

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: P331476

Luminaire Tested: **S122DIW-S290D710U835-4F0-1E-UDD-F1**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P331476
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-S290D710U835-4F0-1E-UDD-F1
Description: DEFINE 2 DIRECT-INDIRECT WALL MOUNT LED LUMINAIRE
DOWNLIGHT 290 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: 3664.2 lumens
Efficiency: N/A
Efficacy: 120.5 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: Semi-Indirect

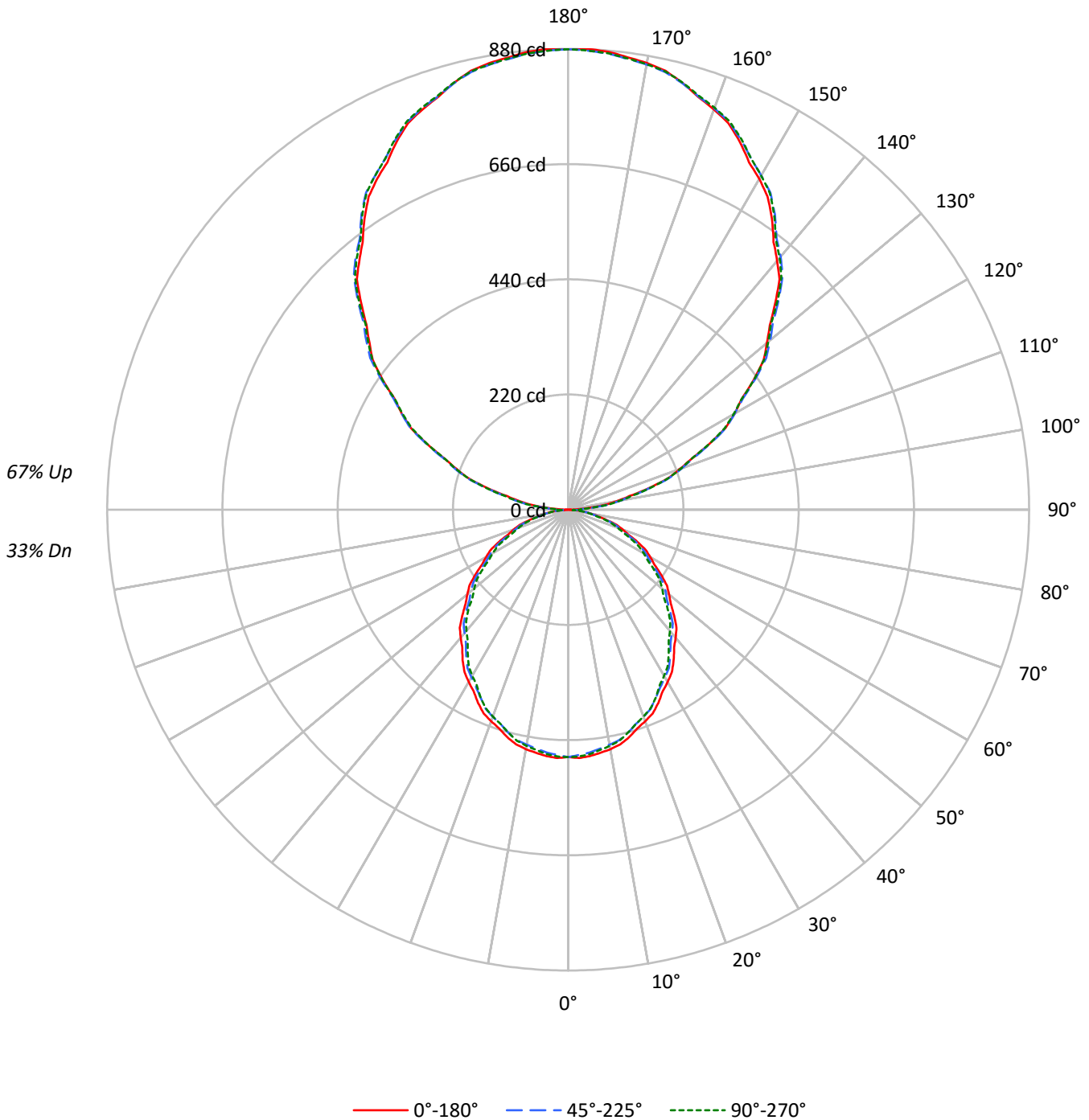
Input Watts (W): 30.4
Input Voltage (V): 120
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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	103	103	103	103	93	93	93	93	74	74	74	56	56	56	40	40	40	33
1	94	90	86	82	84	81	78	75	65	62	60	50	48	47	36	35	34	28
2	85	78	72	67	77	71	66	61	57	53	50	43	41	39	31	30	29	23
3	78	69	62	56	70	62	56	51	50	46	42	38	35	33	28	26	24	20
4	71	61	53	47	64	55	48	43	44	39	36	34	31	28	25	23	21	17
5	65	54	46	40	59	49	42	37	39	34	31	31	27	24	22	20	18	15
6	60	48	40	35	54	44	37	32	35	30	27	28	24	21	20	18	16	13
7	55	44	36	30	50	40	33	28	32	27	23	25	21	19	18	16	14	11
8	51	39	32	27	46	36	29	25	29	24	21	23	19	17	17	15	13	10
9	48	36	29	24	43	33	26	22	27	22	18	21	17	15	16	13	11	9
10	45	33	26	21	40	30	24	20	25	20	16	19	16	13	14	12	10	8

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	7627	7627	7627
5°	7656	7546	7592
10°	7612	7470	7507
15°	7517	7373	7366
20°	7383	7228	7220
25°	7251	7049	7049
30°	7081	6885	6825
35°	6922	6688	6589
40°	6721	6492	6367
45°	6524	6295	6140
50°	6310	6094	5878
55°	6086	5858	5638
60°	5838	5574	5370
65°	5570	5295	5051
70°	5231	4952	4716
75°	4760	4560	4448
80°	4221	4100	3887
85°	3446	3279	2946



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	44.4	1.2
10°-20°	125.0	3.4
20°-30°	183.7	5.0
30°-40°	213.4	5.8
40°-50°	213.2	5.8
50°-60°	185.9	5.1
60°-70°	137.5	3.8
70°-80°	77.9	2.1
80°-90°	24.4	0.7
90°-100°	55.7	1.5
100°-110°	173.1	4.7
110°-120°	295.8	8.1
120°-130°	389.0	10.6
130°-140°	436.6	11.9
140°-150°	428.1	11.7
