

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: P331648-940

Luminaire Tested: **SA2XXRDIP-C485D330U940-4F0-1E-UDD-F**

Issue Date: 10/7/2019

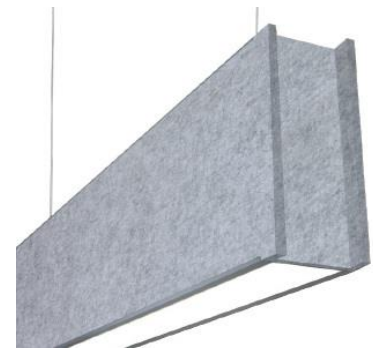
Test Information

Test Method: LM-79-08
Report Number: P331648-940
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-C485D330U940-4F0-1E-UDD-F
Description: DEFINE 2 DIRECT-INDIRECT PENDANT LED LUMINAIRE
DOWNLIGHT 485 LUMENS PER FOOT, FLUSH SATIN WHITE DIFFUSER, REGRESSED
HOUSING
UPLIGHT 330 LUMENS PER FOOT, NO LENS
Light Source: -
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 2682.2 lumens
Efficiency: N/A
Efficacy: 97.5 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

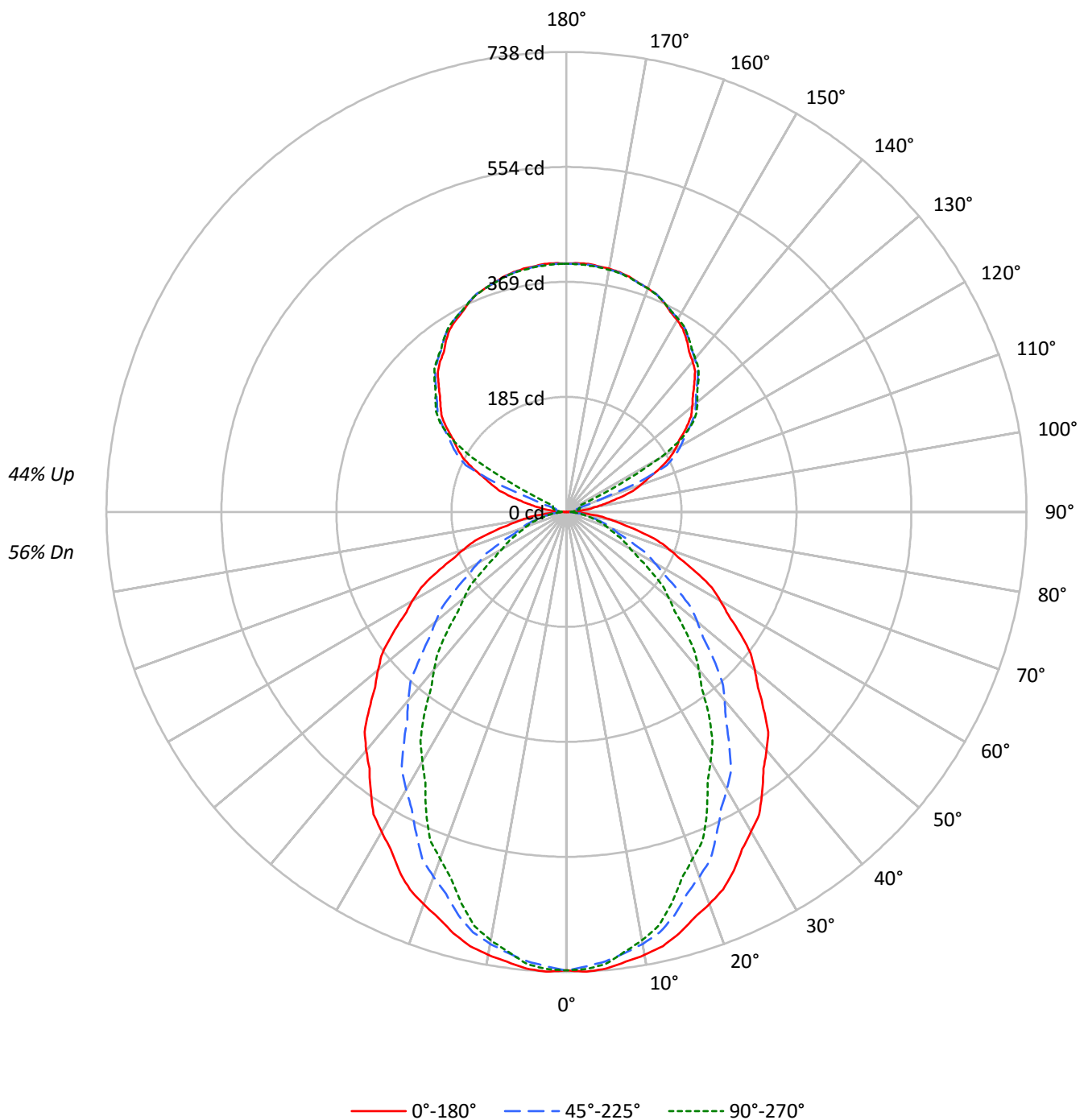
Input Watts (W): 27.5
Input Voltage (V): 120
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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
RW	70	50	30	10	70	50	30	10	50	30	10	50	30	10	50	30	10
RCR																	
0	109	109	109	109	101	101	101	101	87	87	87	74	74	74	62	62	62
1	100	96	92	89	93	89	86	83	77	75	73	66	64	63	56	55	53
2	91	84	78	73	85	79	73	69	68	64	61	59	56	53	50	48	46
3	84	74	67	62	78	70	63	58	61	56	52	52	49	46	45	42	40
4	77	66	59	53	71	62	55	50	54	49	45	47	43	40	40	37	35
5	71	59	51	46	66	56	49	43	49	43	39	42	38	35	36	33	31
6	65	54	46	40	61	50	43	38	44	39	34	39	34	31	33	30	27
7	61	49	41	35	56	46	39	34	40	35	30	35	31	27	31	27	24
8	56	44	37	31	52	42	35	30	37	31	27	32	28	25	28	25	22
9	53	41	33	28	49	38	32	27	34	28	25	30	25	22	26	23	20
10	49	37	30	25	46	35	29	24	31	26	22	28	23	20	24	21	18

