

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: P332161-930

Luminaire Tested: **S123DIW-S775D755U930-4F0-1E-UDD-F1**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P332161-930
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-S775D755U930-4F0-1E-UDD-F1
Description: DEFINE 3 DIRECT-INDIRECT WALL MOUNT LED LUMINAIRE
DOWNLIGHT 775 LUMENS PER FOOT, FLUSH SATIN WHITE DIFFUSER
UPLIGHT 755 LUMENS PER FOOT, FLUSH SATIN WHITE DIFFUSER
Light Source: -
Ballast/Driver: ELECTRONIC DRIVER

Summary

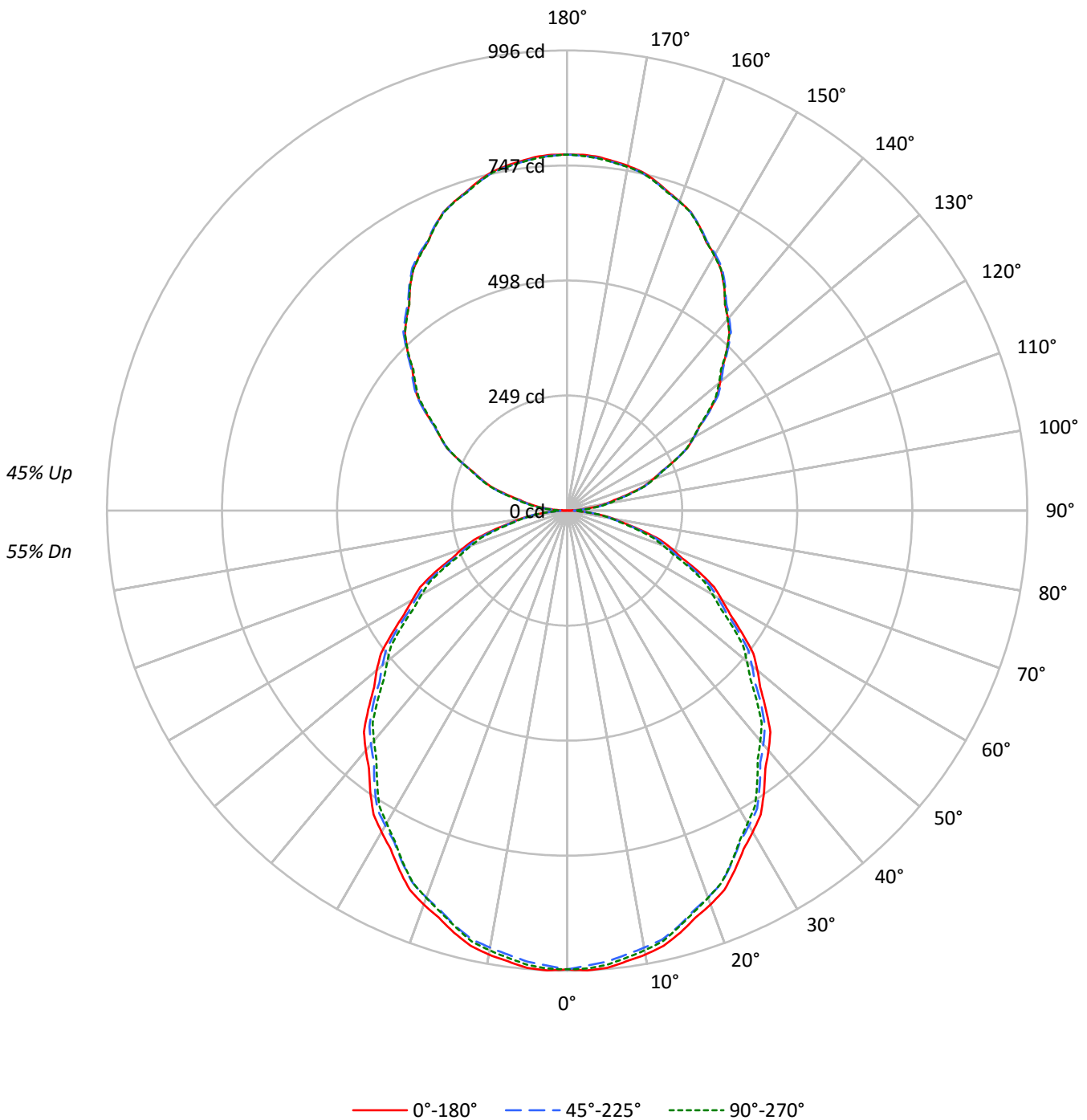
Lumens per Lamp: N/A
Luminaire Lumens: 4720.1 lumens
Efficiency: N/A
Efficacy: 104.9 lumens/watt
Spacing Criteria (0/90/45): 1.21 / 1.18 / 1.31
Luminous Opening: Rectangular (W 0.25' x L: 4' x H: 0')
CIE Type: General Diffuse

