

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: P331506-930

Luminaire Tested: **S122DIW-S485D710U930-4F0-1E-UDD-F1**

Issue Date: 3/3/2020

**Test Information**

Test Method: LM-79-08  
Report Number: P331506-930  
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: S122DIW-S485D710U930-4F0-1E-UDD-F1  
Description: DEFINE 2 DIRECT-INDIRECT WALL MOUNT LED LUMINAIRE  
DOWNLIGHT 485 LUMENS PER FOOT, FLUSH SATIN WHITE DIFFUSER  
UPLIGHT 710 LUMENS PER FOOT, FLUSH SATIN WHITE DIFFUSER  
Light Source: -  
Ballast/Driver: ELECTRONIC DRIVER

**Summary**

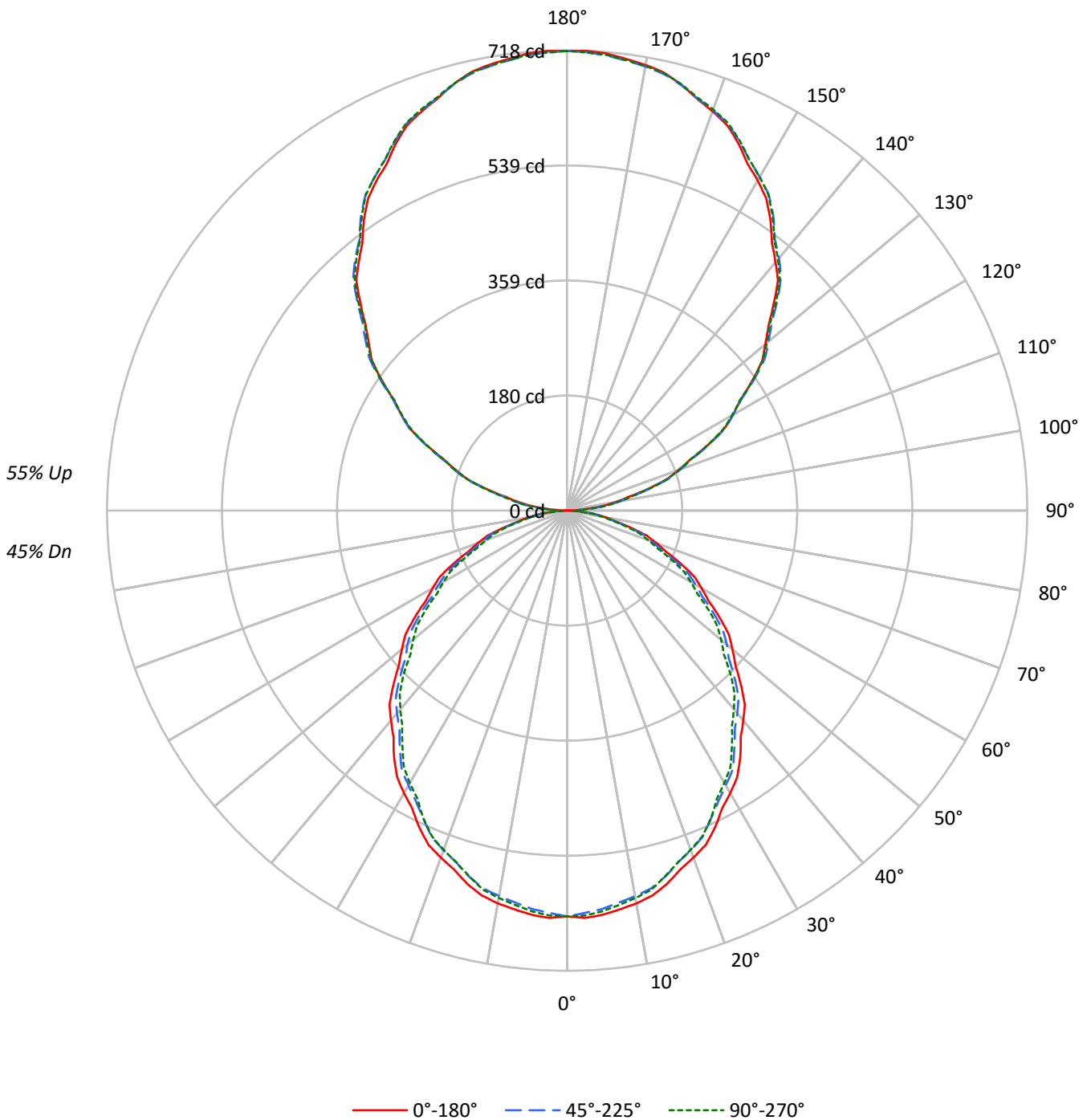
Lumens per Lamp: N/A  
Luminaire Lumens: 3618.6 lumens  
Efficiency: N/A  
Efficacy: 96.2 lumens/watt  
Spacing Criteria (0/90/45): 1.2 / 1.16 / 1.3  
Luminous Opening: Rectangular (W 0.17' x L: 4' x H: 0')  
CIE Type: General Diffuse  
  
