

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: P331654

Luminaire Tested: **SA2XXRDIP-C485D530U835-4F0-1E-UDD-F**

Issue Date: 10/7/2019

Test Information

Test Method: LM-79-08
Report Number: P331654
REPORT IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-1807-864-2,
Test Lab: INNOVATION CENTER
Issue Date: 10/7/2019
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: NEO-RAY
Catalog Number: SA2XXRDIP-C485D530U835-4F0-1E-UDD-F
Description: DEFINE 2 DIRECT-INDIRECT PENDANT LED LUMINAIRE
DOWNLIGHT 485 LUMENS PER FOOT, FLUSH SATIN WHITE DIFFUSER, REGRESSED
HOUSING
UPLIGHT 530 LUMENS PER FOOT, NO LENS
Light Source: -
Ballast/Driver: ELECTRONIC DRIVER

Summary

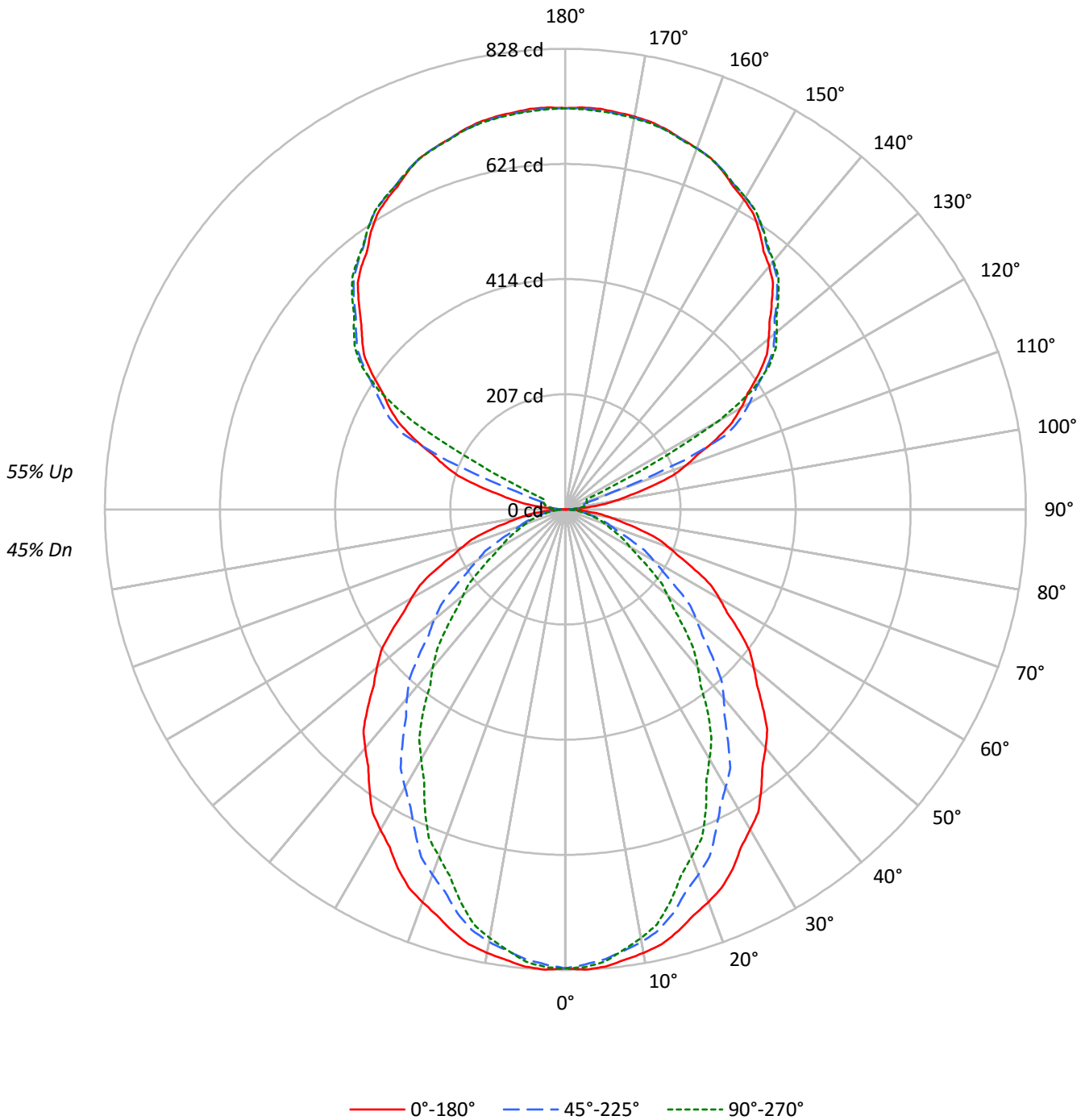
Lumens per Lamp: N/A
Luminaire Lumens: 3812.7 lumens
Efficiency: N/A
Efficacy: 116.2 lumens/watt
Spacing Criteria (0/90/45): 1.2 / 0.99 / 1.16
Luminous Opening: Rectangular (W 0.17' x L: 4' x H: 0')
CIE Type: General Diffuse

