

Comprehensive Technical Exhibit

KKML (FM) FID # 173,617 FAMILY LIFE EDUCATIONAL FOUNDATION Minden, Louisiana

KKML received a permit on March 25, 2010. The current license BLED-20130227AHV was granted March 8, 2013. While operating licensed facilities, interference was observed with a Wireless Internet Service Provider, another user of the tower. KKML (FM) sought and has renewed various Special Temporary Authorizations including the most recent BESTA-20160222AAA to continue to provide service to the area at reduced power. Grant of this CP will eliminate need for ongoing renewals of that STA.

KKML (FM) is licensed to operate on FM Channel 215 (90.9 MHz) with 280 watts E.R.P. with an antenna 73.2 meters C/R above ground level. This application asks permission to raise the antenna to 89 meters above ground level, HAAT to 104.3 meters and for a power reduction to 210 watts to maintain approximately the same coverage service. KKML (FM) uses an existing tower with ASR # 123,9813.

The second condition of the original grant (Chart #1) says that no coverage reduction was allowable in the first four years of operation. The changes in this application are basically offsetting: Greater height, lower power: populations and areas coverage are very similar. Because of quirks in the way coverage curves are calculated, coverage slightly increased in some directions and decreased slightly in others. Adjusting power to just below where overlap began improved coverage and population covered by 2%.

The licensed area within the 60dbu contour is 396.9 square kilometers. The proposed coverage is 2 percent larger at 405.1 square kilometers. Thus the new coverage area is 102% of that in the 2013 license. Population covered rises from 20,706 to 21,138 which is also 2% more. This is shown graphically in Table #2.

The directional antenna is the same as currently licensed. KKML (FM) plans to install the current antenna at the new height and to make certain the cross section of the tower and it's cables, conduits, hardware, etc. will present the same environment as at present. If necessary, we will install dummy sections of line or conduit along the antenna to match current values as recommended by the antenna manufacturer. These will be flagged on the tower so that other users will realize the significance of the aperture near the antenna. The Directional Antenna pattern (Table #3) complies with the Commission's Rules (doesn't exceed 2 dB per 10 degrees azimuth; front-to-back ratio of the pattern doesn't exceed 15 dB.)

Other Conditions from License

Applicant Acknowledges the existing special conditions. KKML (FM) will continue as satellite of KFLO-FM.

Environmental

The proposed facility would not constitute a significant environmental impact, and is exempt from environmental processing. The proposed facility would utilize an existing structure at a greater height and lower power than at present. The tower is registered with the Commission. The proposed greater height and lower power will reduce RF exposure at the site. KKML will utilize the same one bay antenna but at a greater height. The Commission's FM Model utility calculates a predicted power density of 0.3388 uw/cm2 at 96 meters from the tower base. This is much less than the permissible uncontrolled environment limit. This is shown on Table #4. Existing fences and signage will be maintained.

ALLOCATIONS

ComStudy 2.2 search of channel 215 (90.9 MHz Class A) at 32-31-55.0 N, 93-16-12.0 W.

CALL	CITY	ST	CHN CL	DIST	SEP	BRNG	CLEARANCE
KKML	MINDEN	LA	215 A	0.00	115.00	90.0	-20.60 dB
(Of No consequence: Station in instant application)							

W06DD	NATCHEZ	MS	6 TV	206.42	0.00	120.2	0.0
KXKW-LP	LAFAYETTE	LA	6 TV	272.74	0.00	152.7	0.0
KIPS-LD	BEAUMONT	TX	6 TV	277.92	0.00	197.0	0.0
K22GT	LAKE CHARLES	LA	6 TV	256.24	0.00	180.9	0.0
WJMF-LP	JACKSON	MS	6 TV	281.34	0.00	95.0	0.0