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	11880	11880	11880
5°	11925	11733	11797
10°	11835	11540	11442
15°	11699	11198	10877
20°	11510	10710	10172
25°	11318	10156	9492
30°	11050	9587	8617
35°	10789	8966	7849
40°	10526	8323	6962
45°	10218	7604	6158
50°	9902	6875	5368
55°	9579	6092	4611
60°	9203	5270	3827
65°	8779	4424	3484
70°	8266	3644	3205
75°	7642	3319	2994
80°	6750	2966	2724
85°	5298	2353	2353

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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	68.9	2.6
10°-20°	189.1	7.1
20°-30°	265.6	9.9
30°-40°	289.6	10.8
40°-50°	266.3	9.9
50°-60°	209.1	7.8
60°-70°	136.4	5.1
70°-80°	70.3	2.6
80°-90°	19.2	0.7
90°-100°	13.3	0.5
100°-110°	48.7	1.8
110°-120°	130.3	4.9
120°-130°	215.1	8.0
130°-140°	228.7	8.5
140°-150°	212.6	7.9
150°-160°	170.9	6.4
160°-170°	110.1	4.1
170°-180°	37.9	1.4
0°-30°	523.6	19.5
0°-40°	813.2	30.3
0°-60°	1288.6	48.0
0°-90°	1514.5	56.5
90°-120°	192.3	7.2
90°-150°	848.7	31.6
90°-180°	1168.0	43.5
0°-180°	2682.2	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	736	736	736	736	736	
5°	736	732	724	729	728	70
15°	700	692	670	658	651	197
25°	635	613	570	544	533	292
35°	547	512	455	414	398	342
45°	448	402	333	287	270	345
55°	340	287	216	178	164	304
65°	230	176	116	94	91	228
75°	122	77	53	49	48	130
85°	29	15	13	13	13	34
90°	0	3	6	7	8	2
95°	19	10	11	13	12	23
105°	88	91	18	21	22	94
115°	166	171	178	51	24	163
125°	234	238	244	246	246	209
135°	290	295	297	300	300	224
145°	336	336	341	343	342	210
155°	370	368	371	373	371	171
165°	390	389	390	391	390	110
175°	399	397	398	400	397	38
180°	398	398	398	398	398	

