

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: P332158-940

Luminaire Tested: **S123DIW-S775D755U940-4F0-1E-UDD-D**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P332158-940
REPORT IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-1807-864-5,
Test Lab: INNOVATION CENTER
Issue Date: 3/3/2020
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: NEO-RAY
Catalog Number: S123DIW-S775D755U940-4F0-1E-UDD-D
Description: DEFINE 3 DIRECT-INDIRECT WALL MOUNT LED LUMINAIRE
DOWNLIGHT 775 LUMENS PER FOOT, DROP SATIN WHITE DIFFUSER
UPLIGHT 755 LUMENS PER FOOT, NO LENS
Light Source: -
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 5576.2 lumens
Efficiency: N/A
Efficacy: 123.9 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: General Diffuse

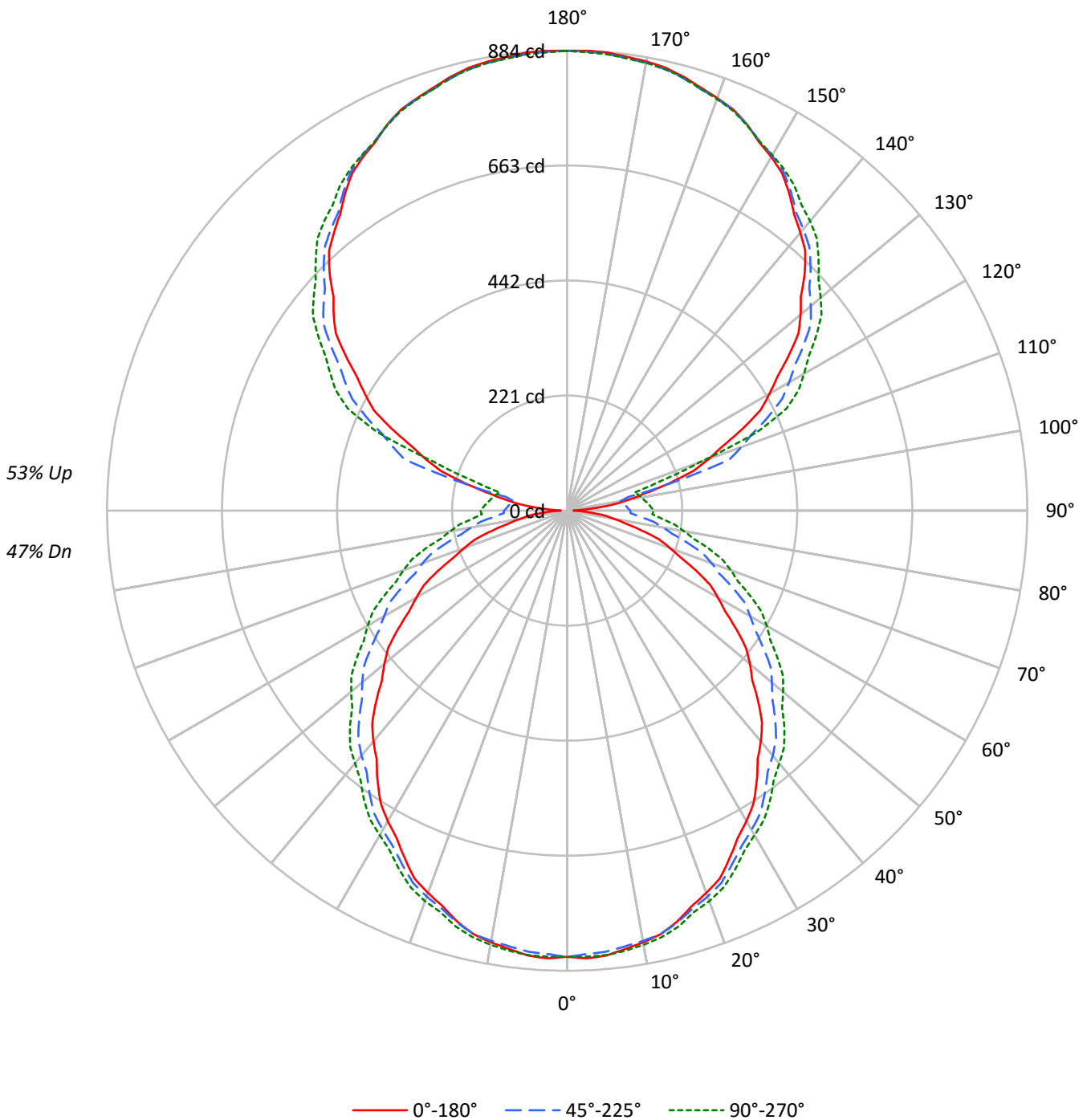
Input Watts (W): 45
Input Voltage (V): 120
Input Current (A_{in}): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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Luminous Intensity Polar Plot