Input Watts (W): 37.6  
Input Voltage (V): 120  
Input Current (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	106	106	106	106	97	97	97	97	80	80	80	65	65	65	51	51	51	45
1	97	92	88	85	88	85	81	78	70	68	66	57	56	54	45	44	43	38
2	88	81	74	69	80	74	69	64	62	58	55	50	48	45	40	38	36	31
3	80	71	64	58	73	65	59	54	54	50	46	44	41	38	35	33	31	27
4	73	63	55	49	67	58	51	45	48	43	39	40	36	33	31	29	27	23
5	67	56	48	42	61	51	44	39	43	38	34	36	32	28	28	26	23	20
6	62	50	42	36	57	46	39	34	39	33	29	32	28	25	26	23	20	17
7	57	45	37	32	52	42	35	30	35	30	26	29	25	22	23	20	18	15
8	53	41	33	28	49	38	31	26	32	27	23	27	23	20	22	19	16	14
9	49	37	30	25	45	35	28	23	29	24	20	25	20	18	20	17	15	12
10	46	34	27	22	42	32	25	21	27	22	18	23	19	16	18	15	13	11

**AVERAGE LUMINANCE (cd/sqm):**

	0°	45°	90°
0°	10224	10224	10224
5°	10263	10115	10175
10°	10203	10012	10063
15°	10076	9884	9872
20°	9897	9689	9677
25°	9720	9449	9449
30°	9491	9229	9148
35°	9278	8966	8834
40°	9010	8703	8534
45°	8745	8439	8229
50°	8457	8166	7877
55°	8158	7848	7561
60°	7824	7472	7195
65°	7465	7095	6770
70°	7010	6637	6326
75°	6382	6114	5964
80°	5662	5486	5207
85°	4613	4390	3946



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	59.5	1.6
10°-20°	167.6	4.6
20°-30°	246.3	6.8
30°-40°	286.1	7.9
40°-50°	285.8	7.9
50°-60°	249.2	6.9
60°-70°	184.3	5.1
70°-80°	104.4	2.9
80°-90°	30.9	0.9
90°-100°	45.4	1.3
100°-110°	141.1	3.9
110°-120°	241.2	6.7
120°-130°	317.1	8.8
130°-140°	356.0	9.8
140°-150°	349.0	9.6
150°-160°	292.8	8.1
160°-170°	194.2	5.4
170°-180°	67.9	1.9
0°-30°	473.4	13.1
0°-40°	759.4	21.0
0°-60°	1294.4	35.8
0°-90°	1613.9	44.6
90°-120°	427.7	11.8
90°-150°	1449.8	40.1
90°-180°	2005.0	55.4
0°-180°	3618.6	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	633	633	633	633	633	
5°	633	631	624	629	628	60
15°	603	599	591	593	591	170
25°	546	540	530	531	530	251
35°	471	464	455	451	448	294
45°	383	378	370	363	360	295
55°	290	286	279	272	269	259
65°	195	192	186	180	177	193
75°	102	101	98	95	96	109
85°	25	24	24	22	21	29
90°	1	8	21	20	20	3
95°	32	37	39	39	38	36
105°	130	132	133	134	134	137
115°	242	245	244	244	242	239
125°	352	357	356	354	353	315
135°	456	462	463	463	461	352
145°	553	557	561	561	559	345
155°	632	634	636	639	637	291
165°	688	687	687	691	688	194
175°	716	714	713	716	713	68
180°	717	717	717	717	717	