Input Watts (W): 45
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	108	108	108	108	101	101	101	101	86	86	86	73	73	73	61	61	61	55
1	99	94	90	87	92	88	84	81	75	73	71	64	62	60	53	52	51	46
2	90	82	76	71	83	77	71	67	66	62	58	56	53	50	47	45	43	38
3	82	72	65	59	76	67	61	56	58	53	49	50	46	43	42	39	36	33
4	75	64	56	50	69	60	53	47	52	46	42	44	40	37	37	34	31	28
5	69	57	49	43	64	53	46	41	46	40	36	40	35	32	33	30	27	24
6	63	51	43	37	59	48	41	35	42	36	31	36	31	28	30	27	24	21
7	59	46	38	33	54	43	36	31	38	32	28	33	28	25	28	24	21	19
8	54	42	34	29	50	39	32	27	34	29	25	30	25	22	25	22	19	17
9	51	38	31	26	47	36	29	25	32	26	22	27	23	20	24	20	17	15
10	47	35	28	23	44	33	27	22	29	24	20	25	21	18	22	18	16	14

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	10687	10687	10687
5°	10737	10589	10662
10°	10665	10497	10563
15°	10541	10379	10398
20°	10394	10208	10219
25°	10200	10007	9987
30°	9984	9783	9708
35°	9759	9546	9423
40°	9524	9284	9140
45°	9266	9045	8824
50°	9008	8748	8505
55°	8668	8443	8188
60°	8325	8086	7830
65°	8023	7697	7457
70°	7578	7254	6930
75°	6924	6675	6392
80°	6248	5976	5926
85°	5483	5274	5064



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	93.5	2.0
10°-20°	264.1	5.6
20°-30°	390.1	8.3
30°-40°	455.7	9.7
40°-50°	458.1	9.7
50°-60°	402.4	8.5
60°-70°	299.8	6.4
70°-80°	170.8	3.6
80°-90°	51.3	1.1
90°-100°	50.2	1.1
100°-110°	150.2	3.2
110°-120°	255.5	5.4
120°-130°	336.1	7.1
130°-140°	377.7	8.0
140°-150°	371.3	7.9
150°-160°	312.6	6.6
160°-170°	208.1	4.4
170°-180°	72.9	1.5
0°-30°	747.7	15.8
0°-40°	1203.3	25.5
0°-60°	2063.8	43.7
0°-90°	2585.7	54.8
90°-120°	455.9	9.7
90°-150°	1540.9	32.6
90°-180°	2134.0	45.2
0°-180°	4720.1	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	993	993	993	993	993	
5°	994	989	980	988	987	94
15°	946	942	931	938	933	267
25°	859	853	843	843	841	395
35°	743	737	726	721	717	464
45°	609	605	594	584	580	470
55°	462	460	450	441	436	414
65°	315	310	302	296	293	311
75°	166	163	160	156	154	178
85°	44	43	43	41	41	49
90°	1	7	14	17	18	5
95°	36	40	45	47	47	40
105°	136	138	143	143	144	146
115°	257	259	258	258	258	254
125°	376	378	377	375	372	336
135°	488	492	491	489	488	376
145°	592	594	596	595	592	370
155°	678	678	679	681	677	312
165°	739	737	737	740	736	208
175°	768	766	766	769	766	73
180°	770	770	770	770	770	