150°-160°	359.1	9.8
160°-170°	238.2	6.5
170°-180°	83.2	2.3
0°-30°	353.2	9.6
0°-40°	566.6	15.5
0°-60°	965.7	26.4
0°-90°	1205.5	32.9
90°-120°	524.6	14.3
90°-150°	1778.3	48.5
90°-180°	2459.0	67.1
0°-180°	3664.2	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	472	472	472	472	472	
5°	472	470	466	469	468	45
15°	450	447	441	443	441	127
25°	407	403	396	396	396	187
35°	351	346	339	337	334	219
45°	286	282	276	271	269	220
55°	216	213	208	203	200	193
65°	146	143	139	135	132	144
75°	76	75	73	71	71	82
85°	19	18	18	16	16	21
90°	1	10	26	25	25	3
95°	39	46	48	47	46	44
105°	160	162	163	165	165	168
115°	297	301	300	299	297	294
125°	432	438	436	434	433	386
135°	559	567	568	568	565	431
145°	678	683	688	688	686	424
155°	775	778	780	783	781	357
165°	844	843	843	848	844	238
175°	878	876	874	879	875	83
180°	879	879	879	879	879	



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CANDELA DISTRIBUTION (FULL):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
0°	472.4	472.4	472.4	472.4	472.4	472.4	472.4	472.4	472.4	472.4	472.4
2.5°	474.6	474.2	473.8	473.4	473.0	472.4	471.5	470.6	469.7	468.8	469.6
5°	472.4	472.0	471.6	471.2	470.8	470.1	469.0	467.9	466.7	465.6	466.4
7.5°	468.3	467.6	467.0	466.4	465.8	464.9	463.8	462.6	461.5	460.4	461.2
10°	464.3	463.6	462.9	462.2	461.4	460.5	459.3	458.1	456.9	455.6	456.4
12.5°	458.8	458.2	457.6	456.9	456.3	455.4	454.2	453.0	451.8	450.6	451.1
15°	449.7	449.1	448.5	447.9	447.3	446.4	445.0	443.7	442.4	441.1	441.5
17.5°	438.1	437.5	436.9	436.3	435.7	434.7	433.4	432.0	430.7	429.4	429.8
20°	429.7	429.1	428.5	427.9	427.3	426.3	424.9	423.5	422.1	420.7	421.0
22.5°	421.4	420.5	419.7	418.8	418.0	416.9	415.6	414.2	412.9	411.6	411.6
25°	407.0	406.2	405.4	404.6	403.8	402.5	400.8	399.1	397.4	395.7	395.9
27.5°	390.7	390.0	389.2	388.5	387.8	386.7	385.4	384.0	382.7	381.3	381.0
30°	379.8	379.0	378.2	377.4	376.5	375.4	373.9	372.4	370.8	369.3	369.0
32.5°	368.1	367.5	366.9	366.2	365.6	364.4	362.8	361.3	359.7	358.1	357.5
35°	351.2	350.1	349.1	348.1	347.1	345.8	344.2	342.6	341.0	339.3	338.7
