

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: P332153

Luminaire Tested: **S123DIW-S775D460U835-4F0-1E-UDD-D1**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P332153
REPORT IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-1807-864-9,
Test Lab: INNOVATION CENTER
Issue Date: 3/3/2020
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: NEO-RAY
Catalog Number: S123DIW-S775D460U835-4F0-1E-UDD-D1
Description: DEFINE 3 DIRECT-INDIRECT WALL MOUNT LED LUMINAIRE
DOWNLIGHT 775 LUMENS PER FOOT, DROP SATIN WHITE DIFFUSER
UPLIGHT 460 LUMENS PER FOOT, FLUSH SATIN WHITE DIFFUSER
Light Source: -
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 4830.2 lumens
Efficiency: N/A
Efficacy: 128.1 lumens/watt
Spacing Criteria (0/90/45): 1.2 / 1.26 / 1.37
Luminous Opening: Rectangular w/ Sides (W: 0.25' x L: 4' x H: 0.08')
CIE Type: Semi-Direct

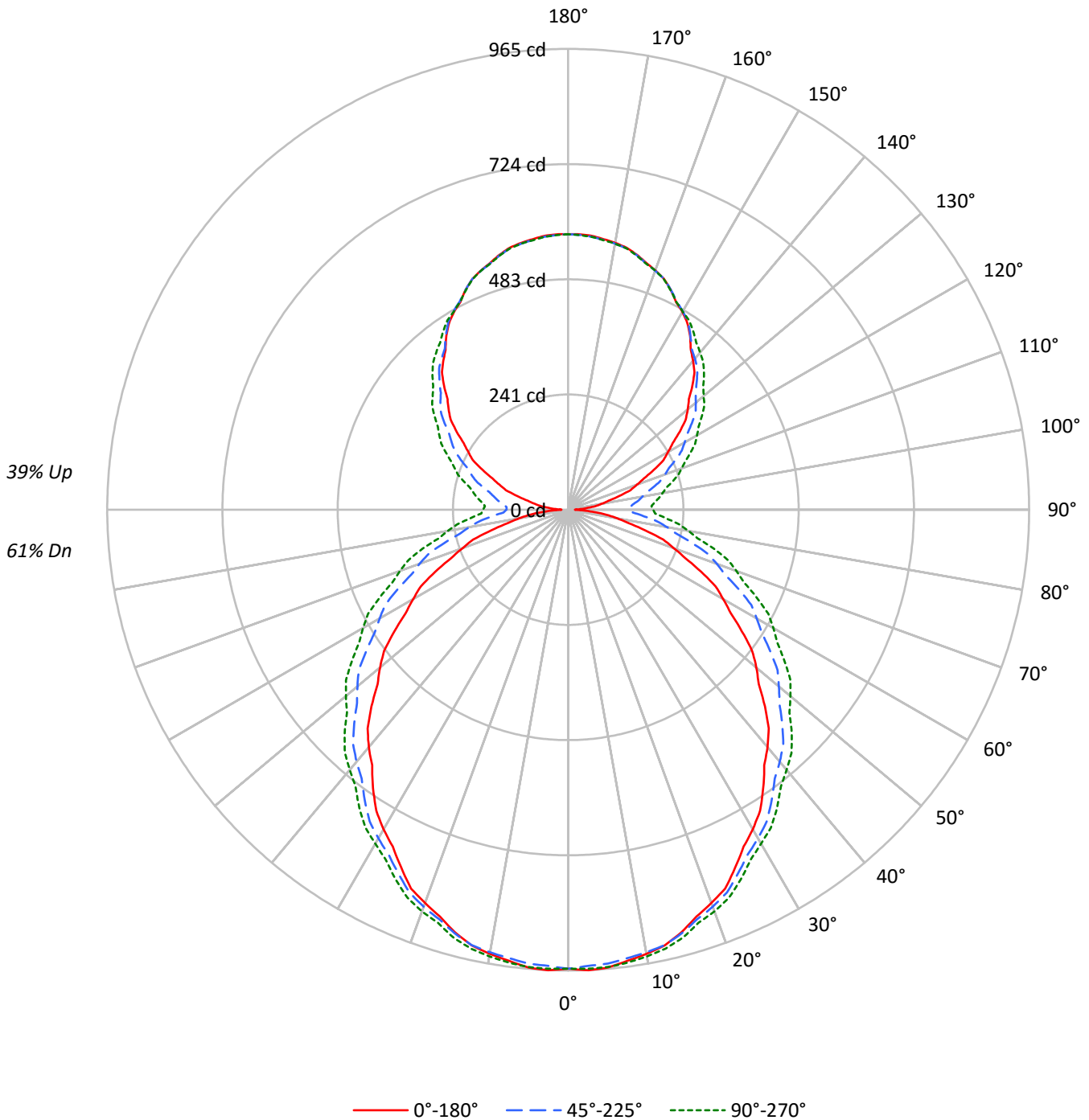
Input Watts (W): 37.7
Input Voltage (V): 120
Input Current (A_{in}): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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	110	110	110	110	103	103	103	103	90	90	90	78	78	78	67	67	67	61
1	99	94	90	86	92	88	84	81	77	74	71	66	64	62	57	55	54	49
2	90	81	75	69	83	76	70	65	66	62	58	58	54	51	49	47	44	40
3	82	71	63	57	76	67	60	54	58	53	48	50	46	42	43	40	37	33
4	74	63	54	48	69	59	51	45	52	45	41	45	40	36	38	35	32	28
5	68	56	47	41	63	52	45	39	46	40	35	40	35	31	34	31	27	24
6	63	50	41	35	58	47	39	34	41	35	30	36	31	27	31	27	24	21
7	58	45	37	31	54	43	35	29	38	31	27	33	28	24	28	24	21	19
8	54	41	33	27	50	39	31	26	34	28	24	30	25	21	26	22	19	17
9	50	37	30	24	47	35	28	23	31	25	21	28	23	19	24	20	17	15
10	47	34	27	22	44	32	26	21	29	23	19	26	21	17	22	18	15	14

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	10346	10346	10346
5°	10379	10086	10092
10°	10286	9853	9804
15°	10153	9590	9490
20°	9963	9288	9146
25°	9730	8942	8782
30°	9490	8630	8415
35°	9221	8300	8121
40°	8965	8000	7807
45°	8682	7712	7556
50°	8400	7427	7278
55°	8091	7135	7030
60°	7790	6839	6774
65°	7480	6524	6470
70°	7013	6169	6159
75°	6425	5763	5842
80°	5749	5363	5479
85°	5117	5090	5269



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	91.1	1.9