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**CANDELA DISTRIBUTION (FULL):**

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
0°	633.2	633.2	633.2	633.2	633.2	633.2	633.2	633.2	633.2	633.2	633.2
2.5°	636.2	635.6	635.1	634.5	634.0	633.2	631.9	630.8	629.6	628.4	629.5
5°	633.2	632.7	632.2	631.6	631.1	630.1	628.6	627.1	625.6	624.1	625.2
7.5°	627.6	626.8	626.0	625.1	624.3	623.1	621.6	620.1	618.6	617.0	618.2
10°	622.3	621.3	620.4	619.5	618.5	617.2	615.6	614.0	612.4	610.7	611.8
12.5°	615.0	614.2	613.3	612.5	611.6	610.4	608.8	607.2	605.5	603.9	604.6
15°	602.8	602.0	601.2	600.4	599.6	598.3	596.5	594.8	593.0	591.3	591.7
17.5°	587.2	586.4	585.6	584.8	584.0	582.7	580.9	579.1	577.3	575.5	576.2
20°	576.0	575.2	574.4	573.6	572.7	571.4	569.5	567.6	565.7	563.9	564.3
22.5°	564.8	563.7	562.6	561.4	560.3	558.8	557.0	555.2	553.4	551.6	551.7
25°	545.6	544.5	543.4	542.3	541.3	539.6	537.3	534.9	532.6	530.4	530.6
27.5°	523.7	522.7	521.7	520.7	519.8	518.4	516.6	514.7	512.9	511.1	510.7
30°	509.1	507.9	506.9	505.8	504.7	503.1	501.1	499.1	497.1	495.0	494.6
32.5°	493.4	492.6	491.7	490.8	490.0	488.4	486.3	484.2	482.1	480.0	479.2
35°	470.7	469.3	468.0	466.6	465.3	463.5	461.4	459.2	457.0	454.9	454.0
37.5°	445.0	443.8	442.6	441.4	440.2	438.5	436.3	434.2	432.0	429.9	428.8
40°	427.5	426.3	425.3	424.2	423.1	421.5	419.3	417.2	415.0	412.9	411.6
42.5°	410.4	409.3	408.2	407.2	406.1	404.5	402.3	400.1	397.9	395.7	394.4
45°	383.0	382.0	381.1	380.2	379.2	377.7	375.7	373.7	371.6	369.6	368.1
47.5°	355.7	354.8	353.9	353.0	352.1	350.7	348.5	346.4	344.3	342.2	340.6
50°	336.7	336.1	335.3	334.7	334.0	332.7	330.8	329.0	327.0	325.1	323.3
52.5°	318.2	317.3	316.4	315.5	314.6	313.3	311.5	309.7	307.9	306.1	304.6
55°	289.8	289.0	288.2	287.4	286.6	285.4	283.7	282.1	280.5	278.8	277.3
57.5°	261.3	260.7	260.0	259.4	258.8	257.6	255.8	254.0	252.2	250.4	248.7
60°	242.3	241.8	241.2	240.7	240.2	239.0	237.1	235.1	233.3	231.4	229.9
62.5°	223.8	223.0	222.1	221.2	220.4	219.2	217.8	216.3	214.8	213.4	212.0
65°	195.4	194.6	193.8	193.0	192.2	191.1	189.8	188.4	187.0	185.7	184.5
67.5°	166.6	165.9	165.3	164.6	164.0	163.1	161.8	160.6	159.4	158.2	157.3
70°	148.5	148.1	147.5	146.9	146.4	145.5	144.3	143.1	141.9	140.6	139.7
72.5°	130.0	129.6	129.0	128.4	127.9	127.3	126.5	125.6	124.9	124.1	123.1
75°	102.3	102.0	101.7	101.5	101.2	100.8	100.0	99.4	98.7	98.0	97.2
77.5°	77.5	77.0	76.6	76.1	75.6	75.3	75.0	74.7	74.4	74.2	73.8
80°	60.9	60.7	60.7	60.5	60.3	60.2	59.8	59.6	59.4	59.0	58.6
82.5°	45.3	45.2	45.2	45.2	45.2	45.1	44.9	44.8	44.6	44.4	43.9
85°	24.9	24.9	24.7	24.5	24.5	24.3	24.1	24.1	23.9	23.7	23.3
87.5°	8.9	9.0	9.1	9.2	9.3	9.5	9.9	10.3	10.7	11.1	10.7
90°	0.6	2.2	3.8	5.5	7.1	9.4	12.3	15.2	18.2	21.2	20.9
92.5°	10.8	12.0	13.1	14.3	15.5	16.5	17.1	17.9	18.5	19.2	19.3
95°	31.5	32.8	34.2	35.5	36.9	37.7	37.9	38.2	38.5	38.7	38.7
97.5°	57.5	58.6	59.8	61.0	62.2	63.0	63.6	64.1	64.6	65.1	65.1
100°	76.8	77.9	79.0	80.1	81.1	81.9	82.3	82.7	83.1	83.5	83.5
102.5°	97.2	98.0	98.9	99.7	100.6	101.3	101.8	102.3	102.8	103.3	103.5
105°	130.0	130.4	130.9	131.3	131.7	132.0	132.3	132.6	132.8	133.1	133.4
107.5°	163.2	163.8	164.4	165.0	165.6	165.9	165.9	165.9	165.9	165.9	166.0
110°	184.5	185.3	186.1	186.9	187.8	188.2	188.2	188.2	188.2	188.2	188.2



