

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: P331655-840

Luminaire Tested: **SA2XXRDIP-C485D530U840-4F0-1E-UDD-F1**

Issue Date: 10/7/2019

Test Information

Test Method: LM-79-08
Report Number: P331655-840
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-C485D530U840-4F0-1E-UDD-F1
Description: DEFINE 2 DIRECT-INDIRECT PENDANT LED LUMINAIRE
DOWNLIGHT 485 LUMENS PER FOOT, FLUSH SATIN WHITE DIFFUSER, REGRESSED
HOUSING
UPLIGHT 530 LUMENS PER FOOT, FLUSH SATIN WHITE DIFFUSER
Light Source: -
Ballast/Driver: ELECTRONIC DRIVER

Summary

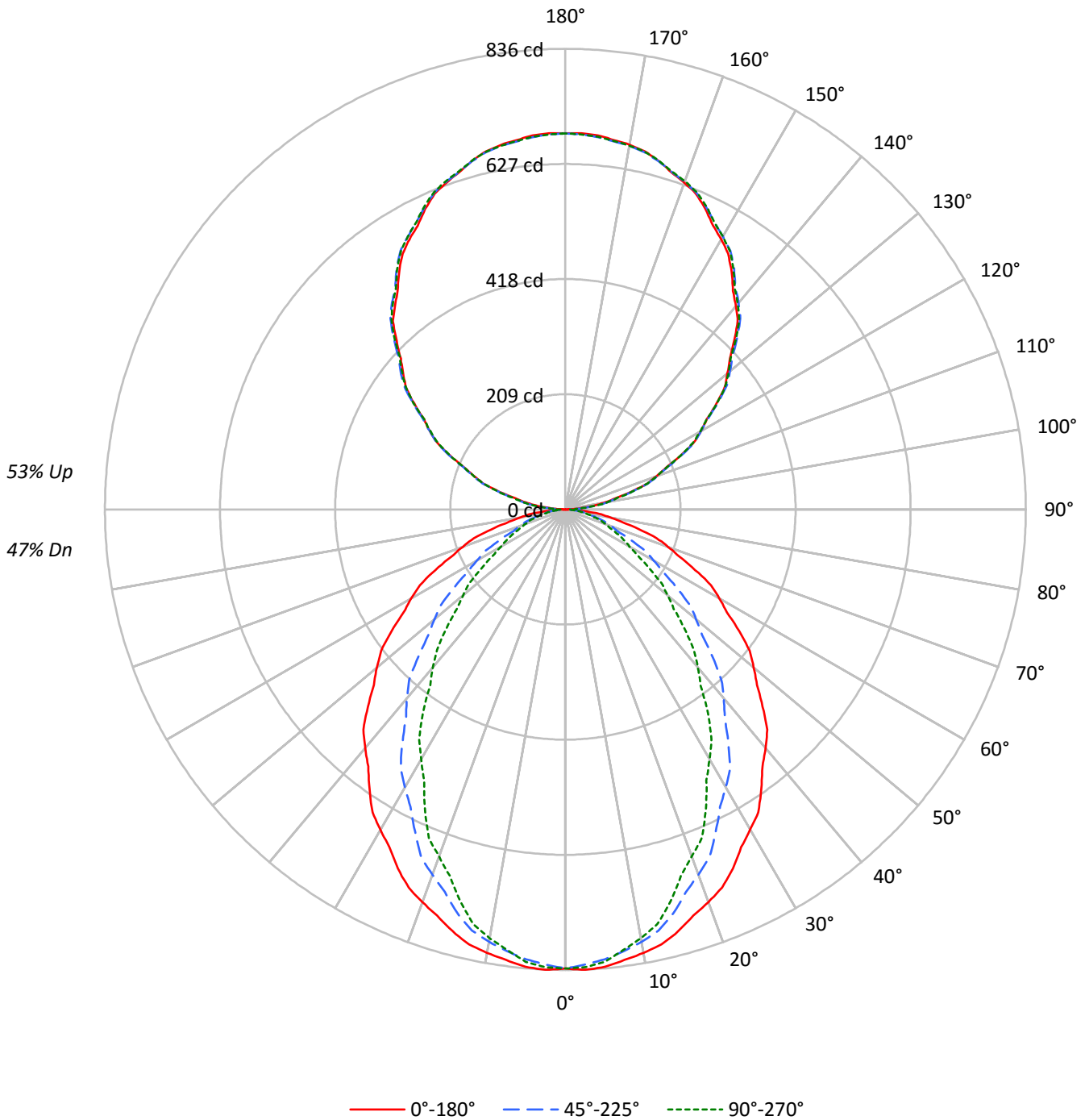
Lumens per Lamp: N/A
Luminaire Lumens: 3624.9 lumens
Efficiency: N/A
Efficacy: 110.5 lumens/watt
Spacing Criteria (0/90/45): 1.2 / 0.99 / 1.16
Luminous Opening: Rectangular (W 0.17' x L: 4' x H: 0')
CIE Type: General Diffuse