Input Watts (W): 32.8
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									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	50	30	10	50	30	10	50	30	10	50	30	10	0																
RCR	0	106	106	106	106	97	97	97	97	80	80	80	65	65	65	51	51	51	45																											
	1	97	93	89	86	89	85	82	79	71	69	67	58	56	55	46	45	44	38																											
	2	89	82	76	71	81	75	70	66	63	59	56	51	49	47	41	39	38	33																											
	3	81	72	65	59	74	66	60	55	56	51	48	46	43	40	37	34	33	28																											
	4	74	64	56	51	68	59	52	47	50	45	41	41	37	35	33	30	28	25																											
	5	68	57	49	44	63	53	46	41	45	39	35	37	33	30	30	27	25	22																											
	6	63	51	44	38	58	48	41	36	40	35	31	34	30	27	27	24	22	19																											
	7	58	47	39	33	54	43	36	31	37	31	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	31	27	46	36	29	25	31	26	22	26	22	19	21	18	16	14																											
	10	47	36	29	24	43	33	27	23	28	23	20	24	20	17	20	17	15	13																											

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	2.0
10°-20°	212.1	5.6
20°-30°	297.8	7.8
30°-40°	324.8	8.5
40°-50°	298.6	7.8
50°-60°	234.5	6.2
60°-70°	152.9	4.0
70°-80°	78.8	2.1
80°-90°	22.2	0.6
90°-100°	24.1	0.6
100°-110°	88.2	2.3
110°-120°	235.8	6.2
120°-130°	389.3	10.2
130°-140°	414.0	10.9
140°-150°	384.8	10.1
150°-160°	309.4	8.1
160°-170°	199.4	5.2
170°-180°	68.6	1.8
0°-30°	587.2	15.4
0°-40°	912.0	23.9
0°-60°	1445.1	37.9
0°-90°	1699.1	44.6
90°-120°	348.1	9.1
90°-150°	1536.2	40.3
90°-180°	2114.0	55.4
0°-180°	3812.7	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°	0	6	10	13	14	3
95°	34	18	20	23	22	41
105°	159	166	32	37	40	170
115°	300	309	322	92	43	295
125°	424	431	441	444	446	378
135°	525	533	538	543	542	405
145°	609	609	617	621	618	381
155°	671	666	672	675	671	309
165°	707	704	705	708	705	200
175°	723	719	720	723	719	69
180°	721	721	721	721	721	