All Stations are cleared by 0.03 kilometers or more

KBSA	EL DORADO	AR	215 C3	97.70	142.00	32.6	0.03 dB
KSWP	LUFKIN	TX	215 C1	183.17	200.00	225.5	0.57 dB
KGRM	GRAMBLING	LA	218 C2	51.32	55.00	91.9	0.61 dB
KLSA	ALEXANDRIA	LA	214 C0	127.05	152.00	147.4	0.61 dB
KIPS-LD	BEAUMONT	TX	6 TV	277.92	0.00	197.0	0.0
KXUL	MONROE	LA	216 C2	120.90	106.00	82.8	13.98 dB
KTAA	BIG SANDY	TX	214 C1	152.99	133.00	274.5	14.60 dB
WMAO-FM	GREENWOOD	MS	215 C1	271.70	200.00	69.0	15.69 dB
KSCL	SHREVEPORT	LA	217 A	43.68	31.00	262.6	17.06 dB
KEDM	MONROE	LA	212 C1	120.90	75.00	82.8	19.59 dB
KNLL	NASHVILLE	AR	213 C1	111.70	75.00	345.1	23.44 dB
KXUL	MONROE	LA	216 A	112.49	72.00	90.0	23.19 dB
KANX	SHERIDAN	AR	216 C2	207.99	106.00	20.0	24.99 dB
KBWC	MARSHALL	TX	216 A	103.78	72.00	270.6	30.65 dB
KIKL	LAFAYETTE	LA	215 C3	274.14	142.00	155.1	31.03 dB
KLFH	FORT SMITH	AR	214 C0	294.53	152.00	352.8	33.91 dB
KLFH	FORT SMITH	AR	214 C0	294.53	152.00	352.8	33.91 dB
KXRT	IDABEL	OK	215 A	209.18	115.00	316.7	33.43 dB
KGWP	PITTSBURG	TX	216 A	161.83	72.00	287.7	34.52 dB
KTXK	TEXARKANA	TX	218 C1	132.01	75.00	316.7	37.87 dB
KNFR	GRAVEL RIDGE	AR	215 A	295.92	115.00	21.6	39.99 dB
WJVI	WILSON	LA	215 A	270.13	115.00	130.3	39.79 dB

Table #1

Special Operating Conditions from BLED-20130227AHV

Special operating conditions or restrictions:

- 1 The permittee/licensee in coordination with other users of the site must reduce power or cease operation as necessary to protect persons having access to the site, tower or antenna from radiofrequency electromagnetic fields in excess of FCC guidelines.
- 2 Pursuant to 47 CFR Sections 73.7002(c) and 73.7005(b) the permittee/licensee is required to construct and operate for a period of four years of on-air operations technical facilities substantially as proposed and shall not downgrade service to the area on which the preference was based.

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Callsign: KKML

License No.: BLED-20130227AHV

Special operating conditions or restrictions:

- 3 Pursuant to 47 CFR Section 73.7005(a) the permittee/licensee shall be subject to a holding period. From the grant of the construction permit and continuing until the facility has achieved four years of on-air operations, the permittee/licensee proposing to assign or transfer the construction permit/license to another party will be required to demonstrate the following two factors: that the proposed buyer would qualify for at least the same number of points as the assignor or transferor originally received; and that consideration received and/or promised does not exceed the assignor's or transferor's legitimate and prudent expenses as defined therein.
- 4 Family Life Educational Foundation requests waiver of 47. C.F.R. Section 73.1125 to operate the proposed facility as "satellite" of co-owned noncommercial educational FM station KFLO-FM, Blanchard, Louisiana (Facility ID No.: 84100). Based upon the specific representations contained therein, the waiver request IS GRANTED, Family Life Educational Foundation shall abide by each representation proffered in the waiver request
- 5 The relative field strength of neither the measured horizontally nor vertically polarized radiation component shall exceed at any azimuth the value indicated on the composite radiation pattern authorized by construction permit BNPED-20071015AFG.

