

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: P331788-940

Luminaire Tested: **S122RDIW-S485D435U940-4F0-1E-UDD-F1**

Issue Date: 3/3/2020

**Test Information**

Test Method: LM-79-08  
Report Number: P331788-940  
REPORT IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-1807-864-8,  
Test Lab: INNOVATION CENTER  
Issue Date: 3/3/2020  
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)  
Product Line: NEO-RAY  
Catalog Number: S122RDIW-S485D435U940-4F0-1E-UDD-F1  
Description: DEFINE 2 DIRECT-INDIRECT WALL MOUNT LED LUMINAIRE  
DOWNLIGHT 485 LUMENS PER FOOT, FLUSH SATIN WHITE DIFFUSER, REGRESSED  
HOUSING  
UPLIGHT 435 LUMENS PER FOOT, FLUSH SATIN WHITE DIFFUSER  
Light Source: -  
Ballast/Driver: ELECTRONIC DRIVER

**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 2854.1 lumens  
Efficiency: N/A  
Efficacy: 94.5 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

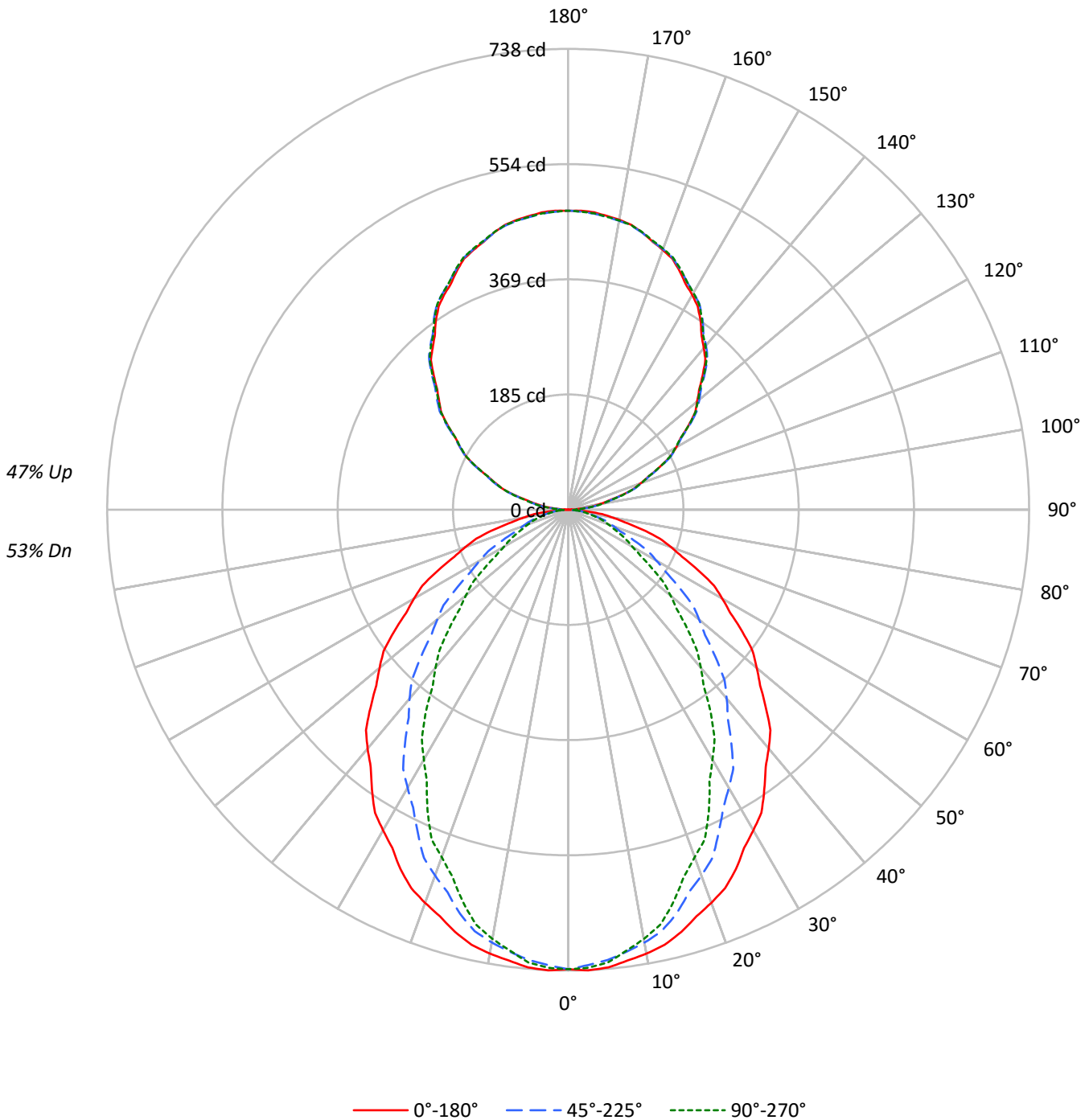
Input Watts (W): 30.2  
Input Voltage (V): 120  
Input Current (A<sub>in</sub>): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 25 FT