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CANDELA DISTRIBUTION (FULL):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
0°	992.9	992.9	992.9	992.9	992.9	992.9	992.9	992.9	992.9	992.9	992.9
2.5°	996.2	995.6	995.1	994.4	993.8	992.7	991.0	989.4	987.7	986.0	987.5
5°	993.7	992.7	991.8	990.8	989.9	988.4	986.3	984.2	982.1	980.0	981.9
7.5°	984.0	983.0	982.0	981.1	980.2	978.6	976.4	974.3	972.1	970.0	971.7
10°	975.8	974.8	973.9	972.9	972.0	970.3	967.8	965.3	962.9	960.4	962.1
12.5°	964.8	964.0	963.3	962.5	961.6	960.1	957.8	955.4	953.2	950.8	952.1
15°	945.9	945.1	944.4	943.6	942.8	941.3	938.7	936.3	933.8	931.4	932.9
17.5°	923.8	922.8	921.9	920.9	919.9	918.2	915.7	913.2	910.8	908.3	909.4
20°	907.4	906.3	905.2	904.1	902.9	901.1	898.6	896.2	893.7	891.2	892.0
22.5°	889.0	887.9	886.7	885.6	884.4	882.6	880.2	877.8	875.3	872.8	873.4
25°	858.8	857.7	856.6	855.4	854.3	852.5	849.9	847.5	845.1	842.6	842.8
27.5°	826.6	825.4	824.3	823.2	822.1	820.3	817.6	815.0	812.3	809.6	809.8
30°	803.3	802.3	801.4	800.5	799.5	797.7	795.1	792.4	789.8	787.1	787.1
32.5°	780.1	778.9	777.6	776.3	775.1	773.5	771.4	769.3	767.3	765.2	764.2
35°	742.7	741.6	740.5	739.3	738.2	736.4	733.9	731.4	729.0	726.5	725.4
37.5°	704.4	703.0	701.6	700.1	698.7	696.8	694.2	691.7	689.2	686.7	685.3
40°	677.8	676.7	675.6	674.4	673.3	671.4	668.7	666.1	663.4	660.7	659.3
42.5°	651.2	649.9	648.6	647.3	646.0	644.1	641.4	638.7	636.1	633.4	631.9
45°	608.7	607.9	607.2	606.4	605.6	604.1	601.5	599.1	596.6	594.2	591.9
47.5°	566.5	565.4	564.3	563.2	562.1	560.4	558.1	555.8	553.4	551.1	548.9
50°	537.9	536.9	535.9	535.0	534.0	532.3	529.9	527.4	524.9	522.4	520.4
52.5°	507.8	507.1	506.5	505.8	505.2	503.5	500.9	498.3	495.7	493.1	491.3
55°	461.9	461.6	461.5	461.3	461.1	459.7	457.3	454.9	452.3	449.9	447.8
57.5°	418.2	417.5	416.9	416.2	415.6	414.3	412.3	410.3	408.3	406.3	404.5
60°	386.7	386.5	386.4	386.1	386.0	384.7	382.5	380.2	377.9	375.6	373.9
62.5°	358.7	358.2	357.8	357.3	356.8	355.4	353.1	350.8	348.5	346.3	344.5
65°	315.0	314.1	313.1	312.2	311.2	309.8	307.9	306.0	304.1	302.2	300.7
67.5°	268.7	267.9	267.1	266.2	265.4	264.2	262.9	261.4	259.9	258.5	257.1
70°	240.8	239.6	238.5	237.3	236.2	235.1	233.9	232.8	231.6	230.5	229.2
72.5°	211.4	210.5	209.7	208.9	208.1	207.0	205.7	204.4	203.1	201.8	200.6
75°	166.5	165.7	164.9	164.2	163.5	162.7	162.2	161.6	161.0	160.5	159.6
77.5°	126.7	126.3	125.9	125.5	125.0	124.5	123.8	123.1	122.5	121.7	121.1
80°	100.8	100.2	99.6	99.1	98.5	98.0	97.6	97.3	96.9	96.4	96.3
82.5°	75.5	75.3	75.3	75.1	75.0	74.9	74.8	74.8	74.7	74.6	74.3
85°	44.4	44.0	43.6	43.3	42.9	42.7	42.7	42.7	42.7	42.7	42.3
87.5°	17.9	17.7	17.5	17.3	17.1	17.1	17.4	17.5	17.7	17.9	17.9
90°	0.6	2.0	3.3	4.6	6.0	7.5	9.3	11.0	12.8	14.5	15.1
92.5°	14.7	15.6	16.5	17.4	18.3	19.2	20.2	21.3	22.3	23.2	23.6
95°	35.7	36.6	37.6	38.6	39.5	40.4	41.6	42.6	43.7	44.8	45.3
97.5°	63.4	64.1	64.8	65.6	66.2	66.9	67.8	68.5	69.3	70.1	70.7
100°	82.3	83.1	83.9	84.7	85.5	86.3	86.9	87.6	88.3	88.9	89.4
102.5°	104.1	104.6	105.1	105.5	106.0	106.7	107.6	108.5	109.3	110.2	110.6
105°	136.2	136.4	136.7	137.0	137.2	137.9	139.2	140.4	141.6	142.8	142.8
107.5°	173.4	173.6	173.7	173.9	174.1	174.4	174.9	175.4	175.9	176.3	176.8
110°	196.7	197.0	197.2	197.5	197.7	198.0	198.3	198.5	198.9	199.1	199.7



