

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: P332783-840

Luminaire Tested: **S124DIW-S795D770U840-4F0-1E-UDD-D**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P332783-840
REPORT IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-1807-864-6,
Test Lab: INNOVATION CENTER
Issue Date: 3/3/2020
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: NEO-RAY
Catalog Number: S124DIW-S795D770U840-4F0-1E-UDD-D
Description: DEFINE 4 DIRECT-INDIRECT WALL MOUNT LED LUMINAIRE
DOWNLIGHT 795 LUMENS PER FOOT, DROP SATIN WHITE DIFFUSER
UPLIGHT 770 LUMENS PER FOOT, NO LENS
Light Source: -
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 6373.0 lumens
Efficiency: N/A
Efficacy: 141.6 lumens/watt
Spacing Criteria (0/90/45): 1.23 / 1.28 / 1.39
Luminous Opening: Rectangular w/ Sides (W: 0.33' x L: 4' x H: 0.08')
CIE Type: General Diffuse

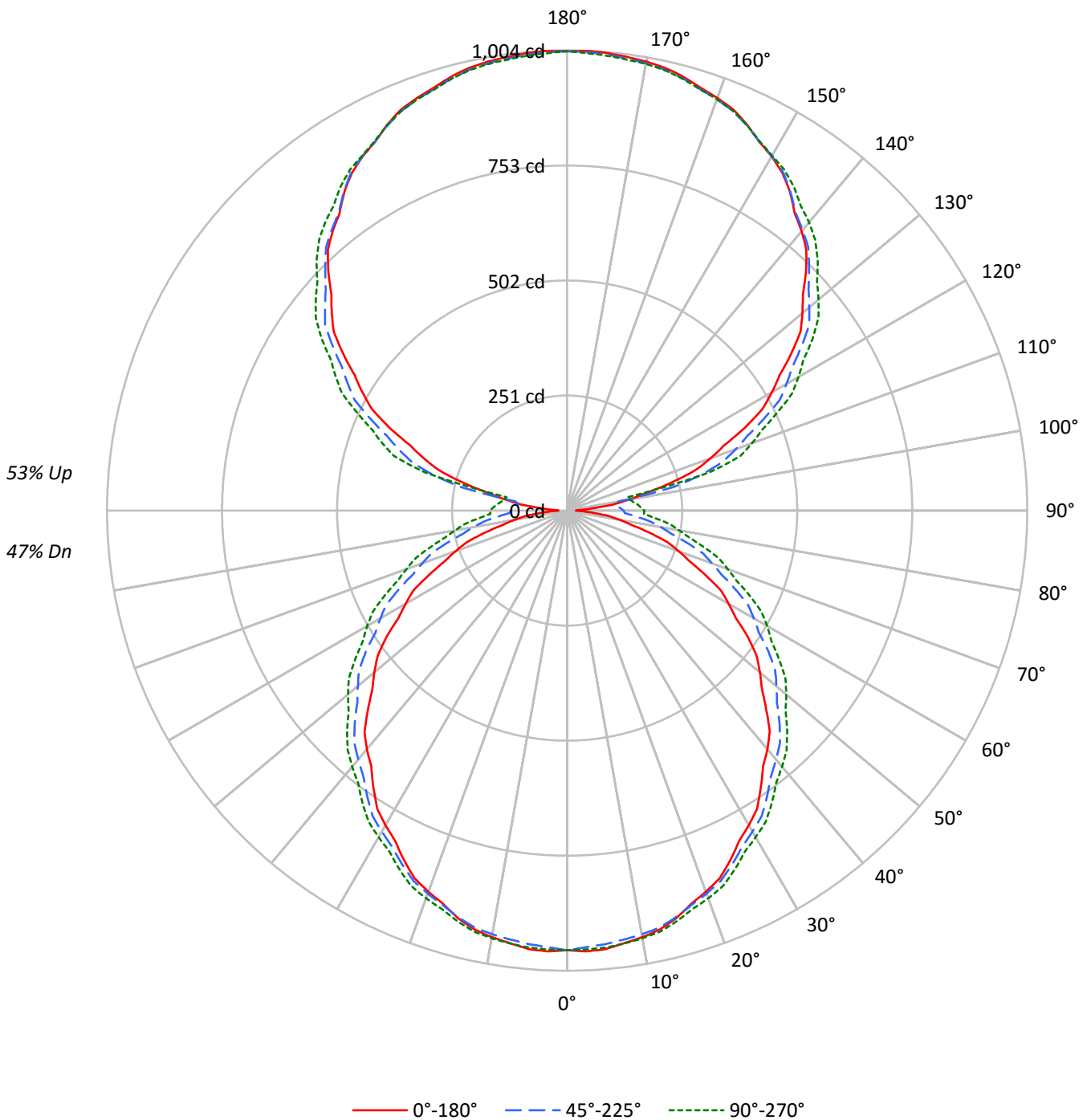
Input Watts (W): 45
Input Voltage (V): 120
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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	107	107	107	107	98	98	98	98	82	82	82	67	67	67	54	54	54	47
1	96	92	87	83	88	84	81	77	70	68	65	58	56	54	46	45	44	38
2	87	79	73	67	80	73	67	63	61	57	53	50	47	44	40	38	36	31
3	79	69	62	56	72	64	57	52	54	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	37	32	38	32	28	31	27	24	25	22	19	16
7	56	44	36	30	52	40	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	44	34	27	22	29	23	19	24	20	16	19	16	14	11
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°	7744	7744	7744
5°	7768	7569	7589
10°	7720	7444	7439
15°	7651	7301	7261
20°	7547	7143	7089
25°	7429	6965	6898
30°	7302	6789	6703
35°	7158	6609	6532
40°	7042	6436	6353
45°	6871	6278	6200
50°	6727	6095	6039
55°	6577	5924	5849
60°	6344	5704	5676
65°	6089	5468	5463
70°	5778	5200	5215
75°	5348	4904	4991
80°	4865	4620	4771
85°	4264	4369	4644



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	90.8	1.4
10°-20°	260.3	4.1
20°-30°	393.5	6.2
30°-40°	476.1	7.5
40°-50°	503.4	7.9
50°-60°	473.7	7.4
60°-70°	393.1	6.2
70°-80°	276.1	4.3
80°-90°	159.0	2.5
90°-100°	127.0	2.0
100°-110°	287.2	4.5
110°-120°	464.1	7.3
120°-130°	556.7	8.7