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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	61	53	52	51	46
2	91	83	77	72	84	78	72	68	67	63	59	56	54	51	47	45	44	39
3	83	74	67	61	77	69	62	57	59	55	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	35	31	29	26
6	65	53	45	39	60	50	42	37	43	38	33	37	33	30	32	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	27	31	27	24	27	23	21	19
9	52	40	33	28	48	38	31	26	33	28	24	29	25	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°	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	2.4
10°-20°	189.1	6.6
20°-30°	265.6	9.3
30°-40°	289.6	10.1
40°-50°	266.3	9.3
50°-60°	209.1	7.3
60°-70°	136.4	4.8
70°-80°	70.3	2.5
80°-90°	20.2	0.7
90°-100°	30.3	1.1
100°-110°	94.2	3.3
110°-120°	161.0	5.6
120°-130°	211.8	7.4
130°-140°	237.7	8.3
140°-150°	233.1	8.2
150°-160°	195.5	6.8
160°-170°	129.7	4.5
170°-180°	45.3	1.6
0°-30°	523.6	18.3
0°-40°	813.2	28.5
0°-60°	1288.6	45.2
0°-90°	1515.5	53.1
90°-120°	285.6	10.0
90°-150°	968.1	33.9
90°-180°	1339.0	46.9
0°-180°	2854.1	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	5	14	13	14	2
95°	21	25	26	26	25	24
105°	87	88	89	90	90	92
115°	162	164	163	163	162	160
125°	235	238	238	236	236	210
135°	304	308	309	309	308	235
145°	369	372	374	375	373	231
155°	422	423	425	426	425	194
165°	459	459	459	462	460	129
175°	478	477	476	478	476	45
180°	479	479	479	479	479	



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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	7.1	6.4	5.7	5.5	5.9	6.3	6.7	7.1	7.0
90°	0.4	1.5	2.6	3.7	4.7	6.2	8.2	10.2	12.1	14.2	14.0
92.5°	7.2	8.0	8.7	9.5	10.3	11.0	11.4	11.9	12.4	12.8	12.8
95°	21.0	21.9	22.8	23.7	24.6	25.1	25.3	25.5	25.7	25.9	25.9
97.5°	38.3	39.1	39.9	40.8	41.6	42.1	42.4	42.8	43.2	43.4	43.4
100°	51.3	52.0	52.7	53.5	54.2	54.7	54.9	55.2	55.5	55.7	55.7
102.5°	64.9	65.5	66.0	66.6	67.1	67.7	67.9	68.3	68.7	69.0	69.1
105°	86.9	87.1	87.4	87.7	87.9	88.2	88.4	88.5	88.7	88.9	89.1
107.5°	109.0	109.4	109.8	110.2	110.6	110.8	110.8	110.8	110.8	110.8	110.8
110°	123.2	123.8	124.3	124.8	125.4	125.6	125.6	125.6	125.6	125.6	125.6



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**CANDELA DISTRIBUTION (continued):**

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
112.5°	138.8	139.3	139.8	140.4	140.9	141.2	141.1	141.0	140.9	140.8	140.6
115°	161.6	162.1	162.6	163.2	163.7	163.9	163.7	163.5	163.4	163.2	163.1
117.5°	184.4	185.1	185.8	186.5	187.3	187.3	186.9	186.4	185.8	185.4	185.1
120°	199.6	200.3	201.0	201.7	202.4	202.4	201.7	201.0	200.3	199.6	199.6
122.5°	213.5	214.4	215.2	216.1	217.0	217.1	216.6	216.1	215.6	215.1	214.9
125°	235.1	235.9	236.7	237.6	238.4	238.6	238.4	238.1	237.8	237.6	237.3
127.5°	256.2	257.3	258.2	259.3	260.3	260.6	260.4	260.0	259.7	259.4	259.0
130°	269.5	270.6	271.8	273.0	274.1	274.6	274.5	274.3	274.1	273.9	273.8
132.5°	284.4	285.3	286.2	287.2	288.1	288.6	288.6	288.7	288.7	288.7	288.4
135°	304.3	305.2	306.2	307.2	308.2	308.7	308.9	309.1	309.2	309.4	309.3
137.5°	325.1	325.9	326.7	327.5	328.3	328.9	329.1	329.4	329.6	329.8	329.8
140°	337.8	338.6	339.4	340.2	341.0	341.6	342.1	342.5	343.0	343.4	343.4
142.5°	350.7	351.5	352.3	353.1	353.9	354.5	354.7	355.1	355.3	355.7	355.8
145°	369.3	369.9	370.5	371.1	371.8	372.4	372.9	373.4	374.0	374.5	374.6
147.5°	385.8	386.6	387.4	388.1	388.9	389.4	389.8	390.1	390.5	390.8	391.0
150°	397.2	397.7	398.2	398.8	399.3	399.8	400.1	400.5	400.8	401.2	401.4
152.5°	407.2	407.7	408.2	408.8	409.3	409.8	410.2	410.6	411.1	411.5	411.9
155°	422.1	422.4	422.7	423.0	423.3	423.6	423.8	424.1	424.4	424.6	425.1
157.5°	435.1	435.2	435.4	435.6	435.8	435.9	436.0	436.2	436.4	436.6	437.2
160°	442.8	443.0	443.2	443.4	443.5	443.6	443.7	443.8	443.9	444.0	444.5
162.5°	449.9	450.0	450.0	450.0	450.0	450.1	450.2	450.3	450.4	450.5	451.0
165°	459.3	459.2	459.1	459.1	459.0	459.0	459.0	459.0	459.0	459.0	459.6
167.5°	467.3	467.0	466.7	466.5	466.2	466.0	466.0	466.0	466.0	466.0	466.6
170°	471.4	471.2	470.9	470.6	470.4	470.2	470.1	470.0	469.9	469.8	470.5
172.5°	474.4	474.1	473.9	473.6	473.3	473.1	473.1	473.0	472.9	472.8	473.4
175°	478.0	477.7	477.4	477.2	476.9	476.6	476.4	476.3	476.1	475.9	476.5
177.5°	479.4	479.2	478.9	478.8	478.5	478.3	478.2	478.0	477.9	477.8	478.2
180°	478.8	478.8	478.8	478.8	478.8	478.8	478.8	478.8	478.8	478.8	478.8