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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	8.9	8.0	7.2	6.4	6.1	6.3	6.5	6.7	6.9	6.9
90°	0.5	1.8	3.1	4.3	5.6	6.7	7.7	8.6	9.5	10.4	11.0
92.5°	10.5	10.4	10.3	10.2	10.1	10.3	10.7	11.2	11.6	12.1	12.4
95°	33.9	30.1	26.3	22.4	18.6	17.1	17.9	18.7	19.5	20.4	20.9
97.5°	67.3	56.5	45.8	35.0	24.2	19.7	21.6	23.5	25.4	27.2	27.7
100°	92.4	76.5	60.6	44.7	28.8	21.9	23.8	25.8	27.8	29.7	30.7
102.5°	119.9	116.6	113.2	109.8	106.5	96.5	80.1	63.6	47.1	30.6	31.8
105°	158.6	162.1	165.6	169.1	172.6	158.5	126.8	95.2	63.5	31.8	33.1
107.5°	202.8	205.6	208.4	211.2	214.0	196.4	158.5	120.5	82.5	44.6	43.3
110°	231.2	233.6	236.1	238.5	240.9	225.4	191.9	158.4	124.8	91.3	79.7



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CANDELA DISTRIBUTION (continued):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
112.5°	257.9	260.1	262.2	264.4	266.5	263.5	255.2	246.9	238.6	230.4	188.0
115°	300.1	302.0	304.0	306.0	308.0	310.4	313.3	316.2	319.1	322.0	268.3
117.5°	337.8	340.0	342.2	344.4	346.6	348.7	350.7	352.7	354.7	356.6	343.7
120°	365.3	367.0	368.8	370.5	372.3	374.2	376.3	378.4	380.4	382.5	383.9
122.5°	388.7	390.5	392.4	394.2	396.0	398.1	400.3	402.6	404.9	407.2	408.0
125°	424.3	425.8	427.3	428.8	430.3	432.2	434.4	436.6	438.8	441.0	441.8
127.5°	456.5	458.2	459.9	461.5	463.2	464.9	466.5	468.2	469.8	471.5	472.6
130°	477.0	478.8	480.7	482.6	484.4	486.0	487.3	488.5	489.8	491.1	492.4
132.5°	497.9	499.4	501.0	502.6	504.2	505.6	506.9	508.2	509.4	510.7	511.8
135°	525.0	526.9	528.7	530.6	532.4	533.9	534.9	536.0	537.0	538.0	539.2
137.5°	552.5	553.7	555.0	556.3	557.6	558.9	560.1	561.3	562.4	563.6	564.8
140°	570.4	571.3	572.3	573.2	574.1	575.2	576.5	577.8	579.0	580.3	581.4
142.5°	585.4	586.3	587.1	587.9	588.8	589.9	591.4	592.8	594.3	595.8	596.7
145°	609.0	608.9	608.8	608.7	608.6	609.5	611.5	613.4	615.4	617.4	618.2
147.5°	629.6	629.1	628.7	628.3	627.8	628.6	630.5	632.5	634.4	636.4	637.0
150°	642.9	642.1	641.3	640.5	639.7	640.2	642.1	643.9	645.8	647.6	648.3
152.5°	654.2	653.3	652.4	651.5	650.6	651.0	652.8	654.6	656.3	658.1	658.8
155°	670.6	669.6	668.5	667.5	666.4	666.6	668.0	669.4	670.8	672.2	672.9
157.5°	683.4	682.6	681.7	680.8	679.9	680.0	680.9	681.9	682.9	683.9	684.6
160°	691.0	690.3	689.6	688.9	688.2	688.2	688.9	689.6	690.3	691.0	691.7
162.5°	697.6	696.9	696.2	695.5	694.9	694.8	695.4	696.0	696.6	697.2	698.0
165°	706.6	705.9	705.2	704.5	703.8	703.7	704.0	704.3	704.7	705.0	705.9
167.5°	713.3	712.6	711.9	711.2	710.5	710.3	710.6	711.0	711.3	711.6	712.4
170°	717.0	716.4	715.7	715.0	714.3	714.0	714.3	714.5	714.7	715.0	715.8
172.5°	719.6	718.9	718.2	717.5	716.8	716.5	716.8	717.0	717.2	717.5	718.3
175°	722.8	722.0	721.2	720.4	719.5	719.3	719.5	719.7	719.9	720.2	721.0
177.5°	723.3	722.7	722.0	721.4	720.7	720.4	720.5	720.6	720.7	720.8	721.5
180°	721.2	721.2	721.2	721.2	721.2	721.2	721.2	721.2	721.2	721.2	721.2