37.5°	332.0	331.1	330.2	329.3	328.4	327.2	325.6	324.0	322.3	320.7	320.0
40°	318.9	318.1	317.3	316.5	315.7	314.5	312.8	311.2	309.6	308.0	307.1
42.5°	306.2	305.4	304.6	303.8	303.0	301.7	300.1	298.5	296.9	295.3	294.3
45°	285.7	285.0	284.3	283.6	282.9	281.8	280.3	278.8	277.3	275.7	274.6
47.5°	265.4	264.7	264.1	263.4	262.7	261.6	260.0	258.5	256.9	255.3	254.1
50°	251.2	250.7	250.2	249.7	249.2	248.2	246.8	245.4	244.0	242.6	241.2
52.5°	237.4	236.7	236.1	235.4	234.7	233.7	232.4	231.1	229.7	228.4	227.2
55°	216.2	215.6	215.0	214.4	213.8	212.9	211.7	210.5	209.3	208.1	206.8
57.5°	195.0	194.5	194.0	193.5	193.0	192.1	190.8	189.5	188.1	186.8	185.6
60°	180.8	180.4	180.0	179.6	179.2	178.3	176.9	175.5	174.0	172.6	171.5
62.5°	167.0	166.3	165.7	165.1	164.4	163.5	162.4	161.4	160.3	159.2	158.1
65°	145.8	145.2	144.6	144.0	143.4	142.6	141.6	140.6	139.6	138.6	137.6
67.5°	124.3	123.8	123.3	122.8	122.4	121.7	120.7	119.8	118.9	118.0	117.3
70°	110.8	110.4	110.0	109.6	109.2	108.6	107.7	106.8	105.8	104.9	104.2
72.5°	97.0	96.6	96.2	95.8	95.4	94.9	94.3	93.8	93.2	92.6	91.9
75°	76.3	76.1	75.9	75.7	75.5	75.2	74.7	74.1	73.6	73.1	72.5
77.5°	57.8	57.4	57.1	56.8	56.4	56.1	55.9	55.7	55.5	55.3	55.0
80°	45.4	45.3	45.2	45.1	45.0	44.9	44.7	44.5	44.3	44.1	43.8
82.5°	33.8	33.8	33.8	33.7	33.7	33.6	33.5	33.4	33.3	33.2	32.8
85°	18.6	18.5	18.4	18.3	18.2	18.1	18.0	17.9	17.8	17.7	17.4
87.5°	6.7	6.9	7.2	7.4	7.6	8.0	8.6	9.2	9.7	10.3	10.0
90°	0.7	2.7	4.7	6.7	8.7	11.5	15.1	18.7	22.3	26.0	25.6
92.5°	13.2	14.7	16.1	17.6	19.0	20.2	21.0	21.9	22.7	23.6	23.7
95°	38.6	40.2	41.9	43.5	45.2	46.2	46.5	46.8	47.2	47.5	47.5
97.5°	70.5	71.9	73.4	74.8	76.3	77.3	78.0	78.6	79.2	79.8	79.8
100°	94.2	95.6	96.9	98.2	99.5	100.4	100.9	101.4	101.9	102.4	102.4
102.5°	119.2	120.2	121.3	122.3	123.4	124.2	124.9	125.5	126.1	126.7	126.9
105°	159.5	160.0	160.5	161.0	161.5	161.9	162.3	162.6	162.9	163.3	163.6
107.5°	200.2	200.9	201.7	202.4	203.1	203.5	203.5	203.5	203.5	203.5	203.6
110°	226.3	227.3	228.3	229.3	230.3	230.8	230.8	230.8	230.8	230.8	230.8



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CANDELA DISTRIBUTION (continued):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