TEST NUMBER: P332158-940

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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	107	107	107	107	98	98	98	98	82	82	82	67	67	67	54	54	54	47
1	96	91	87	83	88	84	80	77	70	68	65	58	56	54	46	45	43	38
2	87	79	73	67	80	73	67	62	61	57	53	50	47	44	40	38	36	31
3	79	69	62	56	72	64	57	52	53	48	44	44	40	37	35	32	30	26
4	72	61	53	47	66	56	49	44	47	42	37	39	35	31	31	28	26	22
5	66	54	46	40	61	50	43	37	42	36	32	35	30	27	28	25	22	19
6	61	49	40	34	56	45	38	32	38	32	28	31	27	24	25	22	19	16
7	56	44	36	30	52	41	33	28	34	29	24	28	24	21	23	20	17	14
8	52	40	32	26	48	37	30	25	31	26	22	26	22	18	21	18	15	13
9	49	36	29	23	45	34	27	22	29	23	19	24	20	16	19	16	14	12
10	45	33	26	21	42	31	24	20	26	21	17	22	18	15	18	15	12	10

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	9226	9226	9226
5°	9255	8994	8999
10°	9172	8787	8743
15°	9054	8552	8462
20°	8884	8283	8155
25°	8676	7974	7832
30°	8462	7695	7504
35°	8223	7401	7242
40°	7995	7134	6961
45°	7742	6877	6737
50°	7490	6622	6490
55°	7215	6363	6268
60°	6946	6099	6041
65°	6670	5818	5769
70°	6254	5502	5492
75°	5730	5140	5210
80°	5128	4782	4885
85°	4559	4540	4699



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	81.3	1.5
10°-20°	231.6	4.2
20°-30°	346.4	6.2
30°-40°	413.7	7.4
40°-50°	432.9	7.8
50°-60°	406.2	7.3
60°-70°	339.3	6.1
70°-80°	242.7	4.4
80°-90°	147.2	2.6
90°-100°	122.9	2.2
100°-110°	219.8	3.9
110°-120°	412.2	7.4
120°-130°	493.6	8.9
130°-140°	511.6	9.2
140°-150°	470.1	8.4
150°-160°	377.3	6.8
160°-170°	243.5	4.4
170°-180°	83.9	1.5
0°-30°	659.3	11.8
0°-40°	1073.0	19.2
0°-60°	1912.1	34.3
0°-90°	2641.3	47.4
90°-120°	754.9	13.5
90°-150°	2230.2	40.0
90°-180°	2935.0	52.6
0°-180°	5576.2	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	857	857	857	857	857	
5°	858	856	851	858	857	81
15°	817	820	819	828	827	230
25°	738	747	750	761	762	340
35°	635	650	662	675	680	397
45°	519	542	565	582	590	400
55°	396	427	460	484	493	354
65°	274	310	351	378	388	270
75°	148	192	239	269	281	159
85°	46	93	142	172	183	48
90°	13	65	121	154	166	10
95°	50	62	113	145	156	57
105°	203	230	214	129	134	215
115°	372	388	426	454	465	367
125°	520	526	555	575	584	464
135°	646	649	662	679	683	497
145°	744	747	749	757	761	465
155°	818	817	818	821	817	377
165°	863	861	860	865	861	244
175°	883	880	881	885	880	84
180°	883	883	883	883	883	