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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°	6.8	6.8	6.8	6.8	6.9	6.9	7.0	7.0
90°	11.6	12.2	12.8	13.2	13.4	13.6	13.9	14.1
92.5°	12.7	13.0	13.3	13.5	13.7	13.8	14.0	14.1
95°	21.5	22.1	22.7	22.9	22.8	22.7	22.6	22.4
97.5°	28.2	28.6	29.1	29.4	29.5	29.7	29.8	30.0
100°	31.6	32.5	33.5	34.0	34.3	34.5	34.7	35.0
102.5°	33.0	34.2	35.4	36.2	36.5	36.8	37.1	37.5
105°	34.4	35.7	36.9	37.8	38.3	38.7	39.2	39.7
107.5°	42.0	40.7	39.4	39.0	39.4	39.9	40.3	40.8
110°	68.1	56.5	44.9	39.4	39.8	40.3	40.8	41.2



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CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
112.5°	145.7	103.4	61.1	40.2	40.5	40.9	41.3	41.6
115°	214.6	160.9	107.2	76.2	67.8	59.5	51.1	42.8
117.5°	330.7	317.7	304.7	284.5	257.0	229.6	202.2	174.7
120°	385.3	386.7	388.1	381.0	365.3	349.7	334.0	318.3
122.5°	408.8	409.7	410.5	409.4	406.4	403.3	400.3	397.2
125°	442.6	443.4	444.2	444.8	445.2	445.5	445.9	446.2
127.5°	473.8	475.0	476.2	476.8	476.9	477.0	477.0	477.1
130°	493.6	494.9	496.2	496.8	496.6	496.5	496.4	496.3
132.5°	512.9	514.0	515.1	515.5	515.4	515.3	515.2	515.1
135°	540.4	541.5	542.7	543.2	542.9	542.7	542.5	542.2
137.5°	565.9	567.0	568.2	568.5	568.1	567.7	567.4	567.0
140°	582.4	583.4	584.5	584.7	584.1	583.6	583.0	582.4
142.5°	597.7	598.6	599.6	599.8	599.2	598.6	598.0	597.4
145°	619.0	619.8	620.6	620.7	620.2	619.6	619.0	618.4
147.5°	637.6	638.2	638.8	638.8	638.4	637.9	637.4	636.9
150°	649.0	649.7	650.4	650.5	649.9	649.3	648.7	648.2
152.5°	659.5	660.2	660.9	660.8	660.1	659.3	658.5	657.8
155°	673.6	674.3	675.0	674.8	673.9	673.0	672.1	671.1
157.5°	685.4	686.2	687.0	687.0	686.0	685.1	684.2	683.3
160°	692.3	693.0	693.7	693.7	692.9	692.1	691.2	690.4
162.5°	698.8	699.6	700.4	700.3	699.3	698.3	697.3	696.3
165°	706.7	707.5	708.3	708.3	707.5	706.7	705.9	705.0
167.5°	713.2	714.1	714.9	714.8	713.7	712.7	711.6	710.6
170°	716.6	717.4	718.2	718.1	717.0	716.0	715.0	713.9
172.5°	719.1	719.9	720.7	720.6	719.6	718.5	717.5	716.4
175°	721.8	722.6	723.4	723.3	722.1	720.9	719.8	718.6
177.5°	722.1	722.8	723.4	723.3	722.5	721.6	720.8	720.0
180°	721.2	721.2	721.2	721.2	721.2	721.2	721.2	721.2

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