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	
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	0	
RCR																						
0	107	107	107	107	98	98	98	98	82	82	82	67	67	67	54	54	54	47				47
1	98	93	90	86	90	86	83	80	72	70	68	60	58	57	48	47	46	41				41
2	89	82	76	71	82	76	71	66	64	60	57	53	50	48	43	41	40	35				35
3	82	73	66	60	75	67	61	56	57	52	49	47	44	41	38	36	34	30				30
4	75	65	57	51	69	60	53	48	51	46	42	42	39	36	35	32	30	26				26
5	69	58	50	44	63	54	47	41	46	40	36	38	34	31	31	29	26	23				23
6	64	52	44	38	58	48	41	36	41	36	32	35	31	28	29	26	23	20				20
7	59	47	39	34	54	44	37	32	38	32	28	32	28	25	26	23	21	18				18
8	55	43	35	30	50	40	33	28	34	29	25	29	25	22	24	21	19	17				17
9	51	39	32	27	47	37	30	25	32	26	23	27	23	20	22	19	17	15				15
10	48	36	29	24	44	34	27	23	29	24	21	25	21	18	21	18	16	14				14

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	13454	13454	13454
5°	13506	13287	13361
10°	13404	13070	12959
15°	13249	12682	12318
20°	13036	12129	11519
25°	12818	11501	10750
30°	12515	10856	9758
35°	12220	10153	8889
40°	11921	9428	7885
45°	11574	8611	6976
50°	11215	7784	6081
55°	10849	6899	5222
60°	10424	5968	4334
65°	9941	5012	3947
70°	9361	4131	3635
75°	8659	3762	3387
80°	7643	3366	3087
85°	6002	2649	2649



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	78.0	2.2
10°-20°	214.2	5.9
20°-30°	300.8	8.3
30°-40°	328.0	9.0
40°-50°	301.6	8.3
50°-60°	236.8	6.5
60°-70°	154.4	4.3
70°-80°	79.6	2.2
80°-90°	23.4	0.6
90°-100°	43.3	1.2
100°-110°	134.3	3.7
110°-120°	229.6	6.3
120°-130°	301.9	8.3
130°-140°	338.8	9.3
140°-150°	332.2	9.2
150°-160°	278.7	7.7
160°-170°	184.8	5.1
170°-180°	64.6	1.8
0°-30°	593.0	16.4
0°-40°	921.0	25.4
0°-60°	1459.4	40.3
0°-90°	1716.8	47.4
90°-120°	407.1	11.2
90°-150°	1380.1	38.1
90°-180°	1908.0	52.6
0°-180°	3624.9	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	833	833	833	833	833	
5°	833	829	820	826	824	79
15°	793	783	759	745	737	223
25°	720	694	646	616	603	331
35°	620	580	515	469	451	388
45°	507	455	377	326	306	391
55°	385	325	245	202	186	344
65°	260	199	131	107	103	258
75°	139	87	60	55	54	147
85°	32	17	14	14	14	38
90°	1	8	20	19	20	3
95°	30	35	37	37	36	34
105°	124	125	127	128	128	131
115°	230	234	233	232	230	228
125°	335	340	339	337	336	299
135°	434	440	441	440	439	335
145°	526	530	534	534	532	329
155°	602	604	605	608	606	277
165°	655	654	654	658	655	185
175°	681	680	678	682	679	65
180°	682	682	682	682	682	