Table #2

Current Coverage in Red, Proposed in Green
Slight (2%) increase in overall area
Slight (2%) increase in population covered

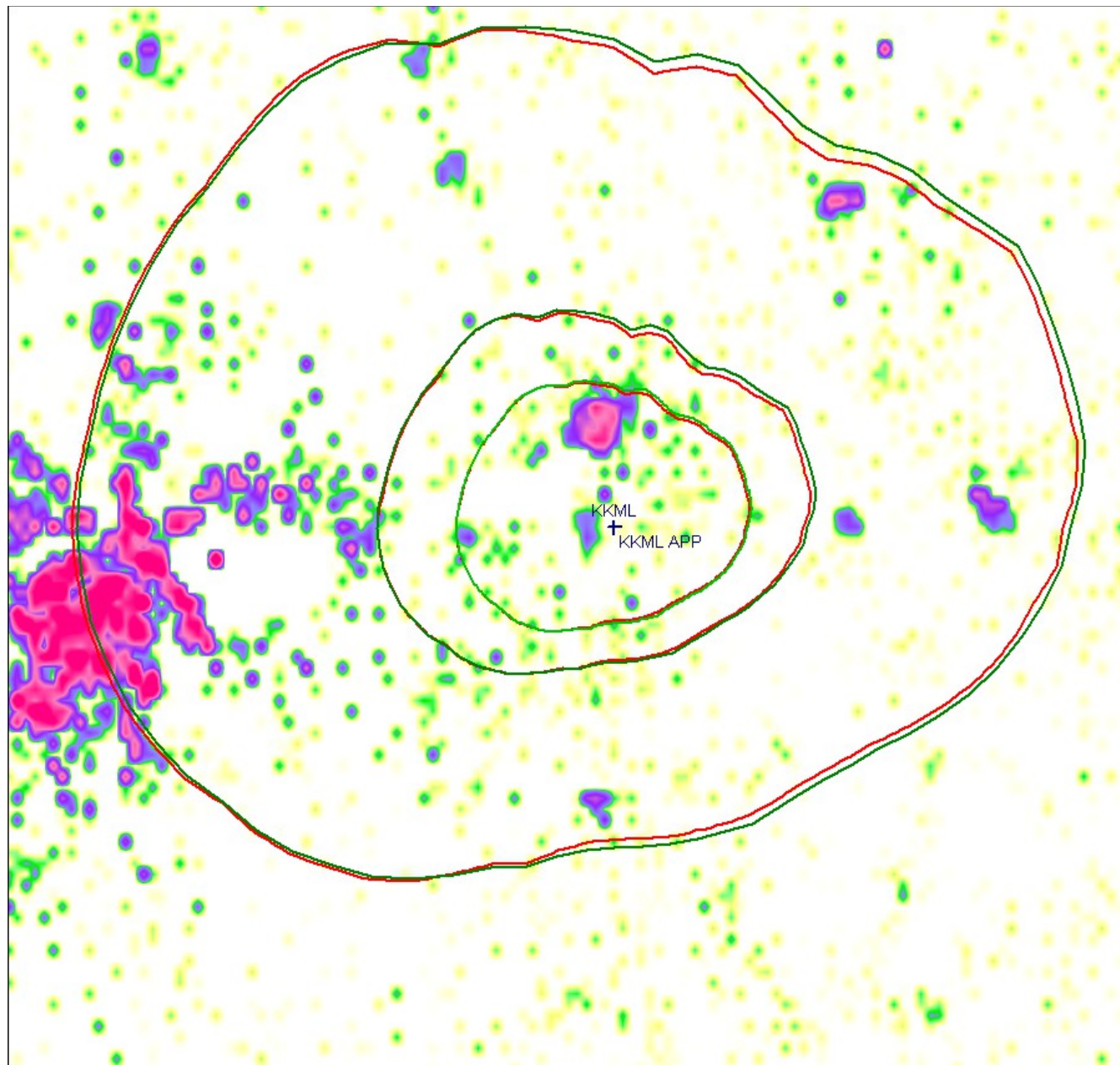


Table #3

Proposed KKML (FM) Directional Antenna Pattern
(same as presently licensed; to be installed higher on a section with same tower members, brackets, lines and conduits)