10°-20°	259.8	5.4
20°-30°	388.5	8.0
30°-40°	464.0	9.6
40°-50°	485.4	10.0
50°-60°	455.5	9.4
60°-70°	380.5	7.9
70°-80°	272.2	5.6
80°-90°	164.0	3.4
90°-100°	139.4	2.9
100°-110°	187.3	3.9
110°-120°	241.3	5.0
120°-130°	280.2	5.8
130°-140°	295.7	6.1
140°-150°	280.8	5.8
150°-160°	234.1	4.8
160°-170°	155.8	3.2
170°-180°	54.6	1.1
0°-30°	739.4	15.3
0°-40°	1203.3	24.9
0°-60°	2144.3	44.4
0°-90°	2961.0	61.3
90°-120°	568.1	11.8
90°-150°	1424.7	29.5
90°-180°	1869.0	38.7
0°-180°	4830.2	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	961	961	961	961	961	
5°	962	960	954	962	961	91
15°	916	919	918	928	928	258
25°	827	837	841	854	854	381
35°	712	729	742	757	762	445
45°	582	607	634	653	662	449
55°	444	479	516	543	553	397
65°	307	348	394	424	436	303
75°	166	216	268	301	315	178
85°	51	104	159	193	205	54
90°	14	70	129	165	178	11
95°	38	83	137	170	182	39
105°	110	138	186	214	225	118
115°	198	213	248	273	282	196
125°	285	288	316	335	342	254
135°	368	370	380	397	402	283
145°	445	445	446	454	456	277
155°	508	508	508	510	507	234
165°	553	552	552	554	552	156
175°	576	574	574	576	573	55
180°	577	577	577	577	577	



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CANDELA DISTRIBUTION (FULL):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
0°	961.2	961.2	961.2	961.2	961.2	961.2	961.2	961.2	961.2	961.2	961.2
2.5°	965.4	964.8	964.3	963.7	963.2	962.1	960.7	959.2	957.7	956.2	957.7
5°	962.3	961.8	961.3	960.9	960.4	959.5	958.1	956.7	955.3	953.9	955.8
7.5°	952.8	952.9	953.0	953.1	953.2	952.6	951.2	949.9	948.5	947.2	949.5
10°	944.5	944.9	945.4	945.9	946.3	946.0	944.8	943.7	942.5	941.3	943.7
12.5°	934.4	935.1	935.7	936.4	937.0	937.0	936.2	935.4	934.6	933.8	935.9
15°	916.2	916.9	917.6	918.3	919.0	919.2	919.0	918.8	918.5	918.3	920.6
17.5°	893.2	894.6	896.0	897.3	898.7	899.4	899.3	899.2	899.1	899.0	901.1
20°	876.4	877.8	879.2	880.6	882.0	882.9	883.4	883.9	884.3	884.8	886.9
22.5°	858.8	860.2	861.6	863.0	864.4	865.4	866.1	866.7	867.4	868.0	870.7
25°	827.2	829.5	831.8	834.2	836.5	838.0	838.7	839.4	840.1	840.8	843.8
27.5°	795.4	798.0	800.7	803.3	806.0	808.0	809.5	811.0	812.5	814.0	816.6
30°	772.7	775.8	778.8	781.8	784.8	787.3	789.1	791.0	792.9	794.7	797.5