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CANDELA DISTRIBUTION (FULL):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
0°	857.1	857.1	857.1	857.1	857.1	857.1	857.1	857.1	857.1	857.1	857.1
2.5°	860.9	860.3	859.9	859.3	858.9	857.9	856.7	855.3	854.0	852.7	854.0
5°	858.1	857.6	857.2	856.8	856.4	855.6	854.3	853.1	851.9	850.6	852.3
7.5°	849.6	849.7	849.8	849.9	850.0	849.4	848.2	847.0	845.8	844.6	846.7
10°	842.2	842.6	843.0	843.5	843.8	843.6	842.5	841.5	840.4	839.4	841.5
12.5°	833.2	833.8	834.4	835.0	835.5	835.5	834.8	834.1	833.4	832.7	834.6
15°	817.0	817.6	818.2	818.9	819.5	819.7	819.5	819.3	819.0	818.9	820.9
17.5°	796.5	797.7	799.0	800.1	801.4	802.0	801.9	801.8	801.7	801.6	803.5
20°	781.5	782.7	784.0	785.2	786.5	787.3	787.7	788.2	788.5	789.0	790.9
22.5°	765.8	767.0	768.3	769.5	770.8	771.7	772.3	772.8	773.5	774.0	776.4
25°	737.6	739.7	741.7	743.9	745.9	747.3	747.9	748.5	749.1	749.8	752.4
27.5°	709.3	711.6	714.0	716.3	718.7	720.5	721.8	723.2	724.5	725.9	728.2
30°	689.0	691.8	694.5	697.1	699.8	702.0	703.6	705.3	707.0	708.6	711.1
32.5°	666.6	669.7	672.7	675.7	678.8	681.4	683.5	685.7	687.9	690.0	692.7
35°	634.9	638.2	641.6	644.9	648.2	651.2	653.9	656.6	659.3	662.0	665.1
37.5°	601.3	605.0	608.8	612.5	616.3	619.7	623.1	626.4	629.7	633.0	636.6
40°	578.9	582.6	586.4	590.1	593.8	597.8	601.9	606.1	610.2	614.4	617.9
42.5°	554.2	558.8	563.4	567.9	572.5	576.9	581.2	585.6	589.9	594.2	598.1
45°	519.2	524.1	529.1	534.0	539.0	544.1	549.3	554.5	559.7	564.9	568.8
47.5°	482.3	488.0	493.7	499.3	504.9	510.7	516.7	522.5	528.5	534.4	538.9
50°	458.4	464.2	470.0	475.9	481.7	487.8	494.3	500.7	507.1	513.5	518.3
52.5°	433.0	439.2	445.3	451.5	457.6	464.2	471.4	478.4	485.5	492.6	497.6
55°	395.9	402.7	409.6	416.4	423.3	430.4	437.9	445.4	452.8	460.3	465.9
57.5°	359.6	366.8	373.9	381.0	388.3	395.8	404.0	412.2	420.4	428.6	434.2
60°	334.3	341.7	349.2	356.7	364.2	372.1	380.7	389.1	397.6	406.2	412.0
62.5°	310.3	318.0	325.7	333.2	340.9	349.2	358.2	367.2	376.2	385.2	391.0
65°	273.6	281.7	289.7	297.8	305.9	314.5	323.7	332.8	342.0	351.1	357.3
67.5°	236.2	244.8	253.4	262.0	270.5	279.6	288.8	298.1	307.4	316.7	323.5
70°	210.1	219.0	227.9	236.8	245.8	255.2	265.2	275.1	285.1	295.1	301.7
72.5°	186.2	195.1	204.0	212.9	221.9	231.5	241.7	252.1	262.3	272.6	279.5
75°	148.5	158.2	168.0	177.7	187.4	197.5	207.9	218.3	228.6	239.1	245.8
77.5°	115.6	125.5	135.3	145.1	154.9	165.1	175.6	186.0	196.4	206.9	214.1
80°	92.5	102.6	112.8	123.0	133.1	143.6	154.4	165.1	175.9	186.7	193.8
82.5°	72.2	82.6	92.9	103.3	113.6	124.2	135.2	146.2	157.1	168.1	175.1
85°	45.7	56.1	66.5	76.9	87.2	97.9	109.0	119.9	130.9	142.0	149.0
87.5°	25.0	35.6	46.2	56.8	67.5	78.3	89.3	100.1	111.1	122.1	129.3
90°	12.8	24.4	36.0	47.7	59.3	71.3	83.8	96.3	108.8	121.3	128.9
92.5°	23.6	32.4	41.1	49.8	58.7	68.9	80.8	92.6	104.5	116.4	124.1
95°	50.3	52.4	54.5	56.6	58.8	65.7	77.5	89.3	101.0	112.8	120.2
97.5°	89.6	94.3	98.8	103.4	108.1	110.0	109.2	108.4	107.6	106.8	114.2
100°	119.3	128.9	138.4	147.9	157.5	155.7	142.5	129.3	116.1	102.9	110.0
102.5°	153.2	161.3	169.3	177.5	185.5	181.8	166.3	150.9	135.4	119.9	122.2
105°	203.0	209.6	216.2	222.7	229.3	230.5	226.3	222.1	217.9	213.7	193.8
107.5°	254.7	260.2	265.6	271.2	276.7	284.7	295.2	305.8	316.4	326.9	313.5
110°	289.1	294.0	298.9	303.8	308.7	316.1	326.0	335.9	345.8	355.7	356.2