112.5°	254.8	255.8	256.8	257.8	258.8	259.2	259.1	258.9	258.8	258.7	258.3
115°	296.8	297.8	298.8	299.8	300.8	301.1	300.8	300.4	300.1	299.8	299.6
117.5°	338.7	340.0	341.3	342.6	343.9	344.1	343.2	342.3	341.4	340.5	340.1
120°	366.6	367.9	369.2	370.5	371.8	371.8	370.5	369.2	367.9	366.6	366.6
122.5°	392.1	393.7	395.3	396.8	398.4	398.8	397.8	396.9	396.0	395.1	394.7
125°	431.9	433.4	434.8	436.3	437.8	438.3	437.8	437.3	436.8	436.3	435.8
127.5°	470.6	472.5	474.4	476.2	478.1	478.8	478.2	477.6	477.0	476.4	475.8
130°	494.9	497.1	499.2	501.4	503.5	504.4	504.1	503.8	503.4	503.1	502.8
132.5°	522.3	524.0	525.8	527.5	529.2	530.2	530.2	530.3	530.4	530.4	529.7
135°	558.8	560.6	562.4	564.2	566.0	567.1	567.4	567.8	568.1	568.4	568.2
137.5°	597.2	598.7	600.2	601.7	603.1	604.1	604.5	605.0	605.4	605.8	605.7
140°	620.4	621.8	623.3	624.8	626.3	627.4	628.3	629.1	629.9	630.7	630.7
142.5°	644.1	645.6	647.1	648.6	650.0	651.1	651.6	652.2	652.7	653.3	653.4
145°	678.2	679.4	680.5	681.7	682.9	683.9	684.9	685.9	686.9	687.9	688.0
147.5°	708.7	710.0	711.4	712.8	714.2	715.2	715.9	716.5	717.2	717.9	718.2
150°	729.4	730.4	731.4	732.4	733.4	734.2	734.9	735.5	736.2	736.9	737.4
152.5°	747.8	748.8	749.8	750.8	751.8	752.7	753.5	754.3	755.1	755.9	756.5
155°	775.4	775.9	776.4	776.9	777.4	777.9	778.4	778.9	779.4	779.9	780.7
157.5°	799.0	799.4	799.7	800.0	800.4	800.7	801.0	801.3	801.6	801.9	803.0
160°	813.3	813.6	813.9	814.3	814.6	814.9	815.0	815.2	815.3	815.5	816.5
162.5°	826.3	826.4	826.5	826.5	826.6	826.7	826.9	827.1	827.2	827.4	828.5
165°	843.7	843.5	843.4	843.2	843.1	843.0	843.0	843.0	843.0	843.0	844.1
167.5°	858.3	857.8	857.3	856.8	856.3	856.0	856.0	855.9	855.9	855.9	857.0
170°	866.0	865.5	865.0	864.5	864.0	863.7	863.5	863.3	863.2	863.0	864.2
172.5°	871.3	870.8	870.3	869.8	869.3	869.0	868.8	868.7	868.5	868.3	869.5
175°	877.8	877.4	876.9	876.4	875.9	875.5	875.1	874.8	874.5	874.1	875.3
177.5°	880.5	880.1	879.7	879.3	878.9	878.6	878.3	878.1	877.8	877.5	878.3
180°	879.3	879.3	879.3	879.3	879.3	879.3	879.3	879.3	879.3	879.3	879.3