130°-140°	579.1	9.1
140°-150°	533.3	8.4
150°-160°	428.2	6.7
160°-170°	276.2	4.3
170°-180°	95.2	1.5
0°-30°	744.6	11.7
0°-40°	1220.8	19.2
0°-60°	2197.9	34.5
0°-90°	3026.0	47.5
90°-120°	878.3	13.8
90°-150°	2547.4	40.0
90°-180°	3347.0	52.5
0°-180°	6373.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	959	959	959	959	959	
5°	960	957	950	958	957	91
15°	921	921	918	928	927	259
25°	842	848	852	863	865	388
35°	737	750	760	775	779	461
45°	614	635	655	673	679	475
55°	481	504	536	557	564	429
65°	333	368	404	430	439	330
75°	185	225	270	299	309	196
85°	57	102	150	181	193	61
90°	19	71	123	157	168	13
95°	55	67	110	142	154	64
105°	235	262	305	336	320	247
115°	428	441	473	497	506	421
125°	596	600	624	646	654	533
135°	737	737	746	765	773	568
145°	848	849	849	856	862	530
155°	929	929	927	930	928	428
165°	980	976	976	981	975	277
175°	1002	998	998	1004	996	95
180°	1002	1002	1002	1002	1002	



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CATALOG NUMBER: S124DIW-S795D770U840-4F0-1E-UDD-D

CANDELA DISTRIBUTION (FULL):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
0°	959.3	959.3	959.3	959.3	959.3	959.3	959.3	959.3	959.3	959.3	959.3
2.5°	962.7	962.1	961.5	961.0	960.4	959.4	957.8	956.2	954.7	953.2	954.5
5°	960.3	959.6	958.9	958.2	957.5	956.2	954.5	952.9	951.2	949.6	951.5
7.5°	952.1	951.7	951.3	950.9	950.4	949.5	948.2	946.7	945.3	944.0	946.1
10°	945.2	945.0	944.8	944.5	944.3	943.6	942.4	941.2	940.0	938.8	941.0
12.5°	935.8	935.7	935.7	935.6	935.6	935.2	934.4	933.5	932.7	931.9	933.9
15°	920.6	920.8	921.0	921.3	921.5	921.3	920.6	919.9	919.1	918.4	920.6
17.5°	899.7	900.4	901.1	901.9	902.6	902.8	902.7	902.6	902.4	902.3	904.5
20°	885.1	885.9	886.6	887.3	888.0	888.5	888.7	888.9	889.2	889.4	891.8
22.5°	868.8	869.7	870.6	871.5	872.4	873.1	873.5	873.9	874.3	874.8	877.2
25°	842.1	843.5	845.1	846.5	847.9	849.0	849.7	850.4	851.1	851.8	854.4
27.5°	812.5	814.6	816.7	818.8	820.9	822.5	823.6	824.7	825.8	826.9	829.3
30°	792.7	794.7	796.6	798.5	800.4	802.1	803.9	805.5	807.2	808.8	811.4
32.5°	771.2	773.6	775.9	778.1	780.4	782.4	784.4	786.2	788.1	789.9	792.9
35°	736.9	739.7	742.7	745.5	748.3	750.9	753.4	755.8	758.1	760.5	763.9