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**CANDELA DISTRIBUTION (continued):**

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
112.5°	207.7	208.6	209.4	210.2	211.0	211.3	211.2	211.1	211.0	210.9	210.6
115°	242.0	242.8	243.6	244.4	245.2	245.5	245.2	244.9	244.7	244.4	244.3
117.5°	276.1	277.2	278.3	279.3	280.4	280.5	279.8	279.1	278.3	277.6	277.3
120°	298.9	299.9	301.0	302.1	303.1	303.1	302.1	301.0	299.9	298.9	298.9
122.5°	319.7	321.0	322.3	323.5	324.8	325.1	324.3	323.6	322.9	322.1	321.8
125°	352.1	353.4	354.5	355.7	356.9	357.3	356.9	356.5	356.1	355.7	355.3
127.5°	383.7	385.2	386.8	388.2	389.8	390.4	389.9	389.4	388.9	388.4	387.9
130°	403.5	405.3	407.0	408.8	410.5	411.2	411.0	410.7	410.4	410.2	409.9
132.5°	425.8	427.2	428.7	430.1	431.5	432.3	432.3	432.4	432.4	432.4	431.9
135°	455.6	457.1	458.5	460.0	461.5	462.4	462.6	462.9	463.2	463.4	463.3
137.5°	486.9	488.1	489.3	490.6	491.7	492.5	492.8	493.3	493.6	493.9	493.8
140°	505.8	507.0	508.2	509.4	510.6	511.5	512.3	512.9	513.6	514.2	514.2
142.5°	525.1	526.4	527.6	528.8	529.9	530.8	531.2	531.7	532.1	532.6	532.7
145°	552.9	553.9	554.8	555.8	556.8	557.6	558.4	559.2	560.0	560.8	560.9
147.5°	577.8	578.9	580.0	581.1	582.3	583.1	583.7	584.2	584.7	585.3	585.5
150°	594.7	595.5	596.3	597.1	597.9	598.6	599.2	599.7	600.2	600.8	601.2
152.5°	609.7	610.5	611.3	612.1	612.9	613.7	614.3	615.0	615.6	616.3	616.8
155°	632.2	632.6	633.0	633.4	633.8	634.2	634.6	635.0	635.4	635.9	636.5
157.5°	651.4	651.8	652.0	652.2	652.6	652.8	653.1	653.3	653.5	653.8	654.7
160°	663.1	663.3	663.6	663.9	664.1	664.4	664.5	664.6	664.7	664.9	665.7
162.5°	673.7	673.8	673.8	673.8	673.9	674.0	674.2	674.3	674.4	674.6	675.5
165°	687.9	687.7	687.6	687.5	687.4	687.3	687.3	687.3	687.3	687.3	688.2
167.5°	699.8	699.4	699.0	698.5	698.1	697.9	697.9	697.8	697.8	697.8	698.7
170°	706.0	705.6	705.2	704.8	704.4	704.2	704.0	703.8	703.8	703.6	704.6
172.5°	710.4	710.0	709.6	709.1	708.7	708.5	708.3	708.3	708.1	707.9	708.9
175°	715.7	715.3	714.9	714.5	714.1	713.8	713.5	713.2	713.0	712.7	713.6
177.5°	717.9	717.5	717.2	716.9	716.6	716.3	716.1	715.9	715.7	715.4	716.1
180°	716.9	716.9	716.9	716.9	716.9	716.9	716.9	716.9	716.9	716.9	716.9