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CANDELA DISTRIBUTION (FULL):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
0°	735.8	735.8	735.8	735.8	735.8	735.8	735.8	735.8	735.8	735.8	735.8
2.5°	738.5	738.0	737.4	736.7	736.2	735.2	734.0	732.6	731.3	730.0	731.2
5°	735.8	735.1	734.4	733.7	732.9	731.6	729.7	727.7	725.9	723.9	725.2
7.5°	728.3	727.4	726.5	725.5	724.6	723.0	720.8	718.5	716.3	714.1	714.4
10°	721.9	720.9	719.8	718.8	717.7	715.8	712.8	709.8	706.9	703.9	703.5
12.5°	713.9	712.7	711.3	710.1	708.8	706.3	702.5	698.7	694.9	691.2	690.4
15°	699.9	698.3	696.7	695.0	693.4	690.1	685.0	680.0	675.0	669.9	667.2
17.5°	682.8	680.3	677.8	675.3	672.8	668.3	661.9	655.4	649.0	642.5	639.2
20°	669.9	667.0	664.1	661.1	658.1	652.9	645.5	638.1	630.7	623.3	619.6
22.5°	656.1	652.8	649.4	646.1	642.8	637.0	628.7	620.3	612.0	603.6	598.9
25°	635.3	630.6	625.9	621.1	616.4	609.1	599.3	589.6	579.8	570.1	564.0
27.5°	610.3	605.1	599.9	594.9	589.7	581.6	570.6	559.5	548.6	537.5	530.5
30°	592.7	587.1	581.5	575.9	570.2	561.5	549.7	537.8	525.9	514.2	506.6
32.5°	575.7	569.1	562.5	556.0	549.4	540.0	528.0	515.9	503.8	491.8	483.1
35°	547.4	539.8	532.4	524.8	517.2	506.9	493.9	480.9	467.9	454.9	445.5
37.5°	519.2	510.9	502.6	494.3	486.1	474.9	461.1	447.2	433.3	419.5	409.1
40°	499.4	490.6	481.7	472.9	464.0	452.4	438.0	423.7	409.3	394.9	384.4
42.5°	479.2	469.8	460.5	451.2	441.8	429.7	414.9	400.0	385.2	370.4	359.5
45°	447.5	437.7	427.7	417.8	407.9	395.1	379.6	364.1	348.5	333.0	322.4
47.5°	416.6	406.1	395.7	385.1	374.6	361.3	345.3	329.2	313.2	297.1	286.7
50°	394.2	383.7	373.3	362.7	352.2	338.9	322.5	306.3	290.0	273.7	263.5
52.5°	372.4	361.4	350.4	339.5	328.5	315.0	299.1	283.2	267.2	251.4	241.5
55°	340.3	328.8	317.2	305.7	294.2	280.4	264.4	248.4	232.4	216.4	207.6
57.5°	307.4	295.6	283.7	271.9	260.0	246.5	231.1	215.7	200.4	185.0	176.8
60°	285.0	273.2	261.4	249.5	237.6	224.2	208.9	193.7	178.4	163.2	155.6
62.5°	263.1	251.4	239.5	227.7	215.8	202.7	188.2	173.6	159.1	144.5	137.3
65°	229.8	217.8	205.8	193.8	181.8	169.2	155.9	142.5	129.2	115.8	110.8
67.5°	197.5	185.7	173.7	161.8	149.9	137.9	126.0	114.0	102.0	90.1	87.7
70°	175.1	163.6	152.0	140.5	128.9	118.1	107.9	97.6	87.5	77.2	75.8
72.5°	153.8	142.8	131.7	120.6	109.6	100.0	91.8	83.6	75.3	67.1	65.9
75°	122.5	112.2	101.8	91.5	81.1	73.4	68.4	63.3	58.3	53.2	52.3
77.5°	91.8	82.7	73.6	64.5	55.5	49.7	47.3	44.9	42.4	39.9	39.3
80°	72.6	65.0	57.5	49.9	42.4	37.9	36.4	35.0	33.4	31.9	31.4
82.5°	55.0	49.1	43.2	37.4	31.5	28.0	27.0	25.9	25.0	24.0	23.6
85°	28.6	25.5	22.4	19.4	16.2	14.4	14.0	13.6	13.1	12.7	12.7
87.5°	8.6	7.8	7.0	6.2	5.4	5.0	5.1	5.2	5.4	5.4	5.4
90°	0.3	1.0	1.7	2.4	3.1	3.7	4.2	4.7	5.3	5.8	6.1
92.5°	5.8	5.8	5.7	5.6	5.5	5.7	5.9	6.2	6.4	6.7	6.9
95°	18.7	16.6	14.5	12.4	10.3	9.5	9.9	10.3	10.8	11.2	11.6
97.5°	37.2	31.2	25.2	19.4	13.4	10.9	11.9	12.9	14.0	15.1	15.3
100°	51.0	42.3	33.4	24.7	16.0	12.0	13.2	14.3	15.3	16.4	16.9
102.5°	66.3	64.4	62.5	60.7	58.9	53.3	44.2	35.1	26.0	16.9	17.6
105°	87.7	89.5	91.5	93.5	95.3	87.6	70.1	52.6	35.0	17.6	18.3
107.5°	112.0	113.6	115.1	116.7	118.2	108.5	87.6	66.6	45.6	24.6	23.9
110°	127.7	129.0	130.5	131.8	133.1	124.5	106.0	87.5	68.9	50.5	44.1