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CANDELA DISTRIBUTION (continued):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
112.5°	322.7	326.8	330.9	335.0	339.1	346.0	355.5	365.2	374.7	384.2	389.6
115°	371.5	374.9	378.2	381.6	385.0	391.0	399.8	408.6	417.3	426.1	432.6
117.5°	419.5	422.0	424.6	427.3	429.9	435.1	442.7	450.4	458.1	465.8	471.9
120°	448.6	450.9	453.3	455.7	458.0	462.8	470.1	477.4	484.7	492.0	497.9
122.5°	479.0	480.7	482.3	483.9	485.5	489.9	497.0	504.0	511.1	518.2	523.6
125°	519.9	521.0	522.2	523.3	524.5	528.4	535.0	541.6	548.2	554.8	559.5
127.5°	560.3	561.2	562.2	563.2	564.1	567.5	573.1	578.8	584.5	590.1	594.8
130°	585.5	586.5	587.4	588.4	589.3	592.2	596.9	601.6	606.4	611.1	615.6
132.5°	608.9	610.0	611.2	612.2	613.4	615.8	619.6	623.4	627.2	631.0	635.3
135°	645.6	646.2	646.9	647.6	648.3	650.0	652.9	655.8	658.6	661.5	665.7
137.5°	676.9	677.8	678.8	679.8	680.6	681.9	683.5	685.1	686.7	688.4	692.3
140°	697.1	698.0	698.9	699.7	700.6	701.6	702.7	703.7	704.8	705.9	709.5
142.5°	716.6	717.3	718.0	718.7	719.4	720.1	720.6	721.1	721.8	722.3	725.5
145°	743.7	744.6	745.4	746.2	747.0	747.5	747.8	748.1	748.4	748.7	750.6
147.5°	768.4	769.0	769.7	770.3	771.1	771.5	771.9	772.1	772.4	772.7	773.5
150°	784.2	784.5	785.0	785.4	785.9	786.2	786.6	786.8	787.1	787.4	787.7
152.5°	798.3	798.5	798.7	798.9	799.2	799.3	799.5	799.7	799.9	800.0	800.5
155°	818.2	818.0	817.7	817.3	817.1	817.0	817.2	817.3	817.4	817.6	818.3
157.5°	833.7	833.7	833.7	833.7	833.7	833.6	833.4	833.2	833.1	832.9	833.8
160°	843.2	843.0	842.9	842.8	842.6	842.5	842.3	842.1	842.0	841.9	842.8
162.5°	852.1	851.8	851.3	851.0	850.6	850.3	850.2	850.1	849.9	849.7	850.8
165°	862.9	862.5	862.0	861.6	861.1	860.9	860.7	860.5	860.4	860.2	861.4
167.5°	871.3	870.7	870.1	869.5	869.0	868.6	868.6	868.6	868.6	868.6	869.8
170°	876.0	875.4	874.9	874.2	873.7	873.3	873.3	873.3	873.3	873.3	874.5
172.5°	879.1	878.4	877.7	877.1	876.4	876.0	876.2	876.3	876.4	876.6	877.7
175°	883.2	882.4	881.7	881.0	880.3	880.0	880.1	880.3	880.5	880.6	881.6
177.5°	884.2	883.7	883.1	882.5	881.9	881.7	881.8	881.9	882.1	882.2	883.1
180°	883.2	883.2	883.2	883.2	883.2	883.2	883.2	883.2	883.2	883.2	883.2