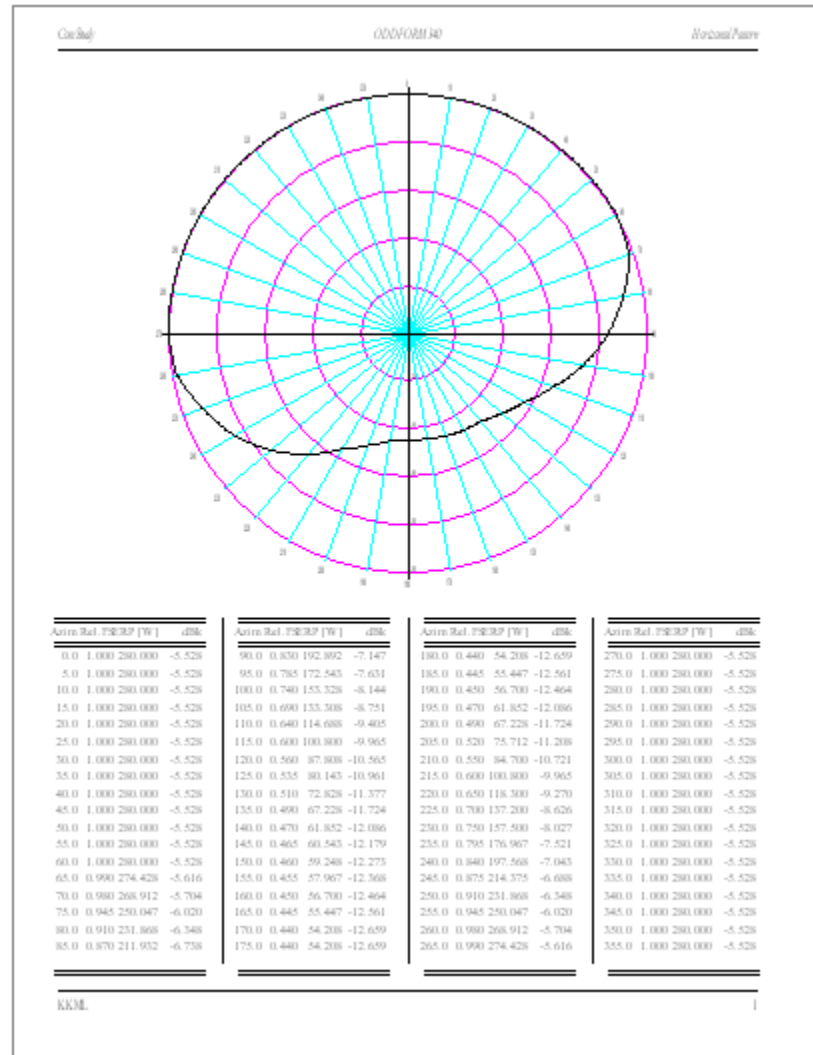
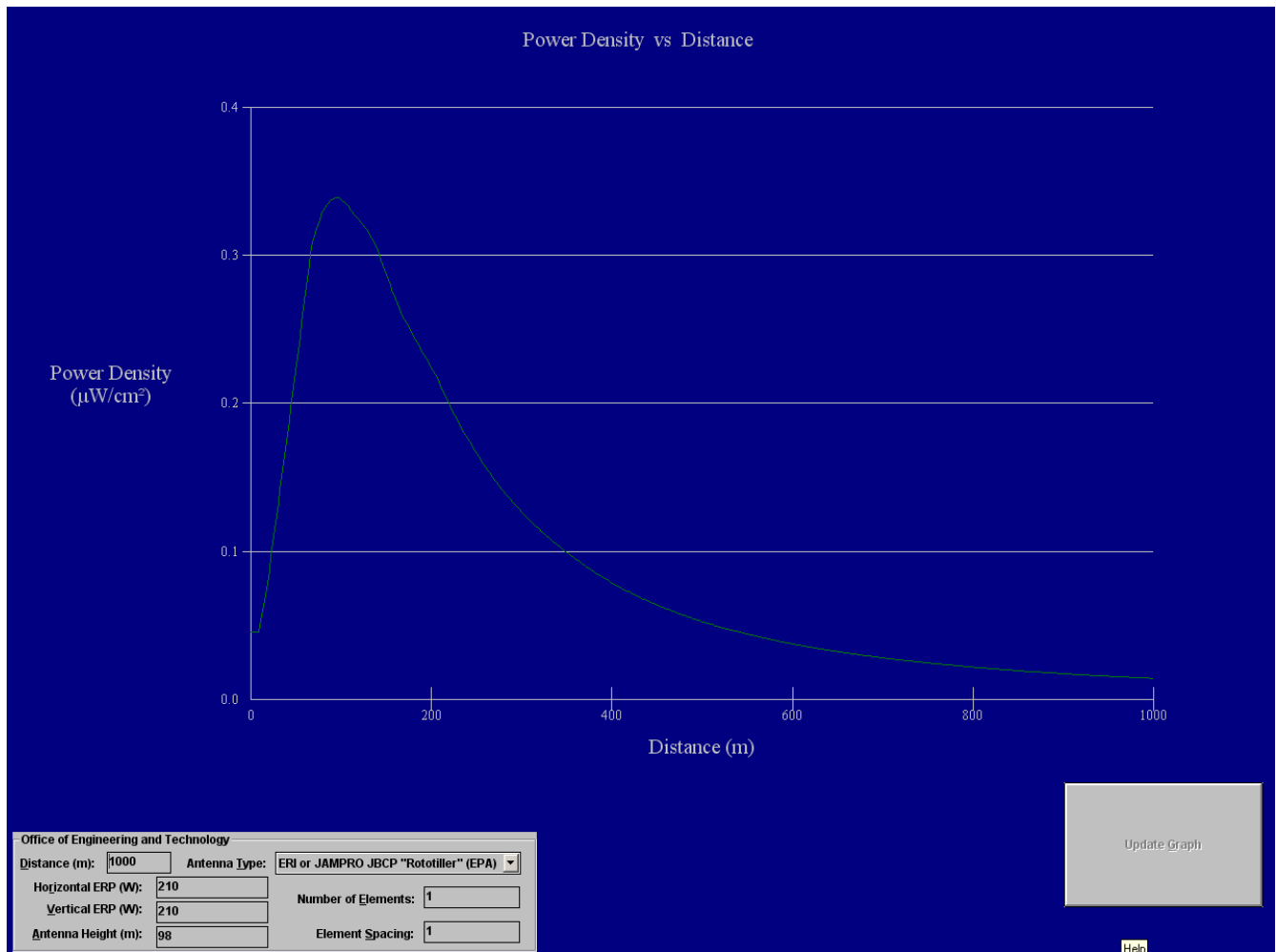