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CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
0°	472.4	472.4	472.4	472.4	472.4	472.4	472.4	472.4
2.5°	470.4	471.2	472.0	472.4	472.2	472.0	471.9	471.7
5°	467.3	468.1	468.9	469.2	469.0	468.8	468.6	468.4
7.5°	462.0	462.8	463.6	463.9	463.7	463.4	463.2	463.0
10°	457.3	458.1	458.9	459.1	458.8	458.5	458.2	457.9
12.5°	451.7	452.2	452.8	453.0	452.8	452.5	452.3	452.1
15°	441.9	442.3	442.7	442.7	442.2	441.7	441.2	440.7
17.5°	430.3	430.8	431.2	431.2	430.7	430.3	429.8	429.3
20°	421.3	421.6	421.9	421.8	421.4	421.0	420.6	420.2
22.5°	411.7	411.8	411.8	411.7	411.5	411.2	411.0	410.8
25°	396.1	396.3	396.5	396.5	396.3	396.1	395.9	395.7
27.5°	380.7	380.4	380.1	379.7	379.2	378.7	378.3	377.8
30°	368.7	368.4	368.1	367.8	367.4	367.0	366.6	366.1
32.5°	357.0	356.4	355.9	355.4	355.0	354.6	354.2	353.8
35°	338.1	337.5	336.9	336.4	335.9	335.4	334.9	334.3
37.5°	319.2	318.5	317.7	317.1	316.6	316.1	315.7	315.2
40°	306.2	305.3	304.4	303.7	303.3	302.9	302.5	302.1
42.5°	293.3	292.3	291.3	290.5	290.0	289.4	288.9	288.3
45°	273.5	272.4	271.3	270.5	270.1	269.7	269.3	268.9
47.5°	253.0	251.8	250.6	249.7	249.2	248.6	248.0	247.4
50°	239.8	238.3	236.9	236.0	235.5	235.0	234.5	234.0
52.5°	226.1	224.9	223.7	222.8	222.1	221.5	220.8	220.1
55°	205.6	204.4	203.2	202.4	201.9	201.3	200.8	200.3
57.5°	184.4	183.2	182.0	181.2	180.9	180.5	180.1	179.7
60°	170.4	169.3	168.2	167.5	167.2	166.9	166.6	166.3
62.5°	157.1	156.1	155.1	154.4	154.0	153.6	153.2	152.8
65°	136.7	135.8	134.9	134.2	133.7	133.2	132.7	132.2
67.5°	116.6	115.9	115.2	114.6	114.2	113.8	113.4	113.0
70°	103.5	102.8	102.1	101.6	101.2	100.7	100.3	99.9
72.5°	91.2	90.5	89.8	89.2	88.9	88.6	88.3	87.9
75°	71.9	71.3	70.7	70.5	70.7	70.9	71.1	71.3
77.5°	54.7	54.4	54.1	53.8	53.5	53.3	53.0	52.7
80°	43.5	43.2	42.9	42.6	42.4	42.2	42.0	41.8
82.5°	32.4	32.0	31.6	31.4	31.4	31.3	31.3	31.3
85°	17.1	16.8	16.5	16.3	16.2	16.1	16.0	15.9
87.5°	9.7	9.4	9.0	8.9	8.8	8.8	8.7	8.7
90°	25.3	25.0	24.7	24.6	24.7	24.9	25.1	25.2
92.5°	23.7	23.8	23.9	23.9	23.9	24.0	24.0	24.0