32.5°	747.6	751.0	754.4	757.8	761.2	764.1	766.5	769.0	771.4	773.8	776.8
35°	712.0	715.7	719.5	723.2	726.9	730.3	733.3	736.3	739.4	742.4	745.9
37.5°	674.3	678.5	682.7	686.9	691.1	695.0	698.8	702.5	706.2	709.9	713.9
40°	649.2	653.4	657.6	661.8	665.9	670.4	675.0	679.7	684.3	689.0	692.9
42.5°	621.5	626.7	631.8	636.9	642.0	647.0	651.8	656.7	661.5	666.4	670.7
45°	582.2	587.8	593.3	598.9	604.5	610.2	616.0	621.8	627.7	633.5	637.9
47.5°	540.9	547.3	553.6	559.9	566.2	572.7	579.4	586.0	592.7	599.3	604.3
50°	514.1	520.6	527.1	533.7	540.2	547.0	554.3	561.5	568.7	575.9	581.2
52.5°	485.6	492.5	499.4	506.3	513.2	520.6	528.6	536.5	544.5	552.4	558.0
55°	444.0	451.6	459.3	467.0	474.7	482.7	491.1	499.5	507.8	516.2	522.5
57.5°	403.3	411.3	419.3	427.3	435.4	443.9	453.1	462.3	471.4	480.6	486.9
60°	374.9	383.2	391.6	400.0	408.4	417.3	426.9	436.4	445.9	455.5	462.0
62.5°	348.0	356.6	365.2	373.7	382.3	391.6	401.7	411.8	421.9	432.0	438.5
65°	306.8	315.9	324.9	334.0	343.1	352.7	363.0	373.2	383.5	393.7	400.7
67.5°	264.9	274.5	284.2	293.8	303.4	313.5	323.9	334.3	344.7	355.2	362.8
70°	235.6	245.6	255.6	265.6	275.6	286.2	297.4	308.5	319.7	330.9	338.3
72.5°	208.8	218.8	228.8	238.8	248.8	259.6	271.1	282.7	294.2	305.7	313.4
75°	166.5	177.4	188.4	199.3	210.2	221.5	233.1	244.8	256.4	268.1	275.7
77.5°	129.6	140.7	151.7	162.7	173.7	185.1	196.9	208.6	220.3	232.0	240.1
80°	103.7	115.1	126.5	137.9	149.3	161.0	173.1	185.2	197.3	209.4	217.3
82.5°	81.0	92.6	104.2	115.8	127.4	139.3	151.6	163.9	176.2	188.5	196.4
85°	51.3	62.9	74.6	86.2	97.8	109.8	122.2	134.5	146.8	159.2	167.1
87.5°	27.9	39.7	51.5	63.3	75.1	87.1	99.2	111.3	123.4	135.6	143.6
90°	14.1	26.5	38.9	51.3	63.7	76.5	89.7	102.8	116.0	129.2	137.5
92.5°	23.7	34.7	45.7	56.6	67.6	79.3	91.7	104.2	116.6	129.0	137.1
95°	38.3	48.0	57.8	67.6	77.4	88.4	100.6	112.8	125.0	137.2	144.8
97.5°	57.8	66.5	75.2	83.9	92.6	102.7	114.2	125.7	137.1	148.6	156.0
100°	71.1	79.1	87.2	95.2	103.3	112.9	124.1	135.3	146.5	157.7	164.8
102.5°	86.5	93.6	100.7	107.7	114.8	123.9	135.1	146.3	157.5	168.6	175.5
105°	110.3	116.1	121.9	127.7	133.5	141.8	152.7	163.7	174.6	185.5	192.0