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**CANDELA DISTRIBUTION (continued):**

	55°	60°	65°	70°	75°	80°	85°	90°
0°	633.2	633.2	633.2	633.2	633.2	633.2	633.2	633.2
2.5°	630.6	631.6	632.7	633.2	632.9	632.7	632.5	632.3
5°	626.3	627.4	628.4	628.8	628.6	628.3	628.0	627.8
7.5°	619.2	620.3	621.4	621.7	621.5	621.2	620.9	620.6
10°	612.9	614.0	615.1	615.4	615.0	614.6	614.2	613.8
12.5°	605.4	606.2	606.9	607.2	606.8	606.6	606.3	605.9
15°	592.3	592.9	593.4	593.3	592.6	592.0	591.3	590.6
17.5°	576.7	577.4	578.0	578.0	577.3	576.7	576.1	575.4
20°	564.7	565.1	565.5	565.4	564.8	564.3	563.8	563.2
22.5°	551.8	551.9	552.0	551.9	551.5	551.2	550.9	550.6
25°	530.9	531.2	531.4	531.4	531.2	530.9	530.6	530.4
27.5°	510.3	509.9	509.5	509.0	508.3	507.7	507.0	506.4
30°	494.2	493.8	493.4	492.9	492.4	491.9	491.3	490.7
32.5°	478.5	477.8	477.0	476.4	475.8	475.3	474.7	474.2
35°	453.2	452.4	451.6	450.9	450.2	449.5	448.8	448.2
37.5°	427.9	426.9	425.9	425.0	424.4	423.7	423.1	422.5
40°	410.4	409.2	408.0	407.1	406.5	406.0	405.4	404.9
42.5°	393.1	391.8	390.4	389.5	388.7	387.9	387.2	386.4
45°	366.6	365.2	363.6	362.6	362.1	361.6	361.0	360.4
47.5°	339.1	337.5	335.9	334.8	333.9	333.2	332.4	331.6
50°	321.4	319.4	317.6	316.3	315.6	315.0	314.2	313.6
52.5°	303.0	301.4	299.9	298.6	297.7	296.9	296.0	295.1
55°	275.7	274.0	272.4	271.3	270.5	269.9	269.2	268.6
57.5°	247.2	245.6	244.0	243.0	242.4	241.9	241.4	240.8
60°	228.4	226.9	225.4	224.5	224.0	223.6	223.2	222.8
62.5°	210.6	209.2	207.8	206.9	206.4	205.9	205.4	204.8
65°	183.3	182.1	180.8	179.9	179.2	178.6	177.9	177.2
67.5°	156.3	155.3	154.4	153.7	153.1	152.5	152.1	151.5
70°	138.8	137.8	136.9	136.2	135.6	135.0	134.5	134.0
72.5°	122.2	121.2	120.3	119.6	119.2	118.7	118.3	117.9
75°	96.4	95.6	94.8	94.5	94.8	95.1	95.3	95.6
77.5°	73.4	73.0	72.6	72.2	71.7	71.4	71.0	70.6
80°	58.2	57.8	57.5	57.1	56.8	56.6	56.3	56.0
82.5°	43.5	42.9	42.4	42.1	42.1	42.0	41.9	41.9
85°	22.9	22.5	22.1	21.9	21.7	21.6	21.4	21.3
87.5°	10.3	9.9	9.5	9.3	9.2	9.1	9.0	9.0
90°	20.6	20.4	20.1	20.1	20.1	20.3	20.5	20.5
92.5°	19.3	19.4	19.5	19.5	19.5	19.6	19.6	19.6
95°	38.7	38.7	38.7	38.6	38.3	38.1	37.7	37.5
97.5°	65.1	65.1	65.1	65.1	65.1	65.1	65.0	65.0
100°	83.5	83.5	83.5	83.4	83.3	83.2	83.0	82.9
102.5°	103.5	103.6	103.8	103.8	103.6	103.5	103.4	103.2
105°	133.6	133.9	134.2	134.3	134.3	134.3	134.3	134.3
107.5°	166.1	166.2	166.3	166.1	165.4	164.9	164.2	163.6
110°	188.2	188.2	188.2	187.9	187.5	187.1	186.7	186.4