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CANDELA DISTRIBUTION (continued):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
112.5°	220.9	221.0	221.2	221.4	221.5	221.6	221.7	221.8	221.8	221.8	222.5
115°	257.2	257.6	258.0	258.4	258.8	258.9	258.6	258.4	258.0	257.8	258.0
117.5°	293.8	294.0	294.2	294.6	294.8	294.8	294.4	294.1	293.8	293.3	293.3
120°	316.5	317.3	318.1	318.9	319.8	319.8	319.1	318.5	317.8	317.1	317.0
122.5°	340.2	340.8	341.4	342.0	342.6	342.7	342.3	342.0	341.7	341.3	341.0
125°	376.4	376.8	377.2	377.6	378.1	378.1	377.8	377.6	377.2	377.0	376.5
127.5°	409.8	410.7	411.6	412.4	413.3	413.5	413.3	412.9	412.6	412.4	411.6
130°	432.1	433.2	434.2	435.3	436.3	436.8	436.3	435.9	435.5	435.1	434.6
132.5°	454.4	455.4	456.5	457.5	458.7	459.0	458.8	458.4	458.1	457.9	457.2
135°	488.4	489.2	490.0	490.8	491.5	492.0	491.8	491.6	491.5	491.4	490.8
137.5°	519.8	520.5	521.1	521.9	522.5	523.0	523.3	523.7	524.1	524.4	523.8
140°	541.6	542.3	543.0	543.6	544.3	544.7	544.9	544.9	545.1	545.3	545.1
142.5°	561.5	562.1	562.8	563.5	564.1	564.6	564.8	565.1	565.3	565.6	565.4
145°	592.5	592.7	593.0	593.2	593.5	593.9	594.3	594.7	595.1	595.5	595.3
147.5°	619.5	620.0	620.5	621.0	621.5	621.9	622.3	622.6	623.1	623.5	623.5
150°	638.5	638.7	639.0	639.3	639.5	639.8	640.0	640.3	640.6	640.8	640.8
152.5°	654.0	654.3	654.7	655.1	655.4	655.7	655.8	656.0	656.2	656.3	656.6
155°	678.4	678.4	678.4	678.4	678.4	678.4	678.6	678.7	678.8	679.0	679.6
157.5°	699.2	699.0	698.9	698.7	698.5	698.5	698.6	698.7	698.9	699.0	699.5
160°	712.2	712.0	711.8	711.4	711.2	711.0	711.0	711.0	711.0	711.0	711.8
162.5°	723.9	723.5	723.1	722.8	722.4	722.3	722.4	722.4	722.6	722.7	723.3
165°	738.9	738.5	738.1	737.7	737.3	737.0	737.0	737.0	737.0	737.0	737.8
167.5°	750.9	750.3	749.8	749.3	748.7	748.5	748.6	748.7	748.9	748.9	749.7
170°	757.7	757.1	756.6	756.0	755.5	755.2	755.2	755.2	755.2	755.2	756.2
172.5°	763.0	762.5	761.9	761.3	760.8	760.5	760.5	760.5	760.5	760.5	761.4
175°	768.5	768.0	767.4	767.0	766.4	766.1	766.1	766.1	766.1	766.1	767.0
177.5°	770.9	770.4	770.0	769.6	769.2	768.9	768.9	768.9	768.9	768.9	769.6
180°	770.4	770.4	770.4	770.4	770.4	770.4	770.4	770.4	770.4	770.4	770.4