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CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
0°	857.1	857.1	857.1	857.1	857.1	857.1	857.1	857.1
2.5°	855.3	856.7	857.9	858.5	858.4	858.2	858.0	857.9
5°	853.9	855.6	857.2	857.9	857.7	857.6	857.4	857.1
7.5°	848.7	850.9	852.9	853.8	853.5	853.4	853.1	852.8
10°	843.6	845.6	847.7	848.6	848.1	847.7	847.3	846.9
12.5°	836.5	838.4	840.3	841.1	840.6	840.3	839.8	839.4
15°	823.0	825.1	827.2	828.0	827.9	827.7	827.4	827.2
17.5°	805.4	807.3	809.1	809.9	809.7	809.3	809.0	808.8
20°	792.7	794.6	796.5	797.5	797.7	797.9	798.1	798.3
22.5°	778.7	781.1	783.5	784.6	784.5	784.3	784.3	784.1
25°	755.2	757.9	760.5	761.9	761.9	761.9	761.9	761.9
27.5°	730.5	732.8	735.1	736.4	736.6	736.7	736.9	737.1
30°	713.6	716.1	718.6	719.9	719.9	719.9	719.9	719.9
32.5°	695.3	697.9	700.6	702.2	702.7	703.2	703.6	704.2
35°	668.2	671.4	674.4	676.5	677.3	678.1	678.9	679.8
37.5°	640.1	643.6	647.1	649.3	649.9	650.6	651.2	651.9
40°	621.4	624.9	628.5	630.6	631.5	632.3	633.1	634.0
42.5°	601.9	605.7	609.7	612.2	613.3	614.5	615.6	616.8
45°	572.7	576.7	580.7	583.4	585.1	586.7	588.4	590.1
47.5°	543.3	547.8	552.2	555.1	556.3	557.7	558.9	560.2
50°	523.1	527.8	532.6	535.7	537.2	538.6	540.1	541.5
52.5°	502.5	507.5	512.4	515.8	517.5	519.3	521.1	522.9
55°	471.5	477.2	482.7	486.3	488.0	489.6	491.3	493.0
57.5°	439.9	445.5	451.1	455.0	456.9	458.9	460.7	462.7
60°	417.8	423.6	429.4	433.5	435.7	438.0	440.3	442.6
62.5°	396.9	402.7	408.5	412.4	414.6	416.7	418.8	420.9
65°	363.6	369.7	375.9	380.1	382.2	384.2	386.4	388.4
67.5°	330.3	337.2	343.9	348.2	349.9	351.7	353.5	355.2
70°	308.4	315.0	321.6	325.9	328.1	330.1	332.2	334.3
72.5°	286.2	293.0	299.9	304.3	306.4	308.4	310.5	312.6
75°	252.7	259.6	266.4	271.1	273.6	276.1	278.6	281.1
77.5°	221.3	228.5	235.8	240.3	242.3	244.2	246.1	248.0
80°	200.8	207.9	215.0	219.5	221.6	223.6	225.8	227.8
82.5°	182.2	189.2	196.3	200.8	203.0	205.0	207.1	209.1
85°	156.0	163.1	170.1	174.7	176.7	178.9	180.9	183.0
87.5°	136.4	143.7	150.8	155.4	157.6	159.7	161.8	164.0
90°	136.5	144.2	151.8	156.9	159.2	161.6	163.9	166.3
92.5°	132.0	139.8	147.6	152.6	154.6	156.8	158.8	160.9
95°	127.7	135.1	142.6	147.3	149.5	151.5	153.6	155.7
97.5°	121.5	128.9	136.3	141.1	143.2	145.4	147.7	149.9
100°	117.3	124.4	131.6	136.3	138.6	140.8	142.9	145.2
102.5°	124.4	126.6	128.9	131.2	133.5	135.8	138.1	140.5
105°	173.7	153.7	133.8	124.8	127.0	129.1	131.3	133.5
107.5°	300.1	286.8	273.4	257.9	240.3	222.7	205.0	187.4
110°	356.9	357.4	358.0	348.7	329.5	310.3	291.1	272.0