Chart #4

FCC FM RFR Model (FMM)



Maximum Value of Graph.

The Max Power Density was found to be .33877100405338 $\mu\text{W}/\text{cm}^2$ at 96 meters.

Note: Graph resolution is 500 points.

OK

Distance (meters) = 1000
Horizontal ERP (W) = 210
Vertical ERP (W) = 210
Antenna Height (m) = 98
Antenna Type = 3 "ERI or Jampro Rototiller"
Number of Elements = 1
Element Spacing = 1
Y-axis (Linear) = -1
X-axis Setup = 0, 500

X (meters) Y ($\mu\text{W}/\text{cm}^2$)

0	4.56747889225455E-02
2	.045654973395898
4	4.55956298429571E-02
6	.04549706600845
8	4.53597903782521E-02
10	5.03016021059449E-02
12	5.67836183320544E-02
14	6.35343974600132E-02
16	7.05199917278136E-02
18	7.84091878266884E-02
20	.087191248535439
22	9.62461809859539E-02
24	.105523616461226
26	.114880876798497
28	.123765081736344
30	.132687538794243
32	.141605539950802
34	.150478159192399
36	.159703197939729
38	.169208167581993
40	.178570859668323
42	.187755500528227
44	.196729452280461
46	.206437496042752
48	.216502117551313
50	.226292469620779
52	.235779998163705
54	.244939939541554
56	.254273337711914
58	.264533944043155
60	.274404058803038
62	.283865217697157
64	.292902725124261
66	.301505414625965
68	.30839870191743
70	.312907813432113
72	.317037534504945