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CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
0°	992.9	992.9	992.9	992.9	992.9	992.9	992.9	992.9
2.5°	989.0	990.6	992.1	992.8	992.6	992.5	992.3	992.1
5°	983.8	985.7	987.7	988.4	988.0	987.7	987.2	986.8
7.5°	973.4	975.1	976.8	977.5	977.3	977.1	976.8	976.6
10°	963.8	965.5	967.2	967.9	967.5	967.1	966.8	966.4
12.5°	953.3	954.6	955.9	956.3	956.1	955.9	955.7	955.4
15°	934.4	935.9	937.4	937.6	936.5	935.3	934.3	933.1
17.5°	910.4	911.5	912.6	912.9	912.5	912.1	911.7	911.3
20°	892.8	893.5	894.3	894.4	893.8	893.2	892.7	892.1
22.5°	874.0	874.7	875.2	875.1	874.5	873.8	873.0	872.3
25°	842.9	843.2	843.3	843.2	842.6	842.0	841.5	840.9
27.5°	809.9	810.1	810.2	809.9	809.3	808.5	807.8	807.1
30°	787.1	787.1	787.1	786.4	785.1	783.7	782.4	781.1
32.5°	763.1	762.1	761.0	760.1	759.4	758.6	757.9	757.2
35°	724.2	723.1	721.9	720.9	719.9	719.0	718.0	717.1
37.5°	684.0	682.6	681.3	680.3	679.6	679.1	678.4	677.8
40°	657.7	656.2	654.7	653.5	652.8	652.0	651.3	650.5
42.5°	630.4	628.8	627.4	626.2	625.5	624.7	623.9	623.2
45°	589.6	587.3	585.1	583.4	582.5	581.6	580.6	579.7
47.5°	546.7	544.5	542.2	540.6	539.8	539.0	538.2	537.3
50°	518.3	516.2	514.1	512.5	511.4	510.2	509.1	507.9
52.5°	489.5	487.7	485.9	484.5	483.4	482.2	481.1	480.0
55°	445.7	443.6	441.6	440.0	439.0	438.1	437.2	436.3
57.5°	402.6	400.8	398.9	397.5	396.3	395.3	394.1	393.1
60°	372.2	370.5	368.8	367.5	366.5	365.6	364.6	363.7
62.5°	342.8	341.1	339.4	338.3	337.6	337.0	336.3	335.7
65°	299.1	297.7	296.1	295.1	294.5	293.9	293.3	292.8
67.5°	255.8	254.5	253.2	252.1	251.4	250.5	249.7	248.9
70°	227.9	226.5	225.2	224.0	223.1	222.2	221.2	220.2
72.5°	199.4	198.3	197.1	196.2	195.8	195.3	194.8	194.3
75°	158.6	157.7	156.7	156.0	155.4	154.8	154.3	153.7
77.5°	120.4	119.8	119.1	118.9	118.9	118.9	118.9	118.9
80°	96.1	95.9	95.7	95.6	95.6	95.6	95.6	95.6
82.5°	73.9	73.6	73.2	73.0	72.9	72.7	72.6	72.4
85°	41.9	41.6	41.2	41.0	41.0	41.0	41.0	41.0
87.5°	17.9	17.8	17.8	17.8	17.8	17.9	17.9	17.9
90°	15.6	16.1	16.7	17.0	17.4	17.6	17.9	18.2
92.5°	24.1	24.5	24.9	25.1	24.9	24.8	24.6	24.5
95°	45.8	46.4	47.0	47.2	47.2	47.2	47.2	47.2
97.5°	71.3	71.9	72.6	72.8	72.8	72.7	72.6	72.6
100°	89.8	90.2	90.6	90.9	91.2	91.5	91.7	92.0
102.5°	111.0	111.5	111.9	112.0	112.0	111.9	111.9	111.9
105°	142.8	142.8	142.8	142.9	143.2	143.5	143.7	144.1
107.5°	177.2	177.7	178.1	178.2	178.1	177.9	177.7	177.6
110°	200.2	200.7	201.2	201.4	201.1	200.8	200.6	200.3