95°	47.5	47.5	47.5	47.3	47.0	46.7	46.3	46.0
97.5°	79.8	79.8	79.8	79.8	79.8	79.8	79.7	79.7
100°	102.4	102.4	102.4	102.3	102.2	102.0	101.8	101.7
102.5°	127.0	127.1	127.3	127.3	127.1	126.9	126.8	126.6
105°	163.9	164.2	164.6	164.7	164.7	164.7	164.7	164.7
107.5°	203.7	203.9	204.0	203.7	202.9	202.2	201.4	200.7
110°	230.8	230.8	230.8	230.5	230.0	229.5	229.0	228.6



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CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
112.5°	257.9	257.5	257.1	256.7	256.4	256.0	255.6	255.3
115°	299.5	299.3	299.1	298.8	298.3	297.8	297.3	296.8
117.5°	339.7	339.3	338.9	338.4	337.9	337.4	336.9	336.4
120°	366.6	366.6	366.6	366.3	365.8	365.3	364.8	364.3
122.5°	394.3	393.9	393.5	393.1	392.7	392.4	392.0	391.7
125°	435.3	434.8	434.3	434.0	433.9	433.7	433.5	433.4
127.5°	475.2	474.6	474.0	473.5	472.9	472.4	471.9	471.4
130°	502.5	502.1	501.8	501.3	500.6	500.0	499.3	498.7
132.5°	529.0	528.2	527.5	526.9	526.4	525.8	525.3	524.8
135°	568.1	567.9	567.8	567.4	566.9	566.4	565.9	565.4
137.5°	605.5	605.4	605.3	604.9	604.2	603.6	602.9	602.2
140°	630.7	630.7	630.7	630.4	629.8	629.1	628.4	627.8
142.5°	653.6	653.7	653.8	653.6	652.9	652.2	651.6	650.9
145°	688.2	688.4	688.5	688.3	687.6	687.0	686.3	685.7
147.5°	718.6	718.9	719.3	719.2	718.6	717.9	717.3	716.7
150°	737.8	738.3	738.8	738.8	738.3	737.8	737.4	736.9
152.5°	757.1	757.7	758.4	758.4	757.7	757.1	756.5	755.9
155°	781.5	782.4	783.2	783.4	782.9	782.4	781.9	781.4
157.5°	804.1	805.2	806.3	806.5	805.7	804.9	804.1	803.3
160°	817.5	818.5	819.5	819.6	819.0	818.3	817.7	817.0
162.5°	829.6	830.8	831.9	832.0	831.2	830.5	829.7	828.9
165°	845.3	846.4	847.6	847.8	846.9	846.1	845.3	844.5
167.5°	858.2	859.3	860.5	860.6	859.8	858.9	858.1	857.2
170°	865.3	866.5	867.6	867.7	866.7	865.7	864.7	863.7
172.5°	870.7	871.8	873.0	873.0	872.1	871.1	870.1	869.1
175°	876.4	877.6	878.8	878.8	877.8	876.9	875.9	874.9
177.5°	879.1	879.9	880.7	880.7	879.9	879.1	878.3	877.5
180°	879.3	879.3	879.3	879.3	879.3	879.3	879.3	879.3

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