74	.320795451309234	
76	.324190292146227	
78	.327231756734754	
80	.329930356070928	
82	.332088354411942	
84	.333860301204888	
86	.335339946767879	
88	.336539085726069	
90	.337469693859741	
92	.338143838885852	
94	.338573601199265	
96	.33877100405338	Largest Computed Value 0.1694 % of public limit
98	.33814265703177	
100	.337333701896371	
102	.336354951647909	
104	.335216931274896	
106	.333929853831968	
108	.332503601569735	
110	.330947711592722	
112	.329271365550055	
114	.327483382894098	
116	.32619887270991	
118	.324945734291322	
120	.323573425546474	
122	.32209008656622	
124	.320503532112531	
126	.318821250925035	
128	.317050407041009	
130	.315197842841261	
132	.313270083561831	
134	.311273343037392	
136	.309213530466526	
138	.306533510017179	
140	.303156160633841	
142	.299792610117058	
144	.296445046823418	
146	.293115487276413	
148	.28980578500697	
150	.286517639173132	
152	.283252602934516	
154	.280012091562603	
156	.276797390272605	
158	.273609661766807	
160	.270449953482802	
162	.267319204543105	
164	.264218252405239	
166	.261147839213591	
168	.258820131997816	
170	.256603337347643	

172	.25438244795175
174	.25215934580006
176	.249935791782303
178	.247713431649658
180	.245493801774781
182	.243278334706443
184	.241068364516808
186	.238865131940946
188	.236669789309479
190	.234483405276364
192	.232306969344763
194	.230141396194704
196	.227987529816861
198	.22584614745732
200	.223717963378539
202	.221603632442076
204	.219503753518827
206	.217373216630508
208	.21460295032335
210	.21187829847104
212	.209198503377085
214	.206562811914178
216	.203970476277361
218	.2014207546608
220	.198912911863822
222	.196446219831527
224	.194019958134908
226	.191633414395105
228	.189285884656094
230	.186976673709834
232	.184705095377599
234	.18247047275099
236	.180272138395867
238	.17810943452221
240	.175981713122722
242	.173888336082775
244	.171828675264125
246	.169802112564636
248	.167808039956103
250	.16584585950212
252	.163914983357761
254	.162014833752762
256	.160144842959734
258	.158304453248826
260	.156493116830165
262	.154710295785291
264	.152962505798647
266	.151292004539045
268	.149646191611038

270	.148024655361224
272	.146426989911531
274	.144852795207731
276	.143301677055435
278	.141773247144594
280	.140267123063482
282	.138782928303035
284	.137320292252389
286	.13587885018639
288	.13445824324578
290	.133058118410736
292	.131678128468369
294	.130317931974769
296	.128977193212108
298	.127655582141314
300	.126352774350756
302	.125068451001367
304	.123802298768598
306	.122554009781567
308	.121323281559728
310	.120109816947376
312	.118913324046273
314	.117733516146656
316	.11657011165687
318	.115422834031848
320	.114291411700652
322	.113175577993253
324	.112075071066729
326	.110989633831045
328	.109919013874554
330	.108862963389356
332	.10782123909664
334	.106793602172121
336	.105779818171662
338	.104779656957196
340	.103792892623013
342	.102819303422497
344	.101858671695377
346	.100910783795566
348	9.99754300196262E-02
350	9.90524045359253E-02
352	9.81415053145225E-02
354	9.72425340578231E-02
356	9.63552961320395E-02
358	9.54796004994872E-02
360	9.45641139389057E-02
362	9.36532276302754E-02
364	9.27550525103126E-02
366	9.18693612258179E-02