107.5°	137.0	141.9	146.7	151.6	156.5	163.8	173.7	183.5	193.4	203.3	209.8
110°	153.6	158.0	162.3	166.7	171.1	178.1	187.6	197.1	206.6	216.1	222.6



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CANDELA DISTRIBUTION (continued):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
112.5°	171.7	175.3	178.8	182.4	185.9	192.2	201.2	210.2	219.1	228.1	234.5
115°	197.8	200.9	204.0	207.1	210.2	215.8	224.0	232.2	240.4	248.5	254.2
117.5°	225.0	226.9	228.8	230.8	232.7	237.5	245.1	252.7	260.3	267.9	273.4
120°	241.2	243.0	244.7	246.5	248.3	252.7	259.9	267.1	274.3	281.4	286.7
122.5°	259.0	260.0	261.1	262.1	263.2	267.2	274.2	281.3	288.3	295.4	300.3
125°	285.0	285.3	285.6	285.9	286.2	289.6	296.2	302.7	309.3	315.8	320.3
127.5°	310.0	310.4	310.9	311.3	311.7	314.6	319.9	325.3	330.7	336.0	340.1
130°	326.7	327.3	327.9	328.4	329.0	331.5	335.8	340.2	344.5	348.9	352.9
132.5°	342.5	343.3	344.1	344.8	345.6	347.7	351.2	354.7	358.2	361.7	365.5
135°	367.8	368.2	368.5	368.9	369.3	370.7	373.2	375.6	378.1	380.5	384.3
137.5°	391.2	391.5	391.8	392.1	392.4	393.4	395.1	396.9	398.6	400.3	403.5
140°	406.6	407.1	407.6	408.1	408.7	409.3	410.1	410.9	411.7	412.5	415.9
142.5°	421.5	421.8	422.1	422.5	422.8	423.1	423.4	423.7	424.1	424.4	427.4
145°	444.7	444.7	444.6	444.6	444.6	444.7	445.0	445.3	445.6	445.9	447.7
147.5°	464.0	464.3	464.7	465.0	465.4	465.7	466.0	466.3	466.6	466.9	467.4
150°	478.1	478.3	478.5	478.7	478.9	479.1	479.3	479.5	479.7	479.9	479.9
152.5°	489.7	490.0	490.3	490.5	490.8	491.0	491.1	491.3	491.4	491.5	491.7
155°	508.0	508.0	508.0	508.0	508.0	508.1	508.2	508.3	508.4	508.5	508.9
157.5°	523.6	523.5	523.4	523.2	523.1	523.1	523.2	523.3	523.3	523.4	523.8
160°	533.4	533.2	533.0	532.8	532.6	532.5	532.5	532.5	532.5	532.5	533.0
162.5°	542.1	541.8	541.5	541.2	541.0	540.9	540.9	541.0	541.1	541.2	541.7
165°	553.3	553.0	552.7	552.4	552.1	552.0	552.0	552.0	552.0	552.0	552.6
167.5°	562.3	561.9	561.5	561.1	560.7	560.5	560.6	560.7	560.8	560.8	561.5
170°	567.4	567.0	566.6	566.2	565.8	565.6	565.6	565.6	565.6	565.6	566.3
172.5°	571.4	571.0	570.6	570.2	569.7	569.5	569.5	569.5	569.5	569.5	570.2
175°	575.5	575.1	574.7	574.3	573.9	573.7	573.7	573.7	573.7	573.7	574.3