37.5°	702.3	705.6	708.9	712.2	715.5	718.6	721.5	724.5	727.5	730.4	733.9
40°	679.9	683.1	686.1	689.2	692.4	695.6	698.9	702.3	705.6	708.9	712.6
42.5°	654.2	657.6	661.2	664.6	668.1	671.8	675.7	679.6	683.6	687.4	691.5
45°	614.4	618.9	623.5	628.0	632.6	637.1	641.7	646.2	650.7	655.2	659.3
47.5°	576.4	581.1	585.7	590.5	595.1	600.1	605.3	610.6	615.8	621.1	625.3
50°	548.9	554.1	559.4	564.6	569.9	575.1	580.4	585.6	590.9	596.1	601.0
52.5°	521.4	526.6	531.9	537.1	542.4	548.1	554.0	560.1	566.1	572.1	576.8
55°	481.2	486.3	491.3	496.2	501.3	507.4	514.5	521.7	528.9	536.0	540.8
57.5°	436.4	442.5	448.8	454.9	461.1	467.8	474.9	482.0	489.2	496.2	501.9
60°	407.1	413.3	419.5	425.8	431.9	439.0	446.9	454.7	462.6	470.5	475.9
62.5°	378.7	385.6	392.3	399.1	405.9	413.2	421.1	429.0	436.9	444.7	450.2
65°	333.0	340.6	348.3	355.9	363.6	371.4	379.5	387.7	395.8	403.8	409.8
67.5°	288.9	297.1	305.2	313.3	321.4	329.8	338.5	347.2	355.9	364.6	370.6
70°	258.8	267.0	275.1	283.3	291.3	299.9	309.0	318.1	327.1	336.2	342.6
72.5°	229.6	237.9	246.3	254.6	262.9	271.9	281.6	291.1	300.8	310.4	316.7
75°	184.8	193.6	202.4	211.3	220.0	229.5	239.5	249.5	259.6	269.6	276.3
77.5°	142.9	152.2	161.6	171.0	180.3	190.3	200.8	211.3	221.8	232.3	239.0
80°	117.0	126.6	136.1	145.7	155.3	165.3	175.8	186.3	196.8	207.3	214.5
82.5°	91.3	101.2	111.2	121.1	131.0	141.3	151.8	162.3	172.8	183.3	190.6
85°	57.0	67.0	77.0	87.1	97.0	107.4	118.2	128.9	139.7	150.4	157.5
87.5°	32.2	42.3	52.4	62.6	72.7	83.1	93.8	104.5	115.2	125.9	133.1
90°	19.4	30.8	42.2	53.6	64.9	76.4	88.1	99.7	111.2	122.8	130.8
92.5°	25.8	34.4	43.1	51.8	60.6	70.7	82.3	93.9	105.5	117.0	124.8
95°	55.2	57.4	59.6	61.8	64.0	70.1	80.1	90.1	100.0	110.0	117.3
97.5°	100.3	110.6	120.9	131.2	141.5	142.2	133.3	124.4	115.5	106.5	112.9
100°	134.7	144.0	153.2	162.4	171.6	169.4	155.6	142.0	128.3	114.6	118.3
102.5°	174.3	182.0	189.7	197.2	204.9	211.8	217.9	224.0	230.1	236.2	212.0
105°	235.3	241.1	246.8	252.7	258.4	266.1	275.8	285.5	295.1	304.8	312.3
107.5°	293.7	298.1	302.6	306.9	311.3	318.3	327.8	337.3	346.8	356.3	362.8
110°	332.4	336.3	340.1	344.0	347.8	354.4	363.8	373.1	382.4	391.8	397.6