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CANDELA DISTRIBUTION (continued):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
112.5°	142.5	143.7	144.9	146.1	147.2	145.5	141.0	136.4	131.8	127.2	103.9
115°	165.8	166.8	168.0	169.1	170.1	171.5	173.1	174.7	176.3	177.9	148.2
117.5°	186.6	187.8	189.0	190.3	191.5	192.6	193.8	194.8	195.9	197.1	189.8
120°	201.8	202.8	203.8	204.7	205.6	206.7	207.9	209.0	210.2	211.3	212.1
122.5°	214.7	215.8	216.8	217.8	218.8	219.9	221.1	222.4	223.7	225.0	225.4
125°	234.4	235.2	236.0	236.9	237.7	238.8	240.0	241.2	242.4	243.6	244.1
127.5°	252.2	253.2	254.0	255.0	255.9	256.8	257.7	258.7	259.6	260.5	261.1
130°	263.5	264.6	265.6	266.6	267.6	268.5	269.2	269.9	270.6	271.3	272.0
132.5°	275.1	275.9	276.8	277.7	278.6	279.3	280.0	280.7	281.4	282.1	282.8
135°	290.1	291.1	292.1	293.1	294.2	295.0	295.5	296.1	296.7	297.3	297.9
137.5°	305.2	305.9	306.7	307.4	308.1	308.8	309.4	310.0	310.8	311.4	312.0
140°	315.1	315.7	316.1	316.6	317.2	317.8	318.5	319.2	319.9	320.6	321.2
142.5°	323.4	323.9	324.3	324.9	325.3	325.9	326.7	327.5	328.3	329.1	329.7
145°	336.4	336.4	336.4	336.3	336.2	336.7	337.8	338.9	340.0	341.1	341.5
147.5°	347.9	347.6	347.3	347.1	346.9	347.2	348.3	349.5	350.5	351.6	351.9
150°	355.2	354.7	354.3	353.8	353.4	353.7	354.7	355.8	356.8	357.8	358.2
152.5°	361.4	361.0	360.4	359.9	359.4	359.6	360.6	361.6	362.6	363.6	363.9
155°	370.5	369.9	369.3	368.7	368.2	368.3	369.1	369.8	370.6	371.3	371.8
157.5°	377.6	377.1	376.6	376.1	375.6	375.7	376.2	376.7	377.3	377.8	378.3
160°	381.7	381.4	380.9	380.6	380.2	380.2	380.6	380.9	381.4	381.7	382.1
162.5°	385.4	385.0	384.7	384.2	383.9	383.9	384.1	384.5	384.9	385.2	385.7
165°	390.4	390.0	389.6	389.2	388.9	388.8	389.0	389.1	389.3	389.5	389.9
167.5°	394.0	393.7	393.3	392.9	392.5	392.4	392.6	392.8	393.0	393.2	393.6
170°	396.2	395.7	395.4	395.0	394.6	394.5	394.6	394.8	394.8	395.0	395.5
172.5°	397.5	397.2	396.7	396.4	396.0	395.8	396.0	396.1	396.3	396.4	396.8
175°	399.3	398.9	398.4	398.0	397.5	397.3	397.5	397.6	397.8	397.9	398.3
177.5°	399.6	399.2	398.9	398.5	398.1	398.1	398.1	398.1	398.1	398.2	398.6
180°	398.4	398.4	398.4	398.4	398.4	398.4	398.4	398.4	398.4	398.4	398.4