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CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
112.5°	223.1	223.8	224.5	224.7	224.7	224.6	224.5	224.5
115°	258.0	258.2	258.4	258.4	258.2	258.0	258.0	257.8
117.5°	293.3	293.3	293.3	293.1	292.7	292.3	292.0	291.6
120°	316.8	316.7	316.6	316.3	316.1	315.8	315.5	315.3
122.5°	340.6	340.2	339.9	339.6	339.2	338.8	338.4	338.0
125°	375.9	375.4	374.9	374.3	373.8	373.2	372.7	372.2
127.5°	410.8	410.1	409.4	408.6	408.1	407.4	406.8	406.2
130°	434.1	433.5	432.9	432.2	431.3	430.3	429.4	428.4
132.5°	456.6	455.9	455.3	454.6	453.9	453.1	452.4	451.7
135°	490.3	489.8	489.3	488.9	488.5	488.3	488.0	487.7
137.5°	523.3	522.7	522.2	521.6	521.1	520.6	520.1	519.6
140°	544.9	544.9	544.7	544.1	543.2	542.3	541.4	540.4
142.5°	565.3	565.2	565.0	564.6	563.9	563.1	562.4	561.7
145°	595.2	595.1	594.9	594.6	594.0	593.5	593.0	592.5
147.5°	623.5	623.5	623.5	623.1	622.2	621.4	620.6	619.8
150°	640.8	640.8	640.8	640.4	639.6	638.9	638.1	637.2
152.5°	656.8	657.0	657.2	657.0	656.2	655.6	654.8	654.2
155°	680.0	680.6	681.1	680.9	680.0	679.1	678.1	677.2
157.5°	700.1	700.7	701.2	701.1	700.3	699.6	698.9	698.1
160°	712.4	713.1	713.7	713.8	713.3	712.7	712.2	711.7
162.5°	724.0	724.7	725.4	725.3	724.4	723.6	722.7	721.8
165°	738.7	739.5	740.3	740.2	739.3	738.3	737.4	736.5
167.5°	750.6	751.5	752.3	752.3	751.5	750.6	749.7	748.9
170°	757.1	758.1	759.0	759.0	758.1	757.1	756.2	755.2
172.5°	762.2	763.0	763.9	763.9	762.9	762.0	761.0	760.1
175°	767.8	768.5	769.3	769.3	768.3	767.4	766.5	765.5
177.5°	770.2	770.9	771.5	771.4	770.7	769.9	769.2	768.4
180°	770.4	770.4	770.4	770.4	770.4	770.4	770.4	770.4

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