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CANDELA DISTRIBUTION (continued):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
112.5°	369.9	373.9	377.7	381.5	385.4	391.5	400.0	408.4	416.9	425.3	430.5
115°	427.7	430.4	433.0	435.7	438.3	443.3	450.8	458.3	465.7	473.2	478.9
117.5°	480.7	482.7	484.6	486.6	488.6	493.3	500.8	508.3	515.7	523.2	528.1
120°	515.8	517.3	518.7	520.0	521.4	525.4	532.2	539.0	545.7	552.5	557.5
122.5°	549.5	550.0	550.5	551.1	551.6	555.2	562.1	568.9	575.6	582.4	587.3
125°	596.5	596.9	597.3	597.7	598.2	601.3	606.8	612.5	618.1	623.8	628.8
127.5°	641.9	641.8	641.7	641.7	641.6	644.2	649.5	654.9	660.2	665.6	669.8
130°	670.3	670.3	670.2	670.1	670.0	672.2	676.5	680.9	685.2	689.5	694.0
132.5°	697.3	697.4	697.5	697.5	697.6	699.4	703.2	706.9	710.5	714.3	718.5
135°	736.8	736.6	736.4	736.3	736.1	737.2	739.5	741.8	744.2	746.5	750.7
137.5°	772.5	772.4	772.2	772.0	771.9	772.5	774.2	775.7	777.2	778.8	782.6
140°	796.0	796.1	796.2	796.3	796.4	796.7	797.3	797.8	798.4	799.0	802.5
142.5°	816.1	816.7	817.2	817.8	818.3	818.6	818.7	818.7	818.8	818.9	821.9
145°	848.1	848.4	848.7	848.9	849.2	849.3	849.3	849.3	849.3	849.3	850.9
147.5°	873.7	874.4	875.1	875.9	876.6	876.8	876.7	876.5	876.3	876.2	876.5
150°	892.3	892.8	893.2	893.6	894.0	894.2	894.0	893.8	893.7	893.5	893.5
152.5°	907.1	907.6	908.1	908.6	909.1	909.1	908.8	908.6	908.3	908.0	908.2
155°	928.8	929.0	929.1	929.3	929.5	929.3	928.8	928.3	927.8	927.3	928.0
157.5°	947.3	947.2	947.1	947.0	946.8	946.4	945.9	945.3	944.7	944.2	945.0
160°	958.0	957.5	957.0	956.5	956.0	955.6	955.5	955.3	955.1	955.0	956.0
162.5°	967.6	966.9	966.3	965.7	965.0	964.6	964.5	964.3	964.1	964.0	965.0
165°	979.8	978.9	978.1	977.2	976.4	976.0	976.0	976.0	976.0	976.0	977.3
167.5°	989.4	988.5	987.6	986.7	985.8	985.4	985.3	985.2	985.1	985.0	986.4
170°	994.7	993.7	992.7	991.7	990.8	990.3	990.5	990.7	990.8	991.0	992.3
172.5°	998.4	997.3	996.3	995.3	994.3	993.9	994.1	994.2	994.4	994.6	995.9
175°	1002.2	1001.2	1000.3	999.3	998.3	997.8	997.9	998.2	998.4	998.5	1000.0
177.5°	1004.0	1003.1	1002.2	1001.2	1000.3	1000.0	1000.3	1000.5	1000.8	1001.0	1002.1