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CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
0°	735.8	735.8	735.8	735.8	735.8	735.8	735.8	735.8
2.5°	732.4	733.6	734.8	735.2	735.0	734.8	734.5	734.3
5°	726.6	727.9	729.2	729.7	729.2	728.8	728.3	727.9
7.5°	714.8	715.2	715.6	715.4	714.6	713.8	713.1	712.3
10°	703.0	702.6	702.1	701.5	700.6	699.7	698.8	697.9
12.5°	689.6	688.8	688.0	686.8	685.3	683.9	682.3	680.9
15°	664.3	661.6	658.7	656.6	655.1	653.6	652.1	650.7
17.5°	635.8	632.5	629.1	626.2	623.7	621.1	618.6	616.0
20°	615.9	612.2	608.5	605.0	601.8	598.5	595.3	592.0
22.5°	594.1	589.3	584.6	580.9	578.5	576.1	573.7	571.2
25°	557.9	551.9	545.8	541.6	539.4	537.2	535.0	532.8
27.5°	523.4	516.3	509.3	504.0	500.4	497.0	493.4	489.9
30°	499.0	491.5	483.9	478.1	474.1	470.2	466.2	462.2
32.5°	474.5	465.9	457.3	451.1	447.4	443.6	439.8	436.0
35°	436.2	426.9	417.6	411.3	408.0	404.7	401.5	398.2
37.5°	398.9	388.6	378.4	371.3	367.7	363.9	360.2	356.4
40°	373.9	363.4	352.8	345.7	341.9	338.0	334.1	330.3
42.5°	348.7	337.8	327.0	319.7	315.9	312.2	308.4	304.7
45°	311.9	301.5	291.0	283.9	280.4	276.8	273.2	269.7
47.5°	276.3	265.8	255.4	248.5	245.3	242.1	238.8	235.6
50°	253.2	243.1	232.8	226.2	223.1	220.0	216.9	213.7
52.5°	231.6	221.8	211.9	205.5	202.7	199.8	196.9	194.0
55°	198.7	189.8	180.9	175.0	172.3	169.4	166.7	163.8
57.5°	168.7	160.6	152.5	147.2	144.8	142.5	140.1	137.7
60°	148.0	140.5	133.0	128.0	125.6	123.2	120.9	118.5
62.5°	130.1	123.0	115.7	111.5	110.0	108.6	107.2	105.8
65°	105.8	100.8	95.8	93.0	92.6	92.1	91.7	91.2
67.5°	85.4	83.1	80.8	79.5	78.9	78.5	78.0	77.5
70°	74.3	72.9	71.3	70.3	69.7	69.1	68.5	67.9
72.5°	64.6	63.4	62.2	61.3	61.0	60.6	60.3	59.9
75°	51.2	50.2	49.1	48.5	48.4	48.2	48.1	48.0
77.5°	38.8	38.2	37.6	37.2	36.9	36.7	36.5	36.2
80°	30.8	30.2	29.6	29.3	29.3	29.3	29.3	29.3
82.5°	23.3	22.9	22.6	22.4	22.4	22.4	22.4	22.4
85°	12.7	12.7	12.7	12.7	12.7	12.7	12.7	12.7
87.5°	5.4	5.3	5.2	5.2	5.2	5.3	5.3	5.3
90°	6.4	6.7	7.0	7.3	7.4	7.5	7.7	7.8
92.5°	7.0	7.2	7.3	7.5	7.6	7.7	7.7	7.8
95°	11.9	12.2	12.5	12.7	12.6	12.5	12.5	12.4
97.5°	15.6	15.8	16.1	16.2	16.3	16.4	16.5	16.6
100°	17.5	18.0	18.5	18.8	18.9	19.1	19.2	19.4
102.5°	18.2	18.9	19.5	20.0	20.2	20.3	20.5	20.7
105°	19.0	19.7	20.4	20.9	21.1	21.4	21.7	21.9
107.5°	23.2	22.5	21.8	21.5	21.8	22.0	22.3	22.6
110°	37.6	31.2	24.8	21.8	22.0	22.3	22.6	22.7