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**CANDELA DISTRIBUTION (continued):**

	55°	60°	65°	70°	75°	80°	85°	90°
112.5°	210.3	209.9	209.6	209.3	209.0	208.7	208.4	208.1
115°	244.2	244.0	243.9	243.6	243.2	242.8	242.4	242.0
117.5°	277.0	276.6	276.3	275.9	275.5	275.1	274.7	274.3
120°	298.9	298.9	298.9	298.6	298.2	297.8	297.4	297.0
122.5°	321.5	321.1	320.8	320.5	320.2	319.9	319.6	319.4
125°	354.9	354.5	354.1	353.8	353.8	353.6	353.4	353.4
127.5°	387.4	386.9	386.5	386.0	385.6	385.1	384.7	384.3
130°	409.7	409.4	409.1	408.7	408.1	407.6	407.1	406.6
132.5°	431.3	430.6	430.1	429.6	429.2	428.7	428.3	427.9
135°	463.2	463.0	462.9	462.6	462.2	461.8	461.4	461.0
137.5°	493.7	493.6	493.5	493.2	492.6	492.1	491.5	491.0
140°	514.2	514.2	514.2	514.0	513.5	512.9	512.3	511.8
142.5°	532.9	533.0	533.0	532.9	532.3	531.7	531.2	530.7
145°	561.1	561.3	561.3	561.2	560.6	560.1	559.5	559.1
147.5°	585.9	586.1	586.4	586.4	585.9	585.3	584.8	584.3
150°	601.5	601.9	602.3	602.3	601.9	601.5	601.2	600.8
152.5°	617.3	617.8	618.3	618.3	617.8	617.3	616.8	616.3
155°	637.2	637.9	638.5	638.7	638.3	637.9	637.5	637.1
157.5°	655.6	656.5	657.4	657.5	656.9	656.2	655.6	654.9
160°	666.5	667.3	668.1	668.2	667.7	667.2	666.7	666.1
162.5°	676.4	677.4	678.2	678.3	677.7	677.1	676.5	675.8
165°	689.2	690.1	691.0	691.2	690.5	689.8	689.2	688.5
167.5°	699.7	700.6	701.6	701.6	701.0	700.3	699.6	698.9
170°	705.5	706.5	707.4	707.4	706.6	705.8	705.0	704.2
172.5°	709.9	710.8	711.8	711.8	711.0	710.2	709.4	708.6
175°	714.5	715.5	716.5	716.5	715.7	714.9	714.1	713.3
177.5°	716.7	717.4	718.0	718.0	717.4	716.7	716.1	715.4
180°	716.9	716.9	716.9	716.9	716.9	716.9	716.9	716.9

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