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CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
112.5°	394.9	400.2	405.6	406.9	404.3	401.7	399.2	396.6
115°	439.0	445.4	451.9	456.2	458.4	460.7	463.0	465.2
117.5°	478.0	484.1	490.2	494.1	495.9	497.6	499.4	501.1
120°	503.8	509.8	515.8	519.4	520.8	522.4	523.8	525.2
122.5°	529.1	534.4	539.8	543.3	544.9	546.5	548.0	549.7
125°	564.1	568.7	573.4	576.6	578.4	580.1	581.8	583.6
127.5°	599.3	603.9	608.5	611.3	612.4	613.6	614.7	615.8
130°	620.2	624.6	629.2	632.0	632.9	633.8	634.8	635.8
132.5°	639.7	644.1	648.5	651.1	652.1	653.1	654.1	655.1
135°	669.9	674.0	678.1	680.6	681.2	681.7	682.3	683.0
137.5°	696.3	700.3	704.3	706.6	707.4	708.1	708.9	709.6
140°	713.2	716.9	720.6	722.8	723.6	724.3	725.1	725.9
142.5°	728.8	732.0	735.3	737.2	737.8	738.4	739.0	739.7
145°	752.6	754.6	756.5	757.9	758.8	759.6	760.4	761.3
147.5°	774.3	775.1	775.9	776.3	776.4	776.4	776.5	776.6
150°	788.0	788.3	788.5	788.7	788.7	788.6	788.6	788.6
152.5°	801.0	801.6	802.1	802.1	801.5	800.9	800.3	799.7
155°	819.0	819.7	820.6	820.5	819.6	818.7	817.8	816.9
157.5°	834.7	835.5	836.4	836.3	835.2	834.0	832.9	831.8
160°	843.6	844.5	845.3	845.3	844.3	843.3	842.2	841.2
162.5°	851.8	852.7	853.7	853.7	852.8	851.9	851.0	850.2
165°	862.6	863.7	864.9	865.0	864.0	862.9	861.9	860.9
167.5°	870.9	872.2	873.3	873.3	872.2	870.9	869.8	868.6
170°	875.7	876.9	878.1	878.1	876.9	875.7	874.5	873.3
172.5°	878.9	880.0	881.2	881.1	879.9	878.6	877.3	876.0
175°	882.6	883.7	884.7	884.6	883.4	882.3	881.1	879.9
177.5°	884.0	884.9	885.9	885.7	884.6	883.4	882.3	881.1
180°	883.2	883.2	883.2	883.2	883.2	883.2	883.2	883.2

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