177.5°	577.3	576.9	576.6	576.3	576.0	575.8	575.8	575.8	575.8	575.8	576.3
180°	576.9	576.9	576.9	576.9	576.9	576.9	576.9	576.9	576.9	576.9	576.9



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CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
0°	961.2	961.2	961.2	961.2	961.2	961.2	961.2	961.2
2.5°	959.2	960.7	962.1	962.8	962.6	962.4	962.2	962.1
5°	957.6	959.5	961.3	962.1	961.9	961.7	961.5	961.2
7.5°	951.8	954.2	956.5	957.5	957.2	957.0	956.7	956.4
10°	946.0	948.3	950.6	951.6	951.1	950.6	950.2	949.7
12.5°	938.1	940.2	942.3	943.2	942.7	942.3	941.8	941.3
15°	922.9	925.3	927.6	928.6	928.4	928.2	927.9	927.7
17.5°	903.2	905.3	907.4	908.3	908.0	907.6	907.3	907.0
20°	889.0	891.1	893.2	894.3	894.6	894.8	895.0	895.3
22.5°	873.3	876.0	878.6	879.9	879.8	879.6	879.5	879.3
25°	846.9	849.9	852.9	854.4	854.4	854.4	854.4	854.4
27.5°	819.2	821.8	824.4	825.8	826.0	826.2	826.4	826.6
30°	800.3	803.1	805.9	807.3	807.3	807.3	807.3	807.3
32.5°	779.7	782.7	785.7	787.5	788.0	788.6	789.1	789.7
35°	749.4	752.9	756.3	758.6	759.5	760.4	761.3	762.3
37.5°	717.8	721.8	725.7	728.1	728.8	729.6	730.3	731.1
40°	696.9	700.8	704.8	707.2	708.2	709.1	710.0	711.0
42.5°	675.0	679.3	683.7	686.5	687.8	689.1	690.4	691.7
45°	642.3	646.7	651.2	654.3	656.2	658.0	659.9	661.8
47.5°	609.3	614.3	619.3	622.5	623.9	625.4	626.8	628.2
50°	586.6	591.9	597.3	600.8	602.4	604.0	605.7	607.3
52.5°	563.5	569.1	574.6	578.4	580.4	582.4	584.4	586.4
55°	528.8	535.1	541.3	545.4	547.3	549.1	551.0	552.9
57.5°	493.3	499.6	505.9	510.2	512.4	514.6	516.7	518.9
60°	468.5	475.0	481.5	486.1	488.6	491.2	493.8	496.3
62.5°	445.1	451.6	458.1	462.5	464.9	467.3	469.7	472.0
65°	407.7	414.6	421.6	426.3	428.6	430.9	433.3	435.6
67.5°	370.4	378.1	385.7	390.5	392.4	394.4	396.4	398.3
70°	345.8	353.2	360.7	365.5	367.9	370.2	372.5	374.9
72.5°	321.0	328.6	336.3	341.3	343.6	345.9	348.2	350.6
75°	283.4	291.1	298.8	304.0	306.8	309.6	312.4	315.2
77.5°	248.2	256.3	264.4	269.5	271.7	273.8	276.0	278.1
80°	225.2	233.1	241.1	246.2	248.5	250.8	253.2	255.5
82.5°	204.3	212.2	220.1	225.2	227.6	229.9	232.2	234.5
85°	175.0	182.9	190.8	195.9	198.2	200.6	202.9	205.2
87.5°	151.6	159.5	167.5	172.7	175.1	177.5	179.8	182.2