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CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
112.5°	80.5	57.2	33.8	22.2	22.4	22.6	22.8	23.0
115°	118.6	88.9	59.2	42.1	37.5	32.9	28.3	23.6
117.5°	182.7	175.5	168.4	157.2	142.0	126.9	111.7	96.6
120°	212.9	213.7	214.4	210.4	201.8	193.1	184.5	175.8
122.5°	225.9	226.3	226.8	226.1	224.5	222.8	221.1	219.5
125°	244.5	245.0	245.4	245.8	245.9	246.1	246.3	246.5
127.5°	261.8	262.4	263.1	263.4	263.5	263.5	263.5	263.6
130°	272.7	273.4	274.1	274.5	274.4	274.3	274.3	274.2
132.5°	283.4	283.9	284.5	284.8	284.7	284.7	284.6	284.5
135°	298.5	299.2	299.8	300.1	300.0	299.8	299.7	299.5
137.5°	312.6	313.3	313.9	314.1	313.9	313.7	313.4	313.3
140°	321.7	322.4	322.9	323.1	322.7	322.4	322.1	321.7
142.5°	330.2	330.7	331.3	331.4	331.0	330.7	330.4	330.0
145°	342.0	342.4	342.9	343.0	342.6	342.3	342.0	341.6
147.5°	352.2	352.6	352.9	352.9	352.7	352.4	352.1	351.9
150°	358.6	358.9	359.4	359.4	359.1	358.7	358.4	358.1
152.5°	364.4	364.7	365.1	365.1	364.6	364.3	363.8	363.4
155°	372.1	372.5	372.9	372.8	372.3	371.8	371.3	370.8
157.5°	378.7	379.2	379.5	379.5	379.0	378.5	378.0	377.6
160°	382.5	382.9	383.3	383.3	382.8	382.4	381.9	381.5
162.5°	386.0	386.5	386.9	386.9	386.3	385.8	385.2	384.7
165°	390.4	390.8	391.3	391.3	390.8	390.4	389.9	389.5
167.5°	394.0	394.5	394.9	394.8	394.3	393.7	393.2	392.5
170°	395.9	396.4	396.8	396.7	396.2	395.6	395.0	394.4
172.5°	397.3	397.7	398.1	398.1	397.5	397.0	396.4	395.8
175°	398.8	399.2	399.7	399.6	399.0	398.3	397.6	397.0
177.5°	399.0	399.3	399.7	399.6	399.1	398.7	398.2	397.8
180°	398.4	398.4	398.4	398.4	398.4	398.4	398.4	398.4

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