180°	1002.2	1002.2	1002.2	1002.2	1002.2	1002.2	1002.2	1002.2	1002.2	1002.2	1002.2



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CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
0°	959.3	959.3	959.3	959.3	959.3	959.3	959.3	959.3
2.5°	955.8	957.3	958.6	959.2	959.0	958.8	958.6	958.4
5°	953.4	955.3	957.2	958.1	957.8	957.6	957.4	957.0
7.5°	948.3	950.4	952.6	953.5	953.3	953.0	952.8	952.6
10°	943.1	945.2	947.5	948.4	948.2	947.9	947.7	947.5
12.5°	935.8	937.9	939.8	940.7	940.7	940.6	940.6	940.5
15°	922.7	924.8	927.0	928.0	927.8	927.5	927.3	927.0
17.5°	906.7	908.9	911.1	912.1	911.9	911.7	911.5	911.3
20°	894.1	896.6	899.0	900.2	900.2	900.2	900.2	900.2
22.5°	879.6	881.9	884.3	885.8	886.2	886.5	886.9	887.3
25°	857.1	859.7	862.3	863.7	863.9	864.2	864.4	864.7
27.5°	831.7	834.1	836.7	838.0	838.3	838.6	838.9	839.1
30°	814.1	816.7	819.3	820.9	821.4	821.8	822.3	822.8
32.5°	796.0	799.0	801.9	803.8	804.2	804.7	805.2	805.7
35°	767.2	770.5	773.9	775.9	776.6	777.3	778.1	778.8
37.5°	737.2	740.6	744.0	746.1	746.8	747.6	748.3	749.1
40°	716.1	719.7	723.3	725.5	726.5	727.4	728.4	729.3
42.5°	695.4	699.3	703.3	705.7	706.4	707.2	708.0	708.7
45°	663.4	667.4	671.5	674.1	675.3	676.5	677.7	678.8
47.5°	629.4	633.7	637.9	640.7	642.2	643.6	645.0	646.4
50°	605.7	610.5	615.2	618.3	619.8	621.3	622.7	624.1
52.5°	581.7	586.4	591.2	594.3	595.7	597.1	598.5	600.1
55°	545.5	550.4	555.1	558.3	559.7	561.1	562.5	563.9
57.5°	507.7	513.3	519.0	522.5	523.8	525.1	526.5	527.9
60°	481.5	487.0	492.4	496.1	498.1	500.0	501.9	503.8
62.5°	455.7	461.2	466.7	470.4	472.3	474.2	476.1	478.0
65°	415.9	421.8	427.8	431.7	433.6	435.6	437.4	439.3
67.5°	376.7	382.7	388.8	392.7	394.7	396.5	398.4	400.2
70°	349.1	355.6	362.0	366.1	367.7	369.4	371.0	372.7
72.5°	323.0	329.2	335.5	339.5	341.3	343.3	345.1	347.0
75°	283.0	289.6	296.4	300.7	303.0	305.1	307.2	309.3
77.5°	245.8	252.6	259.3	263.9	266.2	268.4	270.7	273.1
80°	221.7	228.8	236.0	240.4	242.4	244.3	246.2	248.1
82.5°	197.9	205.3	212.7	217.4	219.4	221.6	223.7	225.8
85°	164.7	171.9	179.0	183.8	186.2	188.5	191.0	193.4
87.5°	140.2	147.3	154.4	159.1	161.3	163.4	165.6	167.7
90°	138.7	146.6	154.5	159.6	161.9	164.1	166.3	168.5