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CANDELA DISTRIBUTION (FULL):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
0°	833.3	833.3	833.3	833.3	833.3	833.3	833.3	833.3	833.3	833.3	833.3
2.5°	836.4	835.8	835.1	834.4	833.7	832.6	831.2	829.7	828.2	826.8	828.1
5°	833.3	832.5	831.7	830.9	830.0	828.5	826.4	824.2	822.0	819.8	821.3
7.5°	824.8	823.7	822.7	821.6	820.6	818.8	816.3	813.7	811.2	808.7	809.1
10°	817.6	816.4	815.2	814.1	812.8	810.6	807.3	803.9	800.5	797.2	796.7
12.5°	808.5	807.1	805.6	804.2	802.7	799.9	795.6	791.3	787.0	782.7	781.8
15°	792.6	790.8	789.0	787.1	785.3	781.5	775.8	770.1	764.5	758.7	755.6
17.5°	773.3	770.4	767.6	764.8	761.9	756.9	749.6	742.3	735.0	727.6	723.9
20°	758.7	755.4	752.0	748.7	745.3	739.4	731.0	722.7	714.3	705.9	701.8
22.5°	743.1	739.3	735.5	731.7	728.0	721.4	712.0	702.5	693.1	683.6	678.2
25°	719.5	714.2	708.8	703.4	698.0	689.8	678.7	667.7	656.6	645.6	638.7
27.5°	691.2	685.3	679.4	673.7	667.8	658.6	646.2	633.7	621.3	608.7	600.8
30°	671.3	664.9	658.5	652.2	645.8	635.9	622.5	609.0	595.6	582.3	573.7
32.5°	652.0	644.5	637.0	629.7	622.2	611.6	597.9	584.2	570.6	556.9	547.1
35°	620.0	611.4	602.9	594.3	585.7	574.1	559.4	544.6	529.9	515.1	504.5
37.5°	587.9	578.6	569.2	559.8	550.5	537.9	522.2	506.4	490.7	475.0	463.3
40°	565.6	555.6	545.5	535.5	525.4	512.3	496.0	479.8	463.5	447.3	435.4
42.5°	542.7	532.1	521.5	511.0	500.4	486.7	469.9	453.0	436.3	419.5	407.2
45°	506.9	495.6	484.3	473.1	461.9	447.5	429.9	412.3	394.7	377.1	365.2
47.5°	471.8	459.9	448.1	436.2	424.2	409.2	391.0	372.8	354.7	336.5	324.7
50°	446.5	434.5	422.7	410.8	398.9	383.7	365.3	346.9	328.4	309.9	298.4
52.5°	421.7	409.3	396.9	384.5	372.0	356.8	338.7	320.7	302.7	284.7	273.5
55°	385.4	372.3	359.2	346.2	333.2	317.5	299.4	281.3	263.2	245.1	235.1
57.5°	348.1	334.8	321.3	307.9	294.5	279.1	261.8	244.3	226.9	209.5	200.3
60°	322.8	309.4	296.0	282.6	269.1	253.9	236.6	219.3	202.1	184.8	176.2
62.5°	298.0	284.7	271.2	257.8	244.4	229.5	213.1	196.6	180.2	163.7	155.5
65°	260.2	246.6	233.1	219.4	205.9	191.6	176.5	161.4	146.3	131.2	125.5
67.5°	223.7	210.3	196.7	183.3	169.8	156.2	142.7	129.2	115.5	102.0	99.4
70°	198.3	185.3	172.2	159.2	146.0	133.7	122.2	110.6	99.1	87.5	85.8
72.5°	174.2	161.7	149.2	136.6	124.1	113.2	103.9	94.6	85.3	76.0	74.6
75°	138.8	127.0	115.3	103.6	91.8	83.1	77.5	71.7	66.0	60.3	59.2
77.5°	103.9	93.6	83.3	73.0	62.8	56.2	53.5	50.8	48.0	45.2	44.5
80°	82.2	73.6	65.1	56.6	48.0	42.9	41.2	39.6	37.9	36.2	35.5
82.5°	62.3	55.6	49.0	42.3	35.6	31.7	30.6	29.4	28.3	27.2	26.8
85°	32.4	28.9	25.3	21.9	18.4	16.4	15.9	15.3	14.8	14.3	14.3
87.5°	9.8	9.0	8.3	7.5	6.7	6.6	7.2	7.8	8.3	8.9	8.7
90°	0.6	2.1	3.6	5.2	6.8	8.9	11.7	14.5	17.4	20.2	19.9
92.5°	10.3	11.4	12.5	13.6	14.7	15.7	16.4	17.0	17.7	18.3	18.4
95°	30.0	31.2	32.5	33.8	35.0	35.9	36.1	36.4	36.6	36.9	36.9
97.5°	54.7	55.8	57.0	58.1	59.2	60.0	60.5	61.0	61.5	62.0	62.0
100°	73.1	74.1	75.1	76.2	77.3	78.0	78.4	78.7	79.1	79.5	79.5
102.5°	92.5	93.3	94.1	94.9	95.7	96.4	96.9	97.4	97.9	98.4	98.5
105°	123.8	124.2	124.6	124.9	125.3	125.6	125.9	126.1	126.4	126.7	126.9
107.5°	155.4	155.9	156.5	157.0	157.6	157.9	157.9	157.9	157.9	157.9	158.0
110°	175.6	176.4	177.1	177.9	178.7	179.0	179.0	179.0	179.0	179.0	179.0