90°	145.8	154.1	162.5	167.9	170.4	172.9	175.5	178.0
92.5°	145.1	153.2	161.2	166.2	168.3	170.3	172.3	174.3
95°	152.4	160.0	167.7	172.6	175.0	177.3	179.6	181.9
97.5°	163.4	170.8	178.2	183.0	185.3	187.6	189.9	192.2
100°	171.8	178.9	185.9	190.7	193.2	195.8	198.3	200.8
102.5°	182.4	189.2	196.1	200.7	203.0	205.2	207.5	209.8
105°	198.5	205.0	211.5	215.9	218.2	220.5	222.8	225.1
107.5°	216.4	222.9	229.5	233.7	235.7	237.6	239.5	241.4
110°	229.0	235.5	241.9	246.0	247.6	249.3	251.0	252.6



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CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
112.5°	240.8	247.2	253.5	257.7	259.7	261.7	263.7	265.7
115°	259.9	265.6	271.3	275.0	276.8	278.5	280.3	282.1
117.5°	278.9	284.4	289.9	293.5	295.0	296.5	298.1	299.6
120°	291.9	297.2	302.4	305.8	307.2	308.6	310.1	311.5
122.5°	305.2	310.1	315.0	318.1	319.5	320.8	322.2	323.5
125°	324.8	329.3	333.8	336.6	337.8	339.1	340.3	341.5
127.5°	344.1	348.1	352.2	354.8	355.9	357.0	358.1	359.2
130°	356.9	360.9	364.9	367.3	368.0	368.7	369.4	370.1
132.5°	369.2	373.0	376.7	379.1	380.2	381.2	382.2	383.3
135°	388.1	391.9	395.7	398.1	399.0	400.0	400.9	401.9
137.5°	406.8	410.0	413.3	415.3	416.1	416.9	417.6	418.4
140°	419.3	422.7	426.1	428.0	428.4	428.9	429.4	429.8
142.5°	430.4	433.4	436.4	438.3	438.9	439.5	440.1	440.7
145°	449.4	451.2	453.0	454.1	454.6	455.2	455.7	456.2
147.5°	468.0	468.5	469.1	469.5	469.7	470.0	470.2	470.4
150°	479.9	479.9	479.9	479.8	479.7	479.6	479.4	479.3
152.5°	491.8	492.0	492.2	492.0	491.6	491.2	490.7	490.3
155°	509.3	509.7	510.1	509.9	509.2	508.5	507.8	507.1
157.5°	524.3	524.7	525.1	525.0	524.5	523.9	523.3	522.8
160°	533.5	534.0	534.5	534.5	534.1	533.7	533.3	532.9
162.5°	542.2	542.7	543.2	543.1	542.5	541.8	541.2	540.5
165°	553.2	553.8	554.4	554.3	553.6	552.9	552.2	551.5
167.5°	562.1	562.7	563.3	563.3	562.7	562.1	561.5	560.8
170°	567.0	567.7	568.4	568.4	567.7	567.0	566.3	565.6
172.5°	570.8	571.4	572.0	572.0	571.3	570.6	569.9	569.2
175°	574.9	575.5	576.1	576.1	575.4	574.7	574.0	573.3
177.5°	576.8	577.3	577.7	577.7	577.1	576.6	576.0	575.4
180°	576.9	576.9	576.9	576.9	576.9	576.9	576.9	576.9

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