92.5°	132.5	140.3	148.0	152.9	154.8	156.8	158.8	160.8
95°	124.8	132.3	139.8	144.6	146.9	149.3	151.6	153.9
97.5°	119.3	125.6	132.0	136.3	138.6	140.7	142.9	145.1
100°	121.9	125.4	129.1	131.8	133.6	135.4	137.3	139.2
102.5°	187.6	163.4	139.1	127.8	129.8	131.7	133.6	135.4
105°	319.7	327.2	334.7	336.3	332.2	328.1	324.1	320.0
107.5°	369.5	376.1	382.6	387.2	389.5	391.8	394.3	396.6
110°	403.4	409.3	415.1	419.2	421.6	424.0	426.5	428.9



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CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
112.5°	435.8	441.0	446.3	450.1	452.6	455.1	457.8	460.3
115°	484.4	490.0	495.6	499.3	500.9	502.6	504.2	505.9
117.5°	533.0	537.9	542.8	546.1	548.0	549.9	551.7	553.5
120°	562.7	567.8	572.9	576.2	577.8	579.4	581.0	582.6
122.5°	592.3	597.2	602.3	605.4	606.8	608.2	609.6	611.0
125°	633.8	638.8	643.9	647.2	648.8	650.5	652.1	653.6
127.5°	674.0	678.2	682.4	685.2	686.7	688.2	689.7	691.2
130°	698.4	702.9	707.3	710.2	711.8	713.2	714.6	716.0
132.5°	722.8	727.0	731.3	734.1	735.4	736.7	738.0	739.3
135°	754.9	759.0	763.2	766.1	767.9	769.6	771.4	773.2
137.5°	786.5	790.3	794.2	796.7	797.8	798.8	799.9	801.0
140°	806.2	809.8	813.3	815.9	817.3	818.6	819.9	821.3
142.5°	825.1	828.1	831.2	833.2	834.4	835.4	836.4	837.4
145°	852.5	854.1	855.7	857.2	858.4	859.7	861.0	862.3
147.5°	876.8	877.1	877.5	878.1	879.0	879.9	880.9	881.8
150°	893.5	893.5	893.5	893.6	893.8	893.9	894.1	894.2
152.5°	908.5	908.7	909.0	909.1	909.0	908.9	908.8	908.7
155°	928.6	929.3	929.9	930.0	929.5	929.0	928.5	928.1
157.5°	945.9	946.8	947.7	947.7	946.8	945.9	945.0	944.2
160°	957.0	958.0	959.0	959.0	958.0	957.0	956.0	955.0
162.5°	966.0	966.9	968.0	968.0	966.8	965.6	964.5	963.4
165°	978.7	980.0	981.3	981.3	979.8	978.3	976.7	975.2
167.5°	988.0	989.4	990.9	990.8	989.1	987.4	985.7	984.1
170°	993.6	995.0	996.3	996.1	994.5	992.8	991.2	989.5
172.5°	997.2	998.6	999.9	999.7	997.8	996.1	994.3	992.5
175°	1001.5	1003.0	1004.5	1004.2	1002.2	1000.3	998.3	996.2
177.5°	1003.2	1004.2	1005.3	1005.0	1003.4	1001.8	1000.3	998.7
180°	1002.2	1002.2	1002.2	1002.2	1002.2	1002.2	1002.2	1002.2

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