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CANDELA DISTRIBUTION (continued):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
112.5°	197.7	198.5	199.2	200.1	200.9	201.2	201.1	201.0	200.9	200.8	200.5
115°	230.4	231.2	231.9	232.7	233.4	233.7	233.4	233.2	232.9	232.7	232.6
117.5°	262.9	263.9	264.9	265.9	266.9	267.1	266.4	265.6	264.9	264.2	263.9
120°	284.5	285.5	286.5	287.5	288.6	288.6	287.5	286.5	285.5	284.5	284.5
122.5°	304.3	305.5	306.8	308.0	309.2	309.4	308.7	308.0	307.3	306.6	306.3
125°	335.2	336.3	337.5	338.6	339.7	340.1	339.7	339.4	339.0	338.6	338.2
127.5°	365.2	366.7	368.1	369.6	371.0	371.5	371.1	370.6	370.2	369.7	369.2
130°	384.2	385.8	387.4	389.1	390.7	391.4	391.2	390.9	390.7	390.4	390.2
132.5°	405.3	406.7	408.0	409.4	410.7	411.4	411.5	411.5	411.6	411.6	411.1
135°	433.6	435.0	436.5	437.9	439.3	440.1	440.3	440.6	440.9	441.1	441.0
137.5°	463.4	464.6	465.7	467.0	468.1	468.8	469.2	469.5	469.8	470.1	470.0
140°	481.4	482.6	483.7	484.8	486.0	487.0	487.6	488.2	488.9	489.5	489.5
142.5°	499.9	501.0	502.2	503.3	504.4	505.2	505.7	506.1	506.5	507.0	507.1
145°	526.3	527.3	528.2	529.1	530.0	530.8	531.5	532.3	533.1	533.8	533.9
147.5°	550.0	551.0	552.1	553.2	554.2	555.0	555.5	556.0	556.5	557.1	557.3
150°	566.1	566.8	567.6	568.4	569.2	569.8	570.3	570.8	571.3	571.9	572.2
152.5°	580.4	581.2	581.9	582.7	583.4	584.1	584.7	585.3	585.9	586.6	587.0
155°	601.8	602.2	602.6	602.9	603.3	603.7	604.1	604.5	604.8	605.2	605.9
157.5°	620.1	620.4	620.6	620.9	621.2	621.4	621.6	621.9	622.1	622.3	623.2
160°	631.2	631.4	631.7	631.9	632.2	632.4	632.5	632.6	632.8	632.9	633.7
162.5°	641.3	641.4	641.4	641.5	641.5	641.6	641.7	641.9	642.0	642.1	643.0
165°	654.8	654.6	654.5	654.4	654.3	654.2	654.2	654.2	654.2	654.2	655.1
167.5°	666.0	665.7	665.3	664.9	664.5	664.3	664.3	664.3	664.2	664.2	665.1
170°	672.1	671.7	671.3	670.9	670.6	670.2	670.1	669.9	669.8	669.7	670.7
172.5°	676.2	675.8	675.4	675.0	674.7	674.4	674.3	674.2	674.0	673.9	674.8
175°	681.3	680.9	680.4	680.1	679.7	679.4	679.1	678.9	678.6	678.3	679.2
177.5°	683.4	683.0	682.7	682.4	682.1	681.9	681.7	681.5	681.3	681.1	681.7
180°	682.4	682.4	682.4	682.4	682.4	682.4	682.4	682.4	682.4	682.4	682.4