368	9.09959312724391E-02
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372	.089284988888002
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404	7.71433811710952E-02
406	7.64663090367539E-02
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412	7.44865397786824E-02
414	7.38432967560504E-02
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494	5.35799090793634E-02
496	5.31834706893118E-02
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502	5.20198147867686E-02
504	5.16402813458017E-02
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516	4.94467461438269E-02
518	4.90945889526469E-02
520	4.87461286878328E-02
522	4.84013145557635E-02
524	4.80600966177421E-02
526	4.77224257731101E-02
528	.047388253742742
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536	4.60856160414625E-02
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552	4.36449359671462E-02
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556	4.30675283869922E-02
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560	4.25013624779782E-02
562	4.22224054069795E-02

564	4.19461521878264E-02
566	4.16725684531443E-02
568	.041401620371846
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572	4.08674984676272E-02
574	4.06042595763952E-02
576	4.03435261832472E-02
578	4.00852669949191E-02
580	3.98294511983663E-02
582	3.95760484520866E-02
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598	3.76322043483207E-02
600	3.73992274197042E-02
602	3.71683842750762E-02
604	3.69396492355982E-02
606	3.67129970027065E-02
608	3.64884026514694E-02
610	3.62658416240766E-02
612	.036045289723459
614	3.58267231070353E-02
616	.035610118280583
618	3.53954520922299E-02
620	3.51827017265656E-02
622	.034971844698868
624	3.47628588494437E-02
626	3.45557223380795E-02
628	3.43504136386025E-02
630	3.41469115335458E-02
632	.033945195108919
634	3.37452437490796E-02
636	3.35470371317041E-02
638	3.33505552228561E-02
640	3.31557782721497E-02
642	3.29626868080059E-02
644	3.27712616330005E-02
646	3.25814838192998E-02
648	3.23933347041852E-02
650	3.22067958856618E-02
652	3.20218492181511E-02
654	3.18384768082652E-02
656	3.16566610106612E-02
658	3.14763844239732E-02
660	3.12976298868223E-02

662	3.11203804738995E-02
664	3.09446194921243E-02
666	3.07703304768732E-02
668	3.05974971882802E-02
670	3.04261036076044E-02
672	.030256133933667
674	3.00875725793526E-02
676	2.99204041681762E-02
678	2.97546135309133E-02
680	2.95901857022914E-02
682	2.94271059177432E-02
684	2.92653596102187E-02
686	2.91049324070552E-02
688	2.89458101269052E-02
690	2.87879787767192E-02
692	2.86314245487845E-02
694	2.84761338178157E-02
696	.0283220931381
698	.028169289240692
700	2.80177090306599E-02
702	2.78673395843813E-02
704	2.77181681468862E-02
706	2.75701821292489E-02
708	2.74233691060251E-02
710	2.72777168127354E-02
712	2.71332131433933E-02
714	2.69898461480759E-02
716	2.68476040305392E-02
718	2.67064751458737E-02
720	2.65664479982027E-02
722	2.64275112384194E-02
724	.026289653661965
726	2.61528642066446E-02
728	2.60171319504812E-02
730	.025882446109608
732	2.57487960361956E-02
734	2.56161712164163E-02
736	2.54845612684432E-02
738	2.53539559404831E-02
740	2.52243451088443E-02
742	2.50957187760368E-02
744	2.49680670689046E-02
746	2.48413802367913E-02
748	2.47156486497349E-02
750	2.45908627966955E-02
752	2.44670132838107E-02
754	2.43440908326828E-02
756	2.42220862786928E-02
758	2.41009905693446E-02

760	2.39807947626354E-02
762	2.38614900254549E-02
764	2.37430676320099E-02
766	2.36255189622762E-02
768	2.35088355004761E-02
770	2.33930088335802E-02
772	2.32780306498359E-02
774	2.31638927373183E-02
776	2.30505869825064E-02
778	2.29381053688817E-02
780	2.28264399755513E-02
782	2.27155829758915E-02
784	2.26055266362155E-02
786	.022496263314462
788	2.23877854589049E-02
790	2.22800856068845E-02
792	2.21731563835592E-02
794	2.20669905006773E-02
796	2.19615807553684E-02
798	2.18569200289547E-02
800	2.17530012857813E-02
802	2.16498175720651E-02
804	2.15473620147621E-02
806	2.14456278204532E-02
808	2.13446082742474E-02
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