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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°	6.8	6.6	6.5	6.4	6.4	6.4	6.4	6.5
90°	13.8	13.6	13.5	13.4	13.5	13.6	13.6	13.7
92.5°	12.9	12.9	13.0	13.0	13.0	13.0	13.1	13.1
95°	25.9	25.9	25.9	25.8	25.6	25.4	25.2	25.1
97.5°	43.4	43.4	43.4	43.4	43.4	43.4	43.4	43.4
100°	55.7	55.7	55.7	55.7	55.6	55.6	55.5	55.4
102.5°	69.1	69.2	69.3	69.3	69.2	69.1	69.0	68.9
105°	89.3	89.4	89.6	89.7	89.7	89.7	89.7	89.7
107.5°	110.9	111.0	111.1	110.9	110.5	110.0	109.7	109.2
110°	125.6	125.6	125.6	125.5	125.2	124.9	124.7	124.4





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**CANDELA DISTRIBUTION (continued):**

	55°	60°	65°	70°	75°	80°	85°	90°
112.5°	140.4	140.2	140.0	139.7	139.6	139.4	139.2	139.0
115°	163.0	162.9	162.8	162.6	162.4	162.1	161.8	161.6
117.5°	184.9	184.7	184.5	184.2	184.0	183.7	183.4	183.2
120°	199.6	199.6	199.6	199.5	199.2	198.9	198.7	198.4
122.5°	214.6	214.5	214.2	214.0	213.8	213.7	213.4	213.2
125°	237.0	236.7	236.5	236.3	236.2	236.1	236.0	235.9
127.5°	258.7	258.4	258.1	257.8	257.4	257.2	256.9	256.6
130°	273.6	273.4	273.2	273.0	272.6	272.2	271.9	271.5
132.5°	288.0	287.6	287.2	286.9	286.6	286.2	286.0	285.7
135°	309.2	309.2	309.1	308.9	308.6	308.4	308.1	307.8
137.5°	329.7	329.6	329.6	329.3	329.0	328.6	328.2	327.9
140°	343.4	343.4	343.4	343.2	342.9	342.5	342.1	341.8
142.5°	355.8	355.9	356.0	355.8	355.4	355.1	354.7	354.4
145°	374.7	374.8	374.9	374.7	374.3	374.0	373.6	373.3
147.5°	391.2	391.5	391.6	391.6	391.2	390.8	390.5	390.2
150°	401.7	402.0	402.3	402.3	402.0	401.7	401.4	401.2
152.5°	412.1	412.5	412.9	412.9	412.5	412.1	411.9	411.5
155°	425.5	426.0	426.4	426.5	426.2	426.0	425.7	425.4
157.5°	437.7	438.4	439.0	439.1	438.6	438.2	437.8	437.4
160°	445.1	445.6	446.1	446.2	445.9	445.5	445.1	444.8
162.5°	451.7	452.3	452.9	453.0	452.5	452.1	451.7	451.3
165°	460.2	460.8	461.5	461.5	461.1	460.7	460.2	459.8
167.5°	467.3	467.9	468.5	468.6	468.1	467.6	467.2	466.7
170°	471.1	471.7	472.3	472.4	471.9	471.4	470.8	470.3
172.5°	474.0	474.7	475.3	475.3	474.7	474.2	473.7	473.1
175°	477.2	477.8	478.4	478.5	478.0	477.4	476.9	476.4
177.5°	478.7	479.0	479.5	479.5	479.0	478.7	478.2	477.8
180°	478.8	478.8	478.8	478.8	478.8	478.8	478.8	478.8

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