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CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
0°	833.3	833.3	833.3	833.3	833.3	833.3	833.3	833.3
2.5°	829.4	830.8	832.1	832.6	832.4	832.1	831.8	831.6
5°	822.8	824.4	825.9	826.4	825.9	825.4	824.9	824.4
7.5°	809.5	809.9	810.4	810.2	809.3	808.4	807.6	806.7
10°	796.2	795.7	795.2	794.5	793.5	792.4	791.4	790.4
12.5°	780.9	780.0	779.1	777.8	776.1	774.5	772.7	771.1
15°	752.3	749.2	746.0	743.6	741.8	740.2	738.5	736.9
17.5°	720.0	716.3	712.5	709.1	706.3	703.4	700.5	697.6
20°	697.5	693.4	689.1	685.2	681.6	677.8	674.2	670.4
22.5°	672.8	667.4	662.1	657.9	655.2	652.5	649.7	646.9
25°	631.9	625.0	618.1	613.4	610.9	608.3	605.9	603.4
27.5°	592.8	584.7	576.7	570.8	566.7	562.8	558.8	554.8
30°	565.1	556.6	548.1	541.5	536.9	532.5	528.0	523.4
32.5°	537.3	527.7	517.9	510.9	506.6	502.4	498.1	493.8
35°	494.0	483.4	472.9	465.7	462.1	458.4	454.7	451.0
37.5°	451.7	440.1	428.5	420.5	416.4	412.1	407.9	403.6
40°	423.4	411.5	399.6	391.5	387.2	382.8	378.4	374.1
42.5°	394.9	382.5	370.3	362.0	357.8	353.6	349.3	345.1
45°	353.3	341.4	329.5	321.5	317.5	313.5	309.4	305.5
47.5°	312.9	301.0	289.2	281.4	277.8	274.2	270.4	266.8
50°	286.8	275.3	263.7	256.2	252.7	249.1	245.6	242.1
52.5°	262.3	251.2	239.9	232.8	229.5	226.3	223.0	219.7
55°	225.0	214.9	204.9	198.2	195.1	191.9	188.7	185.5
57.5°	191.1	181.9	172.7	166.7	164.0	161.4	158.6	155.9
60°	167.6	159.2	150.6	145.0	142.3	139.6	136.9	134.2
62.5°	147.3	139.3	131.1	126.2	124.6	123.0	121.4	119.8
65°	119.9	114.1	108.5	105.3	104.8	104.3	103.8	103.3
67.5°	96.7	94.1	91.5	90.0	89.4	88.9	88.4	87.8
70°	84.1	82.5	80.8	79.6	79.0	78.3	77.6	77.0
72.5°	73.2	71.8	70.4	69.5	69.1	68.7	68.3	67.9
75°	58.0	56.9	55.6	54.9	54.8	54.6	54.4	54.3
77.5°	43.9	43.2	42.6	42.1	41.8	41.6	41.3	41.0
80°	34.8	34.2	33.5	33.2	33.2	33.2	33.2	33.2
82.5°	26.4	26.0	25.5	25.3	25.3	25.3	25.3	25.3
85°	14.3	14.3	14.3	14.3	14.3	14.3	14.3	14.3
87.5°	8.5	8.3	8.1	8.1	8.1	8.1	8.1	8.2
90°	19.7	19.4	19.1	19.1	19.2	19.3	19.5	19.6
92.5°	18.4	18.5	18.5	18.6	18.6	18.6	18.7	18.7
95°	36.9	36.9	36.9	36.8	36.5	36.3	36.0	35.7
97.5°	62.0	62.0	62.0	61.9	61.9	61.9	61.9	61.8
100°	79.5	79.5	79.5	79.4	79.3	79.2	79.1	78.9
102.5°	98.6	98.7	98.8	98.8	98.7	98.5	98.4	98.3
105°	127.2	127.4	127.7	127.8	127.8	127.8	127.8	127.8
107.5°	158.1	158.2	158.3	158.0	157.4	156.9	156.3	155.7
110°	179.0	179.0	179.0	178.9	178.5	178.1	177.7	177.3



