910.6	910.1	909.7	909.6	909.4	909.2	909.0	910.3
172.5°	917.8	917.3	916.8	916.2	915.7	915.4	915.2	915.0	914.9	914.7	915.9
175°	924.7	924.2	923.6	923.1	922.6	922.2	921.8	921.5	921.1	920.8	922.0
177.5°	927.5	927.1	926.7	926.2	925.8	925.5	925.2	924.9	924.6	924.4	925.2
180°	926.2	926.2	926.2	926.2	926.2	926.2	926.2	926.2	926.2	926.2	926.2



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CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
0°	825.2	825.2	825.2	825.2	825.2	825.2	825.2	825.2
2.5°	821.3	822.7	824.0	824.5	824.3	824.0	823.7	823.5
5°	814.8	816.3	817.8	818.3	817.8	817.3	816.8	816.3
7.5°	801.6	802.0	802.5	802.3	801.4	800.5	799.7	798.8
10°	788.4	787.9	787.4	786.7	785.7	784.7	783.7	782.7
12.5°	773.3	772.4	771.5	770.2	768.5	766.9	765.2	763.6
15°	745.0	741.9	738.7	736.3	734.6	733.0	731.3	729.7
17.5°	713.0	709.3	705.5	702.2	699.4	696.5	693.7	690.8
20°	690.7	686.6	682.4	678.5	674.9	671.2	667.6	663.9
22.5°	666.2	660.9	655.6	651.5	648.8	646.1	643.4	640.6
25°	625.7	618.9	612.1	607.4	604.9	602.4	600.0	597.5
27.5°	587.0	579.0	571.1	565.2	561.2	557.3	553.3	549.4
30°	559.6	551.2	542.7	536.2	531.7	527.3	522.8	518.3
32.5°	532.1	522.5	512.8	505.9	501.7	497.5	493.2	489.0
35°	489.2	478.7	468.3	461.2	457.6	453.9	450.3	446.6
37.5°	447.3	435.8	424.3	416.4	412.3	408.1	403.9	399.7
40°	419.3	407.5	395.7	387.7	383.4	379.1	374.7	370.4
42.5°	391.0	378.8	366.7	358.5	354.3	350.1	345.9	341.7
45°	349.8	338.1	326.3	318.4	314.4	310.4	306.4	302.5
47.5°	309.8	298.1	286.4	278.7	275.1	271.5	267.8	264.2
50°	284.0	272.6	261.1	253.7	250.2	246.7	243.2	239.7
52.5°	259.7	248.7	237.6	230.5	227.3	224.1	220.8	217.6
55°	222.8	212.8	202.9	196.3	193.2	190.0	186.9	183.7
57.5°	189.2	180.1	171.0	165.1	162.4	159.8	157.1	154.4
60°	166.0	157.6	149.1	143.6	140.9	138.2	135.6	132.9
62.5°	145.9	137.9	129.8	125.0	123.4	121.8	120.2	118.6
65°	118.7	113.0	107.4	104.3	103.8	103.3	102.8	102.3
67.5°	95.8	93.2	90.6	89.1	88.5	88.0	87.5	86.9
70°	83.3	81.7	80.0	78.8	78.2	77.5	76.8	76.2
72.5°	72.5	71.1	69.7	68.8	68.4	68.0	67.6	67.2
75°	57.4	56.3	55.1	54.4	54.3	54.1	53.9	53.8
77.5°	43.5	42.8	42.2	41.7	41.4	41.2	40.9	40.6
80°	34.5	33.9	33.2	32.9	32.9	32.9	32.9	32.9
82.5°	26.1	25.7	25.3	25.1	25.1	25.1	25.1	25.1
85°	14.2	14.2	14.2	14.2	14.2	14.2	14.2	14.2
87.5°	9.8	9.6	9.4	9.4	9.4	9.4	9.5	9.5
90°	26.7	26.3	26.0	25.9	26.1	26.2	26.4	26.6
92.5°	25.0	25.1	25.1	25.2	25.2	25.3	25.3	25.3
95°	50.0	50.0	50.0	49.9	49.5	49.2	48.8	48.5
97.5°	84.1	84.1	84.1	84.1	84.1	84.0	84.0	83.9
100°	107.9	107.9	107.9	107.8	107.6	107.4	107.3	107.1
102.5°	133.8	133.9	134.1	134.0	133.9	133.7	133.5	133.3
105°	172.7	173.0	173.4	173.5	173.5	173.5	173.5	173.5
107.5°	214.6	214.7	214.9	214.6	213.8	213.0	212.2	211.4
110°	243.1	243.1	243.1	242.8	242.3	241.8	241.3	240.7



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CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
112.5°	271.6	271.2	270.8	270.4	270.0	269.6	269.3	268.9
115°	315.4	315.3	315.1	314.7	314.2	313.7	313.2	312.7
117.5°	357.8	357.4	356.9	356.5	356.0	355.4	354.9	354.4
120°	386.1	386.1	386.1	385.9	385.3	384.8	384.3	383.8
122.5°	415.3	414.9	414.5	414.1	413.7	413.3	412.9	412.6
125°	458.6	458.0	457.5	457.2	457.0	456.8	456.7	456.5
127.5°	500.6	499.9	499.3	498.7	498.2	497.6	497.1	496.5
130°	529.3	528.9	528.6	528.0	527.3	526.7	526.0	525.3
132.5°	557.2	556.4	555.7	555.0	554.4	553.9	553.3	552.8
135°	598.4	598.2	598.0	597.7	597.2	596.7	596.1	595.6
137.5°	637.9	637.7	637.6	637.2	636.5	635.8	635.1	634.4
140°	664.4	664.4	664.4	664.0	663.4	662.7	662.0	661.3
142.5°	688.4	688.6	688.7	688.4	687.7	687.0	686.4	685.7
145°	724.9	725.1	725.3	725.0	724.3	723.6	722.9	722.2
147.5°	756.9	757.3	757.7	757.6	756.9	756.2	755.6	754.9
150°	777.2	777.7	778.3	778.3	777.7	777.2	776.7	776.2
152.5°	797.5	798.2	798.8	798.8	798.2	797.5	796.8	796.2
155°	823.2	824.1	825.0	825.2	824.6	824.1	823.6	823.1
157.5°	847.0	848.2	849.4	849.5	848.7	847.9	847.0	846.2
160°	861.1	862.2	863.2	863.4	862.7	862.0	861.3	860.6
162.5°	873.9	875.1	876.3	876.4	875.6	874.8	873.9	873.1
165°	890.4	891.6	892.8	893.0	892.1	891.2	890.4	889.5
167.5°	904.0	905.2	906.4	906.6	905.7	904.8	903.9	903.0
170°	911.5	912.7	913.9	914.0	913.0	911.9	910.9	909.8
172.5°	917.1	918.3	919.5	919.6	918.6	917.5	916.5	915.5
175°	923.2	924.4	925.6	925.7	924.7	923.6	922.6	921.6
177.5°	926.0	926.9	927.7	927.7	926.9	926.0	925.2	924.4
180°	926.2	926.2	926.2	926.2	926.2	926.2	926.2	926.2

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