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CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
112.5°	200.2	199.9	199.5	199.2	198.9	198.6	198.3	198.1
115°	232.4	232.3	232.2	231.9	231.5	231.2	230.8	230.4
117.5°	263.6	263.3	263.0	262.7	262.3	261.9	261.5	261.1
120°	284.5	284.5	284.5	284.3	283.9	283.6	283.2	282.8
122.5°	306.0	305.7	305.4	305.1	304.8	304.5	304.3	304.0
125°	337.8	337.5	337.1	336.8	336.7	336.6	336.4	336.3
127.5°	368.8	368.3	367.9	367.4	367.0	366.6	366.2	365.8
130°	389.9	389.7	389.4	389.0	388.5	388.0	387.5	387.0
132.5°	410.5	409.9	409.4	408.9	408.5	408.1	407.7	407.3
135°	440.9	440.7	440.6	440.3	440.0	439.6	439.2	438.8
137.5°	469.9	469.8	469.7	469.4	468.9	468.4	467.9	467.4
140°	489.5	489.5	489.5	489.3	488.7	488.2	487.7	487.2
142.5°	507.2	507.3	507.4	507.2	506.6	506.1	505.6	505.1
145°	534.1	534.2	534.3	534.1	533.6	533.1	532.6	532.1
147.5°	557.6	558.0	558.3	558.2	557.6	557.1	556.6	556.1
150°	572.6	573.0	573.4	573.4	573.0	572.6	572.2	571.9
152.5°	587.5	588.0	588.5	588.5	588.0	587.5	587.0	586.6
155°	606.5	607.1	607.8	607.9	607.5	607.1	606.7	606.4
157.5°	624.0	624.9	625.8	625.9	625.3	624.7	624.1	623.4
160°	634.4	635.2	635.9	636.1	635.6	635.1	634.5	634.0
162.5°	643.8	644.7	645.6	645.7	645.1	644.5	643.9	643.3
165°	656.0	656.9	657.7	657.9	657.2	656.6	656.0	655.3
167.5°	666.0	666.9	667.8	667.9	667.2	666.6	665.9	665.2
170°	671.6	672.5	673.3	673.4	672.6	671.9	671.1	670.3
172.5°	675.7	676.6	677.4	677.5	676.8	676.0	675.2	674.5
175°	680.1	681.1	682.0	682.1	681.3	680.4	679.7	678.9
177.5°	682.3	682.9	683.5	683.5	682.9	682.3	681.7	681.1
180°	682.4	682.4	682.4	682.4	682.4	682.4	682.4	682.4

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